```
1.95477E+02
Opporation
fission
                  1.07614E+00

    elacsed time .35 min.

Omr 263 1057 218 gp st f-1/em 090376 p3 295k
                                                                             95243
                                                                                       temperatures 975.00
Oresonance data for this ruclide
                                                                             = 975,000
Omess runber (a)
                         = 240,940
                                                    temperature(kelvin)
                                                                             = 4.1914479E-10
Opotential scatter signs = 9.511
                                                    lumped nuclear density
                                                                             = 4.6812201E-01
Ospin factor (g)
                         = 82052,602
                                                   · lump chimare (on (a-ber)
                                                                             = 3.4269261E-01
Oimer radius
                         = .000000E+00
                                                   dancoff correction (c)
Othe absorber will be treated by the northein integral method.
                                                 signe(per absorber aton)= 4.0740029E+08
Omes of accidenator-1 = 15.995
Omphrator-1 will be treated by the northeim integral method.
                                                 signa(per absorber atonò= 4.3699021€+08
Orass of moderator-2 = 258.051
Omderator-2 will be treated by the northeim integral method.
Othis resorance meterial will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding=1.00000
                             res fiss
(group
              res abs
                                             res acat
  13
          -6.60425ZE-0B
                            .000000E+00
                                           4.386608E-04
                                          2.371130E-04
          2.231602E-02
                            .000000E+00
Ocicess resonance integrals
                   resolved
                  1.601520
Ochscription
fission
                   .0000000
- elapsed time
                   .35 min.
                                               undated 10/13/89
                                                                             96244
                                                                                       temperature 975.00
0 curium 244 endf/b-iv met 1162
Oresonence data for this ruclide
                                                                             = 975.000
Oness number (a)
                         = 242.133
                                                    temperature(kelyin)
                                                                            = 9.1373150E-12
Opotential scatter signs = 10.320
                                                    lurped nuclear density
                         = 5251.150
                                                    lump dimension (a-bar)
                                                                             = 4.6812201E-01
Ospin factor (g)
                                                                             = 3.426925 E-01
Oirner redius
                          = .000000E+00
                                                   dencoff correction (c)
Othe absorber will be treated by the norcheim integral method.
                                                 signs(per absorber aton)= 1.8688168E+10
Ormes of moderator-1 = 15.995
Orockretor-1 will be treated by the norcheim integral method.
                                                 signs(per absorber atom)= 2.0045511E+10
Oness of moderator-2 = 258.051
Omobrator-2 will be treated by the northein integral method.

Othis resonance material will be treated as a 2-disensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.00000
garata
              res abs
                              res fiss
                                             res acat
                          7.064Z/9E-06
                                          3.05316/E-04
  11
             .582341E-04
  12
          6.932982E-04
                          3.25201E-05
                                          1.372209E-04
                                          7.12855E-04
  13
           2.72073/E-03
                           1.336612E-04
                          5.06250 - 03
                                           1.605748E-02
           8.46785ZE-02
Occess resonance integrals
                   resolved
                  6.1390/E+02
Oabsorption
fission
                  3.54222E+01
  elapsed time
                   .Dimir.
   elacaed time
      this xedm working tape was created 02/16/96 at 09:56:57
      the title of the parent case is as follows .
      scale 4.2 - 27 group neutron burnup library
based on emit-b version 4 data with emit-b version 5 fission products
           compiled for mrc 1/21/89
                                                          number of nuclides
          tape id
                                                           number of games groups
                                                                                                 n
          number of neutron groups
                                              Z7
                                                           logical unit
          first themal group
                                        table of contents
                                                                                                999
        1/v cross sections normalized to 1.0 at 0.0253 ev
         hydrogen endf/b-iv mat 1269/thms1002 updated 10/13/89
                                                                                               1001
5010
        b-10 1273 218npp 042375 p-3 283k
```

				_
baran-11	endf/b-iv met 1160 .	updated 10/13/89	id	5011
aggen-16	endf/b-iv met 1276	updated 10/13/89	id	8016
aygen 16	endf/b-iv mat 1276	updated 10/13/89	id	- 6
	#t=102,105,105,105,106,107		iä	36083
kr-83	W-105, 100, 100, 100, 100	updated 10/13/89		
kr-82	int= 102		id	36065
90~1a	mt=102	updated 10/13/89	id	32090
y-80	mt=102	updated 10/13/89	id id	39089
zr-93	mt= 102	• • •	id	40093
zr-94	mt=102	undsted 10/13/89	id	40094
<u>x-85</u>	mt=102	uzzbted 10/13/89	ĩď	40095
			2.1	
zircalloy	endf/b-iv mat 1284	updated 10/13/89	id	40302
rb-%	at=102	updated 10/13/89	id	41094
m-95	at=102	uccleted 10/13/89	id	42095
tc-99	st=102	updated 10/13/89	id	43099
ru-101	nt=102	ucdated 10/13/89	id	44101
			id	
ru-106	mt=102	updated 10/13/89	ici	44106
rh-103	nt=102	updated 10/13/89	id	4510B
rh-105	mt= 102		id	45105
pd-105	at=102	undeted 10/13/89	id	46105
pd-108	mt=102	uzdated 10/13/89	id	4610B
				47109
silver-109	endf/b-iv mat 1139	updated 10/13/89	id	
sb-124	nt=102	u julated 10/13/89	id	51124
xe-131	mt=102,103,104,105,106	updated 10/13/89	id	54131
xe-132	mt=102,103,104,105,106	updated 10/13/89	id	54132
xeror-135	erclif/b-iv set 12%	updated 10/13/89	id	54135
xe-136	mt= 102, 108, 104, 105,	117	id	54136
		undsted 10/13/89	ĩď	55133
cesiun-133	endf/b-iv mat 1141			
cs- <u>134</u>	nt=102	ujubted 10/13/89	id	55134
ය-125	mt= 102		fd	55155
cs-137	mt=102	updated 10/13/89	id	55137
ba-136	nt=102	uzstated 10/13/89	id	56136
la-139	at=102	updated 10/13/89	id	57139
œ-144	nt= 102	dance of plan	id	58144
	HAM RUE,	1 4 4 40 477 490	N	501/4
pr-141	nt=102,105,104,105,106,107	updated 10/13/89	id	59141
pr-143	at=102	updated 10/13/89	id	59143
nd-143	nt=102	updated 10/13/89	id	60143
nd-145	nt=102	updated 10/13/89	id	60145
nd-147	mt=102	undated 10/13/89	id	60147
pn-147	mt=102	updated 10/13/89	id	61147
		drawn id the	ñã	61148
ps-148	mt= 102			
san-147	erdř/b-v fission product	updated 10/13/89	id	62147
sn-149	at=102,103,107	updated 10/13/89	id	62149
sm: 150	nt=102	uzalstad 10/13/89	id	62150
sn-151	mt=102,105,104,105,106,107	umbted 10/13/89	id	62151
sm-152	mt=100 108 104 105 104 107	updated 10/13/89	id	62152
eu-153	nt=102,103,104,105,106,107 nt=102,103,104,105,106,107	updated 10/13/89	id	63153
	#L-KE, 100, 100, 100, 100, 100			
eur <u>154</u>	mt=102,103,104,105,106,107	updated 10/13/89	id	<u> </u>
eu-155	mt=102,103,104,105,106,107	updated 10/13/89	id	63155
pd-155	mt=102	upolatorol 10/13/89	id	64155
u-234 1043 sig	9544 neuklacs p-3 255k f-1/e+	n(1.45)	id	92234
	ercif/b-iv mat 1261	updated 10/13/89	id	92235
1274 1163 eig	0-5+4 newlacs p-3 295k f-1/e-	~135\ T	id	92236
1 20 1 100 8 19		40/57/50		92238
	erdi/to-iv mat 1262	updated 10/13/89	id	
	endf/b-ivant 1263	updated 10/13/89	id	95237
pu-238 1050 sig	90-5+4 newlacs p-3 293k f-1/e	19(1.45)	id	94238
plutonium 239	ercif/b-iv net 1264	updated 10/13/89	id	94239
nlumnium-20	erdi/o-ivast 1264 erdi/o-ivast 1265	updated 10/13/89	id	94240
	ercif/o-iv mat 1266	updated 10/13/89	ä	94241
			ũ	922
Programmer or	endif/b-iv met 1161	updated 10/13/89		
ETT-ZAT TUDO SI	p-514 nauklacs 218npp p-3 255	K	id	95241

0 1	sm-2/3 105 curius-2/4 tape cop xx	4 endf/b-iv	em 093% p3 29 met 1162 o's, and took diffillial in the diffillial	yekted 10/2.00 seconds miniminiminiminiminiminiminiminiminimin	13/89 m m m mm m	P P P P P P P P P P P P P P P P P P P		
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	96	œ		88	86	ļļ.	66
22	96	œ	œ	88	223	!!	66 ,
\$95969	9999995	000000	2000000	88	80	ишшшш	666666666666
89939	200908	œ	2000000	86	83	uuuuuuu	666666666666666666666666666666666666666

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program verification information states the states code system scale versions 4.2 states the states
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260 d, ses2h: bebook wilcox 15x15, 3.00x24, 20gxd/mmu burn high temp

1 entries.
1 tentries.
1 tentrie
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ige 1/2/3 = plane/cylinder/sphere

isn quadrature order

Я

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izm number of zones
                                                   isct order of scattering
                                                   lext 0/1/2/3/4/5/6=0/k/aluha/c/z/r/h
    number of special intervals
                                                                                           20
ibl 0/1/2/3 = vecum/refl/per/white
                                                   i im irrer iteration meximum
                                                   ion outer iteration maximum
                                                                                           25
ibr right boundary condition
                                                                                            0
mox runber of mixtures
                                                   iclc -1/0/n--flat res/sn/opt
                                                   ith Q/1 = forward/adjoint
                                                                                            Ò
ms mixima table length
                                        65
ign number of energy groups
                                        27
                                                   If I u not used (alvays with)
                                                                                            n
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me number of neutron groups
                                        27
                                                   ight -2/-1/0/namixture asec print
reg number of games groups
ifty number of first thermal group
                                                                                           53
                                         ۵
                                                   idl 0/1/2/3-ro/prt rd/pch n/both
                                         15
                                                   ight -1/0/1=none/fine/all bal. prt
                                  special options
                                                   ign 0/1/2 diff. coef. perma
ifa 0/1 = none/weighting colculation
ign volumetric sources (Q/TPTO/yes)
                                                   idin 0/1 = rune/density factors 38*
                                                   isz 0/n = none/n activities by zone
ion boundary sources (0/n+no/yes)
ifn 0/1/2 = irrut 33°/34*/use last
                                         53
                                                       O/1-name/activities by interval
                                                   ifct 0/1=rp/ves upscatter scaling
itus maximum time (mirutes)
                                                   ip/t 0/1/2-ro/k/alcha parametric srch
idt1 0/1/2/3-rp/ksect/srce/flux--aut
                                                   isen outer iteration acceleration
isk broad group fluxes
ibln activity data unit
                                                   ntrid bend reballin penemeter
jtkl 0/1/2 buckling geometry
                                   weighting data (ifg=1)
                                                   intf total xsect pen in brd go tables
icon -1/0/1=cell/zone/resion weight
                                         27
                                                   ndsf pangg or file runber
rusf table length or max order
ignif number of broad groups
ito 0/10/20/30/40 0/c/e/ac/a
                                         0
                                         -2
                                                  mean extra 1-d x-sect positions
     -2/-1/0/magted assect print
İ
iap -1/n anian assect print
                                  floating point parameters
                                                       cyl/plaint for buckling plane depth for buckling
                                                                                    .000E+00
                                1.0000E-04
es overall convergence
ptc point convergence
                                                                                    .0000E+00
                                1.0000Œ-04
                                1.0000E+00
                                                        void streaming correction .00000E+00
and nonrelization factor
                                                   VXC
                                 .0000E+00
                                                        inv=1/2--k/altha
                                                                                   1.0000E+00
    eigerwelue guess
ev.
                                                   ect ev charge ecs for search 1.0000E-03
em eigenvalue modifier
                                  .0000E+00
    buckling factor=1.420892
                               1.420B9E+00
                                                   perpen new person mod for search 7.50000E-01
    this case will require
                                  255 locations for mixing
     this case has been allocated 200000 locations
                       240 d, ses2h: beboook wilcox 15x15, 3.00x12, 20gxd/mtu burn high temp
                         & entries.
        13g armsy has
        You array has
                         & entries.
                         & entries.
        Equatray has
                                     data block 2 (mixing table, etc.)
                                                                                                       extra
                                                           mixing table
     nuclides
                  identification
                                                 erstxim
                                                                         aton density
                                                                                                     xsect id's
                                                           CORPORATE
      on tage
                                                             9225
                                                                         5.99891E-04
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    2
         1001
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         5010
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                                                             92238
                                                                         2.2005Œ-02
         5011
                                                              8016
                                                                          4.55359E-02
         8016
                                                                         2.09710E-02
            6
                                                             34083
                                                                           .52870E-07
        36083
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                                                                         2.19160E-07
        36085
    8
                                                             38090
                                                                          4.9062E-06
        38090
        33039
                                                             39089
                                                                         2,95210E-05
   10
                                                             42075
                                                                          2.67690E-06
        40093
   112345
        40094
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                                                                         3.6623/E-06
                                                                         5.64805E-05
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        40095
                                                             40095
                                                                          2.02113E-06
        40302
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41094

41094

1.92547E-12

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5.40977E-05
2.34075E-05
1.42541E-08
4.75216E-05
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17 ·
                     42095
43099
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2.4477/E-07
1.71902E-07
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46108
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2.48629E-06
TO NOT THE WAS A STANDARD OF THE PROPERTY OF T
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9.0856E-06
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2,7804E-06
5,70747E-06
1,44625E-08
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$15
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4.03326E-07
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58144
60143
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4.64739E-06
3.44986E-06
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61147
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62149
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1.34141E-07
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3.1256/E-08
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3.2538E-06
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                                                                                                                                                                                                                                                                                              6.04966E-09
                                                                                                                                                                                                                                                                                               4.19145E-10
                                                                                                                                                                                                                                                                                              9.13732E-12
                                                                                                                                                                                                                                                                                                1.0000E-20
  elapsed time .00 min.
21649 locations will be used
                                                                                             Z entries.
                  35q array has
36q array has
                                                                                              24 entries.
                   330; array has
                   39q array has
                                                                                                 4 entries.
                                                                                             4 entries.
27 entries.
                   40q array has
47q array has
                                                                                       27 entries.
240 d, sae2h: beboock wilcox 15x15, 3.00x1X, 20p.d/www.burn.high temp
                   51q array has
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			na dre	n and n norm	-tere				
0	~	enero/	letheray	n group peran Heighted	prosed 8b	calc	group	right	left
U	₩,	boundaries -	boundaries	velocities	runbers		bend	dodla	albedo :
	4					type D		1.0000E+00	auan
	1		-6.93147E-01	4.60581E+09	1		1		
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	3	3.0000E+06	1.20377E+00	2.12201E+09	3	Õ	3	1.0000E+00	
	4	1.85000E+06		1.756735+09	2 3 4 5 6 7	Ō	4	1.00000E+00	
	5	1.40000E+05	1.96611E+00	1.4555E+09	5	0	5 6 7	1.0000E+00	
	6	9.0000E+05	2,40795E+00	1.05620E+09	-6	٥	6	1.0000E+00	
	7	4.0000E+05	3.218895+00	6.07557E+08	7	Ď	7	1.0000E+00	
	ä		4.60517E+00	2.72415=+08	8	ň	Ř	1.0000E+00	
	ğ	1.7000E+04	6.377135+00	1.1352/E+08	ğ	ň	ğ	1.0000E+00	
	10		8.11175-00	4.8212 /E+ 07	10	ň	1Ó	1.0000E+00	
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						ŭ			
	12	1.0000E+02	1.15120001	1.00360-07	12	ň	12	1.0000E+00	
	13	3.0000E+01	1.27169E+01	5.67399E+06	13 14 15	ň	13	1.0000E+00	
	14 15	1.0000E+01	1.38155E+01	3.20957€+06	14	Ų	14	1.00000€+00	
		3.04999E+00	1.50030E+01	2.10601E+06	D	Ō	15	1.0000E+00	
	16		1.55471E+01	1.70522E+06	16	Ō	16	1.0000Œ+00	
	17	1.2999E+00	· 1.58557E+01	1.525/32+06	17	0	17	1.0000Œ+00	
	18	1.129992+00	1.59999E+01	1.42857E+06	18	00000000000000	18	1,0000E+00	
	19		1.61181E+01	1.31002E+06	19	0	19	1.0000E+00	
	ä		1.63412E+01	9.058982+05	20	Ŏ		1.0000E+00	
	21	4,0000E-01	1.70544E+01	8.17974E+05	21	0	21	1.0000E+00	
	22	3.2500E-01	1.72420E+01	6.90070E+05	22	Ŏ	22	1.0000E+00	
	22	2.2500E-01	1.760985+01	4.86953=+05	云	ŏ	云	1.00000=+00	
	7	9.9999E-02	1.84207E+01	3.577655+05	2	ň	2 .	1.0000E+00	
	፠ ጛ		1.91138E+01	2.7823+05	න න න න න න	Ŏ	20 20 20 20 20 20 20 20 20 20 20 20 20 2	1.0000E+00	
	×		1.96247E+01	1.87832+05	ž	ŏ	¥	1.0000€+00	
	27	1.0000E-02	2.072535+01	8.85201E+04	27	ŏ	20 27	1.00000=+00	
				CLUED K-V4	£.i	v	и	1.0000	
	28	1.0000E-05	2.76310E+01			•	_		
1		1.0000E-05	2.76310E+01 240 d, se	s2h: beboock	wilcox 15x15,	, 3.00.ex, 20g	 Hd∕intu burn h	igh temp	
1 0		1.0000E-05	2.76310E+01 240 d, se order p(l)	eZh: beboock activity	wilcox 15x15,	, 3.00.ex, 20g	dequatric co	igh temp netants	
1 0	28	1.0000E-05	2.76310E+01 240 d, se	s2h: beboock	wilcox 15x15,	, 3.00мX, 20g .неights	ed/atu bum h quadrature co directions	igh temp natents reficience	wt x cos
1 0	28	1.0000E-05 mixture by zone	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	, 3.00.4%, 20g .Heights	ud/mu burn h quadrature co directions -2.7900/E-01	igh temp natents neft direc 3	0
1 0	28	1.0000E-05 mixture by zone i	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	, 3.00м2, 20g .неights 0 5.06143E-02	uci/intu bum h quadrature co directions -2.7900E-01 -1.9726E-01	igh temp risterits refl direc 3 3	0 -9.98548E-08
1 0	28	1.0000E-05 mixture by zone i	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	3.0042, 20g . Heights 0 5.06143E-02 5.06143E-02	ud/intu burn h quadreture co directions -2.7900/E-01 -1.97266E-01 1.97266E-01	igh temp ristants refl direc 3 3 2	0 -9.98548E-05 9.98548E-05
1 0	28	1.0000E-05 mixture by zone	2.76310E+01 240 d, se order p(l)	eZh: beboock activity	wilcox 15x15,	, 3.00.4%, 20g Heights 0 5.05143E-02 5.05143E-02 0	uckneu burn h quadreture co directions -2,7500:E-01 -1,9726:E-01 -6,0449:E-01	igh teep retents refl direc 3 3 2 8	0 -9.9548E-05 9.9548E-05 0
1 0	28	1.0000E-05 mixture by zone i	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	, 3.00.4%, 20g Heights 0 5.05143E-02 5.05143E-02 0	ud/intu burn h quadreture co directions -2.7900/E-01 -1.97266E-01 1.97266E-01	igh temp retents refl direc 3 3 2 2 8	0 -9.9548E-05 9.9548E-05 0 -3.10450E-02
1 0	28	1.0000E-05 mixture by zone i	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	, 3.00.4%, 20g .ueights 0 5.061/3E-02 5.061/3E-02 5.55953E-02	ud/atu bum h quadreture co directions -2.79002-01 -1.97265-01 -5.024105-01 -5.584105-01 -2.313016-01	igh temp retaints refl direc 3 3 2 2 8 8 7	0 -9.98548E-05 9.98548E-05 0 -3.10450E-02 -1.28598E-02
1 0	28	1.0000E-05 mixture by zone i	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	, 3.00.4%, 20g .ueights 0 5.061/3E-02 5.061/3E-02 5.55953E-02	uc/mtu bum h quedreture co directions -2.79004-01 -1.97266-01 1.97266-01 -5.04496-01 -5.58406-01	igh temp retaints refl direc 3 3 2 2 8 8 7	0 -9,96548:-08 9,96548:-08 0 -3,104508:-02 -1,26598:-02 1,26598:-02
1 0	12345678	1.0000E-05 mixture by zone i	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	, 3.00.4%, 20g heights 0 5.06143E-02 5.06143E-02 5.5553E-02 5.5553E-02 5.5553E-02	ud/atu bum h quadreture co directions -2.79002-01 -1.97265-01 -5.024105-01 -5.584105-01 -2.313016-01	igh temp retaints refl direc 3 3 2 2 8 8 7	0 -9,96548:-08 9,96548:-08 0 -3,104508:-02 -1,26598:-02 1,26598:-02
1 0	123456789	1.0000E-05 mixture by zone i	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	3.00.4%, 20g seights 0 5.061/3E-02 5.061/3E-02 0 5.597/3E-02 5.597/3E-02 5.597/3E-02	ed/etu tum h quatreture co cfirections -2.7500/E-01 -1.97265-01 1.97265-01 -5.58/10E-01 -2.31301E-01 2.31301E-01 -8.5077E-01	igh temp retaints refl direc 3 3 2 2 8 8 7	0 -9.98548E-05 9.98548E-05 0 -3.10450E-02 -1.28598E-02
1 0	123456789	1.0000E-05 mixture by zone i	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	3.00.4%, 20g seights 0 5.051/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02	ed/wtu burn h quadrature co directions -2.75002-01 -1.972802-01 -5.96402-01 -5.56602-01 -2.319012-01 2.319012-01 5.58602-01 -8.50762-01 -8.50762-01	igh temp retaints refl direc 3 3 2 2 8 8 7	0 -9.96548E-05 9.96548E-05 0 -3.10450E-02 -1.26578E-02 1.26578E-02 3.10450E-02
1 0	123456789	1.0000E-05 mixture by zone i	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	3.00.4%, 20g seights 0 5.051/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02	ed/etu tum h quatreture co cfirections -2.7500/E-01 -1.97265-01 1.97265-01 -5.58/10E-01 -2.31301E-01 2.31301E-01 -8.5077E-01	igh temp retents refl direc 3 3 2 2 8 8 7	0 -9.9548:-05 9.9548:-05 0 -3.1050:-02 -1.2598:-02 1.2598:-02 3.1050:-02 0
1 0	123456789	1.0000E-05 mixture by zone i	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	3.00.4%, 20g seights 0 5.051/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02	cultur burn h quarteture co directions -2.78004-01 -1.97285-01 -5.58/10E-01 -2.3190E-01 2.3190E-01 -8.50774E-01 -6.0538E-01	igh temp retents refl direc 3 3 2 2 8 8 7	0 -9,98548-08 9,98548-08 0 -3,10508-02 -1,28598-02 1,28598-02 3,10508-02 0 -4,26688-02
1 0	123456789	1.0000E-05 mixture by zone i	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	3.00.4X, 20g .ueights 0 5.06 K3E-02 5.06 K3E-02 0 5.59 F3E-02 5.59 F3E-02 5.59 F3E-02 5.28 KE-02 5.28 KE-02 5.28 KE-02 5.28 KE-02	cultur burn h quarteture co directions -2.78004-01 -1.97285-01 -5.58/10E-01 -2.3190E-01 2.3190E-01 -8.50774E-01 -6.0538E-01	igh temp retents refl direc 3 3 2 2 8 8 7	0 9.98548:-08 9.98548:-08 0 -3.10500:-02 1.28598:-02 3.10500:-02 -4.26660:-02 -3.16578:-02 -1.15128:-02
1 0	123456789	1.0000E-05 mixture by zone 1	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	3.00.4X, 20g seights 0 5.06 K3E-02 5.06 K3E-02 0 5.595 XE-02 5.595 XE-02 5.595 XE-02 5.286 KE-02 5.286 KE-02 5.286 KE-02 5.286 KE-02 5.286 KE-02	ed/etu turn h quatreture co directions -2.79026-01 1.97265-01 1.97265-01 -5.58/105-01 -2.31006-01 2.313016-01 -8.50776-01 -8.21782-01 -6.01583-01 2.201966-01	igh temp retents refl direc 3 3 2 2 8 8 7	0 9.98548-08 9.98548-08 0 -3.10508-02 1.28598-02 3.10508-02 0 -4.28668-02 -3.16578-02 -1.15128-02
1 0	123456789	1.0000E-05 mixture by zone 1	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	3.00.eX, 20g 	nd/etu bum h quadrature co directions -2.7500/E-01 -1.97285E-01 -5.58410E-01 -5.58410E-01 -2.31301E-01 -2.31301E-01 -8.5077E-01 -8.5077E-01 -2.2019EE-01 -2.2019EE-01 -6.01588E-01	igh temp restants refl direc 3 3 2 8 8 7 6 5 15 14 11	0 -9.98548-08 9.98548-08 0 -3.10508-02 1.28598-02 3.10508-02 0 -4.25688-02 -3.145378-02 1.15128-02 1.15128-02 1.15128-02
1 0	123456789	1.0000E-05 mixture by zone 1	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	3.00.eX, 20g .ueights 0 5.061/3E-02 5.061/3E-02 5.595/3E-02 5.595/3E-02 0 5.281/E-02 5.281/E-02 5.281/E-02 5.281/E-02 5.281/E-02 5.281/E-02 5.281/E-02	ACARTU BLIM IN CAPACITICS CONTROL CONT	igh temp restants refl direc 3 3 2 8 8 7 6 5 15 14 11	0 -9.98548:-08 9.98548:-08 0 -3.10500:-02 -1.28598:-02 3.10500:-02 0 -4.28668:-02 -3.145378:-02 1.15128:-02 1.15128:-02 3.145378:-02 4.28668:-02
1 0	123456789	1.0000E-05 mixture by zone 1	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	3.00.4X, 20g .ueights 0 5.06 K3E-02 5.06 K3E-02 5.5953E-02 5.5953E-02 5.5953E-02 5.5953E-02 5.5953E-02 5.5953E-02 5.5953E-02 5.5954E-02 5.2864E-02 5.2864E-02 5.2864E-02 5.2864E-02	ACARTU BLIM IN A CARTURE CO. C	igh temp restants refl direc 3 3 2 8 8 7 6 5 15 14 11	0 -9.98548:-08 9.98548:-08 0 -3.10508:-02 1.28598:-02 3.10508:-02 -3.16578:-02 -3.16578:-02 -1.15128:-02 1.15128:-02 4.2668:-02 -4.2668:-02 4.2668:-02
1 0	123456789	1.0000E-05 mixture by zone 1	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	3.00.4X, 20g 5.061/3E-02 5.061/3E-02 5.597/3E-02 5.59	ed/etu tum h quatreture co directions -2.7002E-01 1.9728E-01 1.9728E-01 -5.58/10E-01 -2.3190E-01 2.3190E-01 -8.2178E-01 -6.0158E-01 2.20198E-01 8.2178E-01 -9.818EE-01 -9.818EE-01	igh temp restants refl direc 3 3 2 8 8 7 6 5 15 14 11	0 -9.98548-08 9.98548-08 0 -3.10.508-02 1.28598-02 3.10.508-02 -3.10.508-02 -3.10.508-02 -3.10.508-02 -3.10.508-02 -3.10.508-02 -3.10.508-02 -3.10.508-02 -3.10.508-02 -4.5098-02
1 0	123456789	1.0000E-05 mixture by zone 1	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	3.00.eX, 20g 	cultur burn h questeure co directions -2.75004-01 -1.97265-01 -5.58405-01 -5.58405-01 -5.58405-01 -8.50746-01 -8.21784-01 -6.015885-01 -2.201965-01 8.21784-01 -9.80025-01 -9.80025-01 -9.80025-01 -9.80025-01	igh temp restants refl direc 3 3 2 8 8 7 6 5 15 14 11	0 -9.98548-08 9.98548-08 0 -3.10508-02 1.28598-02 3.10508-02 0 -4.28688-02 -3.145378-02 -1.15128-02 1.15128-02 1.25578-02 4.2868-02 0 -4.37098-02 -3.70888-02
1 0	123456789	1.0000E-05 mixture by zone 1	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	3.00.4X, 20g .ueights 0 5.061/3E-02 5.061/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 6 5.281/4E-02 5.281/4E-02 5.281/4E-02 5.281/4E-02 5.281/4E-02 5.281/4E-02 5.281/4E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02	ecketu tum h quarteture co directions -2.75026-01 -1.97266-01 -5.554106-01 -2.315016-01 -2.315016-01 -8.50776-01 -8.21766-01 -2.201966-01 -2.201966-01 -2.201966-01 -2.201966-01 -9.80166-01 -9.80166-01 -9.80166-01 -9.80166-01 -9.80166-01	igh temp restants refl direc 3 3 2 8 8 7 6 5 15 14 11	0 9.98548-08 9.98548-08 0 -3.10508-02 1.28598-02 1.28598-02 3.10508-02 0 4.28688-02 -1.15128-02 1.15128-02 1.15128-02 4.28688-02 4.2868-02 4.37098-02 -3.70588-02 -2.47598-02
1 0	123456789	1.0000E-05 mixture by zone 1	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	3.00.4X, 20g 5.06 K3E-02 5.06 K3E-02 5.06 K3E-02 5.59 F3E-02 5.59 F3E-02 5.59 F3E-02 5.59 F3E-02 5.28 KE-02 5.28 KE-02 5.28 KE-02 5.28 KE-02 5.28 KE-02 5.28 KE-02 5.28 KE-02 5.28 KE-02 5.28 KE-02 6.28 KE-0	ed/atu tum h quareture co directiors -2.75024-01 -1.97262-01 -5.7603-01 -5.58402-01 -5.58402-01 -5.58402-01 -8.507762-01 -8.277862-01 -2.201962-01 -2.201962-01 -2.201962-01 -2.201962-01 -2.201962-01 -2.201962-01 -2.201962-01 -5.564632-01 -5.464632-01 -1.917802-01	igh temp restants refl direc 3 3 2 8 8 7 6 5 15 14 11	0 9.98548-08 0 -3.10500-02 -1.2698-02 1.2698-02 3.10500-02 -3.10500-02 -3.16576-02 -3.16576-02 -1.15128-02 1.15128-02 1.25060-02 -2.2668-02 -2.37098-02 -3.7098-02 -3.7098-02 -3.7098-02
1 0	123456789	1.0000E-05 mixture by zone 1	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	3.00.4X, 20; 5.061/3E-02 5.061/3E-02 5.061/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.286/4E-02 5.286/4E-02 5.286/4E-02 5.286/4E-02 5.286/4E-02 5.286/4E-02 6.286/4E-02 6.286/4E-02 6.286/4E-02 6.286/4E-02 6.38	ed/atu tum h quadrature co directions -2.79026-01 1.97262-01 1.97262-01 -5.26.102-01 -5.56.102-01 -2.310016-01 -2.310016-01 -8.20762-01 -8.20762-01 -8.20762-01 -8.21762-01 -9.46432-01 -9.46432-01 -9.46432-01 -1.917602-01	igh temp restants refl direc 3 3 2 8 8 7 6 5 5 5 10 2 2 11 10 2 2 2 2 2 2 2 2 2 2 2 2 2	0 9.98548-08 0 -3.10.50E-02 1.28598-02 1.28598-02 3.10.50E-02 -3.16558-02 -3.16558-02 1.15128-02 1.15128-02 1.2668-02 4.2668-02 4.2668-02 4.37058-02 -3.70588-02 -3.70588-02 -3.70588-02 -8.66448-08
10	123456789	1.0000E-05 mixture by zone 1	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	wilcox 15x15,	3.00.4X, 20; 5.061/3E-02 5.061/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.281/4E-02 5.281/4E-02 5.281/4E-02 5.281/4E-02 5.281/4E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02	ACAME LUM IN A CAME LONG AND A	igh temp instants refl direc 3 3 2 8 7 5 5 5 5 5 10 24 21 21 21 21 21 21 21 21 21 21 21 21 21	0 -9.98548-08 9.98548-08 -3.10590-02 -1.28598-02 3.10590-02 0 -4.2868-02 -3.16578-02 -1.15128-02 1.15128-02 0 -4.2868-02 -3.16578-02 -3.76598-02 -3.76598-02 -3.76598-02 -3.76598-02 -3.76598-02 -3.76598-02 -3.76598-02 -3.76598-02 -3.76598-02 -3.76598-02
1 0	123456789	1.0000E-05 mixture by zone 1	2.763100+01 240 d, sa order p(l) by zone 3	eZh: beboock activity	vilcox 15x15,	3.00.4X, 20; .ueights 0 5.061/3E-02 5.061/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 6.5281/4E-02 5.281/4E-02 5.281/4E-02 5.281/4E-02 5.281/4E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02	4/4tu tum h quareture co directiors -2.7502E-01 -1.9726E-01 -5.58/10E-01 -5.58/10E-01 -5.58/10E-01 -5.58/10E-01 -5.58/10E-01 -8.50776E-01 -8.2176E-01 -8.2176E-01 -9.805E-01	igh temp restants ref l direc 3 3 2 8 8 7 6 5 5 5 14 13 12 11 10 24 24 23 22 21 20 19 18	0 -9.98548-08 9.98548-08 0 -3.10508-02 1.28598-02 3.10508-02 0 4.28688-02 -3.16578-02 1.15128-02 1.15128-02 1.15128-02 4.2868-
	28 123456789011254567892022A	1.0000E-05 mixture by zone 1 1 2 3	2.76510E-01 260 d, se order p(l) by zone 3 3 3 3 3	eZh: beboock activity	vilcox 15x15,	3.00.4X, 20; 5.061/3E-02 5.061/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.281/4E-02 5.281/4E-02 5.281/4E-02 5.281/4E-02 5.281/4E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02	4/4tu tum h quareture co directiors -2.7502E-01 -1.9726E-01 -5.58/10E-01 -5.58/10E-01 -5.58/10E-01 -5.58/10E-01 -5.58/10E-01 -8.50776E-01 -8.2176E-01 -8.2176E-01 -9.805E-01	igh temp instants refl direc 3 3 2 8 7 5 5 5 5 5 10 24 21 21 21 21 21 21 21 21 21 21 21 21 21	0 -9.98548-08 9.98548-08 -3.10590-02 -1.28598-02 3.10590-02 0 -4.2868-02 -3.16578-02 -1.15128-02 1.15128-02 0 -4.2868-02 -3.16578-02 -3.76598-02 -3.76598-02 -3.76598-02 -3.76598-02 -3.76598-02 -3.76598-02 -3.76598-02 -3.76598-02 -3.76598-02 -3.76598-02
	28 1234567891111114561187212224te	1.0000E-05 mixture by zone i	2.76510E-01 260 d, se order p(l) by zone 3 3 3 3 3	eZh: beboock activity	vilcox 15x15,	3.00.4X, 20; .ueights 0 5.061/3E-02 5.061/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 5.595/3E-02 6.5281/4E-02 5.281/4E-02 5.281/4E-02 5.281/4E-02 5.281/4E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02 4.535/3E-02	4/4tu tum h quareture co directiors -2.7502E-01 -1.9726E-01 -5.58/10E-01 -5.58/10E-01 -5.58/10E-01 -5.58/10E-01 -5.58/10E-01 -8.50776E-01 -8.2176E-01 -8.2176E-01 -9.805E-01	igh temp restants ref l direc 3 3 2 8 8 7 6 5 5 5 14 13 12 11 10 24 24 23 22 21 20 19 18	0 -9.98548-08 9.98548-08 0 -3.10508-02 1.28598-02 3.10508-02 0 4.28688-02 -3.16578-02 1.15128-02 1.15128-02 1.15128-02 4.2868-

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INFORMATION ONLY
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1 -2.750XE-01 8.8525E-01 6.74XE-02 -6.169XE-01 -1.7170XE-02 2 -1.9726E-01 8.8525E-01 .0000E+00 -4.36226E-01 1.2141XE-02
                                      .00000E+00 4.3622EE-01 -1.2141E-02
     3 1.97286E-01 8.83235E-01
     4 -6.0419E-01 4.52016E-01 3.16379E-01 -8.0439E-01 -1.7456/E-01
     5 -5.58x10E-01 4.5201KE-01 2.2371KE-01 -7.A3201E-01 -6.68023E-02
     6 -2.31301E-01 4.52016E-01 -2.25713E-01 -3.0784E-01 1.61276E-01
     7 2.31301E-01 4.52016E-01 -2.23713E-01 3.0784/E-01 -1.61276E-01
    8 5,58402-01 4,520162-01 2,257132-01 7,432012-01 6,660262-02 9 -8,5077/2-01 -8,572562-02 6,268/32-01 -1,98/5/2-01 -4,8/8/32-01
    10 -8.2178/E-01 -8.5725/E-02 5.428/2E-01 -1.9169/E-01 -3.442/5E-01
                                     .00000E+00 -1,40830E-01 3.4424/E-01
    11 -6.01588E-01 -8.5725E-02
    12 -2.20198E-01 -8.5725E-02 -5.4285E-01 -5.1363E-02 3.4426E-01
    13 2.20196E-01 -8.57Z5E-02 -5.4285E-01 5.136GE-02 -3.4426SE-01
                                     .0000E+00 1,40830E-01 -3,44249E-01
    14 6.015335 -01 -8.57235 -02 .00000 -00 1.43305 -01 -3.44245 -01 

15 8.21784 -01 -8.57235 -02 5.42845 -01 1.91694 -01 3.44245 -01 

16 -9.8303 -01 -4.49525 -01 8.34835 -01 5.00705 -01 -7.51005 -01
    17 -9,64143E-01 -4,49528E-01 7.73181E-01 4.91083E-01 -6.2433E-01
    18 -8.1736'E-01 -4.4952'E-01 3.2026'E-01 4.16520E-01 1.4651/E-01
    19 -5,4648-01 -4,4538-01 -3,7088-01 2,78178-01 7,34578-01 20 -1,917808-01 -4,4538-01 -7,731818-01 9,76834-02 4,17286-01 21 1,917808-01 -4,4538-01 -7,731818-01 -9,76834-02 -4,17286-01
        5,46143E-01 -4,49528E-01 -3,20262E-01 -2,78176E-01 -7,36573E-01
    23 8.1736'E-01 -4.4952'E-01 3.2026'ZE-01 -4.16520E-01 -1.4651/E-01
    24 9.64143E-01 -4.4952E-01 7.73181E-01 -4.91083E-01 6.2443E-01
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                                                  1.6275E-01 9.4751E-05 1.0000E+00
3.8185E-01 2.9405E-02 1.0000E+00
        2.59102E-02 4.33405E-02
        6.07710E-02 8.75100E-02
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        1.14249E-01 1.74195E-01
                                                   7,178/8E-01 1,3110/E-01
                                                                               1.00000E+00
                                                                                                  0
        2.34051E-01 2.93967E-01
                                                   1,4705E+00 2,2129E-01
                                                                               1.00000E+00
       3.5373E-01 3.80512E-01
4.07351E-01 4.24781E-01
4.42212E-01 4.55167E-01
                                                   2.225/SE+00 1.27890E-01
                                                                               1.0000E+00
                                                   2.5594E+00 9.3042SE-02 1.0000E+00
                                                   2.77850E+00 7.4100/E-02 1.0000E+00
        4,68122E-01 4,68814E-01
                                                   2.9413DE+00 4.0794Æ-08
    10 4,67507E-01 4,71481E-01
                                                   2.9500E+00 1.16989E-02
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       4.73456E-01 4.75431E-01
4.77405E-01 4.7809E-01
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                                                   2.9996ZE+00 4.160ZYE-05
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        4.78790E-01 4.83159E-01
                                                   3,00839E+00 2,65269E-02 1,00000E+00
        4,87528E-01 4,99987E-01
                                                   3.0525E+00 7.82762E-02 1.00000E+00
        5,12445E-01 5,2490BE-01
                                                   3,21975E+00 8,21777E-02 1,00000E+00
        5.37362E-01 5.41731E-01
                                                   3.37634E+00 2.97427E-02 1.00000E+00
       5.46100E-01 5.53513E-01
5.60929E-01 5.70900E-01
                                                   3.43125E+00 5.15631E-02 1.0000E+00
                                                   3.52/40E+00 7.155/8E-02 1.0000E+00
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        5,8087/E-01 5,96175E-01
                                                   3,647/E+00 1.1462/E-01 1.0000/E+00
    20 6.11479E-01 6.45795E-01
                                                   3.84201E+00 2.78169E-01
                                                                               1.0000E+00
    21 6.8008/E-01 7.1/319E-01
                                                   4.2/2/8E+00 3.0/702E-01
                                                                               1.0000E+00
    Z2 7.48592E-01 7.63879E-01
                                                   4.70554E+00 1.46879E-01
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    23 7.79193E-01 7.89167E-01
                                                   4,89582E+00 9.89116E-02 1.00000E+00
                                                   5.0215E+00 7.51357E-02 1.00000E+00
    24 7.99141E-01 8.0654E-01
    25 8.139685-01
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          221 -9.63613E-06 1.13953E+00 -1.26102E-05 -1.51753E-02 -4.62957E-03
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         284 3.53237E-06 1.1377EE+00 -1.41227E-04 -1.45082E-08 -8.89717E-04
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          330 -6,49125E-06 1.44017E+00 -2,40407E-05 -2,8558/E-04 -1,6678/E-04
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         351 -1.10716E-05 1.1402E+00 -5.1553/E-05 -5.2012/E-05 -2.705//E-05
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INFORMATION ONLY
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      6 398 -5,4950E-07 1,14019E+00 -7,51250E-07 -8,60379E-06 -5,37447E-06
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                      Lentzla 1.14015E+00
  elacted time
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                          240 d, see2h: bekoook wilcox 15x15, 3.00x1X, 20pxd/mtu burn high temp
0 int. zone number
                         radius int. midpoint area.
                                                     area volume procidensity
.00000E+00 2.10906E-03 3.34398E-08
                       2.59702E-02 4.3340E-02 1.6279E-01 9.49518E-03 1.50451E-02 6.0770E-02 8.75100E-02 3.8165E-01 2.9404E-02 4.6863E-02
                       1.142/9E-01 1.7455E-01 7.178/9E-01 1.3110/E-01 2.10039E-01
                       2.3465E-01 2.5966E-01 1.4705E+00 2.2129E-01 3.6514E-01 3.5397E-01 3.80612E-01 2.2256E+00 1.27890E-01 2.14674E-01
                                                                                 2.14674E-01
                       3.53873E-01 3.80612E-01 4.07351E-01
                                                   2.559465+00
                                                                  9.30429E-02
                                                                                  1.590425-01
                       4.42212E-01 4.55167E-01 2.77850E+00
                                                                  7.4100/E-02
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                       4.68122E-01 4.68814E-01 2.94130E+00 4.07946E-03
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                       4,69507E-01 4.71481E-01 2.95000E+00
                       4,73/5/E-01 4.75/31E-01 2,97481E+00
                                                                  1.17XE-02
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                       4.77405E-01 4.78098E-01
4.7870E-01 4.83159E-01
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    14 15 16 17 18 19
19 18 19 18 19
                       4,8752E-01 4,99987E-01 3,06525E+00
                                                                  7.827686-02
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                       5.1245E-01 5.2490E-01 3.21979E+00
                                                                  8.21777E-02
                                                                                   _00000E+00
                       5.37362E-01 5.41731E-01 3.3763/E+00
                                                                   2.974Z/E-02
                                                                                   .0000E+00
                       5.45100E-01 5.53513E-01 3.4312E+00 5.6024E-01 5.70900E-01 3.53440E+00 5.80874E-01 5.96173E-01 3.64774E+00
                                                                  5.5631E-02
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                                                                   7.155485-02
                                                                                   .0000E+00
                                                                   1.1462E-01
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    AKNNA
                       6.11475E-01 6.46755E-01 3.84201E+00
                                                                  2.78169E-01
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                       6.8005/E-01 7.1/313E-01 4.272/0E+00 3.07702E-01
                                                                                   -00000E+00
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                       7,485XE-01 7.638XE-01 4.7054E+00
                                                                  1.46879E-01
                       7,79192E-01 7,89167E-01 4,89582E-00 9,89116E-02 7,99141E-01 8,06554E-01 5,02115E-00 7,51357E-02
                                                                                   .00000E+00
                                                                                   .00000E+00
                                                    5.11/31E+00
    25
                       8,1396E-01
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240 d, see2h: beboook wilcox 15x15, 3.00x4X, 20gud/mu burn high temp

0 total flux

0 int.	grp. 1	gmp. 2	grp. 3	grp. 4	grp. 5	grp. 6	grp. 7	grp. 8
1	1.72636E-01	972. 2 1.31508E+00	1,6738E+00	1.03961E+00	1.57465-00	3.03077E+00	2.90515E+00	2.07949E+00
2	1.72597E-01	1.356E+00	1. <i>67469</i> E+00	1.04011E+00	1.575375+00	3.03208E+00	2.90582=+00	2.07935E+00
3	1.72641E-01	1.31503E+00	1.67391E+00	1.03963E+00	1.57/576+00	3.030%E+00	2.9047 X ±100	2.0793/E+00
4	1.7250E-01	1.31078E+00	1.65654E+00	1,03628E+00 1,02785E+00	1,56925E+00 1,55589E+00	3.01991E+00 2.99378E+00	2.85843E+00 2.88280E+00	2.07830E+00 2.07571E+00
5	1.71238E-01 1.70073E-01	1,25987E+00 1,25745E+00	1.638928-00	1.018/2E+00	1.54109±400	2.96518E+00	2.8557Æ+00	2.07283E+00
6 7	1.69K8E-01	1.27774E+00	1.62695+00	1.0112XE+00	1.52991E+00	2.9410E+00	2.853316+00	2.070666+00
8	1.68231E-01	1.26829E+00	1.615375+00	1.0030E+00	1.5195/E+00	2.98/85E+00	2.8420/E+00	2.06863E+00
ğ	1.67729E-01	1.263125+00	1.60919E+00	1.00091E+00	1.51409E+00	2,914836+00	2.83622=+00	2.0575E+00
10	1.67629E-01	1.26216E+00	1_60796E+00	1.000215+00	1.51309E+00	2.91305E+00	2.83523=+00	2.06736E+00
11	1.67472E-01	1.2505/E+00	1,606175+00	9.9X24E-01	1.51167E+00	2.91049E+00	2.833835+00	2.06707E+00
	1.6737 E-01	1,259695+00	1.60501E+00	9.9581E-01	1.510795+00	2.90 00000 +00	2.83293:+00	2.0 660E+ 00
12 13	1.6718/E-01	1.25785E+00	1.60280E+00	9.97540E-01	1.5089/E+00	2.90541E+00	2.83100E+00	2.06651E+00
14	1.66673E-01	1.2525E+00	1.596300+00	9.93505E-01	1.50312=+00	2.89411E+00	2.824545+00	2.0547E+00
15	1.66101E-01	1.2655E+00	1.587335+00	9.88189E-01	1.49470E+00	2.87743E+00	2.81494E+00	2.06434E+00
16	1.65621E-01	1.24287E+00	1.582572=+00	9.84718E-01	1.4887/E+00	2. 8584E+ 00	2,80821E+00	2.05355E+00
17	1.6560E-01	1.24087E+00	1.575822+00	9.82589E-01	1.48/PX=+00	2.85750E+00	2.8035/£+00	2.05569E+00
18	1.6510E-01	1.282E+00	1.575XE+00	9.7%16E-01	1.47973=+00	2.847916+00	2.7976500 2.7910500	2.05355E+00 2.05335E+00
19	1.65289E-01	1.23521E+00	1.571235+00	9.76054E-01	1.4742/EH00	2.83674E+00 2.82287E+00		2.05301E+00
20 21	1.6499XE-01	1.23124E+00 1.22846E+00	1.5653/E+00 1.5612/E+00	9.71839E-01 9.68855E-01	1.46714E+00 1.46212E+00	2.81305E+00	2.782572E+00 2.77722E+00	2.06291E+00
22	1.64797E-01 1.64792E-01	1.2283/45+00	1.5609/E+00	9.68579E-01	1.46160E+00	2.81202E+00	2.77678=+00	2.06314E+00
ž	1.64867E-01	1.22919E+00	1.5620/E+00	9.69802E-01	1.462785-00	2.81432E+00	2.778245+00	2.053425+00
24	1.6953E-01	1.23019E+00	1.563425+00	9.70201E-01	1.46424E+00	2.817185+00	2.78007E+00	2.0369E+00
0 int.	grp. 9	grp. 10	grp. 11	grp. 12	grp. 13	grp. 14	grp. 15	grp. 16
1	1.585392+00	1,4433/E+00	1.30173=+00	7.9008E-01	& <i>75</i> /∕€-01	5.9475E-01	3.7212E-01	2.07125E-01
Ż	1.58531E+00	1,4432/E+00	1,30152=+00	7.938146-01	6.72340E-01	5.9471E-01	3.72095E-01	2.07110E-01
3	1,58550E+00	1,434£+00	1.30199E+00	7.9362E-01	6,72787E-01	5.95138E-01	3.72170E-01	2.0714 9E -01
4	1.58655E+00	1,44471E+00	1.30%E+00	7.97431E-01	6.75357E-01	5.9886E-01	3.7255E-01	2.07571E-01
5	1.5891Æ+00	1.44776E+00	1.31119E+00	8.05009E-01	6.8163E-01	6.08178E-01	3.73587E-01	2.07914E-01
6	1.57208E+00	1.45110E+00	1.318360	8,13353E-01	6.8562E-01	6.18456E-01	3.74667E-01	2.0505E-01
7	1.5930E+00	1.4555E+00	1.32363E+00	8.19330E-01	6.000E-01	6.26119E-01	3.7544E-01	2.0873/E-01
8	1.5959E+00	1.45577E+00	1.32835+00	8.25217E-01	6.95381E-01 7.00822E-01	6.33181E-01 6.3653E-01	3.76136E-01 3.76491E-01	2.09527E-01 2.09529E-01
9	1.57750E+00	1,45691E+00 1,45710E+00	1.33092E+00 1.33152E+00	8.28167E-01 8.28642E-01	7.01221E-01	6.37442E-01	3.7655 E-01	2.0956/E-01
10 11	1.59770E+00 1.59759E+00	1.45757E+00	1.33188E+00	8.29521E-01	7.0172E-01	6.3828/E-01	3.76657E-01	2.07613E-01
12	1.59818E+00	1.45754E+00	1.33226+00	8.29760E-01	7.02163E-01	6.38825E-01	3.766XE-01	2.0964£-01
ឌី	1.5985E+00	1.45789E+00	1.3330,E+00	8.3065E-01	7.02919E-01	6.37743E-01	3.76807E-01	2.09711E-01
14	1.59959E+00	1,45902E+00	1.33542-00	8.33/57E-01	7.05289E-01	6.43420E-01	3.7717Æ-01	2.099186-01
15	1.60074E+00	1.46063E+00	1.33881E+00	8.37322E-01	7.0548E-01	6.48230E-01	3.77690E-01	2.10204E-01
16	1,601292+00	1,46170E+00	1.34105E+00	8.39814E-01	7.105EE-01	6.51320E-01	3.7805/E-01	2.1058E-01
17	1,60159E+00	1,46250E+00	1.34272=+00	8.41649E-01	7.1216Œ-01	6.53572E-01	3.78221E-01	2.1050/E-01
18	1.602042+00	1.46 558E+ 00	1.34500E+00	8.4415/E-01	7.1421Œ-01	6.5664ZE-01	3.78429E-01	2.105/ /JE -01
· 19	1.60260E+00	1,464825+00	1.34760E+00	8.47057E-01	7.16582E-01	6.60181E-01	3.7867Æ-01	2.10819E-01
20	1,603385+00	1.46638E+00	1.350900+00	8.50711E-01	7.1959Œ-01	6,6/69/E-01	3.78970E-01	2.110326-01
21	1.60590E+00	1.46750E+00	1.3532/E+00	8.5332SE-01	7.217kE-01	6.6780XE-01	3.771172-01	2.111596-01
22	1.60/02=+00	1.46761E+00	1.353/XE+00	8.53507E-01	7.218565-01	6.68134E-01	3.7XB1E-01 3.78H37E-01	2.11133E-01 2.11061E-01
25	1.60305E+00 1.60366E+00	1,46733E+00	1.35290E+00 1.35214E+00	8.52878E-01 8.52039E-01	7.2125Œ-01 7.2053Œ-01	6.67275E-01 6.66224E-01	3.7874ZE-01	2.10985E-01
24 0 int.		1,46598E+00 grp. 18	grp. 19	grp. 20				grp. 24
U #K.	grp. 17 8.87323E-02	6,4539E-02	grp. 19 1.37538E-01	4.52611E-01	grp. 21 1.25/5/E-01	gp. 22 2.32/81E-01	grp. Z3 7.7383/E-01	5.5170BE-01
ż	8.8712/E-02	6.41199E-02	1.3790/E-01	4.52510E-01	1.26391E-01	2,326296-01	7.73391E-01	5.51331E-01
3	8.8748E-02	6.42070E-02	1.37567E-01	4.5269E-01	1.2555	2,33102E-01	7.7432E-01	5.5240E-01
ī	8.89522E-02	6.46898E-02	1.3795Œ-01	4.5380%-01	1.27413E-01	2.356/SE-01	7.80297E-01	5,58250E-01
Š	8,9490E-02	6.587826-02	1,398395-01	4.56532E-01	1.2574E-01	2.41995E-01	7.94852E-01	5.72790E-01
6	9.0037E-02	6.73/FE-02	1.39821E-01	4.595 DE-01	1.31970E-01	2.49097E-01	8,10890E-01	5.8806/E-01
7	9.04987E-02	6.82718E-02	1.40538E-01	4.61705E-01	1.33763E-01	2.5463E-01	8.Z284E-01	6.0110 CE- 01
8	9.08922E-02	6.925/E-02	1.4118EE-01	4.63706E-01	1.35/21E-01	2.5946/E-01	8.33853E-01	6.12377E-01
9	9.10771E-02	6.97241E-02	1.41525E-01	4.64745E-01	1,3628/E-01	2.62073E-01	8.39571E-01	6.182%F-01

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10 9.11316E-02 6.9802E-02 1.41581E-01 4.66167E-01 1.3662E-01 2.6366E-01 8.4066E-01 6.1912E-01 1.3661E-01 1.3661E-01 2.63031E-01 8.4172E-01 6.20381E-01
                  12 9.1212E-02 6.9986E-02 1.417TE-01 4.6552F-01 1.3674E-01 2.65396E-01 8.4254E-01 6.21187E-01 13 9.12780E-02 7.07542E-02 1.41819E-01 4.66678E-01 1.36978E-01 2.66442E-01 8.4227E-01 6.2253E-01 14.9181E-02 7.07530E-02 1.4254E-01 4.66678E-01 1.36978E-01 2.66453E-01 8.46378E-01 6.2779E-01 15 9.17521E-02 7.12186E-02 1.4254E-01 4.66678E-01 1.39078E-01 2.6660E-01 8.56512E-01 6.39778E-01 15 9.17521E-02 7.1616E-02 1.4254E-01 4.68078E-01 1.39078E-01 2.7660E-01 8.6678E-01 6.39778E-01 1.9078E-02 7.7601E-02 1.4254E-01 4.68078E-01 1.39078E-01 2.7660E-01 8.6678E-01 6.39778E-01 1.9078E-02 7.7601E-02 1.4376E-01 4.66678E-01 1.4078E-01 2.77601E-01 8.6678E-01 6.4878E-01 1.9078E-02 7.77601E-02 1.4376E-01 4.7676E-01 1.4078E-01 2.77601E-01 8.6698E-01 6.4878E-01 1.9078E-02 7.77601E-02 1.4376E-01 4.77667E-01 1.4078E-01 2.77601E-01 8.6698E-01 6.4878E-01 1.9078E-02 7.77601E-02 1.4376E-01 4.77667E-01 1.4078E-01 2.77601E-01 8.6698E-01 6.4878E-01 1.9078E-02 7.77601E-02 1.4376E-01 1.4376E-01 1.4078E-01 2.77601E-01 8.77667E-01 6.4878E-01 2.77601E-01 8.77667E-01 6.77667E-01 1.4376E-01 2.77601E-01 8.77676E-01 6.77667E-01 1.4376E-01 2.80778E-01 8.97676-01 6.77667E-01 2.97677E-02 7.77677E-02 1.4479E-01 4.77676E-01 1.4376E-01 2.80778E-01 8.97676-01 6.77667E-01 2.97778E-02 7.77677E-02 1.4479E-01 4.77676E-01 1.4376E-01 2.80778E-01 8.97776E-01 6.77677E-01 2.97778E-02 7.77677E-02 1.4479E-01 4.77676E-01 1.45778E-01 2.80778E-01 8.97776E-01 6.776778E-01 8.97777E-02 1.4479E-01 4.77676E-01 1.45778E-01 2.80778E-01 8.97776E-01 6.77778E-01 8.977778E-02 1.44798E-01 4.77778E-01 1.45778E-01 2.80778E-01 8.97778E-01 6.77778E-01 6.77778E-01 8.97778E-01 6.77778E-01 6.
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1 2.2651e-01 1.3561e-01 1.7502e-02
2 2.2599e-01 1.3562e-01 1.75830e-02
                              3 2.2675E-01 1.35987E-01 1.75545E-02
                                4 2.2960/E-01 1.38781E-01 1.85261E-02 5 2.37159E-01 1.45770E-01 2.02894E-02
                            6 2,4500E-01 1,5367E-01 2,2500E-02 7 2,51990E-01 1,5975E-01 2,4507E-02 8 2,5796E-01 1,66517E-01 2,63057E-02
                      9 2.6108E-01 1.666/E-01 2.763/E-02 01 2.613/E-01 1.666/E-01 2.763/E-02 11 2.653/E-01 1.653/E-01 2.763/E-02 11 2.623/E-01 1.653/E-01 2.763/E-02 12 2.623/E-01 1.7650E-01 2.765/E-02 13 2.6543/E-01 1.7650E-01 2.765/E-02 14 2.653/E-01 1.765/E-01 2.765/E-02 14 2.653/E-02 
                         15 2.6931/E-01 1.79631E-01 2.92768E-02 16 2.71305E-01 1.7758E-01 2.97056E-02
                         17 2.7529E-01 1.7559E-01 3.05692E-02 18 2.76592E-01 1.83134E-01 3.1580/E-02
                         19 2.8061/E-01 1.87441E-01 3.29992E-02
                        20 2.8509E-01 1.9530/E-01 3,48657E-02
                       21 2.9062E-01 1.9009E-01 3.6600E-02 2.9141E-01 1.97810E-01 3.6669E-02
                       23 2.9033E-01 1,9885E-01 3.68027E-02 26 2.89759E-01 1.98107E-01 3.66313E-02

    elected time _02 min.

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                                                .0000E+00 3.6643E-11 1.7108/E-02 1.8830E-01 2.0645E-02
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28 .0000E+00 1.0000E+00 6.370EE-01 5.476EE+00 6.370EE-01 9.3545EE-01 0 grp. rt by flux rt leelage lft by flux lft leelage rth rate fiss rate 1 1.675EE-01 1.000E+02 1.727EE-01 .0000E+00 2.2071E-03 2.574VE-03 2 1.263VE+00 1.374VE+00 .0000E+00 1.7530E-05 1.1789E-02 3 1.6075E+00 1.463VE-01 1.5730E+00 .0000E+00 .0000E+00 1.453VE-02 4 1.0000E+00 1.354VE+01 1.573VE+00 .0000E+00 .0000E+00 1.626VE-03 5 1.5143VE+00 1.3546E-01 1.573VE+00 .0000E+00 .0000E+00 1.626VE-03 6 2.9153VE+00 1.426VE-01 2.904ZE+00 .0000E+00 .0000E+00 1.6720VE-03 7 2.834VE+00 1.426VE-01 2.904ZE+00 .0000E+00 .0000E+00 1.678VE-03 8 2.063VE+00 2.063VE-02 2.000E+00 .0000E+00 .0000E+00 1.7752ZE-03 6 2.063VE-00 2.063VE-02 2.075VE+00 .0000E+00 .0000E+00 1.7752ZE-03 6 2.063VE-00 2.063VE-02 2.075VE+00 .0000E+00 .0000E+00 1.7752ZE-03 6 2.063VE-00 2.063VE-00 2.000E+00 .0000E+00 2.420VE-03 6 2.063VE-03 2.063VE-03 2.000E+00 .0000E+00 2.420VE-03 6 2.063VE-03 2.000E+00 .0000E+00 2.420VE-03 6 2.063VE-03 2.000E+00 .0000E+00 2.420VE-03 6 2.000E+00 2.000E+00 2.420VE-03 6 2.000E+00 2.000E+00 2.420VE-03 6 2.000E+00 2.
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20	.00000E+00	.00000E+00	.0000E+00	.00000E+00	.000 .		-2.23517E-08	1.0000E+00
21	.0000E+00	.00000E+00	.00000E+00	,00000E+00	.000000	.0000E+00	5.58794E-09	1.0000E+00
22	.0000E+00	,00000E+00	.00000E+00	.00000E+00	.0000E+00	.0000E+00	.0000E+00	1.0000E+00
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3	1.60471E+00	1.44834E-01	1.60952E+00	1,44834E-01	.0000E+00	.00000E+00	.0000E+00	5.1000%E-02
4	9.93419E-01	8.77151 E- 02	1.00107E+00	8.77151E-02	.000TE+00	.000 00E+ 00	.00000E+00	3.1726/E-02
5	1.510535+00	1.3366 2E -01	1.5143 (E+ 00	1,336622:-01	.0000E+00	.00000E+00	.00000E+00	4.79960E-02
6	2.908/Æ+00	2.51789E-01	2.915316+00	2.517895-01	.000E+00	.00000E+00	.0000E+00	9.24057E-02
7	2.85271E+00	1,4296E-01	2.83649E+00	1.429 65E- 01	.0000E+00	.0000E+00	.000 0E+ 00	8.99547E-02
8	2.05/8/E+00	· 2.06187E-02	2.05760E+00	2.06187E-02	.0000000	.0000€+000	.00000E+00	6.56035E-02
9	1.59822E+00	-2.12831E-02	1.59745E+00	-2.12831E-02	.000000	.000E+00	.0000Œ+00	5.07079E-02
10	1.45758E+00	-2.61925E-02	1,4569600	-2.61924E-02	.0000000+000	.0000E+00		4,62X5 CE -CE
11	1.3325SE+00	-5.60771E-02	1.330B1E+00	-5.6097TE-02	.000E+00	.000E+00	.00000E+00	4.22587E-02
12	8.23870E-01	-6,49960E-02	8.2004ZE-01	-6,47760E-02	.0000E+00	.0000E+00	.0000E+00	2.63079E-02
Ï	7.025Æ-01	-5.46259E-02	7.00716E-01	-5,46297E-02	.0000E+00	,0000E+00	.0000E+00	2.22625E-02
14	6.3896/E-01	-8.06490E-02	6.36697E-01	-8.06490E-02	.0000E+00	.0000E+00	.00000000	2.024 <i>27</i> E-02
14 15		-8.0680BE-05	3.7647SE-01	-8.06808E-05	.0000E+00	.000E+00	.0000E+00	1,19513E-02
16	2.09/5/E-01	-4.72878E-05	2.09521E-01	-4.72877E-05	.0000E+00	.0000E+00	,0000E+00	6.6513/E-03
17		-4.73745E-05	9.1090E-02		.0000E+00	,0000E+00	.000E+00	2,8929YE-05
18		-1.0587E-02	6.97057E-02	-1.0587E-02	.00000E+00	.0000E+00	,00000€	2.2169Œ-08
19		-7.53733E-05	1.41519E-01	-7.83733E-08	.00000E+00	,0000E+00	.0000E+00	4.49X 33E -0B
20	4.65377E-01	-2.40287E-02	4.64710E-01	-2.40007E-02	.00000E+00	.0000E+00	.000Œ+00	1,47582E-02
21		-1.91301E-02	1.36255E-01	-1.91301E-02	.0000E+00	.0000E+00	.0000E+00	4.332KŒ-08
22		-5.50674E-02	2.61969E-01	-5.50674E-02	.000E+00	,0000E+00	.0000E+00	8.33 3335- 03
콩		-1.28646E-01	8.39527E-01	-1.28546E-01	.000000=+000	.0000E+00	.0000E+00	2.66922E-02
24	6.2130E-01	-1.289/AE-01	6,18007E-01	-1.288/FE-01	.000000=+00	.0000E+00	.000E+00	1.96679E-02
25		-6.61Z39E-02		-6.61239E-02	.00000E+00	.0000E+00	.0000E+00	8.3100Œ-03
26	1.69994E-01	-6.11315E-02	1.68/37E-01	-6.11315E-02	.0000E+00	.0000E+00	.0000E+00	5.37092E-03
27	2.77020E-02	-1.68385E-02	2.7269XE-02	-1,68385E-02	.000000=+00	.0000E+00	.000E+00	8.73467E-04
28	2.35871E+01	6,6614/E-02		6.66139E-02	.00000E+00	.0000E+00	.0000E+00	7.48510E-01
If ine	TOD SURBLY		by group incl	uding sun for	·all groups i	n line 28		
0 grp.	fix source		in scatter	slf scatter	out scatter	absorption	Leekage	belance
1	.0000E+00	.0000E+00	.0000E+00	3,68837E-03	2,76490E-0B		-2.680WE-05	1.00001£+00
2	.0000E+00	.0000E+00	4.8289XE-04	2.566252-02	1.844E-02		-1.792E-02	1,00000E+00
2 3	.0000E+00	_00000E+00	2,60917E-0B	4.99¥8E-02	1.57825E-02		-1.330B9E-02	9.9 333 E-01
4	.0000E+00	.0000E+00	5.08749E-03	4.1997E-02	5.4379XE-03	1.0310BE-04	-4.532%1E-04	9.9 333 6E-01
Ś	.0000E+00	.00000E+00	1.07722E-02	8.15405E-02	5.15682E-03	1.5190E-04	5.663YE-03	1.0000E+00
6	.0000E+00	_0000E+00	1.85660E-02	2.34945E-01	3.21000E-0B	3.19927E-04	1.48552E-02	9. 93997E- 01
7	.0000E+00	.00000E+00	1.22417E-02	2.3515E-01	1.18181E-03	3.HHATE-04	1.0753E-02	9.9999E-01
8	.0000E+00	.0000E+00	2.1544TE-03	1.58474E-01	7.63077E-03	2.94718E-04	-5.775EE-03	1.00002E+00
9	.0000E+00	.0000E+00	7.66399E-03	1.0510BE-01	8.76150E-04	1.10829E-03	5.6797TE-03	9.999 00E- 01
10	.0000000	.0000E+00	8.77321E-04	8.54430E-02	8,47751E-04		-8.0478/E-04	9.9999E-01
10 11	.00000E+00	.0000E+00	8,47812E-04	7.6885E-02	8.65319E-04		-1.35/5ZE-03	9.9999E-01
12	.0000E+00	.000E+00	8.65325E-04	4.67052E-02	8.6875E-04		-4.22820E-05	1.0000E+00
13	.0000000	.000E+00	8.68754E-04	3.95/0 CE -02	8.0660ZE-04	6.00341E-05	2.37301E-06	9.9333E-01
14	.00000E+00	.000E+00	8.05502E-04	3.62159E-02	6.82493E-04	9.645XE-05	2.763422-05	1.0000E+00
14 15	.000000	.000E+00	7.26961E-04	2.0725/E-02	8.48221E-04		-2.0599E-04	9.9994E-01
16	.00000E+00	.000E+00	9.51757E-04	1.1043BE-02	9.5674Œ-04		-5.6654ZE-05	9.9 7736E -01
17	.00000E+00	.0000E+00	1.05252E-08	4.200/SE-05	1.0399E-03		-6.76EFE-06	9.9999E-01
18	.0000E+00	.000E+00	1.090BE-0B	3.05237E-05	9.00025E-04			9.9 333E -01
19	.000000	.00000E+00	1.0104Œ-03	7.08879E-05	1.0550E-03	4.57254E-05	-8.12521E-05	9.9 3332E -01

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.0000E+00 1,2602E-03 2,5612/E-02 1,0999E-03 1,9033E-04 -1,80267E-05 9,9996E-01
                                                   .000000=+00
                                                                                                            .0000E+00 1.4080E-08 6.3809E-08 1.53417E-03 7.0288E-05 -1.85367E-04 9.9998E-01
                                                 .000000=+00
                                                                                                             .0000E+00 1.9259E-05 1.3508E-02 1.8054E-03 1.5740E-04 -3.6595E-05 9.99994E-01
                                                   .00000E+00
22 .0000E+00 .0000E+00 1,959E+03 1,359E+02 1,359E+03 1,5740E+03 1,4740E+03 1,0000E+00 2,5750E+03 3,1778E+02 4,550E+03 7,3891E+04 -1,4474E+03 1,0000E+00 2,0000E+00 .0000E+00 3,9750E+03 1,2467E+02 3,1300E+03 4,1364E+04 3,788E+04 1,0000E+00 2,0000E+00 .0000E+00 1,6590E+03 1,2467E+03 1,2467E+03 3,1300E+03 4,1364E+04 3,788E+04 1,0000E+00 2,0000E+00 1,6590E+03 1,2467E+03 1,4670E+03 1,4670
                                                                                                             .0000E+00 2.5750E+03 4.5380E+02 3.3327E+03 6.87511E+04-1.44492E+03 1.0000E+00
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                     18 7.17207e-02 -1.05777e-02 7.0007e-02 -1.05687e-02 .00000e-00
19 1.43004e-01 -7.99861e-08 1.41731e-01 -7.89733e-05 .00000e-00
20 4.69219e-01 -2.40667e-02 4.65378e-01 -2.40287e-02 .00000e-00
21 1.33818e-01 -1.8168e-02 1.33778e-01 -1.91301e-02 .00000e-00
22 2.72111e-01 -5.51040e-02 2.66487e-01 -5.5064e-01 .00000e-00
23 8.62100e-01 -1.3000e-01 8.42744e-01 -1.2854e-01 .00000e-00
24 6.39781e-01 -6.57520e-02 2.66487e-01 -2.8948e-01 .00000e-00
25 2.77838e-01 -6.57520e-02 2.66487e-01 -6.11315e-02 .00000e-00
25 2.77838e-01 -6.10498e-02 1.6994e-01 -6.11315e-02 .00000e-00
26 1.77998e-01 -6.10498e-02 2.77020e-02 -1.6858e-02 .00000e-00
27 2.98029e-02 -1.6628e-02 2.77020e-02 -1.6858e-02 .00000e-00
28 2.35604e-01 5.8838e-02 2.3887e-00 6.66144e-02 9.8878e-01 6.66144e-02 9.8878e-01
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.0000E+00 5.8097/4E-02
                                                                                                                                                                                                                                                                                                                                                                                                      .0000E+00 1.8/8/7E-01
.0000E+00 1.3/8/5E-01
.0000E+00 5.8009/E-02
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                                                                                                                                                                                                                                                                                                                                              .0000E+00
                                                                                                                                                                                                                                                                                                                                                                                                     .0000E+00 6.26071E-05
.0000E+00 5.10713E+00
   23 2.356/e-01 5.8339E-02 2.3587E-01 6.66/4/e-02 9.8787E-05 .0000E-00 .0000E-00 5.1073E-00 1fire grop summy for zere 4 by grop including sun for all grops in line 28 0 gp. fix source fis source in scatter alf scatter at scatter absorption landage balance 1 .0000E-00 .0000E-00 5.8279E-03 7.733E-03 4.1113E-04 -8.1265E-03 9.9995E-01 2 .0000E-00 .0000E-00 4.260E-03 7.5500E-02 9.297E-02 1.0630E-03 -9.9933E-02 9.9995E-01 3 .0000E-00 .0000E-00 4.7073E-02 6.8777E-02 9.7995E-02 1.0630E-03 -9.9933E-02 9.9997E-01 4 .0000E-00 .0000E-00 4.7073E-02 4.5777E-02 1.5713E-03 3.7297E-03 -1.3152E-01 9.9997E-01 5 .0000E-00 .0000E-00 1.2633E-01 1.4635E-01 2.6665E-01 3.7697E-03 -1.3522E-01 9.9997E-01 6 .0000E-00 .0000E-00 2.7273E-01 4.5505E-01 2.5665E-01 1.4677E-05 -2.6665E-01 9.9997E-01 7 .0000E-00 .0000E-00 5.2500E-01 7.9602E-01 2.5363E-01 1.5363E-01 9.9997E-01 8 .0000E-00 .0000E-00 5.2500E-01 1.0000E-00 4.6800E-05 -1.4667E-02 9.9997E-01 0 .0000E-00 .0000E-00 7.4600E-01 9.5511E-01 7.2666E-01 9.5907E-05 1.5603E-02 9.9997E-01 10 .0000E-00 .0000E-00 7.2457E-01 8.6366E-01 4.6800E-05 -1.6677E-02 9.9998E-01 10 .0000E-00 .0000E-00 7.2457E-01 8.6366E-01 4.6800E-05 -1.6677E-02 9.9998E-01 10 .0000E-00 .0000E-00 6.9985E-01 8.6366E-01 4.5503E-01 5.9600E-04 6.5033E-02 9.9998E-01 12 .0000E-00 .0000E-00 5.9865E-01 8.6366E-01 4.5903E-01 5.9600E-04 6.5033E-02 9.9998E-01 12 .0000E-00 .0000E-00 5.9865E-01 4.1896E-01 5.9600E-04 6.5033E-02 9.9998E-01 12 .0000E-00 .0000E-00 5.9865E-01 6.4500E-01 5.9600E-04 6.5033E-02 9.9998E-01 12 .0000E-00 .0000E-00 5.9865E-01 6.4500E-01 5.9600E-01 5.9998E-01 5.9600E-01 5.9998E-01 5.99
                                                                                                           .0000000 5.586201 4.18542-01 4.7858-01 5.96108-04 6.50838-02 9.9998-01 .0000000 4.8998-01 3.7830-01 4.3852-01 8.97676-05 6.50838-02 9.9998-01 .0000000 4.8998-01 3.26816-01 3.87856-01 1.466416-08 8.06218-02 9.9998-01 .0000000 2.52858-01 1.25998-01 2.42998-01 1.25130-08 8.27416-08 9.9998-01
                                                    .00000=+00
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                                                                                                             .00000E+00 1.6756/E-01 5.4750EE-02 1.61889E-01 8.86502E-04 4.7670EE-08 9.99990E-01
                          17
                                                     .00000E+00
                                                                                                             ,0000E+00 8.630E-02 1.564E-02 8.1450E-02 4.37ZTE-04 4.740E7E-0B 1.0000E+00
                                                                                                            .0000E+00 7.70193E-02 1.2092E-02 6.6073E-02 3.6992E-04 1.0574/E-02 1.0003E+00 .0000E+00 1.26992E-01 3.61214/E-02 1.18858E-01 7.91749E-04 7.91324E-03 1.0003E+00
                           18
                                                     .00000E+00
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                                                                                                            ,0000E+00 3,5825E-01 2,55175E-01 2,86510E-01 3,26/87E-08 2,4050E-02 9,9999X-01
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21 .0000E+00 .0000E+00 1.50480E-01 4.99443E-02 1.2992E-01 1.2751E-03 1.98081E-02 1.0000E+00 2.0000E+00 2.88144E-01 1.47540E-01 2.3822E-01 2.8120E-03 5.51078E-02 9.99998E-01
 22 .00000+00 .00000+00 6.95248-01 1.473468-01 2.51258-03 5.51078-02 9.99998-01
23 .00000+00 .00000+00 6.95248-01 7.33734-01 5.51058-01 1.2098-02 1.30900-01 1.00001+00
24 .00000+00 .00000+00 4.565018-01 2.978578-01 3.85194-01 7.55478-08 6.57508-02 1.000000+00
25 .00000+00 .00000+00 3.99984-01 3.157518-01 2.91858-01 7.55478-08 6.10578-02 9.99988-01
27 .00000+00 .00000+00 3.99984-01 3.157518-01 2.91858-01 7.25478-08 6.10578-02 9.99988-01
28 .00000+00 .00000+00 9.265108-00 9.252278-00 9.26508-00 5.99488-01 7.25478-08 6.10578-02 9.99988-01
29 .00000+00 .00000+00 9.265108-00 9.252278-00 9.26508-00 5.99488-01 5.98488-02 5.99488-02 9.999578-01
0 gp. rt bdy flux rt leekage lft bdy flux lft leekage rhn rate flux rate
                                3 1,5641E+00 -3,9333E-09 1,5817C+00 1,3152E-01 4 9,7057C+01 2,1650E-08 9,8850C+01 8,72615C-02 5 1,4690E+00 -2,2769E-08 1,475E-00 1,385E-01 6 2,8169E+00 2,3769E-07 2,8277E+00 2,6662E-01 7 2,7810E+00 1,7537E-07 2,80537E+00 1,5681E-01 8 2,0538E+00 -1,2009E-07 2,0537E+00 1,4847E-02 9 1,6056E+00 -4,7214E-03 1,6014CE+00 -1,5663E-02 10 1,4669C+00 -6,0152E-08 1,4619E+00 -2,6977E-02 11 1,3517E+00 -4,2616E-08 1,34164E+00 -5,76517E-02 12 8,5199E-01 -1,9210E-08 8,4046E-01 -6,5089E-02 13,72053E-01 -1,5620E-09 4,5214E-01 -5,4625E-02 4,6657E-01 -1,5620E-08 6,5214E-01 -5,4625E-02
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                                  13 7.2075:E-01 -1.55201:E-02 7.1176:E-01 -5.2625:E-02
14 6.6667:E-01 1.0650:E-08 6.52118:E-01 -8.0213:E-02
15 3.7857:E-01 2.09122:E-08 3.78128:E-01 -8.27207:E-08
16 2.1076:E-01 1.64750:E-06 2.1076:E-01 4.7853:E-08
17 9.2752:E-02 -3.3600:E-05 9.1990:E-02 -4.7425:E-08
18 7.3652:E-02 -3.2467:E-06 7.17207:E-02 -1.05777:E-02
19 1.4626:E-01 -5.37152:E-05 1.4500:E-01 -7.9785:E-08
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.0000E+00 2.70022E+01
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1 fire grap supery for system
0 gr. fix source fiss source in scatter alf scatter al. scat
          If ine group surrery for system
                                                                       .0000e+00 1,2830e+08 4,7600e+01 5,12730e+01 3,9638e+01 8,0630e+02 1,0650e+08 9,9998e+01 0,0000e+00 1,2473e+09 2,6667e+01 2,5668e+01 2,5258e+01 8,06348e+03 2,0722e+06 1,0000e+00 0,0000e+00 1,3712e+10 9,56281e+02 3,51182e+02 9,6836e+02 5,3098e+03 -3,35600e+06 1,0000e+00 0,0000e+00 1,3712e+10 9,56281e+02 3,51182e+02 9,6836e+02 5,3098e+03 -3,35600e+06 1,0000e+00 0,0000e+00 9,8366e+11 8,5530e+02 2,8666e+02 7,3569e+02 1,2022e+02 -3,2148e+06 1,00000e+00 4,0000e+00 9,8366e+11 8,5530e+02 2,8666e+02 7,3569e+02 1,2022e+02 -3,2148e+06 1,00000e+00 4,0000e+00 4,0000e+0
                                                                          .0000E+00 1.38787E-10 1.38113E-01 6.94747E-02 1.30621E-01 7.48710E-03 -5.3799E-06 1.0000E+00
                                                                          .0000E+00 2.2569E+10 3.2559E+01 3.6502E+01 2.9962E-01 2.8537E-02 3.6112E-06 1.0000E+00 .0000E+00 3.30531E-11 1.61750E+01 8.07750E+02 1.4022E-01 2.0860E-02 -8.45319E-06 1.0000E+00
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.0000E+00 3.83259E-11 3.0560E-01 2.13487E-01 2.43719E-01 5.98741E-02 3.57357E-06 1.0000E+00 .0000E+00 3.6638E-11 7.1285E-01 1.07285E+00 5.7508/E-01 1.37859E-01 -5.71100E-07 1.0000E+00
                                                      .0000E+00 9.97377E-12 7.3542E-01 8.92745E-01 5.9527EE-01 1.43121E-01 -2.5373E-06 1.0000E+00 .0000E+00 2.91973E-12 4.81342E-01 3.57749E-01 4.01982E-01 7.95484E-02 -1.55391E-06 1.0000E+00
25 .0000E+00 2.97973E-12 4.8134ZE-01 3.57749E-01 4.0788E-01 7.9348E-02 -1.5397E-05 1.000E+00 2.0473E-12 3.7181E-01 3.5784E-01 2.9786E-01 7.238E-02 7.832ZE-06 9.9998E-01 27 .0000E+00 4.8788E-13 1.2198E-01 7.250RE-02 1.051ZE-01 2.0473E-02 2.2738E-07 1.000E+00 2.000E+00 1.000E+00 1.000E+0
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.0000=00 4.30265=00
.0000=00 3.30263=00
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.0000=00 1.0750E-02
.0000=00 1.3754E-02
.0000=00 1.3754E-02
.0000=00 9.177E-03
.0000=00 2.3247E-03
                     10 1.46401-00 -6.0523-08 1.443/78-00
11 1.351778-00 -4.26148-08 1.30199-00
12 8.51978-01 -1.92108-08 7.9348-01
13 7.20153-01 -1.562018-09 6.72608-01
14 6.66674-01 1.06868-08 5.951128-01
15 3.78573-01 2.091228-06 3.721488-01
16 2.10548-01 1.64768-06 2.07538-01
17 9.27528-02 -3.25608-06 8.873818-02
18 7.361528-02 -3.25608-06 8.873818-02
18 7.361528-01 -3.571928-06 1.359388-01
20 4.73038-01 -3.611248-06 4.527388-01
21 1.433938-01 -8.453198-06 1.265478-01
22 2.82468-01 3.573578-06 2.35968-01
23 8.88288-01 -5.711008-07 7.73338-01
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.0000E+00 1.3429E+00
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.0000=00 2,96270=01
.0000=00 9,7478=01
.0000=00 2,86270=01
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.0000E+00 2.5420E-08
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.00000+00 1.67539E-02
.00000+00 1.28783E-02
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                           23 8.89283E-01 -5.71100E-07 7.74383E-01
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.0000E+00 1.31934E+00
                           24 6.71217E-01 -2.53735E-05 5.52211E-01
                                                                                                                                                                                                                                                               .00000E+00
                                                                                                                                                                                                                                                                                                                              .00000E+00 8.61648E-02
                         5 2.56475E-01 -1.55371E-05 2.26587E-01 25 1.57675E-01 7.85225E-05 1.57675E-02 2.2763EE-07 1.74124E-02 25 2.36619E-01 -5.9658E-05 2.36678E-01
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                                                                                                                                                                                                                                                              .00000E+00
                                                                                                                                                                                                                                                              .0000E+00 2.32343E-08 4.53208E-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .0000E+00 4.90943E+01
          - elepsed time .02 min.
       Odirect access unit 9 requires 516 blocks of length 1456 for cross section weighting.

1 transport cross section weighting function
    0xre gp. 1 gp. 2 gp. 3 gp. 4 gp. 5 gp. 6 gp. 7 gp. 8
1 2.502E-03 2.603E-02 3.000E-02 1.910E-02 2.9297E-02 5.580E-02 3.780E-02 4.603E-03
2 3.602E-03 3.228E-02 4.8697E-02 2.9263E-02 4.4037E-02 6.9516E-03
3 2.9518E-03 3.220E-02 4.2697E-02 2.7785E-02 4.259E-02 8.0486E-02 4.6046E-02 5.5307E-03
4 1.0187E-03 1.2020E-02 1.6477E-02 1.097E-02 1.744VE-02 3.3891E-02 1.955E-02 1.9807E-03
                               5 1,693 E-03 1,67470E-02 2,466 E-02 1,56111E-02 2,43670E-02 4,65140E-02 2,6679E-02 3,2000E-03
    $ 1,546E-05 1,546E-02 2,556E-02 1,551TE-02 2,556E-02 1,557E-05 1,556E-05 1,5
    $ 3.5502-05 4.08-05-05 1.088-05 1.088-05 1.088-05 1.088-05 1.088-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-05 1.0802-0
      Ocore grp. 25 grp. 26 grp. 27 grp. 28
1 1.4440xE-02 1.31470E-02 3.4438/E-03 3.24351E-01
                                2 2.2225E-02 2.050BE-02 5.6604E-03 5.8684E-03
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3 2.04008-02 1.88828-02 5.19868-08 5.40978-01 4 8.29786-03 7.56768-08 1.90808-08 2.177078-01 5 1.181168-02 1.07958-02 2.814316-03 3.12146-01
                                                                                                                              240 d. see2h: beboock wilcox 15x15, 3,00xxX, 20axd/mu burn high temp
 Octre grp. 1 grp. 2 grp. 3 grp. 4 grp. 5 grp. 6 grp. 7 grp. 8 1 1.70592-01 1.25416+00 1.64765+00 1.02666+00 1.54585+00 2.58556+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.58565+00 2.
                       3 1.65402E-01 1.24755E+00 1.5720E+00 9.50752E-01 1.47870E+00 2.85529E+00 2.81946E+00 2.05474E+00
                        4 1.66978E-01 1.23116E-00 1.56517E-00 9.71662E-01 1.46693E-00 2.8222EE-00 2.7826E-00 2.05318E-00
                        5 1,6706/E-01 1,25437E+00 1,5958/E+00 9,91275E-01 1,49815E+00 2,88286E+00 2,81802E+00 2,05715E+00
 0276 gp. 9 gp. 10 gp. 11 gp. 12 gp. 13 gp. 14 gp. 15 gp. 16
1 1.5706±00 1.4775±00 1.31425±00 8.0612±01 6.0621±01 6.1246±01 3.7605±01 2.18164±01 1.3376±00 1.3376±00 8.2630±01 7.01505±01 6.37651±01 3.7762±01 2.10565±01 3.7762±01 2.10565±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±01 4.7762±0
                         4 1.60843E+00 1.4664E+00 1.35105E+00 8.5085E-01 7.1969EE-01 6.64860E-01 3.7869EE-01 2.11010E-01
                        5 1,5987E+00 1,4599E+00 1,35714E+00 8,3465E-01 7,0648E-01 6,4520E-01 3,7710E-01 2,09949E-01
2016 gp. 17 gp. 18 gp. 19 gp. 20 gp. 21 gp. 22 gp. 23 gp. 24 gp. 26 gp. 17 gp. 18 gp. 19 gp. 20 gp. 21 gp. 22 gp. 23 gp. 24 gp. 26 gp. 26 gp. 27 gp. 28 gp. 27 gp. 28 gp. 27 gp. 28 gp. 28 gp. 28 gp. 27 gp. 28 gp. 
   Ozore grp. 25 grp. 26 grp. 27
1 2.408/3E-01 1.4932E-01 2.188/1E-02
                                      2.61856E-01 1.69242E-01 2.74920E-02
                                   2.6766E-01 1.7439E-01 2.89579E-02 2.8569E-01 1.94317E-01 3.5220E-02
                        5 2.69290E-01 1.76982E-01 2.98Y87E-02
   Offux disadventage factors (zone average/cell average-flux)
    3 9.9039E-01 9.9667E-01 9.9766E-01 9.9947E-01 1.0037E-00 1.0038E-00 1.0051E-00 9.9853E-01
                       4 9.0700E-01 9.81/8E-01 9.070E-01 9.000E-01 9.7007E-01 9.7007E-01 9.7007E-01 9.7007E-01 9.000E-00 1.0000E-00 1.000E-00 1.0000E-00 1.000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.000E-00 1.0000E-00 1.000E-00 1.000E-00 1.000E-00 1.000E-00 1.000E-00 1.000E-00 1.000E-00 
   Carre gr. 9 grp. 10 grp. 11 grp. 12 grp. 13 grp. 14 grp. 15 grp. 16
1 9.5485E-01 9.5250E-01 9.5285E-01 9.685E-01 9.695E-01 9.4557E-01 9.9186E-01 9.9150E-01
                        2 9,9935E-01 9,98161E-01 9,9885E-01 9,9885E-01 9,9893E-01 9,8861E-01 9,9860E-01 9,9886E-01
                        3 1,00089E+00 9,99961E-01 1,00008E+00 1,00060E+00 1,0006E+00 1,00169E+00 1,00090E+00 1,00056E+00
                       Course orp. 17 orp. 18 orp. 19 orp. 20 orp. 21 orp. 22 orp. 23 orp. 24
1 9.797656-01 9.38746-01 9.783746-01 9.782716-01 9.782716-01 9.782716-01 9.782716-01 9.78316-01
                        2 9.9522E-01 9.86177E-01 9.9457E-01 9.9556E-01 9.8664E-01 9.8088E-01 9.8566E-01 9.7772E-01
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        1,1811/E-02 1,07995E-02 2,81/31E-03
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          3.1735ZE-02
                           1.52/6E-02
          2.1672/E-01
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library: /neutronics/scale/exe
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                                            date of execution: 02/16/96
                                            time of execution: 09:58:11
          •1q array has
0q array has
                                   1 entries.
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                                   6 entries.
            20 array has
                                   2 entries.
1 logical assignants
Orașter Library 12
working Library 17 scratch file 18
 now Library
Oproblem description
Oigr-gemetry (VI/2/3--inf mc/sleb/cyl/sphere
Oimr-number of zores or material regions
One-mixing table length
Oibl--shielded cross section edit option (V/1--no/yes)
                                                                                 70
Oibr-bridgerio factor edit editor (U/1-m/yes)

Oissept-denorif factor edit editor (U/1-m/yes)

Occurregence criterion

1,00000E-03

Ogeometry correction factor for vigner retional approximation

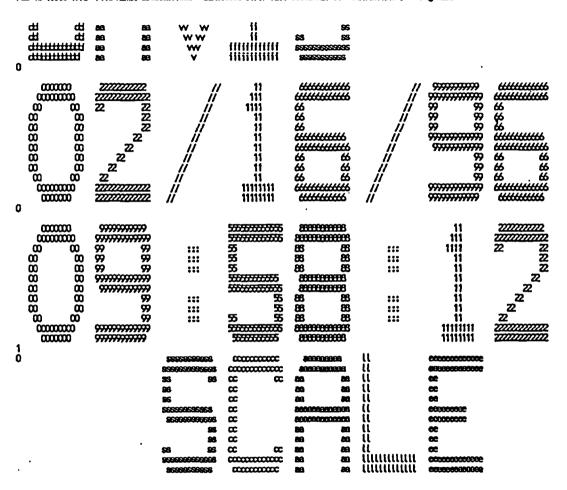
1,300E-00
           3q array has
4q array has
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                                  70 entries.
            So array has
۵
                                  70 entries.
            6q arrey has
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            7g array has
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Omixing table
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Centry mixture isotope
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18	i	40094		B11E-06		200018		
19	i	40095	6.68	494E-07		200019		
20 21	1	41094		185E-13		200020		
21	1	43099		733E-06		200021		
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222	1	45105 44101		797E-09 517E-06		20024		
2	i	44106		021E-07		200025		
ž	i	46105		B05E-07		200026		
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30	1	54131		327E-07		200030		
31	1	54152 54156		631E-05 375E-09		20031 20032		
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٠	i	\$6134		282E-08		200084		
5	i	<u> </u>		35€-07		200035		
36	i	5557		777E-06		20036		
36 37	i	56136		117E-09		200037		
38	1	57139		760E-06		200038		
39	1	59141		ORYE-OR		200039		
40	1	59143		567E-07		200040		
41	1	58144		205E-06		200041		
42	1	60143 60145	122	714E-06 105E-06		200042 200043		
43	i	61147		173E-07		20004		
3394444444	i	61148		75E-09		200045		
46	i	60147	4.43	675E-08		2000/6		
46 47	i	62147	4.54	726E-08		200047		
48	1	62149	2.27	WSE-OB		2000/8		
49	1	62150		241E-07		2000/9		
50	1	62151		387E-08		200050 200051		
51	1	62152 64155		696E-07		20052		
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22	i	9280		622 E -06		200064		
É	i	94241		3622-07	•	200065		
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2.96100E+00 9.75000E+02 2.32853E-01
          8067 (costions of 20000) available are required to make a new master containing the self-shielded values
One nuclides in your problem have burdered factor data***Durami will copy from logical 12 to logical 1 copy 999 1/v cross sectio from log 12 to log 1 burderedo trigger 0 copy 1001 hydrogen from log 12 to log 18 burderedo trigger 0 copy 1001 hydrogen from log 18 to log 1 burderedo trigger 0 copy 1001 hydrogen from log 18 to log 1 burderedo trigger 0 copy 1001 hydrogen from log 18 to log 1 burderedo trigger 0 copy 5010 b-10 1273 218mgs from log 12 to log 18 burderedo trigger 0 copy 5010 b-10 1273 218mgs from log 12 to log 18 burderedo trigger 0
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5010 b-10 1273 218rpp from log 18 to log 1
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5011 boror-11 from log 12 to log 18
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from log 18 to log
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HARRERERER
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                                                     from lag 12 to lag 18
                           zircalloy
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                40002
                                                     from lag 18 to lag 1
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from Log 12 to Log
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                           8D-95
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               44101
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                                                     from lag 12 to lag
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                                                    from log 12 to log
from log 12 to log
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               4510B
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               54131
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                                                                                            bondererlos trigger 0
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               60143
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                                                    from log 12 to log
from log 12 to log
from log 12 to log
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               60147
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 Octpy
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                                                     from log 12 to log
                                                                                            bondererico trigger 0
                                                                                            bondanerico trigger 0
                           an-149
                                                     from log 12 to log
 Octoby
                                                     from log 12 to log 1
from log 12 to log 1
                           sa-150
                                                                                            bondarerico trigger 0
               £250
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                                                                                           bondererko trigger 0
                           sm-151
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0cpy 9225 ura 0cpy 9226 u-24 0cpy 9228 ura 0cpy 9228 pr2 0cpy 9428 pr2 0cpy 9428 ptu 0cpy 9420 ptu	153 from Lo 154 from Lo 155 from Lo 155 from Lo 155 from Lo 156 from Lo 156 from Lo 157 from Lo 158 from Lo 158 from Lo 158 from Lo 158 1050 sigo from Lo	# 12 to log # 12 to log	1 borderello trigger 0		
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hydrogen			undeted 10/13/89	id	202
hydrogen	erdf/b-iv mat 125		updated 10/13/89	id	200057
b-10 1273 218	up 0/2375 p-3 283k	•	•	id	203
6-10 1273 21 8	up 0/2375 p-3 293k			id	200058
boran-11	endi/b-iv mat 116		updated 10/13/89	id	
baarli	endi/b-iv mat 116		updated 10/13/89	id	200059 201
aygen ló	erdi/b-iv mat 127		updated 10/13/89 updated 10/13/89	id id	200010
aygen-16 aygen-16	endi/b-iv mat 12/ endi/b-iv mat 12/		uzdeted 10/13/89	id	200011
K-85	Ht=102,105,105,10	5.106.107	uppleted 10/13/89	ĭď	200012
£-85	est= 102	٠,١٠٠,١٠٠	4-2	id	200013
ar~90	at=102		updated 10/13/89	id	200014
y-89	mt=102		updated 10/13/89	id	200015
27-95	int= 102			id	200017
25-04	mt=102		updated 10/13/89	id	200018
2r-95	mt=102 eruif/b-iv met 128	ν.	updated 10/13/89 updated 10/13/89	id id	200019 205
zircalloy zircalloy	endif/b-iv met 128		underted 10/13/89	ŭ	20056
rb-%	MC=102	~	updated 10/13/89	id	200020
no-95	mt=102		uzzbood 10/13/89	id	200016
tc-99	mt=102		undsted 10/13/89	id	200021
ru-101	act=102		updated 10/13/89	id	200024
ru-106	ht=102		updated 10/13/89	id	<u>2002</u>
rh-103	mt=102		ujzdated 10/13/89	id	200022 200025
nh-105	nt= 102 nt=102		uzdated 10/13/89	id id	20026
pd-105 pd-108	#L=102 #E=102		updeted 10/13/89	凝	200027
silver-109	ercli/b-iv met 113	9	uzdeted 10/13/89	id	20012B
sb-124	st=102		undated 10/13/89	id	200029
xe-131	nt=102,105,104,10		updated 10/13/89	id	200030
xe-132	at-102,105,104,10		updated 10/13/89	id	200031
xeron-135	endif/b-iv mat 129	•	updated 10/13/89	id	200032

		•	
xe-136	mt= 102, 103, 104, 10	5 107	id 200033
cesiun-133	endf/b-iv met 1141	ucdated 10/13/89	id 200060
cs-134	st=102	updated 10/13/89	id 200034
cs-135	mt= 102	4	id 200035
cs-137	nt=102	upotated 10/13/89	id 200036
ba-136	pt=102	updated 10/13/89	id 200037
la-139	rt=102	updated 10/13/89	ld 200038
ce-144	nt= 102		id 200041
pr-141	mt=102,103,104,105,106,10	7 updated 10/13/89	id 200039
pr-143	mt=102	unisted 10/13/89	id 20000
rd: 1/2	##=102	undated 10/13/89	id 200042 id 200043
nd-145 nd-147	nt=102 nt=102	updated 10/13/89 updated 10/13/89	id 200%
pa-147	nt=102	updated 10/13/89	id 20004
pa-148	mt= 102	draw w sta	id 2000/5
SII-147	endi/b-v fission product	updated 10/13/89	id 200047
san-149	mt=102,108,107	uzdeted 10/13/89	id 200048
san-150	mt=102	uzdated 10/13/89	id 200049
sm-151 .	mt=102,103,104,105,106,10	7 undsted 10/13/89	id 200050
sm-152	nt=102,108,104,105,106,10	7 updated 10/13/89	id 200051
er 53	mt=102,103,104,105,105,10	77 updated 10/13/89	id 2000 <u>5</u> 3
eu-154	mt=102,103,104,105,106,10		id 200054
eu <u>155</u>	nt=102,108,104,105,106,10		id 20005
94.55	at=102	updated 10/13/89	id 200052
	go-5+4 neuklacs p-3 298k f-1	/e-#(1.45)	id 20007
urenium 235	endi/b-iv net 1261	updated 10/13/89	id 20006 id 20008
uranium 238	go=5+4 nauklacs p-3 258k f-1 endf/b-ivmet 1262	updated 10/13/89	id 20009
	7 endf/b-iv met 1263	ucdataci 10/13/89	id 2000ši
	igo-64 navlacs p-3 28k f-		id 200062
	9 endi/o-iv met 1264	Updated 10/13/89	id 200053
plutanium 24		undated 10/13/89	id 200064
plutonium 24		updated 10/13/89	id 200085
	2 endf/b-iv met 1161	ujudated 10/13/89	id 2000 <u>66</u>
	igp54 naklas 2larp p3		ld 200067
	18 gp wt f-1/em 090376 p3 2		id 2000 <u>88</u>
arium 244	endi/b-iv mat 1162		id 200069
0 tabe caby n	sed 0 1/o/s, and took	.00 secords	u u u
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41 41 88			
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मं संब	BODGOODOOO W W	11 200000000000000000000000000000000000	



program verification information

```
programs c0c002
                                                 creation date: 04/27/95
                                                         library: /neutronics/scale/eve
                                            this is not a scale configuration controlled code
                                                         jobreme: devis
                                            date of executions 02/16/96
                                            time of execution: 09:58:12
 0
           -1q array has
                                  1 entries.
                                4 entries.
            Oci array has
0 lq array has 12 entries.
0 select 5 nuclides from the master library on logical 1
65 nuclides from the working library on logical 3
0 nuclides from the working library on logical 0
to create the new working library on logical 4
1 rescrence calculations have been requested
0 output option for saps formatted cross section data
Othe storage allocated for this case is 200000 words
           20 array has
30 array has
40 array has
                                70 entries.
                                 15 entries.
                                  5 entries.
O general information concerning cross section library tape identification number 4349
     number of nuclides on tape
                                                              65
     ruster of neutron energy groups
                                                              Z
      first themal reutron energy group
                                                              15
     rusber of game energy groups
0 direct access unit number 9 requires 72 blocks of length 1484 words

    xsdm tape 4321

                                scale 4.2 - 27 group neutron turnup literary
besed on end-b version 4 data with end-b version 5 fission products
                                        compiled for mc
                                                                  1/27/89
                                            last updated
                                                                  9/16/93
                                               Linipetrie - and
 - work tape 4349
 xschm weighted tape--parent case entitled-- 240 d, see2h: beboock wilcox 15x15,
   3.00 dt. 20p.d/mtu burn high temp
 O rucifoles from xechn tape
                                                                                                                    202 203 204
203 204
                                 endf/b-iv set 1269/thres1002
              hydrogen
                                                                         updated 10/13/89
             b-10 12/3 218mp 0423/5 p-3 25%k
                                 endf/b-fv mat 1160
                                                                         updated 10/13/89
              baran-11
```

4	aygan 16	endf/b-iv ant 1276	updated 10/13/89	201
5	zircalloy	endf/b-iv mat 1284	updated 10/13/89	205
	es from work te		57	999
6 7	lydrogen	ions normalized to 1.0 at 0.02 endi/b-iv met 1269/thmm1002	updeted 10/13/89	1001
8		p 042375 p-3 269k	quotar (q tato)	5010
9	boron-11	erdf/b-iv met 1160	uzdated 10/13/89	5011
10	avgen-16	erchi/b-iv met 1276	updated 10/13/89	8016
11	avygen-16	endf/b-lv mat 1276	updated 10/13/89	6
12 13 14 15 16 17	kr-83	mt=102,103,103,105,106,107	ujudeted 10/13/89	36083
13	β Σ- 2 β	mt= 102		3605
14	sr- 2 0	mt=102	updated 10/13/89	38090 39089
D 44	31~83 31~83	mt=102 mt= 102	updated 10/13/89	400 7 5
17	27-94	mt=102	updated 10/13/89	40094
18	27-85	mt=102	undeted 10/13/89	40095
19	zircalloy	endf/b-iv set 1284	undsted 10/13/89	40302
20	rb-%	mt=102	updated 10/13/89	41094
21	8D-95	mt=102	updated 10/13/89	42095
22	tc -99	#£=102	updated 10/13/89	43099
23	ru-101	mt=102	updated 10/13/89	44101
24	ru-106	mt=102	updated 10/13/89	44105 /5107
2	rh-103	at=102	updated 10/13/89	45103 45105
20 27	nh-105 pd-105	nt= 102 nt=102	uzdeted 10/13/89	46105
28	p±-108	nt=102	updated 10/13/89	4610B
29	silver-109	erdi/b-iv mat 1139	updated 10/13/89	47109
30	sb-124	mt=102	updated 10/13/89	51124
31	xe-131	mt=102,108,104,105,106	updated 10/13/89	54131
32	x = -132	mt=102,108,104,105,105	updated 10/13/89	54132
33	ж ага: 135	erce/b-iv met 12%	_updated 10/13/89	54135
34	же-136	at= 102, 108, 104, 105,	107	54136
30	cesiun-133	endf/b-iv mit 1141	updated 10/13/89	5503 55134
20	cs-134 cs-135	mt=102 mt= 102	updated 10/13/89	55135
7 4	CS-137	mt=102	uzdsted 10/13/89	\$357
30	ba-136	mt=102	updated 10/13/89	56136
40	la-139	mt=102	updated 10/13/89	57139
41	ce-144	mt= 102	• • • • • • • • • • • • • • • • • • • •	58144
42	p~141	mt=102,105,104,105,106,107	updated 10/13/89	59141
43	p-143	nt=102	updated 10/13/89	59143 4017
44 /E	nd-143	mt=102	updated 10/13/89 updated 10/13/89	60143 60145
40	nd-145 nd-147	nt×102 nt×102	updated 10/13/89	60147
ž	III: 147	mt=102	urdeted 10/13/89	61147
7 8	cm-148	nt= 102	4	61148
Ű)	837-147	endf/b-v fission product	updated 10/13/89	62147
50	an 149	nt=102,103,107	updated 10/13/89	62149
<u>51</u>	sn: 150	nt=102	updated 10/13/89	62150
모	an-151	mt=102,103,104,105,106,107	updated 10/13/89	62151
KNNKKRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRR	SR 152	mt=102,103,104,105,106,107	updated 10/13/89	813 813
걅	er 53	mt=102,103,104,105,105,107	updated 10/13/89 updated 10/13/89	ଷ୍ଟ
₽ ¥	೯೩ <u>१</u> 2%	mt=102,103,104,105,106,107 mt=102,103,104,105,106,107	undsted 10/13/89	815
Š	od-155	#E=102	updated 10/13/89	415
58	u-234 1043 sig	p-54 maxtacs p-3 295k f-1/en	π(1. 4 5)	92234
59	uranium 235	endi/to-iv met 1261	updated 10/13/89	9225
60		0-5+4 naklacs p-3 255k f-1/er	x(1.+5)	92236
61	uranium 238	endf/b-ly mat 1282	updated 10/13/89	92298 93237
62	repturatua-25/	endf/to-iv mat 1263	updated 10/13/89	KYLF

```
94238
         pu-238 1050 sign=5+4 resultacs p-3 253k f-1/e-n(1,+5)
                                                           undeted 10/13/89
                                                                                            9(23)
          plutonium-239 erolf/b-iv mat 1264
          plutarium-240 erdf/b-iv met 1265
plutarium-241 erdf/b-iv met 1266
plutarium-242 erdf/b-iv met 1161
                                                                                            9220
                                                           urdsted 10/13/89
                                                           undsted 10/13/89
                                                                                            9241
                                                           underted 10/13/89
                                                                                            9222
                                                                                            95241
          an-241 1056 sign-544 newlacs 218rgp p-3 288k
                                                                                            952/3
          an-243 1057 218 go wt f-1/e-m 090576 p3 295k
                          entito-iv net 1162
                                                           underted 10/13/89
                                                                                            96244
          curium 244
0 hydragen
                 endf/b-iv met 1269/thrm1002 updated 10/13/89
                                                                                           temperature: 607.60
                                                                                            550.00 was selected.
                               thermal scattering matrix number 2 at a temperature of
05-10 1273 218mp 042375 p-3 258k
                                                                                   203
                                                                                           tesperatures 607.60
                                                                                            50.00 ME selected.
                               thermal scattering matrix runber 2 at a temperature of
                                                 updated 10/13/89
                                                                                   204
                                                                                           temperature= 607.60
0 baran-11
                 erdf/b-iv met 1160
                                                                                            550.00 was selected.
                               thermal scattering matrix number 2 at a temperature of
                                                 updated 10/13/89
                                                                                           temperature= 607.60
0 avgen-16
                 ertif/b-iv met 1276
                                                                                   201
                                                                                           temperatures 650.00
                                                                                   205
0 zircallov
                 endf/b-iv met 1284
                                                 updated 10/13/89
Orescrence data for this ruclide
                                                      temperature(kelvin)
                                                                                 = 650,000
Ones runber (a)
                                                                                = 4.255602E-02
Opotential scatter signa =
                                6.35
                                                      lumped ruclear density
                          =
                                1.079
                                                      lump dimension (a-bar)
                                                                                = 6.7309999E-01
Ospin factor (g)
Dirner radius
                          = 6.32 \times 6000 = -01
                                                      dercoff correction (c)
                                                                                = 1.6905907E-01
Othe absorber will be treated by the northern integral method.
Othis rescreme material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.00000
                              res fiss
Grap
              ada aen
                                               res acat
          -1.15675ZE-03
                             .00000E+00
                                           -7.806BE-01
          -4.62577E-02
                             .00000F+00
                                           -2.0752/0E+00
  10
          -5.962250E-02
                             .0000000E+00
                                           -1.35198/E+00
          -1.76167Æ-01
                             .0000000=+00
                                           -7.350731E-01
  11
Opicess resonance integrals
                   resolved
Oderation
                  2.92X02E-01
fission
                   -00000E+00

    elaced time

                   .00 min.
                   .02 min.
  elacced time
      this xsdm working tape was created 02/16/96 at 09:58:12
      the title of the parent case is as follows
     reschi weighted tape-parent case entitled - 240 d. see2h: beboock willow 15x15.
      3.00xX, 20p.cl/titu burn high temp
                                                                                                    70
                                               8670
                                                             number of nuclides
          tace id
          number of neutron groups
                                                27
                                                             number of genma groups
                                                 15
          first themal group
                                                             lagical unit
                                         table of contents
       hydrogen encir/o-19 max b-10 1273 218 gp 042375 p-3 253k
hydrog-11 encir/o-19 mat 1160
                        erclf/b-ly met 1269/thres1002
                                                        undeted 10/13/89
                                                                                                   RHAAHRE
                                                                                           ちでなななななななななななななななな
                                                         updated 10/13/89
                        endf/b-iv mat 1276
                                                         updated 10/13/89
         avgen-16
                        erchi/b-iv met 1284
                                                         ucdated 10/13/89
         zircallor
        1/v cross sections normalized to 1.0 at 0.023 ev
        haraen
                        endi/b-iv net 1269/thm1002
                                                        undeted 10/13/89
       b-10 1273 218-pp 042375 p-3 293k
boron-11 eroi/b-jv mst 1160
                                                                                                   5010
                                                         updated 10/13/89
                                                                                                   5011
                                                                                                   8016
         avgen-16
                         endf/b-iv met 1276
                                                         undered 10/13/89
        avgar-16
kr-83
                         endif/b-iv met 1276
                                                         underted 10/13/89
                                                                                                      6
                        nt=102,103,103,105,105,107
nt= 102
                                                                                                  36083
                                                         undated 10/13/89
                                                                                                  36085
         kr-85
                        mt=102
                                                                                                  38090
         Q-12
                                                         undeted 10/13/89
         y-89
                        mt=102
                                                         updated 10/13/89
                                                                                                  39089
                           Int= 102
                                                                                                  40075
         zr-95
```

			•					
	· 21-54	nt=102		ated 10/13		id	40094	
	27-95	nt=102		steed 10/13		id	40075	
	zircalloy	endf/b-iv mat 1284		sted 10/13 sted 10/13		id D	40802 41094	
	nb-95	nt=102 nt=102		ecad 10/13		ki	42095	
	tc-99	nt=102		Bood 10/13		id	43099	
	ru-101	st=102		eced 10/13		id	44101	
	ru-106	at=102		sted 10/13		id	44106	
	rh-103	mt=102	ųid	eted 10/13	/89	id	4510B	
	rh-105	mt= 102			~~	id	45105	
	bt-102	mt=102 100		eted 10/13 eted 10/13		id id	46105 46108	
	p::108 silver-109	mt=102 erclf/b-iv met 1139		ected 10/13		id	47109	
	sb-124	mt=102		aced 10/13		id	51124	
	xe-131	nt=102,108,104,105,		sted 10/13		id	54131	
	xe-132	mt=102,105,104,105,		aced 10/13		id	54132	
	xeron-135	and the iveral 1294		bted 10/13	/89	id	54135	
	xe-136	mt= 102, 105, 1	04 , 1 05 , 1 07			id	54136	
	cesium III	endf/b-iv mat 1141		sted 10/13		įd	55133	
	CS-134	nt=102 nt= 102	ųю	ated 10/13	/ 09	id	55134 55135	
	cs-135 cs-137	mt=102	und	ated 10/13	/89	ŭ	55137	
	ba-136	mt=102		sted 10/13		id	56136	
	la-139	mt=102		ated 10/13		id	57139	
	ce-144	nt= 102				įd	58144	
	pr-141	mt=102,105,104,105,	106,107 upd	scad 10/13		id	59141	
	pr-143	mt=102		eted 10/13		id id	59143 60143	
	int-143 not-145	811=102 811=102		sted 10/13 sted 10/13		id	60145	
	nd-147	at×102		ececi 10/13		ĩď	60147	
	PR-147	st=102		sted 10/13		id	61147	
	pm-148	pt= 102	•		, ==	id	61148	
	sor 147	endf/b-v fission pro		sted 10/13		id	62147	
	SR-149	mt=102,103,107		nted 10/13		id	62149	
	807 150 151	mt=102 mt=102,105,104,105,1		sted 10/13 sted 10/13		id	62150 62151	
	907-151 907-152	mt=102,105,104,105,	105,107 upo			id	62152	
	er. 153	nt=102,105,104,105,		tod 10/13		id	ស៊ីទើ	
	er 54	mt=102,105,104,105,		sted 10/13		iä	63154	
	eu-155	mt=102,105,104,105,	105,107 uzd	eted 10/13	/89	id	ଷୀଞ୍ଚ	
	gd-155	#£≥102		sted 10/13	/89	id	64155	
		0-514 resideds p-3 22	x t-Ven(1.45)	600	id id	92234 92236	
	uraniun-255	endf/b-iv mat 1261 p=5+4 ms.klacs p-3 29;		eted 10/13	/OV	id	92236	
	uranium-238		und	, etad 10/13	/89	ĭd	92238	
		erdi/to-iv seet 1263		sted 10/13		id	95237	
	pu-253 1050 si	99-544 newlacs p-3 2	Zk f•1/e x(1.+)	5)		1	94238	
		endiforive set 1264		sted 10/13		id	9/239	
		endi/b-iv mat 1265		sted 10/13		1 0	9220	
		endiforivent 1266 endiforivent 1161		sted 10/13 sted 10/13		id	94241 94242	
	an-241 1054 ei	go 54 newdacs 218rg	10-3 20% U		, Car	ŭ	95341	
	an-2/3 1/57 21	8 gp at f-1/em 09057	6 25 25 k			id	9523	
	curium 24	erof/b-iv mat 1162	ن بط	sted 10/13	<i>1</i> 89	id	96244	
Ò	tabs cdby no	ed 0 i/o's, and						
1		esesses dilitili				HHHHH		1000
	XX XX \$98	esseeses diilitiii Se dii	ed ir			muun		
	, , , , , , , , , , , , , , , , , , ,	25 43	# #F	-		PP PP	to want	
	XX 86	ä	a ii	1. U		æ		

HED ID IULIO IND FILE	eie: Steuti.ut ashow	m-011 11-000 juniz 1	ET OF AFFACENT TO	9
XXX XX XX XX XX XX XX XX SS XX XX SSSSSS	7 th the sesses at 1 th 1	m mmmmm m n r m n r m n r m n r	m m minimim m m p mm p mm p mm p	ETTIN
dittititititi anana di di an di di an di di an di di an	89 W W 80000000 W W 1 89 W W W 800000000 W W 800000000 W W 800000000		10055559 10055555 105 1005555 105 105 105 105 10	·
	777772 7777772 72 72 72 72 72 72 727772	111		97777777777777777777777777777777777777
	99 ::: 55 99 ::: 55 99 ::: 55 99 ::: 55 99 ::: 59 99 ::: 59	55 88 55 88 57 88 57 88 57 88 57 88 57 88 57 88		
	\$559699999999 C	CC CC BROSEN CC BROSEN	annon	60000000000000000000000000000000000000

IIIIIIIIIIII ecoccoccocc Illillillill coccoccoccce 200000000000 88

```
program verification information
                                                  code system: scale version: 4.2
                                               program c0c001
                                         creation date: 04/27/95
                                               library: /mutronics/scale/eve
                                    this is not a scale configuration controlled code
                                               ideneme: devis
                                    date of execution: 02/16/96
                                    time of executions 09:58:14
                          240 d, second part of ses2n pass to make library
                            1 entries.
                            11 extrics.
                            To entries.
                            10 entries.
                            12 entries.
                            9 entries.
0 5g array has 12 entries.
Odirect access unit 9 requires 12 blocks of Length 704 for cross section mixing.
1 240 d. second part of seein pass to make library
Openeral problem description data block
                                   general problem data
 ige 1/2/3 = plane/cylinder/sphere
izm runber of zones
                                                       isn quadrature order
                                                      fact order of scattering
fevt 0/1/2/3/4/5/6-c/k/althe/c/z/r/h
im inner iteration maximum
     number of special intervals
                                                                                                  30,00
     Q/1/2/3 = vacua/refl/per/shite
                                                       ion outer iteration maximum
 ibr right boundary condition
                                                       iclc -1/Q/n--flat res/sr/opt
 mox runter of mixtures
                                            70 27
                                                       ith Q/1 = forward/adjoint
                                                                                                   Ō
 ms mixing table length
 ign runber of energy groups
                                                       iflu not used(always world)
```

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-1q array has

Oci array has

1q array has 2q array has

3q array has 4q array has

```
iprt -2/-1/0/mmixture xsec print idl 0/1/2/3-no/prt nd/pch n/both
me number of neutron groups
                                                                                            -2
                                                                                            14
non number of gamma groups
ifty runber of first thermal group
                                         15
                                                    ight -1/0/1=none/fine/all bal. prt
                                                                                             ٥
                                  special options
                                                   ign 0/1/2 diff. coef. parent
ifg 0/1 = none/heighting calculation
iqu volumetric sources (O/THTO/Yes)
                                                    idfm 0/1 = none/density factors 38*
                                                   isz 0/n = none/n activities by zone
ipm boundary sources (O/naro/yes)
ifn 0/1/2 = input 33*/34*/Lee last
                                                   iai O/legure/activities by interval
                                          14
                                                   ifct 0/1=ro/yes upscatter scaling
itus maximum time (minutes)
                                                    ipyt 0/1/2-rp/k/altha parametric srth
idt1 0/1/2/3-my/xsect/srce/flux--aut
                                                   isen cuter iteration acceleration
isk broad group fluxes
ibln activity data unit
                                                   ritad band rebala parameter
jtkl Q1/2 buckling geometry
                                    weighting data (ifg=1)
                                                   ihtf total xsect pen in brd go tables
rasif pen g-g or file number
ican -1/0/1=cell/zone/region weight
ignif number of broad groups
to 0/10/20/30/40 0/c/e/ac/a
                                                   rust table length or max order
                                          ٥
                                                                                             6
                                                   mean extra 1-d x-sect positions
    -2/-1/0/magted assect print
ĺΦ
     -1/n anish xsect print
                                  floating point parameters
                                1.0000E-04
                                                        cyl/pla ht for buckling
                                                                                     .0000E+00
ers overall convergence
                                                        plane depth for buckling 2,00000=102
                                1.0000E-04
ptc point convergence
                                                         void streaming correction .0000E+00
and romalization factor
                                1.0000E+00
                                                   VSC
                                                                                   1.00000=00
                                                         ipyt=1/2--k/alpha
                                  .000E+00
ev eigenvolue guess
                                                   eqt ev charge eps for search 1.0000E-03
orpa new param and for search 7.5000E-01
                                  .000E+00
eva eigenvalue modifier
bf buckling factor=1.420892
                                1,420B9E+00
                                  2611 locations for mixing
    this case will require
    this case has been allocated 200000 locations
                        240 d, second part of see2h pass to make library
70 entries.
       Og array has
                         70 entries.
       14c array has
       To array has
                          70 entries.
                                      data block 2 (mixing table, etc.)
     ruct foles
                                                            mixing table
                                                                                                         extra
                      CCC:
                  identification
                                                                                                      xsect id's
     on tape
202
                                                 mixture
                                                           component
                                                                          atom density
                                                                          2.07710E-02
                                                                201
                                                               RRAH
          233
                                                                          4.19420E-02
          200
                                                                          3.855E-06
                                                                          1.5489E-05
          25
                                                                          4.2515E-02
                                                              92235
                                                                          1.970235-04
                                                              92234
                                                                          1.7358E-05
         1001
         5010
                                                              92236
                                                                          6.E541EE-05
                                                              92793
                                                                          7.278/dE-03
         5011
                                                               80%
                                                                          1.50611E-02
   10
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   1123456
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       3/083
                                                                          1.49789E-07
        36085
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                                                                          7.24877E-08
                                                              38090
                                                                          1.622228-06
        38090
                                                              3000
                                                                          9.67797E-07
        39089
        40075
40094
                                                              42075
                                                                          8.853XE-07
                                                              40025
                                                                          1.2116E-06
   17
        40075
                                                              4000%
                                                                          1.89811E-06
   18
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   19
        40302
                                                              41074
                                                                          6.3718E-13
        41094
   മ
                                                              43077
45103
   21
        42075
                                                                          1.78739E-06
                                                                          7.74209E-07
        43099
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160	Ю	טאנו שיטו	rite mane. o.	ACUL! (UL)	DEPARTURE OF IT	wiz	ILT 01	MIMAN	Latt 1	Tugo ETT
	23	44101			1	45105	4.7079			
	<u> 34</u>	44106			1	44101	1.5651			
	2	4510B			1	44106	2.1102	1E-W 45-07		
	<u>&</u>	45105 46105				46105 4610B	4.3980 8.0959			
	Z Z 2 S	4610B			i	47109	5.657			
	æ	47109			i	51124	1.5853			
	30	51124			i	54131	8.2252			•
	31	54131			i	54132	1.3463			
	REFERENCES	54132			1	5415	2,1537			
	33	54135			1	54136	2.98/			
	<u>34</u>	54136			1	55134	2.6928			
	35	25133			1	ट्यद	9.25/3			
	\$	55134			1	55137 56136	1,8877 5,5111			
	32 22	55135 55137			i	57U9	1.8876			
	₩.	56136			i	59141	1.3908			
	40	57139			i	59143	1.336			
	41	58144			i	58144	1,2020			
	42	59141			1	60143	1.5371			
	43	59143			1	601/5	1.1410			
	44	60143			1	61147	5.3917			
	45	60145			1	61148	1.4379			
	46 47	60147			i	60147 62147	4.4367 4.5472	XE-100 KE-100		
	48	61147 61148			i	62149	2.274			
	49	62147			i	62150	3.2724			
	ŠÓ	62149			i	62150 62151	7.3738			
	SUNDARROLD	62150			1	62152	1.5169			
	52	62151			1	64155	1,4772			
	33	62152			1	ଷ୍ଟାୟ	6.6931			
	<u>×</u>	ଷ୍ଟାୟ			1	Ø154	5.203			
	20	ଣୀ% ଶୀର			1	63155 40802	1.0538 4.4268			
	쫎	641 3 5			i	1001	2.3063			
	38	92234			i	5070	2.0978			
	5 7	9225			i	5011	8.5167			
	80	92236			1	55133	1.9356	0E-06		
	61	92238			1	93237	2.0358			
	62	95237			1	94238	7.9821			
	Ø	94238			1	94239	1,446			
	64	94239 94240			1	94240 94241	1.0762	2E-00		
	8	94241			i	9202	6.8341	Œ-00		
	ã	92/2			i	95241	2.0009	(E-07)		
	æ	95241			i	95243	1.3853			
	8	95243			1	96244	3.0221			
	70	96244			1	999	3.3075	3€-21		
- (elap	ed time	.00 min.							
Ŏ	ΧZ		swill be used							
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ŏ		36q array		mes. tries.						
ŏ		40c array		ries.						
ŏ		47g array								
Ó		51q array	tes 27 est	ries.						
1		•	240 d, s		feedh pees to	make librar	y			
_				an Brarb bau				_		lada
0	Ф	portpules	lethergy boundaries	weighted velocities	broad go numbers	calc type	grau		right albadb	, left albedo
		WHITE IS		46.f00 f f f	: 141111A	· <i>~</i> ~	-	_		

160 10 10:00 1300 1	ILE MOIE! SY	ener.ue. B		11-020 0012.1	ET UI AIIA	urun I -	rage ov
1 2.00000-07 2 6.55/000-06 3 3.00000-06 5 1.40000-06 6 9.00000-06 7 4.00000-06 8 1.00000-06 10 5.00000-01 11 5.50000-01 12 1.00000-01 14 1.00000-01 15 3.059500 16 1.759500 17 1.259500 17 1.259500 18 1.1259500 19 1.00000-01 22 3.25000-01 23 2.25000-01 24 3.00000-01 25 2.25000-01 26 3.00000-02 27 1.00000-02 28 1.00000-05 1 0 mixture 1 3 3	-6.93147E-01 4.40987E-00 1.2097E-00 1.2097E-00 1.2097E-00 1.2097E-00 3.2189E-00 4.60517E-00 4.60517E-01 1.2016E-01 1.7024E-01 1.7024E-01 1.7024E-01 1.7024E-01 1.7024E-01 2.7023E-01	2.88/3/k-69 2.12/216-09 1.76/36-09 1.76/36-09 1.46556-09 1.46556-09 1.46556-09 1.46556-09 1.15526-08 1.15526-08 1.15526-08 1.15526-08 1.20/36-07 1.20/36-07 1.20/36-06 1.30/36-0		seights	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 22 1 22 23 25 26 27 14 charter condinections 2.7500 - 01 - 2.7500 - 01	1.000000000000000000000000000000000000	
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4 -6.0419E-01 4.52016E-01 3.16379E-01 -8.04439E-01 -1.7456/E-01
    5 -5.58410E-01 4.52016E-01 2.25714E-01 -7.43201E-01 -6.68028E-02
    6 -2.31301E-01 4.52016E-01 -2.25713E-01 -3.0784/E-01 1.61276E-01
     7 2.31301E-01 4.52016E-01 -2.25713E-01 3.0784E-01 -1.61276E-01
    8 5.58410E-01 4.52016E-01 2.25713E-01 7.43201E-01 6.68029E-02
    9 -8.50774E-01 -8.5725E-02 6.263E-01 -1.9855E-01 -4.8655E-01
   10 -8.2178/E-01 -8.5725E-02 5.4285E-01 -1.9169/E-01 -3.442/5E-01
    11 -6.01500E-01 -8.57Z50E-02
                                  .00000E+00 -1,40830E-01 3.4424E-01
    12 -2.20196E-01 -8.57Z5EE-02 -5.42863E-01 -5.13643E-02 3.44265E-01
    13 2.2019/E-01 -8.57/25/E-02 -5.4286/E-01 5.136/3/E-02 -3.4426/SE-01
    14 6.015855-01 -8.572555-02
                                   .000<del>-3</del>00000.
                                               1,40830E-01 -3.44249E-01
    15 8.2178/E-01 -8.5725E-02 5.428/E-01 1.9169/E-01 3.442/SE-01
    16 -9.83052E-01 -4.49529E-01 8.34995E-01 5.00709E-01 -7.51005E-01
    17 -9.64143E-01 -4.4952EE-01
                                 7.73181E-01 4.91083E-01 -6.2433E-01
                                 3.2082E-01 4.16520E-01 1.4651/E-01
    18 -8.17361E-01 -4.47528E-01
   19 -5.46143-01 -4.49528-01 -3.20262-01 2.78174-01 7.36573-01 20 -1.917802-01 -4.49528-01 -7.731812-01 9.78824-02 4.17282-01
    21 1.91780E-01 -4.47528E-01 -7.73181E-01 -9.76824E-02 -4.17256E-01
    22 5.46K/3E-01 -4.49528E-01 -3.20262E-01 -2.78176E-01 -7.36575E-01
       8.1735'E-01 -4.49528E-01 3.20262E-01 -4.16320E-01 -1.46514E-01
    34 9.64 K3E-01 -4.47528E-01 7.73181E-01 -4.91083E-01 6.2438E-01
                                                                                       ractius mod
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                      mid pts
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1 int redii
                                  zone no.
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                                               1,49020E+00 1,37447E-01
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     6 3.16230E-01 3.55759E-01
7 3.95289E-01 4.34816E-01
                                               1,985356+00 1,767176-01
                                               2.4856E+00 2.1598E-01
                                               2.98040E+00 2.95258E-01
     8 4.74345E-01 5.13874E-01
                                               3,47713E+00 1,4255E-01
       5.53403E-01 5.73167E-01
    10 5.92531E-01 6.12596E-01
                                               3.7250E+00 1.52173E-01
                                               3.9738E+00 8.20%6E-02
    11 6.32X60E-01 6.42620E-01
                                               4.1015/E+00 8.46/05E-02
    12 6.52780E-01 6.62940E-01
                                               4.23921E+00 2.05562E-01
    13 6.73100E-01 6.96583E-01
                                               4,53(31E+00 2,19(2E-01
    14 7.20067E-01 7.43550E-01
                                               4.81941E+00 2.33282E-01
    15 7.67083E-01 7.90517E-01
                                               5.11/51E+00 5.29051E-01
    16 8,14000E-01 8,62795E-01
    17 9.11591E-01 9.6058E-01
                                               5.72769E+00 5.88891E-01
                                               6.34089E+00 1.35731E+00
       1.00718E+00 1.10577E+00
                                               7.5672/6+00 1.596676+00
       1,2035E+00 1,30195E+00
                                               8.79560E+00 1.83603E+00
       1.37733E+00 1.49714E+00
                                               1,00200E+01 2.07540E+00
    21 1.59473E+00 1.69252E+00
    22 1.78771E+00 1.88750E+00
                                               1.1263E+01 2.31476E+00
                                               1,24727E+01 2,55412E+00
    25 1,98509E+00 2.08269E+00
                                               1.36991E+01 2.77549E+00
    24 2.18027E+00 2.27785E+00
    25 2,375/5E+00 2,47305E+00
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    26 2.5706/EHO0 2.66829EHO0
    27 2,765826+00 2,814616+00
                                               1.75781E+01 1.72587E+00
    28 2.863/16+00 2.912206+00
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    elapsed time

1 outer irrer 1 - belance eigenvalue 1 - source 1 - scatter 1 - upscat
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         319 2.60041E-06
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1.1439XE+00 -2.02940E-05 -3.55780E-04 -1.6230E-04
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         462 2.14825E-06
      5 504 -4.31134E-07 1.14307E+00 -3.61954E-06 -7.01865E-05 -3.16620E-05
                                                                                                   .0167
                                                                                  .0000E+00
                                                                        grp to grp inner and anak. flux and anak scale course
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iters int. difference int.
1 17 2.49552E-06 28
                                          factor
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                                       1.0000E+00
                  17 3.08674E-06
                                       1.00000E+00
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                  17 2.8185E-06
                                    28 1.0000E+00
                  17 2.75748E-06
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                 17
                     2.8972£-06
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                                       1.00000E+00
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26 2.2039E-06
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                 26 1.14753E-06
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                 26 1.4798/E-06
      13
                                    28
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                 25 4.35/6/E-07
                                    28 1,0000E+00
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                  2 3.39450E-05
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                                    28 9,99969E-01
                     4.18474E-05
17
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                                    28 1.00002=+00
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                                     6 1.00002E+00
                     3.2397E-05
                                                       6
                     3.00988E-05
                                     5 1.00002E+00
                        .0167
                   angular flux on 16
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6 531 -1.69257E-06 1.14397E+00 -5.47494E-07 -1.38940E-05 -6.78854E-06 .00000E+00 final monitor Lenbota 1.14392E+00 production/absorption 1.58935+00 elacced time .02 min. 240 d, second part of sas2n pass to make Library radius int. midpoint area volume prod density 0 int. zone runber 3.95287E-02 5.92581E-02 2.48566E-01 1.4726/E-02 -0000E+00 7.50578-02 1.16982-01 4.50738-01 5.850576-02 1.58158-01 1.97648-01 9.93448-01 9.817628-02 2.371728-01 2.767018-01 1.490208-00 1.374478-01 _0000E+00 .00000E+00 -0000E+00 3.1623DE-01 3.55759E-01 1.985/8E+00 1.76717E-01 .0000E+00 3.9528E-01 4.3486E-01 2.4856E-00 2.1598E-01 4.7436E-01 5.1887E-01 2.9856E-00 2.5525E-01 5.5360E-01 5.73167E-01 3.4773E-00 1.4250E-01 .00000E+00 .00000E+00 .00000E+00 5.9231E-01 6,1269E-01 3.7250E+00 1.52179E-01 .00000E+00 10 11 6.33/60E-01 6.43630E-01 3.97386E+00 8.20/60E-02 .0000E+00 6.52780E-01 6.62940E-01 4.10154E+00 8.4640EE-02 12 _00000E+00 6.73100E-01 6.9683E-01 4.22921E+00 2.05562E-01 13 *000E+00 7,2007E-01 7,4350E-01 4,5263E+00 2,1942E-01 7,67059E-01 7,90517E-01 4,81941E+00 2,35282E-01 14 15 16 .00000E+00 .00000E+00 8.1400E-01 8.6279E-01 5.11451E+00 5.29051E-01 2.599731-02 17 18 9.1591E-01 9.60387E-01 5.72769E+00 5.88897E-01 2.83192E-02 1.00918E+00 1.10677E+00 6.3408E+00 1,357316+00 6,398256-02 1,59667E+00 7,37806E-02 19 1,20(3(£+0) 1,30197£+00 7,5673(£+0) ä 1.39955E+00 1.4971/E+00 8.79560E+00 1.83605E+00 8.36689E-02 1,00200E+01 2,07540E+00 9,36102E-02 れれなみな 1.59475E+00 1.69252E+00 1.1263E+01 2.31476E+00 1.26727E+01 2.5541ZE+00 1.78991E+00 1.88750E+00 1.03609E-01

1.36991E+01 2.79549E+00

1,492546+01 3,052856+00

2,5705/E+00 2,65827E+00 1,61518E+01 3,27727E+00 1,44431E-01

1.98509E+00 2.0826E+00

2.1802/E+00 2.27/8/E+00 2.37545E+00 2.47305E+00 1.13674E-01

1,23819E-01

1.34051E-01

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2,7682E+00 2,81461E+00 1,75781E+01 1,7287E+00 7,61524E-02
                                                       28
                                                                                                                                                                                                                   2.85341E+00 2.91Z20E+00 1.799T3E+01 1.76571E+00 7.88275E-02
                                                                                                                                                                                                                   2.96100E+00
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.850/5E+01
                                                                                                                                                                                                                                           240 d. second part of ses2h pass to make Library
                   O total flux
                 0 int. grp. 1 grp. 2 grp. 3 grp. 4 grp. 5 grp. 6 grp. 7 grp. 8
1 1,2280E-02 8.8660E-02 1.11539E-01 6.8670F-02 1.0377E-01 1.92610E-01 1.9279E-01 1.4680E-01
2 1.22830E-02 8.89176E-02 1.11477E-01 6.8632E-02 1.03621E-01 1.9252E-01 1.9289E-01 1.4689E-01
3 1.285E-02 8.883E-02 1.1160E-01 6.850E-02 1.085E-01 1.983E-01 1.838E-01 1.8
                                                               3 1,2235E-02 8,8305E-02 1,11436E-01 6,8650E-02 1,0256E-01 1,9256E-01 1,9256E-
                                            1 1.5817E-01 1.0696E-01 1.0656E-01 6.527ZE-02 5.5857E-02 5.5851E-02 2.525E-02 1.6261E-02 2 1.5817E-01 1.0656E-01 1.0656E-01 6.527ZE-02 5.5857E-02 5.5857E-02 2.525E-02 1.6261E-02 3 1.5815E-01 1.0657E-01 1.0657E-01 1.0657E-01 6.525ZE-02 5.5767E-02 5.3565E-02 2.525E-02 1.6258E-02 4 1.5810E-01 1.0657E-01 1.0657E-01 6.5166ZE-02 5.5767E-02 5.3466E-02 2.5767E-02 1.6258E-02 5.5767E-02 5.3465E-02 2.5767E-02 1.6258E-02 5.5767E-02 5.3465E-02 2.5767E-02 1.6258E-02 5.5767E-02 5.366E-02 2.5767E-02 1.6258E-02 5.5767E-02 5.366E-02 2.5767E-02 1.6258E-02 5.5767E-02 5.366E-02 2.5767E-02 1.6258E-02 5.5767E-02 5.366E-02 2.5767E-02 1.6268E-02 5.5767E-02 5.366E-02 2.5767E-02 1.6268E-02 5.5767E-01 1.0657E-01 1.0657E-01 1.0657E-01 1.0657E-02 5.5767E-02 5.366E-02 2.5767E-02 1.6268E-02 5.5767E-02 1.6268E-02 5.5767E-02 5.266E-02 2.5767E-02 1.6268E-02 5.5767E-02 1.6268E-02 5.5767E-02 5.266E-02 2.5767E-02 1.6268E-02 5.5767E-02 5.266E-02 2.5767E-02 1.6268E-02 5.5767E-02 5.266E-02 2.5767E-02 1.6268E-02 5.5767E-02 5.266E-02 2.5767E-02 1.6268E-02 1.6268E-02 1.6268E-02 1.6268E-02 5.2668E-02 2.5767E-02 1.6268E-02 1.6268E-0
                                                  2 1.5/26-01 1.05/26-01 9.5526-02 6.35706-02 5.4678-02 5.5015-02 2.8548-02 1.5105-02 1.5105-02 1.5076-02 1.6575-01 1.05/26-01 9.5526-02 6.35706-02 5.4678-02 5.16736-02 2.8528-02 1.65076-02 1.1526-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 1.65076-02 
                                                       19 1.1527E-01 1.056/7E-01 9.7765E-02 6.185/7E-02 5.2837E-02 4.9137E-02 2.8572E-02 1.586/E-02 1.1527E-01 1.056/7E-01 9.7568E-02 6.1618E-02 5.2607E-02 4.8617E-02 2.8618E-02 1.5867E-02 1.15172E-01 1.05507E-01 9.756/7E-02 6.16507E-02 5.265/7E-02 4.86105E-02 2.8677E-02 1.5877E-02                                                        21 1.15192E-01
22 1.15183E-01
                                                                                                                                                                                                                 1.05/57E-01 9.726/1E-02 6.1350E-02 5.25/2E-02 4.8557E-02 2.8566E-02 1.5814E-02 1.05/2E-01 9.71927E-02 6.1257E-02 5.252E-02 4.85/5E-02 2.8536E-02 1.5800E-02
                                                                                        1.15182E-01
                                                                                        1.15178-01 1.05408-01 9.71440E-02 6.119716-02 5.22078E-02 4.52704E-02 2.65157E-02 1.5770E-02
                                                         25 1.15177E-01 1.0597F-01 9.7150E-02 6.11639E-02 5.2157E-02 4.8280E-02 2.8504E-02 1.57850E-02
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26 1.1517/E-01 1.0537/E-01 9.7105/E-02 6.1153/E-02 5.216/E-02 4.82127E-02 2.8303/E-02 1.578/E-02 7.11517/E-01 1.0537/E-01 9.7111/E-02 6.1153/E-02 5.217/E-02 4.8223/E-02 2.8307/E-02 1.5785/E-02
7 1.5172-01 1.0572-01 9.7112-02 6.1592-02 5.2174-02 4.8245-02 2.85072-02 15762-02 0 int. gp. 17 gp. 18 gp. 20 gp. 21 gp. 22 gp. 23 gp. 24 gp. 
                              28 1.15170E-01 1.05401E-01 9.71271E-02 6.11779E-02 5.21956E-02 4.88485E-02 2.85170E-02 1.57912E-02
                               3 3.1654-02 2.2732-02 4.2582-03
4 3.1474-02 2.2633-02 4.2582-03
5 3.1294-02 2.2427-02 4.2662-03
6 3.0224-02 2.2427-02 4.1842-03
7 3.0213-02 2.1723-02 4.1143-03
8 3.0091-02 2.15273-02 4.01022-03
9 2.95703-02 2.0204-02 3.9846-03
                             10 2,91905E-02 2,05718E-02 3,8593E-05
11 2,8756E-02 2,05471E-02 3,79132E-05
                        11 2.85%E-02 2.0547E-02 3.765E-03
12 2.885E-02 2.053%E-02 3.765E-03
13 2.8707E-02 2.055%E-02 3.765E-03
14 2.885E-02 1.976%E-02 3.6390E-03
15 2.7765E-02 1.977%E-02 3.6390E-03
16 2.665E-02 1.957%E-02 3.026E-03
17 2.665%E-02 1.650%E-02 3.026%E-03
18 2.5360E-02 1.650%E-02 2.874%E-03
19 2.460%E-02 1.650%E-02 2.75%E-03
20 2.355%E-02 1.580%E-02 2.550%E-03
21 2.3560E-02 1.580%E-02 2.550%E-03
22 2.3260E-02 1.5180E-02 2.550%E-03
23 2.3067E-02 1.5180E-02 2.550%E-03
                              25 2,30×21E-02 1,5119×E-02 2,5366E-08
                              24 2.2854E-02 1.50059E-02 2.51852E-03
                              25 2.27797E-02 1.49299E-02 2.50670E-08
                              26 2.2720/E-02 1,48862E-02 2.49985E-03
                              27 2.27052E-02 1.48707E-02 2.49727E-03
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28 2.27K/E-02 1,4873/E-02 2,497/19E-03 elapsed time .02 min. If ine grap summery for zone 1 by grap including sum for all graps in line 28 .00000+00 4,9257E-05 1,3097E-01 .0000+00 5,9257E-05 2,4470E-01 .0000+00 3,2704E-05 1,8459E-01 .0000+00 1,905E-05 1,3478E-01 .0000+00 1,7649E-05 1,2953E-01 .0000+00 1,7649E-05 8,4412E-02 .0000+00 1,7649E-05 8,4412E-05 8,4 8 1,47518=01 -2,4262=05 1,4697=01 9 1,5757=01 2,76203=04 1,58162=01 1,47943=05 1,06661=01 19,96734=02 3,4904=05 1,00600=01 12 6,41626=02 4,04784=05 6,55036=02 .00000E+00 .00000E+00 .00000E+00 .00000E+00 .0000E+00 .0000E+00 .00000E+00 .0000E+00 .0000E+00 5.465/7E-02 3.75/30E-03 5.5600E-02 5.2128E-02 5.3500E-03 5.3507E-02 2.85/72E-02 1.1660E-03 2.9270E-02 .0000E+00 8.74/7E-05 6.9697E-02 .0000E+00 8.52/3TE-05 6.6529E-02 .0000E+00 4.50/40E-05 3.6528E-02 .00000E+00 .00000=+00 13 .000000:+000 .0000E+00 .0000E+00 .00000E+00 1.6129E-02 5.7666E-04 1.6257E-02 7.565/E-03 3.7827E-04 7.237E-03 .000E+00 .0000E+00 2.2669E-06 2.0554E-02 .0000E+00 9.2762E-07 9.0506E-08 ,00000E+00 .00000E+00 5.85054E-03 6.48474E-04 6.02898E-03 .0000E+00 .0000E+00 .00000E+00 7.4689/E-07 7.47947E-03 1,120/E-02 6.430/E-04 1.1369E-02 3,6925E-02 1.9875E-03 3,7427E-02 1.1755E-02 1.323/0E-03 1.21(51E-02 ,00000E+00 .0000E+00 .0000E+00 1.4853/E-06 1.4195/E-02 .00000+00 5.4808E-06 4.67818E-02 .00000+00 1.3747E-06 1.47754E-02 .00000+00 2.8908Z-06 3.1619ZE-02 .00000+00 8.7071S-06 1.0597E-01 .0000E+00 .00000E+00 .00000E+00 2.44819E-02 3.95628E-03 2.57064E-02 8.574/E-02 1.23956E-02 8.61219E-02 .000E+00 .000E+00 6.5169E-02 1.18029E-02 7.0273/E-02 .00000E+00 .00000E+00 .00000E+00 5.25011E-06 8.53253E-02 2.89769E-02 5.51002E-08 3.17759E-02 .0000E+00 .00000=+00 .0000E+00 1.81083E-06 3.8240/E-02 .00000E+00 .0000E+00 9.53478E-07 2.725/82-02 2.0575E-02 4.07927E-03 2.25509E-02 .00000E+00 3.7%69E-08 6.8921/E-04 4.33862E-08 .00000E+00 .00000E+00 .0000E+00 1.12286E-07 5.13932E-08

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28 1.7655E+00 -6.8447/E-05 1.7755E+00 .0000E+00 3.5053E-11 .0000E+00 5.874/9E-04 2.2264/E+00
 If the group summery for zone 2 by group including sum for all groups in line 28
 .00000=00
                           .0000E+00 1.0198E-03 1.2597E-02 1.6789E-04 2.7050E-05 8.5547E-04 1.0000E+00 .0000E+00 6.6748E-04 1.2590E-02 6.3285E-05 2.6806E-05 5.7765E-04 1.0000E+00 .0000E+00 1.1667E-04 9.2058E-08 4.43118E-04 2.2059E-05 -3.4857E-04 1.0000E+00
                           .00000E+00 4.4494.2E-04 6.35391E-05 5.2066E-05 7.66409E-05 3.15340E-04 9.99993E-01
            .00000E+00
                           .00000E+00
            .0000E+00
      11
            .00000E+00
            .0000E+00
            .0000E+00
5 1.05/6/E-01 -1.0397E-02
6 1.9827E-01 -1.837E-02
7 1.98/6/E-01 -1.1/37ZE-02
                                        1.97551E-01 -1.96527E-02
                                                                        .0000E+00
                                                                                       .00000E+00 1.01683E-05 3.29955E-02
                                        1.96062E-01 -1.20143E-02
                                                                        .0000E+00
                                                                                       .0000E+00 8.350B0E-06 3.27212E-02
      8 1.47406E-01 -2.7709E-03 1.47518E-01 -2.4226E-05
9 1.5746E-01 5.9155E-04 1.575E-01 2.7620E-04
10 1.0848E-01 1.44382E-03 1.0862E-01 1.49948E-03
                                                                        .000E+00
.000E+00
                                                                                       .0000E+00 5.27758E+06 2.4563E+02
.0000E+00 4.57867E+06 1.92950E+02
.0000E+00 4.9028E+06 1.77518E+02
                                                                                       .0000E+00 4.75415E-06 1.66047E-02
.0000E+00 3.2085E-06 1.0693E-02
          9,95800E-02 3,39955E-05 9,9673/E-02 3,4901/E-05
                                                                        .0000E+00
         6.4054E-02 4.0410E-05 6.4162E-02 4.04784E-05
5.4754E-02 3.75418E-05 5.4657R-02 3.7573E-05
5.1968E-02 5.38746E-05 5.2129E-02 5.3904E-03
2.89340E-02 1.15421E-05 2.89721E-02 1.1663E-05
1.61127E-02 5.7651E-04 1.6127E-02 5.76567E-04
                                                                        .000000=+00
                                                                        .000E+00
                                                                                       .00000E+00 2.73719E-06 9.13398E-08
                                                                                       .0000E+00 2.57318E+06 8.6750E+05 .0000E+00 1.42181E+06 4.8270E+05 .0000E+00 7.91678E+07 2.6869E+05
                                                                        .000E+00
                                                                        .0000E+00
                                       7.1585/E-03 3.7827/E-04
5.805/E-03 6.4847/E-04
1.120/E-02 6.4307/E-04
          7.14857E-03 3.77068E-04
                                                                        .0000E+00
                                                                                       .00000E+00 3.51113E-07 1.19222E-08
         5.8339XE-03 6.4970XE-04
1.1187XE-02 6.4010XE-04
                                                                                       .00000E+00 2.86619E-07 9.73539E-04
                                                                        .00<del>.</del>000
                                                                                       .00000E+00 5.4910/E-07 1.85572E-08
                                                                        .00000=00
          3.69707E-02 1.99227E-08
1.16590E-02 1.3075E-08
                                                                                       .0000E+00 1.8070E+06 6.1475E+08 .0000E+00 5.7193E+07 1.9474E+08 .0000E+00 1.15281E+06 4.07101E+08
                                        3,6925E-02 1,9875E-05
                                                                        .0000E+00
                                        1.1750E-02 1.32540E-05
                                                                        .0000E+00
          2.4383E-02 3.94928E-08
                                        2,44815E-02 3,95628E-05
                                                                        .00000E+00
          8.12852E-02 1.2285/E-02 8.1574/E-02 1.2355/E-02
                                                                        .0000E+00
                                                                                       .00000E+00 3.96133E-06 1.35677E-02
                                                                                       .00000E+00 3.14467E-06 1.0836EE-02
          6.49157E-02 1.17075E-02
                                        6,516PXE-02
                                                       1.1800XE-02
                                                                        .00000E+00
                                                                                       ,00000E+00 1,3900/E-06 4,81866E-05
          2.8868/E-02 5.5329/E-05
                                        2,8769E-02 5,51002E-08
                                                                        .00000E+00
          2.08078E-02 4.0748/E-08
                                        2.0575E-02 4.0792/E-05
                                                                        .00000E+00
                                                                                       .00000E+00 9.67257E-07 3.38874E-08
                                                                                       ,00000E+00 1.74783E-07 6.31696E-04
          3.78B/ZE-03 7.06009E-04
                                        3.7969E-03 6.8521/E-04
                                                                        .00000E+00
                                                                      5.668228-06
                                                                                       .00000E+00 1.04301E-04 2.94833E-01
          1.76923E+00 -7.47473E-05 1.7653E+00 -6.8447/E-05
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If the group summery for zone 3 by group including sum for all groups in line 28
 0 grp. fix source fiss source in scatter all scatter out scatter absorption leskage
                                                      .0000E+00 .0000E+00 2.5373/E-04 3,35839E-04 2.798/0E-05 -3.6378/E-04 9.99965E-01
                        .00000E+00
                        .0000E+00
                                                       .0000E+00 1.9869E+04 3.2299E+05 4.25720E+05 9.21267E+05 -4.1344E+05 9.99987E+01
                                                      .0000E+00 2.0007E+03 2.8637E+03 7.5388E+03 4.91752E+05 -5.5737E+03 9.9997E+01 .0000E+00 2.9541E+03 1.91862E+03 6.59219E+03 2.25502E+05 -3.6604E+03 9.9999E+01
                        .00000E+00
                        .00000E+00
                                                      .0000000 5.4818-03 6.16736-03 1.11736-02 2.657776-05 5.75178-03 9.99996-01 .0000000 1.4688-02 1.8486-02 2.19658-02 4.51502-05 -1.05468-02 1.0000000 .0000000 2.25976-02 3.25786-02 2.657506-02 3.25128-05 -6.185318-03 9.99998-01 .0000000 2.597518-02 4.11418-02 3.08888-02 1.91588-05 -8.88668-04 9.99978-01
                        .00000E+00
                       .0000E+00
                       .0000E+00
                        .00000E+00
                        .0000E+00
                                                       .0000E+00 3.0409E-02 3.7955E-02 3.0057E-02 1.5309E-05 3.3780E-04 9.9999E-01
                                                      .0000E-00 2.9879E-02 3.6050E-02 2.8678E-02 1.8792E-05 8.8576E-04 9.9790E-01 .0000E-00 2.91378E-02 3.39824E-02 2.71302E-02 2.8575E-05 1.98047E-03 9.97948E-01 .0000E-00 2.35542E-02 1.80682E-02 2.12477E-02 3.11036E-05 2.2757E-03 9.97981E-01
                        .0000E+00
                        .0000000
          11
                        .00000E+00
                       .0000E+00
                                                      .00000=00 2.093/4E-02 1.4726E-02 1.85782E-02 4.3607E-05 2.0578E-05 9.9977E-01 .0000E+00 2.083/4E-02 1.4478E-02 1.75185E-02 6.9967E-05 2.95518E-03 9.99990E-01
                                                      .00000+00 1.11500=02 5.68590=08 1.05670=02 5.89810=05 4.20000+00 .00000+00 7.37630=03 2.40770=08 7.07830=03 4.07860=05 2.38800=04 1.00000+00 .00000+00 3.811810=03 6.920190-04 3.60540-03 1.98070=05 1.91470=04 9.97750=01 .00000+00 3.371830=03 5.476170-04 2.97220=03 1.71550=05 3.82230=04 1.00000+00 .00000+00 3.371830=03 5.476170-04 2.97220=03 1.71550=05 3.82230=04 1.00000+00 .00000+00 3.371830=03 5.476170-04 2.97220=03 1.71550=05 3.82230=04 1.00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00000+00 .00
                        .000E+00
                        .0000E+00
                      .000000
                                                      .00000+00 5.6665E-03 1.6065E-03 5.350VE-03 3.5977E-05 3.1889E-04 9.9999E-01 .0000E+00 1.4087E-02 1.1405E-02 1.2895E-02 1.4874E-04 9.857VE-04 1.0000E+00
                                                       .0000E+00 6.8474E-08 2.3280E-08 6.05050E-08 5.85274E-05 7.39661E-04 1.0000E+00
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           fiss rate flur db 2 total flux
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1,85728€-11
.0000€+00
0 grp. rt bdy flux
                                                                                                                                                                                       .0000E+00 4.6725E-05 6.0125E-02
.0000E+00 4.8947E-05 7.55794E-02
                                                                                                                                                       _0000E+00
                                                                                                                                                       .00000=00
                                                                                                                                                                                       ,00000E+00 2.2250E-05 4.666VE-02
                                                                                                                                                                                       .0000E+00 2.6420XE-05 6.98217E-02
.0000E+00 4.46921E-05 1.31185E-01
                                                                                                                                                       .00000E+00
            6 2.00896-01 -2.988226-02 1.98226-01 -1.883786-02
7 1.97856-01 -1.76226-02 1.984696-01 -1.143726-02
                                                                                                                                                        .000=000
                                                                                                                                                                                       .0000E+00 3.1480E-05 1.2973E-01
                                                                                                                                                       00+2000D.
            8 1.47677E-01 -3.46046-08 1.47406E-01 -2.77099E-08 9 1.15517E-01 9.22433E-04 1.15746E-01 5.9153E-04
                                                                                                                                                                                       .0000E+00 1.7187/E-05 9.7124/E-02
.0000E+00 1.1529/E-05 7.61166E-02
                                                                                                                                                       .000<del>1</del>
                                                                                                                                                       .00000=+00
          10 1.0622E-01 2.33259E-05 1.0648E-01 1.4382E-05 11 9.9003E-02 5.3800E-05 9.95800E-02 3.3995E-05
                                                                                                                                                                                        ,00000E+00 9.98%81E-06 7.00263E-02
                                                                                                                                                        .00000E+00
                                                                                                                                                       .000000=00
                                                                                                                                                                                       ,0000E+00 9.27753E-06 6.53956E-02
                  6.3365E-02 6.3170E-03 6.4056E-02 4.04110E-03 5.4166E-02 5.75774E-03 5.4750E-02 3.7545E-03 5.1101E-02 8.3428E-03 5.1056E-02 5.38766E-03 2.8864E-02 1.35421E-03 2.8864E-02 1.35421E-03
                                                                                                                                                                                       .0000E+00 5.4089E-06 4.19769E-02
.0000E+00 4.5058E-06 3.58818E-02
                                                                                                                                                       .0000E+00
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                                                                                                                                                                                       .00000E+00 4.35350E-06 3.39789E-02
                                                                                                                                                                                       .0000E+00 2.3419/E-06 1.90217E-02
                                                                                                                                                       .0000E+00
        6 1.656E-02 8.1547E-04 1.61127E-02 1.7547E-04 17 7.0457E-05 5.6547E-04 7.4657E-03 3.7765E-04 18 5.745E-05 5.6547E-04 7.4657E-03 3.7765E-04 19 1.1058E-02 9.56547E-04 1.1187E-02 6.4010E-04 20 3.65654E-02 2.9765E-05 3.6670F-02 1.9727E-05 21 1.446E-02 2.0476E-05 1.4650E-02 1.3097E-05 21 1.4660E-02 1.4650E-02 1.4650
                                                                                                                                                                                       ,00000E+00 1,1792/E-06 1,05910E-02
                                                                                                                                                       .000000=+000
                                                                                                                                                                                       .0000E+00 4.801YE-07 4.690YE-03
.0000E+00 3.8020E-07 3.807YE-08
                                                                                                                                                        00+200000,
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                                                                                                                                                                                       .00000E+00 7.67982E-07 7.33971E-03
                                                                                                                                                       .0000E+00
                                                                                                                                                                                       .0000E+00 2.8554E-06 2.41914E-02
.0000E+00 6.993BE-07 7.62670E-08
                                                                                                                                                       .0000E+00
                                                                                                                                                       ,00000E+00
                  2.3643E-02 6.15510E-03 2.4385E-02 3.9492E-03
                                                                                                                                                       .00000E+00
                                                                                                                                                                                       ,00000E+00 1,44877E-06 1,58480E-02
         23 7.59650E-02 1.62895E-02 8.12852E-02 1.22864E-02 3. 6.22481E-02 1.76071E-02 6.44957E-02 1.17095E-02
                                                                                                                                                       .000000=000
                                                                                                                                                                                       ,00000E+00 4,35902E-06 5,28496E-02
                                                                                                                                                                                        .0000E+00 2.5725EE-06 4.1969EE-02
                                                                                                                                                       .00+300000.
                                                                                                                                                                                       .0000E+00 8,785VE-07 1,8567E-02
                  2.7369E-02 8.38343E-05 2.8869E-02 5.53294E-05
                                                                                                                                                       ,00000E+00
                   1,8836E-02 6,4940E-08 2,00076E-02
                                                                                                                  4.0748E-05
                                                                                                                                                       .0000E+00
                                                                                                                                                                                       ,00000E+00 4.52766E-07 1.25469E-02
                                                                                                                                                                                       .00000E+00 5.19185E-08 2.37631E-08
                  3.3704/E-05 1.32021E-05 3.7884/E-05 7.0600/E-04
                                                                                                                                                       .0000E+00
          28 1.76999E+00 -1.06750E-02 1.76925E+00 -7.47473E-05 1.65726E-11
                                                                                                                                                                                       .0000E+00 3.11082E-04 1.16866E+00
If the grap suggery for zone 4 by grap including sum for all graps in line 28
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0 grp.	fix source	fiss source	in scatter		out acatter	absorption	Lenkage	belance
1	.0000E+00	2.21135E-02	.0000E+00	2.05319E-02	1.9459E-02	3.6005E-05	1.20533E-03	9.9897E-01
2	.00000E+00	1.91371E-01	6.73317E-03	2.4719E-01	1.70070E-01	1.5150XE-02	1.28963E-02	1.0000 21+ 00
3	.0000E+00	2.15417E-01	7.01579E-02	2.56078E-01	2.52503E-01	1.62574E-02	1.67372E-02	9.99989E-01
4	.0000E+00	1.24V8E-01	1.0456E-01	1.76089E-01	2.10417E-01	7.77XESE-03	1.05141E-02	1.00000E+00
5	.0000E+00	1.65059E-01	1.90752E-01	4.43728E-01	3.345Œ-01	5.22670E-03	1.6133355-02	9.99991E-01
6	.0000E+00	1.78557E-01	3.89452E-01	1.190916+00	5.30402E-01	8.31671E-03	2.958206-02	1.00001E+00
7	.00000E+00	8.85054E-02	5.92545E-01	1.56461E+00	6.95078E-01	8.3565/E-05	1.76251E-02	9.99989E-01
8	.0000E+00	1.36510E-02	6.89167E-01	1.573322+00	6.8576ZE-01	1.3/511E-02	3.66079E-03	9.999225-01
9	.0000E+00	9.91007E-04	6.77875E-01	1.370 /JE+ 00	6.57763E-01	2.210 66E -02		9,99898E-01
10	.000 00E+ 00	7.36105E-05	6.54847E-01	1.24451E+00	6.25XXE-01	3.34119E-02		9.933XE-01
11	.0000E+00	5.79125E-06	6.28047E-01	1.157116+00	5.7926/E-01	5.4205/E-02		9.99940E-01
12	.000 02+ 00	4.06824E-07	5,0460E-01	6.32515E-01	4.52782E-01	5,81835E-02		9.99975E-01
13	.00000E+00	6.46000E-08	4.47429E-01	5.02025E-01	3.9963E-01	5.35376E-02		9.99970E-01
14	.0000E+00	1.28020E-08	4.3096E-01	4.72118E-01	3.645E-01	7.46500E-02		9.999BE-01
15	.00000E+00	1.44677E-09	2.3554E-01	2.17039E-01	2.325XE-01	7.53757E-03		1,00007E+00
16	.000 000	4.24821E-10	1.63040E-01	1.00866E-01	1.59132E-01	4.7128/E-03		1.0007E+00
17	.0000E+00	1.36813E-10	8.77Z79E-02	3.24917E-02	8.35567E-02	4.9557E-05		1.0003E+00
18		. 9.7542E-11	7.8737/E-02	2.46702E-02	6.85430E-02	1.12269E-02		1.0000£+00
19	.000 000	1.38486E-10	1,27389E-01	6.4568E-02	1.21350E-01	6.930Æ-Œ		1.00005E+00
20	.000000	2.25190E-10	3.03379E-01	3.63470E-01	2.8007/E-01	2.67779E-02		1.0000XE+00
21	.000000	3.2610E-11	-1.52381E-01	7.77019E-02	1.3448E-01	1.9990E-02		1.0000 E+00
22	.000000	3.82425E-11	2.95188E-01	2.10\3\cdots	2.402508-01	5.9074E-02		1.00005E+00
23	.00000E+00	3,65639E-11	7.1585E-01	1.10 4/8E+0 0	5.91982E-01	1.421 VE-01		1.0000Æ+00
<i>Z</i> 4		9.95219E-12	7.6135/E-01	9.4161E-01	6.2786/E-01	1.5106E-01		1.000 E+00
25	.00000=+00	2.91335E-12	5.05116E-01	3.80135E-01	4.27137E-01	8.43519E-02		1.000025+00
25 27	.00000	2.04284E-12	3.8X77E-01	3.80591E-01	3.1923/E-01	7.67321E-02 2.17422E-02		1,0000E+00 1,0000E+00
	.000000	4.888XE-13	1.2822/E-01	7.65335E-02	1.07801E-01		1.08568-02	
28	.000000	1.00000E+00	9,33080E+00 lft bd/ flux	1.48275E+01 lft leskape	9.33029E+00 r2n rate	9.91453E-01 fiss rate	fluctor 2	9.99980E-01 total flux
0 ab	nt boy flux	-9.97737E-09		-1.205XE-08	2.16520E-03	2.4170E-03	2.854776-04	3.265 KE-01
ż		-9.01340E-08	9.20530E-02		1,625225-05	1.092575-02	1.56700E-08	2,420(5=+00
3		-1.07647E-07		-1.67373=-02	.0000E+00	1.3500E-02	1.817876-03	3.0/817€+00
4		-9.78125E-08		-1,0542-02	,000000000	5.752/0E-08	8.8157XE-04	1.88493E+00
Š		-1.8420E-07		-1.61387E-02	.00000E+00	1.6852E-05	1.0B082E-03	2.8355900
6		-2.3/811E-07		-2.93822E-02	.00000E+00	1.48180E-03	1.731135-03	5.31797E+00
7	2.03560E-01	5.61110E-07	1.97587E-01	-1.76225E-02	.0000E+00	1,4970/E-03	1.22593E-03	5.169T3E+00
8	1.4886/E-01	8.97975E-08	1,47697E-01	-3.66064E-03	.0000E+00	1.56076E-0B	6.97367E-04	3.78/TZE+00
9	1.15171E-01	-4.37011E-05	1.55172-01	9,2%35=04	.000 0E+ 00	2.133XE-03	4.7057ZE-04	2,9332 (E+ 00
10	1.05405E-01	6.25900E-07	1.05222E-01	2.3325XE-05	.0000E+00	4.557ZE-05	4.2E092E-04	2.680E+00
11	9.7137 3E -02	1.37020E-06	9,90053E-02	5.38001E-03	.00 000E+ 00	9.5416/E-08	3.85377E-04	2,47840E+00
12		-3.91943E-07	6.3366 E-02	6.317ŒE-Œ	.000000=+00	1,24109E-02	2.275702-04	1.5000E+00
13	5.22063E-02	4.64490E-07	5.41649E-02	5.75/7¥E-05	.0000E+00	1.23673=-02	1.95229E-04	1.33 //0E+ 00
14	4.8257E-02	1.48075E-07	5.1101 E-02	8.3/2021-03	.00000=+00	8.45267E-05	1.782361-04	1.2368E+00
15		4.46383E-05	2.80%3-02	1.59652-05	.000000	2.14079E-05	1.1178/E-04	7.22782E-01
16		-3.07762E-06	1.60560E-02	8.13479E-04	.00000	1.4460E-03	5.86730E-05	4,0293/E-01
17	6.9060E-03	1.28506E-06	7.0×57E-05	5.65547E-04	.000000	2.0339E-05	2.34470E-05	1.76363E-01
18		-2.777 55 -05	5.71/51E-03	1.05218E-03	.000E+00	2.37041E-0B	1.627938-05	1.3748E-01
19	1.07525-02	5.89876E-07	1,10981E-02	9.583472-04	.00000	3.20172E-03	3.728E-05	2.752WE-01
20		-1.0575/E-05	3.6554E-02 1.1445E-02	2.9760E-03 2.04782E-03	.0000E+00	1.58574E-02 1.22900E-02	1.31725E-04 3.12857E-05	9,08433E-01 2,74863E-01
21 22		-3.10237E-06 -4.03089E-06	2.36432-02	6.13510E-03	.00000=00	3.6067E-02	5.91360E-05	5.4952KE-01
25	7.07299E-02	9.52730E-06	7.8960E-02	1.628835-02	.00000E+00	8.565Z/E-02	1.91421E-04	1.630535+00
2		•3.12393E-07	6.22/81E-02	1.76071E-02	.000000	9.0BB18E-02	1.125E-0	1.39159E+00
. #		-6.15187E-0B	2.73699E-02	8.38343E-05	.0000E+00	5.27926E-02	3.808035-05	5.939RE-01
ă ă		2.52930-07	1.8936E-02	6.494CBE-CB	0000E+00	4.866E-02	1.863828-05	3.9229E-01
27		-5.1680/E-08	3.370/Œ-0B	1.32021E-0B	.0000E+00	1.35/UE-02	1.90393-06	6.6021SE-02
28.		·1.9523E-05		-1.08750E-02	2.181/Œ-05	4.55157E-01	1.1954E-02	
1fine a	TOLD SLIBBBY	for system						
0 grp.	fix source	fiss source	in scatter	slf scatter	out acetter	absorption	lesiage	balance

.0000E+00 2.2115E-02 .0000E+00 2.1475E-02 2.05978E-02 3.713/5E-03 -9.97757E-09 9.9896E-01 .0000E+00 1.91371E-01 7.3170E-03 2.57889E-01 1.8527E-01 1.54294E-02 -9.01340E-08 1.00001E+00 2.7510/E-01 7.60816E-02 2.67140E-01 1.63987E-02 -1.07647E-07 9.99987E-01 .00000E+00 2.15417E-01 .0000E+00 1.2k/45E-01 1.0331E-01 1.0398E-01 2.268(9E-01 7.0570E-03 -9.7612E-03 9.9999E-01 .0000E+00 1.666(E-01 2.0699E-01 4.6680E-01 3.6674(E-01 5.3164(E-03 -1.8420E-07 9.9999E-01 .0000E+00 1.7867E-01 4.2333E-01 1.262(E+00 5.9500E-01 8.47315E-03 -2.3481E-07 1.0000E+00 .0000E+00 8.8505/E-02 6.57970E-01 1.67052E+00 7.3800E-01 8.4770E-03 5.61110E-07 9.9998E-01 .0000E-00 1.3661E-02 7.7558E-01 1.7057E-00 7.7586E-01 1.3528E-02 8.9797E-08 9.9976E-01 .0000E-00 9.9100F-06 7.4667E-01 1.4574E-00 7.6534E-01 2.2227E-02 4.3701E-06 9.9957E-01 .0000E-00 5.7912E-06 7.480E-01 1.3661E-00 7.6534E-01 3.3529E-02 4.3701E-06 9.9957E-01 .0000E-00 5.7912E-06 7.1502E-01 1.2609E-00 5.7520E-01 5.3520E-02 1.3700E-06 9.9975E-01 .0000E-00 4.0634E-07 5.7550E-01 6.88152E-01 5.5520E-01 5.820E-02 -3.9194E-07 9.9997E-01 .0000E-00 4.0634E-07 5.7550E-01 6.88152E-01 5.5520E-01 5.3672E-02 4.6440E-07 9.9997E-01 .0000E-00 1.2600E-08 4.9076E-01 5.4764E-01 4.5527E-01 5.3672E-02 4.6440E-07 9.9998E-01 .0000E-00 1.4667E-09 2.7150E-01 2.3687E-01 2.5677E-01 7.74856E-02 1.4609E-07 9.9998E-01 .0000E-00 1.4667E-09 2.7150E-01 2.3687E-01 2.5677E-01 7.763E-08 4.6489E-06 1.0000E+00 .0000E-00 1.3689E-10 9.9176E-02 3.4775E-02 9.4175E-02 4.9959E-03 1.2600E-00 1.000E+00 .0000E+00 1.3689E-10 1.4645E-01 6.97047E-02 9.4175E-02 4.9959E-03 1.2600E-00 1.000E+00 .0000E+00 1.3646E-10 1.4645E-01 6.97047E-02 1.3766E-01 7.1078E-08 5.8896E-07 1.000E+00 .0000E+00 1.3646E-10 1.4645E-01 3.9847E-01 3.1766E-01 7.1078E-02 -1.05756E-05 1.0000E+00 .0000E+00 3.2650E-11 1.7253E-01 8.4415E-02 1.5253E-01 7.1078E-02 -1.05756E-05 1.0000E+00 .0000E+00 3.3656E-11 1.7253E-01 2.3817E-01 2.7258E-01 1.5355E-01 3.10576E-05 1.0000E+00 .0000E+00 3.8656E-11 8.2259E-01 1.2896E-01 1.5355E-01 1.5355E-01 3.1259E-07 1.0000E+00 .0000E+00 9.9526E-12 8.7600E-01 1.0666E-00 7.2659E-01 1.5355E-01 -3.1259E-07 1.0000E+00 .0000E+00 9.9526E-12 8.7600E-01 1.0666E-00 7.2659E-01 1.5355E-01 -3.1259E-07 1.0000E+00 .0000E+00 9.9526E-12 8.7600E-01 1.0666E+00 7.2659E-01 1.5355E-01 -3.1259E-07 1.0000E+00 .0000E+00 9.9526E-12 8.7600E-01 1 .0000E+00 1.3610E-02 7.75581E-01 1.7087/E+00 7.75766E-01 1.35287E-02 8.9797E-08 9.99720E-01 5,95081E-02 -4,0809E-06 1,0007E+00 1,44071E-01 9,52730E-06 1,0007E+00 1,53355E-01 -3,1259E-07 1,0007E+00 .00000+00 9.95298-12 8.76008-01 1.06646+00 7.22698-01 1.53558-01 -3.12598-07 1.00004-00 .00008-00 2.91558-12 5.76028-01 4.35678-01 4.35678-01 1.53558-01 -3.12598-07 1.00008-00 .00008-00 2.04268-12 4.501648-01 4.38678-01 3.72668-01 7.80578-02 -2.52558-07 1.00008-00 .00008-00 4.86698-13 1.46738-01 8.92788-02 1.2608-01 2.222208-02 -5.16808-08 1.00008-00 8.92/4E-02 1.2500E-01 1.6179E+01 1.657/9E-01 1ft lesiage r2n rate .0000E+00 2.708/E-08 .0000E+00 1.625/2E-05 .0000E+00 .0000E+00 .00000=400 1.00000E+00 1.05719E+01 1.00256+00 -1.95301E-05 9.99987E-01 fise rate flued/*/2 total flux 2.41708=08 3.14098=04 3.52358=01 1.092878=02 1.712218=03 2.60838=00 1.335008=02 1.970978=03 3.226118=00 0 gp. rt bdy flux rt leskee lft bdy flux 1 1.28/5E-02 -9.77/3/E-09 1.222/E-02 2 9.53/50E-02 -9.07/4/E-08 8.90/0/E-02 3 1.2008/E-01 -1.076/7/E-07 1.1199/E-01 4 7.42/0/E-02 -9.78/2/E-08 6.87/4/E-02 5.752K0E-08 9.52807E-04 2.030K9E+00 5 1.1157/E-01 -1.8/20E-07 1.0257E-01 6 2.0367E-01 -2.37817E-07 1.9257E-01 7 2.0556E-01 5.61110E-07 1.9307E-01 .000E+00 .00+30000. .00+30000. 1.025ZE-01 .00000E+00 1.6845ZE-03 1.11513E-05 3.04717E+00 .00000+00 1.48/88E-05 1.85/88E-05 5.77/8EE+00 .00000+00 1.47/70/E-05 1.3220E-05 5.575/7EE+00 .00000+00 1.54/70/E-05 7.525/E-04 4.056/7E-00 .0000E+00 2.1339/E-05 5.025/7E-04 3.17/4E+00 8 1.486/E-01 8.9797E-08 9 1.517/E-01 4.3701/E-06 .000E+00 1.4687/E-01 1,1581Æ-01 .0000E+00 4.5572F-08 4.62112E-04 2.9080CE+00 .0000E+00 9.54164E-08 4.18278E-04 2.6853EE+00 10 1.05405E-01 6.26907E-07 1.06961E-01 .0000E+00 .0000E+00 .0000E+00 .0000E+00 11 9.71379E-02 1.37020E-06 1.0050E-01 .0000E+00 1.24107E+02 2.4657E+04 1.69757E+00 .0000E+00 1.2567E+02 2.12217E+04 1.4453E+00 6.5363Œ-02 6.1190/E-02 -3.919/JE-07 5.22063E-02 4.64490E-07 5.58500E-02 14 4.2657E-02 1.4807E-07 5.3697E-02 15 2.8527E-02 4.4688E-06 2.9270E-02 16 1.5745E-02 -3.07762E-06 1.6257E-02 17 6.5060E-03 1.2650E-06 7.2572E-03 .0000E+00 8.45267E+05 1.95707E+04 1.3/577E+00 .0000E+00 2.1/407E+05 1.2005E+04 7.85212E+01 .00000E+00 1,4468E-08 6.29109E-05 4.365/TE-01 .0000E+00 2.0339E+05 2.5269E+05 1.9152E+01 .0000E+00 2.37041E+05 1.7639E+05 1.49749E+01 .0000E+00 3.29172E+05 4.01010E+05 2.9845E+01 18 5.36476E-03 -2.77759E-06 6.02892E-08 19 1.07752E-02 5.89876E-07 1.13696E-02 .0000E+00 1.5857E-02 1.4184E-04 9.8555E-01 .0000E+00 1.2250E-02 3.32597E-05 2.9945E-01 3.55610E-02 -1.05754E-05 3.744ZE-02 1.07126-02 -3.1025/E-05 1.2105/E-02 22 2.1305E-02 -4.0305E-05 2.5705E-02 23 7.0739E-02 9.52730E-05 8.61215E-02 ,00000E+00 3.60467E-02 6.46691E-05 6.0106/E-01 .0000E+00 .0000E+00 8.565Z7E-02 2,08/50E-04 2,00254E+00 24 5.33756E-02 -3.12575E-07 7.0273/E-02 25 2.2725E-02 -6.15187E-08 3.1775/E-02 .00000E+00 9.08818E-02 1.2528E-04 1.52972E+00 .000E+00 4.21610E-05 6.57227E-01 .0000E+00 5.27926E-02 26 1,48782E-02 -2.5253E-07 2.2E509E-02 .0000000 .00000E+00 4.8565E-02 2.10117E-05 4.3589EE-01 Z7 2,47733E-03 -5.16804E-08 4.33862E-03 .00000E+00 .0000E+00 1.55705E-02 2.2424E-06 7.41669E-02 .00000E+00 2.18713E-03 4.55157E-01 1.25%9E-02 4.8425/E+01 28 1.75/50E+00 -1.9523E-05 1.77553E+00 - element time .02 min.

Odirect access unit 9 requires 556 blocks of length 216 for cross section weighting.

1 transport cross section weighting function

```
Ozone grp. 1 grp. 2 grp. 3 grp. 4 grp. 5 grp. 6 grp. 7 grp. 8 1 1.09998-03 4.971528-03 5.26048-03 2.50648-03 3.18158-03 5.526478-03 3.72048-03 1.74278-03
            2 6,700E-04 4,9107E-08 5,7566E-03 3,4347E-03 4,200E-03 6,1697E-03 4,339E-03 2,1476E-03
            3 1.1276E-08 5.3892E-08 5.8430E-03 2.91018E-03 3.8563E-03 6.79211E-08 4.3869E-08 1.82315E-08
            4 7.7481E-04 4.2226E-08 4.9075E-08 2.3852E-08 2.8278E-03 4.8832E-08 3.3275E-08 1.7964E-08
           5 7.97503E-04 4.27811E-03 4.95110E-03 2.40766E-03 2.87769E-03 4.89222E-03 3.37697E-03 1.78679E-03
7.7730E-04 42801E-05 4,9716E-05 224076E-05 43822E-05 3.3630E-05 1.7807E-05 1.1122E-05 1.042E-05 1.042E-05 8.7280E-04 7.8570E-04 1.0878E-05 3.3630E-04 1.5857E-04 1.1122E-05 1.042E-05 1.042E-05 8.7280E-04 7.8570E-04 1.0878E-05 3.3630E-04 1.5857E-04 1.5857
 Ozore grp. 17 grp. 18 grp. 19 grp. 20 grp. 21 grp. 22 grp. 23 grp. 24
1 8.08819E-05 1.13772E-04 1.34903E-04 4.46703E-04 2.31647E-04 2.1647E-04 2.1647E-05 2.01510E-08
                 1.6665E-04 1.94151E-04 2.66197E-04 8.59807E-04 3.91619E-04 1.07147E-08 3.38727E-08 3.12109E-08
          3 1.10998-04 1.81998-04 1.8016-04 5.97238-04 3.6508-04 1.07758-08 3.2508-04 3.10578-08 4 6.96208-05 6.46578-05 1.12958-04 3.861978-04 1.31878-04 3.30588-04 1.11998-08 9.12768-04 5 7.17058-05 7.06688-05 1.166108-04 3.98568-04 1.43058-04 3.68888-04 1.22578-08 1.02938-08
Ozore grp. 25 grp. 26 grp. 27 grp. 28
1 9.28K5E-04 6.6174TE-04 1.00942E-04 4.192KE-02
2 1.4528E-03 1.0641E-03 1.8529E-04 5.5309E-02
            3 1.48225E-03 1.11985E-05 2.09760E-04 5.17650E-02
           4 3.8669E-04 2.3428E-04 2.9022E-05 3.4535/E-02 5 4.42178E-04 2.77969E-04 3.75563E-05 3.54079E-02
  forced group parameters
                   Upper energy
2.000E+07
                                                   mid energy
                                                                                      velocity
                                                                                                                fiss spac
                                                    2.6391E+05
                                                                                   1.9547E+09
                                                                                                                7.1812E-01
                                                     1.5059E+05
                      9.000E+05
                                                                                                                2.818E-01
                                                                                  9.65122+05
                                                                                 3.6830E+05
                                                                                                                1.23 KE-10
                      4.0000E-01
                                                    1.271<del>6E</del>-01
                      1.0000E-05
                                                            200 d. second part of seath pass to make library
  Ocel I averaged fluxes
 Ozone grp. 1 grp. 2 grp. 3
1 3.87437E-01 1.1390E+00 2.4525E-01
2 3.9266E-01 1.14057E+00 2.35554E-01
           3 3.9560/E-01 1.1/09/E+00 2.3119/E-01
           4 4.12/53E-01 1.1440E+00 2.00812E-01
           5 4.11057E-01 1.14379E+00 2.08313E-01
 Offlux disadventage factors (zone average/cell average-flux)
 Ozone grp. 1 grp. 2 grp. 3
1 9.42516E-01 9.9900E-01 1.20619E-00
            2 9.55251E-01 9.97257E-01 1.5651E+00
          3 9.6233E-01 9.9758E-01 1.1371E-00
4 1.00410E-00 1.0002E-00 9.85240E-01
           5 1.0000E+00 1.0000E+00 1.0000E+00
 Ocell averaged currents
Ozere grp. 1 grp. 2 grp. 3
1 1.7057E-02 1.5127SE-02 6.7785E-03
2 1.9070E-02 2.5561SE-02 1.0573E-02
           3 1.91358E-02 2.19601E-02 1.06691E-02
           4 1.51262E-02 1.62707E-02 3.138/5E-08
           5 1.5321E-02 1.65477E-02 3.53005E-08
Ozone
                          volume
                                                    vol. fraction
                      1.256490+00
                                                        4.5625Æ-02
                      1.66687E-01
                                                        6.0516E-03
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6.99362:-01

2.38987E-02

0	4 2.5%246 5 2.75%00 elapsed time construction cc				u u u u u u u u u u u u u	00000000000000000000000000000000000000		
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program verification information

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-lq array has 1 entries.

O de array has 1 entries.
O lq array has 1 entries.
O 2q array has 1 entries.
O them = .5092
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O user requested (see jacti) that only the nuclide transitions presently included in
0 origen library be updated.
icross sections, evailable from anox (normalized to thermal flux), berns
                              10010 to 10020 2.75385E-01
10010 tot-cap 2.75385E-01
50100 to 40100 2.09013E-02
50100 to 40000 3.11739E-03
                               50100 to 10020 3.11769E-08
                              50100 to 30070 3.16715E+05
50100 to 20040 3.16730E+05
50100 to 10050 7.80945E-02
                              50100 tot-cap 3.16725+05
50110 to 50100 8.889775-06
                               50110 to 50120 4.18853E-05
                               50110 to 40110 1.13442E-06
                              50110 to 10010 1.1342E-06
50110 to 4000 1.01234E-06
                               50110 to 10080 1.01236E-05
                              50110 to 30080 1.32159E-04
50110 to 20040 1.32159E-04
                              50110 tot-cap 4.3408/E-05
80160 to 80170 1.4710/E-04
                              80160 to 70160 7.77840E-05
80160 to 10010 7.77840E-05
80160 to 70150 1.46700E-05
                               80160 to 10020 1,46700E-05
                              80160 to 60130 2.21441E-02
80160 to 20040 2.21441E-02
                               80160 to 80161 3.41133E-05
                             80160 tot-cap 2.23837E-02
360830 to 360820 1.76621E-02
                             360830 to 360810 1,86469E-09
                             360830 to 360840 1,48072E+02
360830 to 360830 7,33668E-04
                             360830 to 10010 7.33569E-04
                             360830 to 350820 5.83331E-06
                             360830 to 10020 5.83331E-06
                             340630 to 350810 2,03865E-05
                             360630 to 10050 2,03855E-05
360630 to 360610 3,25972E-08
                             340830 to 20080 3.297/25-08
340830 to 340800 3.878125-05
                             360830 to 20040 3,878125-05
                             360830 tot-cap 1,480916+02
360850 to 360860 1,332836+00
                             360650 tot-cap 1.332635+00
380900 to 380910 6.111885-01
                             380900 tot-cap 6.11180E-01
                             390890 to 390900 9.50805E-01
390890 tot-cap 9.50805E-01
```

400930 to 400940 1.187225-01 400930 tot-cap 1.187225-01 400940 tot-cap 1.465525-01 400940 tot-cap 1.465525-01 400950 tot-cap 1.975885-00 400950 tot-cap 1.975885-00

res = .386 fast = 2.9517

410940 to 410950 3,46661E+01 410940 to 41090 3,46661E+01 410940 to 420940 3,5252ZE+07 420990 to 420940 3,5252ZE+07 430990 to 430980 5,35894E-08 430990 to 431000 8,1563E+01 43090 txt-cap 8.156916+01
44100 txt-cap 2.501176+01
441010 txt-cap 4.1000 tx 441000 T.466316-01 441050 to 441070 7.56531E-01
441050 tor-cep
451050 to 451020 1.94681E-03
451050 tor-cep
451050 tor-cep
451050 tor-cep
461050 tor-cep
471050 tor-cep
471050 tor-cep
471050 tor-cep
471050 tor-cep 471090 to 461090 2,57939E-04 471000 to 461000 2.57938E-04
471000 to 100100 2.57938E-04
471000 to 451060 2.12051E-04
471000 to 471001 5.55824E-01
471000 tot-cap 3.3600Fe/02
511240 to 511250 1.0942E-01
541310 to 541300 5.4724E-02
541310 to 541300 3.3000E-02
541310 to 541300 3.3000E-02 541310 to 10010 3.33792E-05 541310 to 531300 4.58219E-07 541310 to 10020 4.58919E-07 541310 to 531290 4.70576E-07 541310 to 10080 4.70576E-07 541310 to 521280 1.5555E-05 \$4130 to \$2020 1.5555E-05
\$41310 to 2020 1.5555E-05
\$41310 tot-cap 2.4050E-02
\$41320 to \$41310 8.8028E-03
\$41320 to \$41320 8.4130E-01
\$41320 to \$41320 8.4130E-01
\$41320 to \$13320 6.4778E-05 541320 to 10010 6.77785E-06 541320 to 531310 2.8490E-07 541320 to 10020 2.8490E-07 541320 to 531300 3.8369E-08 541320 to 10080 3.836976-08 541320 to 521290 8.308686-07 541320 to 20040 8.30858E-07 541500 tot-cap 8.50172E-01 541500 tot-cap 1.44670E+06 541560 tot-cap 1.44670E+06 541560 to 541550 1.5122E-02 541360 to 541340 4.61869E-05 541360 to 541370 1.18642E-01 541360 to 531360 2,79290E-07

541360 to 10010 2.79290E-07 541360 to 531350 1.03961E-07 541360 to 10020 1.03961E-07 541360 to 531340 2.3484E-08 541360 to 10080 2,34866E-08 541360 to 521330 2.34241E-07 541360 to 20040 2.34241E-07 %1300 tot-cap 1.33811E-01 \$1330 to \$1320 7.0814E-05 \$1330 to \$1340 9.3283E-01 \$1330 to \$4330 7.7803E-04 551330 to 10010 7.78052-04 551330 to 531300 1.210056-05 551330 to 20040 1.210056-05 \$130 to 200 12106-0 \$130 to 5050 1.2230-0 \$130 to 5050 1.2230-0 \$130 to 5050 1.2230-0 \$150 to 5050 1.5062-0 \$150 to 5050 2.0851-0 \$150 to 5050 2.0851-0 551370 tot-cap 2.08331E-01 561360 to 561370 8.14600E-01 561360 tot-cap 8.14605-01 571390 tot-cap 7.5655/E+00 571390 tot-cap 7.5655/E+00 581440 to 581450 1.14875E+00 581440 tot-cap 1.148752-00 571410 to 571400 5.074405-05 571410 to 571370 2.140545-06 571410 to 571370 2.140545-06 591410 to 20040 4.52892E-05 591410 to 581400 1.54905E-05 57/410 to 56/400 1.34057-05
57/410 to 57/420 1.11551-01
57/410 to 58/410 4.17447-05
57/410 to 58/390 1.25265-05
57/410 to 58/390 1.35565-06 591410 to 10080 1.35585E-06 59/410 to 57/390 1,30942E-08 59/410 to 20090 1,30942E-08 59/410 to 57/390 4,30973E-05 571410 tot-cap 1.11605=01 571430 to 571440 9.16475=01 591430 tot-cap 9.1645E+01 601430 to 601420 7.7705E-02 601430 to 601410 7.5943/E-06 601430 to 501410 7.58426-16
601430 to 501430 1.750116-05
601430 to 20040 4.859556-04
601430 to 501420 3.317086-06
601430 to 501440 1.546516-02
601430 to 501440 1.546516-02
601430 to 501440 3.305576-05 601430 to 10020 2.05757E-06 601430 to 591410 2.97908E-06 601430 to 50800 2.97002-06 601430 to 508140 1.431332-08 601430 to 50800 1.431332-08 601430 to 50800 4.714142-04 601430 tot-cap 1.95029E+02 601450 to 601440 9.97664E-02

601450 to 601430 1.01175E-04 601450 to 581410 7.23125E-06 601450 to 20040 1,81711E-04 601450 to 591440 1.90050E-06 601450 to 10010 1.258625-05 601450 to 601460 7.225825-01 601450 to 591450 1.16281E-05 601450 to 10020 1.14244E-06 601450 to 591430 1,80107E-06 601450 to 10080 1,80107E-06 601450 to 581430 3.66699E-09 601450 to 20080 3.66699E-09 601450 to 581420 1.74479E-04 601450 tot-cap 7.235825+01 601470 to 601480 1.691695+02 601470 tot-cap 1.69168E+02 611470 to 611460 2.72614E-02 611470 to 611450 8.5060E-05 611470 to 591430 7.58435E-06 611470 to 20040 7.05508E-05 611470 to 601460 1.06371E-05 611470 to 10010 2.38494E-05 611470 to 611480 5.36651E+02 611470 to 601470 2.12576E-05 611470 to 10020 7.8/525E-06 611470 to 601450 2.96207E-06 611470 to 10080 2.96207E-06 611470 to 591450 4.45355E-09 611470 to 20080 4.45556E-09 611470 to 591440 6.2866E-05 611470 tot-cap 5.36578=402 611480 to 611490 1.15266=404 611480 tot-cap 1.1526/E+04 621470 to 621460 7.112/3E-02 621470 to 621450 6.40862E-08 621470 to 601430 5.62185E-06 621470 to 20040 1.07573E-05 621470 to 611460 1.29053E-04 621470 to 10010 1.85403E-04 621470 to 621480 2.08808E+02 621470 to 611470 1.636/4E-04 621470 to 10020 1,07305E-04 621470 to 611450 1.15222E-04 621470 to 10080 1.15222-04 621470 to 601450 5.30198-06 621470 to 2020 5.301925-06 621470 to 601440 1.037525-08 621470 to 621471 1.45472E+00 621470 tot-cap 2.09927=402 621470 to 621480 4.02107=402 621490 to 621470 3.19192E-05 621490 to 621500 4.47192E-04 621490 to 611490 4.15419E-04 621470 to 10010 4.15418E-04 621470 to 601460 4.15418E-04 621470 to 20040 4.15418E-04 621470 tot-cap 4.47197E+04 621500 to 621510 1.34848E+02 621500 tot-cap 1.268/2E+02 621510 to 621500 1.3669E-01

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621510 to 621490 1,20109E-04 621510 to 601470 1.35716E-05 621510 to 20040 1.06255E-04 621510 to 611500 1.64465E-06 621510 to 10010 1.28576E-05 621510 to 621520 4.81862E-05 621510 to 611510 1.1852E-05 621510 to 10020 6.39831E-07 621510 to 611490 1.16285E-06 621510 to 10080 1.16285E-06 621510 to 601490 1.19796E-09 621510 to 20080 1.19796E-09 621510 to 601480 9.26637E-05 621510 tot-cap 4.818765-08 621520 to 621510 1.608405-02 621520 to 621500 1.08805-04 621520 to 601480 2.42865E-06 621520 to 20040 1.00951E-05 621520 to 611510 6.9662E-07 621520 to 10010 2.0668E-06 621520 to 621530 6.81787E-02 621520 to 611520 1.82621E-06 621520 to 10020 4,6704E-07 621520 to 611500 1.21467E-07 621520 to 10080 1.21467E-07 621520 to 601500 3.68114E-10 621520 to 20080 3.68114E-10 621520 to 601490 7.6652E-06 621520 tot-cap 6.81765-02 631530 to 631520 1.56205-02 631530 to 631510 2.33275E-05 631530 to 611440 3.6555E-05 631530 to 20040 5.50264E-04 631530 to 621520 6.54189E-06 631530 to 10010 5.55667E-05 61530 to 61550 5.8652=05
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62730 to 92230 5.37761£-05 922340 fission 3.269763E+00 922340 nursigf 1.01609E+01 922340 to 922520 7.7853E-05 92340 to 92360 1.69426-02 92340 to 92341 2.609-26-00 92340 to 92341 2.6032540
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92250 to 92340 2.461995-02
92250 fission 3.514535-02
92250 to 92230 2.346175-05
92250 to 92230 2.346175-05 92250 to 92251 7.4219/E-02 92250 tot-cap 4,330/SE+02 92250 to 92250 2,736/1E-02 92250 fission 1,653/9E+00 97250 ru-sigf 4.5531E+00 97250 to 972540 3.6675E-04 92250 to 922570 6,97858E+01 92250 to 92251 2,55478E+00 92250 tot-cap 7,14670E+01 92280 to 922570 5,46500E-02 92230 tission 8.2/05/E-01 92230 ru-sigt 2.326/0E-02 92230 to 92250 3.5319E-04 92230 to 92230 7.6129/E-02 92290 tot-op 8.49501E+00 92270 to 93250 1.2659E-02 952370 fission 4,46514E+00 952370 nu-sigf 1,35001E+01 932370 to 93250 4.76640E-05 932370 to 932380 2.78086E+02 92370 to 932371 6.69105E-01 92370 tot-cap 2.82585E-02 92380 to 942370 2.00260E-08 94290 to 94250 2.02102401 94290 to 94250 1.12076-15 94290 to 94290 2.57608-02 94290 to 94290 to 94290 2.57608-02 94290 2. 9/2390 tot-op 2.77622E+02 9/2390 to 9/2390 1.062/6E-02 942390 fission 8.54735E+02 942390 rursigf 2,45731E+05

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942390 to 942370 1,80436E-05
                                  942390 to 942360 1,78869E-08
                                  942390 to 942400 4,85399E+02
                                  9/2390 tot-cap
                                                              1,33811E+05
                                  942400 to 942390 4.98738E-03
                                  942400 fission 5.21918E+00
                                  9/2/00 ru-sigf 1,630625+01
9/2/00 to 9/2/380 4,86695-05
                                  942400 to 942410 1.91204E+08
                                  942400 tot-cap
                                                              1.91727E+03
                                  942410 to 942400 6.34184E-02
                                  942410 fission 8.90876E+02
                                  942410 ru-sigf
                                                              2.61233E+05
                                  942410 to 942390 1.04139E-04
942410 to 942420 2.94405E-02
942410 tot-cap 1.18484E-03
                                  942420 to 942410 2.03312E-02
942420 fission 3.88427E+00
                                  9/2/20 nursion 1.21612E+01
9/2/20 to 9/2/20 2.47167E-04
                                  9/2/20 to 9/2/30 2.9689E+02
9/2/20 tot-cap 3.0078E+02
                                  952410 fission
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                                  952410 to 952420 1.00417E+03
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                                  952(30 to 952(40 3,82722E+02
                                  952/30 tot-cap 3.85718E+02
                                  962440 to 962630 4,88608E-08
                                  962440 fission
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                                  962440 ru-sigf 4.54426E-05
962440 to 962420 4.8725E-05
                                  962440 to 962650 1,26267E+02
                                  962440 to 962441 3.32705E+00
                                  962440 tot-cap 1,398(3E+02
 Othe reaction 50100 to 30070 was not used, because 50100 is not in library., (in subr pool)
                                                                    in the search of Library number 3
 Othe reaction 50100 to 40090 was not used, because 50100 is not in library., (in subr pool)
                                                                    in the search of Library number 3
 Othe reaction 50110 to 40090 was not used, because 50110 is not in library., (in subr pool)
                                                                    in the search of Library number 3
 Othe reaction 50100 to 40100 was not used, because 50100 is not in library., (in str pool)
                                                                    in the search of Library number 3
In the search of Ubrary number 3
Othe reaction 80160 to 80161 was not used, because 80161 is not in library., (in subr pool)
Othe reaction 621470 to 621471 was not used, because 621471 is not in library., (in subr pool)
Othe fission product transitions for 922340 were not used. Library fissile nuclides are
92230 92250 92340 92250 92250 92250
Othe substitute nuclide in block 8 data. or, update with new fission yield data.
Othe reaction 922360 to 922351 was not used, because 922341 is not in library., (in subr pool)
Othe fission product transitions for 922360 were not used. Library fissile nuclides are
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Othe fission product transitions for 952370 were not used. Library fissile ruchides are
922330 92250 92300 92300
 One substitute ructide in block 8 data. or, update with new fission yield data.
Othe reaction 932370 to 932371 was not used, because 932371 is not in library., (in sub-pool)
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Othe fission product transitions for $4250 were not used. Library fissile nuclides are
   922330 922550 942410 922580 942590
One substitute ructide in block 8 data, or, update with new fission yield data.
Othe reaction 9/250 to 9/251 was not used, because 9/251 is not in library., (in sub-pool)
Othe fission product transitions for %200 were not used. Library fissile ruclides are 922330 92250 942410 92250 94250
One substitute ructide in block 8 data. or, underte with new fission yield data.
Othe fission product transitions for $4200 were not used. Library fissile ructides are
92230 $2250 $4240 $2250 $4250.
One substitute nuclide in block 8 data. or, update with new fission yield data.

Othe fission product transitions for 953/10 were not used. Library fissile nuclides are
   922330 922350 942410 922380 942390
Oue substitute ructide in block 8 data. or, update with new fission yield data. Othe fission product transitions for 952430 were not used. Library fissile ructides are
   922330 922550 942410 922380 942390
One substitute ructive in block 8 data. or, update with new fission yield data.

Othe fission product transitions for 963%0 were not used. Library fissile nuclides are
   922330 92250 942410 922580 942390
One substitute ruckide in block 8 data. or, update with new fission yield data. Othe reaction 962440 to 962441 was not used, because 962441 is not in library., (in sub-pool)
                                 case completed, date, 2/16/1996
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program verification information

contents

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time of execution: 09:58:18
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col. prec. machine word applied has, at least, a 16 significant figure accuracy.

short-lived split test fraction, opn = 9.182E-04

half-norm of matrix used, ann = 7.000E+00

4-place-accuracy-retention ratio, ratio4 = 6.45 KE-13

[q array has 20 entries.
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 1 library information...
              cross-section data taken from position number 1 of library on unit 15.
              pnes 2
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              "scale system control module see? Library"
used a time-deportant matron spectrum, for each of the above passes
pass 0 applies start-up fuel densities
pass n applies mid time densities of nth Library interval
              first library updated was...
               pass 0
               *scale-system control module ses2 library*
              used a time-dependent neutron spectrum, for each of the above passes pass 0 applies start-up fuel densities pass n applies mid time densities of nth library interval
               first library updated was...
                             prelia for origens binary working library-id = 1143 made from modified card-image origens libraries of scale 4.2
                         data from the light element, actinide, and fission product libraries
                           decay data, including germs and total energy, are from endi/b-vi
                       nautron flux spectrum factors and cross sections were produced from
the "preses2" case updating all ructides on the scale "turnup" library
                                           fission product yields are from endf/b-v
                                     photon libraries use an 18-energy-group structure
                                    the photon data are from the master photon data base,
                                     produced to include bremestrahlung from up2 metrix
                            ern information above this box (if present) for later updates
```

```
other identification and sizes of library. data set name: ft15f001
                                                                                        date library ses produced total number of nuclides in library
                                               2/16/1996
                                                                  1697
                                                                                          number of light-element nuclides
                                                                    129
                                                                                          ruster of actinide nuclides
                                                                                        number of fission product nuclides
number of numbero off-diagonal matrix elements
                                                                   879
    sas2h: beboock wilcox 15x15, 3.00x1X, 20gxd/mu burn high temp
                                                                                                                                                                                                                                                                                                                                         actinides
          power= 8.466-05mm, burrup-2.0818E-02md, flue= 1.66E+13n/cmt=2-sec
                                                                                                                                      ruci ide concentrations, gram atoms
     basis = converted to atoms/(bern-on)
charge 200.0 d 240.0 d 250.0 d 320.0 d 320.0 d 360.0 d
u230 3.02E-22 4.37E-22 5.84E-22 7.51E-22 9.43E-22 9.43E-22 1.17E-21
       UZS1 8.18E-21 1.15E-20 1.46E-20 1.82E-20 2.23E-20 2.22E-20 2.66E-20 3.22E-20
                            1.07E-13 1.4/E-13 1.87E-13 2.3/E-13 2.9/E-13 3.6/E-13 4.3/E-13
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                             9.03E-12 1.12E-11 1.33E-11 1.52E-11 1.71E-11 1.71E-11 1.89E-11
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                              5.35E-06 5.30E-06 5.25E-06 5.16E-06 5.14E-06 5.14E-06 5.10E-06
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And the code system: scale version: 4.2 solutions the code system: code sys	more perification information	tim	***
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neated shows program c0x008 some shows show show shows program c0x008 some shows show show show show show show sho		******	****
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make program: c0:c008 make creation clate: 04/27/95 make library: /neutronics/scale/exe make this is not a scale configuration controlled code make this is not a scale configuration controlled code make this is not a scale configuration controlled code make this is not a scale configuration controlled code make this is not a scale configuration controlled code			•
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	MAN Introduction		- Andread

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time of execution: 09:58:22
          · 1q array has
                                1 entries.
          On array has
                                4 entries.
           1g array has
                                6 extries.
           2q array has
                                2 entries.
1 logical assignments
Omester Library 12
working library 0 scretch file 18
 neu Library
Oproblem description
Oign-geometry (0/1/2/3--inf mod/slob/cyl/sphere
Oign-number of zones or material regions
                                                                          2480
Ons-mixing table length
Oibl--shielded cross section edit option (Q/1--no/yes)
Oibr-bardererio factor edit ation (0/1--no/yes)
Oissapt-demoff factor aption
Occinergence criterion 1.0000E-03
Operatry correction factor for wigner rational approximation 1.350E+00
          3q array has
4q array has
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On ixing table
                                4 entries.
                                  number density new identifier
         mixture isotope
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3.9128/E-07

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5.49010E-01
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  (CODY
                                                                                   from lag 18 to lag 1
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from log 12 to log 1
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                                              from lag 12 to lag
                                                                               bondarerko trigger 0
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from log 12 to log
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              43077
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              4101
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0ccpy
                        ru-101
              44106
                        ru-105
                                                                               bordererko trigger 0
Occipy
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              45103
                        rh-103
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bordererico trigger 0
              45105
                        rh-105
                                             from log 12 to log
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from log 12 to log
              46105
                        pd-105
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                        pd-108
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              47109
                        silver-107
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              51124
                        sb-124
              54131
                                                                               bondarenko trigger 0
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                                              from log 12 to log
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                                             from log 12 to log
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from log 12 to log
             54136
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                        cesium-133
                                                                               bandarerko trigger 0
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              5534
                        cs-134
                                                                               bondererlo trigger 0
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                        cs-135
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                                             from lag 12 to lag
from lag 12 to lag
              55137
                        cs-137
                                                                               bondarerko trigger 0
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                        p-1/3
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              57143
                                                                               bandarento trigger 0
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from log 12 to log
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             60143
0сору
                        nt-143
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bandarerko trigger 0
                        rd-145
                        60147
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                                             from log 12 to log
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from log 12 to log
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from log 12 to log
from log 12 to log
             6147
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21-149
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              62149
                        an-150
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              62150
                                             from log 12 to log
from log 12 to log
from log 12 to log
from log 12 to log
from log 12 to log
              62151
                        sa-151
                                                                               bondarenko trigger 0
              62152
                        50-12
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Octoby
Octoby
              63153
                                                                               bondererko trigger 0
                        er 153
              6554
                        GJ-154
                                                                               bandarenko trigger 0
                                             from lag 12 to lag
from lag 12 to lag
0ccpy
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                        er-155
                                                                               bandanerko trigger 0
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Ocepy
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                      u-234 10/3 sign= from log 12 to log
uranium-255 from log 12 to log
u-236 11/3 sign= from log 12 to log
uranium-285 from log 12 to log
uranium-285 from log 12 to log
              92234
                                                                               borderatio trigger 0
Ocepy
              9225
Сфу
                                                                               bondarenko trigger 0
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              92256
0ccpy
              92238
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Ocepy
(CODY)
                        reptunium-257 from log 12 to log
                                                                               bondarerico trigger 0
              95257
              9.28
                       pur 258 1050 sign from log 12 to log
                                                                               bandarenko trigger 0
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             92299
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                        plutanium 239
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                                             from log 12 to log
from log 12 to log
                                                                               bondererko trigger 0
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             9231
9232
9231
                        plutonium 241
                                             from log 12 to log
                                                                               burdererko trigger 0
0ccpy
                                             from lag 12 to lag
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                        plutonium-242
                                                                               bondererico tripper 0
boderato trigger 0
                       an-241 1056 sign from log 12 to log 1
              923
                       an-243 1057 218 from log 12 to log 1
                                                                               bondarenko trigger 0
              96344
                        curium 244
                                             from log 12 to log 1
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(COOP)
                        27 group neutron burnup library
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compiled f	orno 1/27/89 deted 9/16/93	n endf-b	version 5 fission products		
	petrie - aml	/204			66
tape id		4321	number of nuclides	•	
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	ions normalized to 1.0			id	999
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hydrogen	endf/b-iv met 1269/	thrus OUZ	updated 10/13/89	id	1001
	gp 042575 p-3 253k			ត្រស់ស្រុសស	5010
boron-11	endf/b-iv mat 1160		updated 10/13/89)d	5011
aygan 16	endf/b-iv met 1276		updated 10/13/89	1d	8016
00/90T-16	endi/to-iv met 1276		updated 10/13/89	id	6
kr-83	mt=102,105,105,105,1	105,107	updated 10/13/89	1d	36083
kr-85	est= 102			id	36065
sr-90	mt=102		updated 10/13/89	id	38090
y-89	mt=102		updated 10/13/89	id	37089
zr-95	mt= 102			id	40095
zr~94	nt=102		updated 10/13/89	id	40094
ZF-95	nt=102		updated 10/13/89	id	40095
zircalloy	erdif/b-iv met 1284		updated 10/13/89	id	40302
rb-94	nt=102		updated 10/13/89	id	41094
10-7 5	RE=102		updated 10/13/89	년 년 년 년 년	42095
tc-99	mt=102		updated 10/13/89	id	43099
ru-101	nt=102		updated 10/13/89	id	44101
ru-106	at=102		updated 10/13/89	id	44106
rh-103	nt=102		updated 10/13/89	id id	45103
rh-105	at= 102		•	id	45105
pc+105	mt=102		updated 10/13/89	id id	46105
pc-108	mt=102		ujodeted 10/13/89	id	4610B
silver-109	endi/b-iv ant 1139		updated 10/13/89	id id	47109
sb-124	. at=102		updated 10/13/89	id	51124
xer-131	at=102,105,104,105,1	106	updated 10/13/89	id	54131
же-132	ent=102,103,104,105, endf/b-iv met 1294	105	updated 10/13/89	r r r r r	54132
peror 135	erdif/b-iv met 1234		updated 10/13/89	ld	54135
x=136	mt= 102, 105, 10	X, 105, '	107	id	54136
cestur-133	endi/b-iv met 1141		updated 10/13/89	id	ऋछ
cs-1 <u>34</u>	nt=102		updated 10/13/89	id	<u> 55134</u>
CS- <u>135</u>	mt= 102			jd	<u>35135</u>
CS-137	mt=102		updated 10/13/89	ជុំជុំជុំជុំជុំជុំជុំជុំជុំជុំ	55137
ba-136	nt=102		updated 10/13/89	10	56136
la-139	nt=102		updated 10/13/89	10	57139
c c-1//	mt= 102			id	58144
pr-141	m=102,105,104,105,	105,707	updated 10/13/89	id id	59141
pr-143	mt=102		updated 10/13/89	10	59143
nd-143	mt=102		updated 10/13/89	id	60143
nd-145	mt=102		undated 10/13/89	id	60145
nd-147	nt=102		474b0rd 10/13/89	id	60147
p r 147	mt=102		updated 10/13/89	id	61147
pa-148	mt= 102			id	61148
sm-147	endi/b-v fission pro	xict	undeted 10/13/89	id	62147
an- 149	mt=102,105,107		updated 10/13/89	10	62149
an-150	mt=102		undeted 10/13/89	10	62150
an-151	mt=102,103,104,105,	100,107	updated 10/13/89	jd	62151
an 152	mt=102,103,104,105,	145,107	updated 10/13/89	ri Pi Pi	€ 15
er-123	mt=102,105,104,105, mt=102,105,104,105,	ILD, TU	updated 10/13/89		ଊୣଊ
er <u>54</u>	MK=1UK, TUS, TUS, 1US, 1US, 1	IUD, 1UV	updated 10/13/89	id	ଭାୟ
au-155	mt=102,105,104,105,1	אטר יסטו	updeted 10/13/89	id	ଭୀର

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	11.74.10(3	Laine Sil	auriore r	-3 283k f-1/	(a-m/1 +5)	10107	id 92		
	unanium	75	b-iv met	1341	updated 10	/17/90	સ્ત્રિં જેટ		*
						, cyco	₩ 2		
				r3 200k f-1/	EUR 1972)	/17 /00	id 92		
	uranium		D-IV ABI		updated 10				
		1237 endf/			updated 10	עסעט /	id 95		
				p-3,203k f-1			id %		
		n-239 endf/			updated 10		id %		
		r240 endf/			uppleted 10		id 94		
	plutaniu		to-iv met		updated 10		id 94		
		1-242 endf			updated 10	/13/89	id 94		
	an-241 100	xósigp=544	DEKLES	218mp p-3 2	550k		id 95		
	an-2/3 10	57 218 gp w	t f-Vem	090376 p3 25	CS K		id 95		
	arium2	4 endf/	Ab-iv met	1162	updated 10	/13/89	id 96	\$4	
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	8 8			//	11			9777777777	***********
	œ œ		2		44				
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	888	22 22	2	<i> </i>	11	66 66	jj .	99	6 6
	88 88 88 88 88 88 88 88 88 88 88 88 88	22 22 22		#	11 11	66 66 66 66	//	99	6 6
	88888888888	22 22 22 22		<i> </i>	11 11 11	8 8 8 8	jj .	99 99 99	8 8 8 8
		22 22 22 23 24 24 24 27 27 27 28 28 28 28 28 28 28 28 28 28 28 28 28	7222 /	# # #	11 11 11 1111111	######################################		3333333333 33 34 35 35 35 35 35 35 35 35 35 35 35	######################################
	88888888888	22 22 22 22	7222 /	# # #	11 11 11	8 8 8 8	//	99 99 99	8 8 8 8
0		22 22 22 23 24 24 24 27 27 27 28 28 28 28 28 28 28 28 28 28 28 28 28	7222 /	# # #	11 11 11 1111111	######################################		3333333333 33 34 35 35 35 35 35 35 35 35 35 35 35	######################################
0		72 72 72 73 73 73 73 73 73 73 73 73 73 73 73 73	7772 7772	# # #	11 11 11 11 1111111 11111111	CHILLIANS CHILLI		9777777777 977777777777777777777777777	
0		72 72 72 72 73 73 73 73 73 73 73 73 73 73 73 74 74 74 74 74 74 74 74 74 74 74 74 74	722. 722. 779.	# # #	11 11 11 11111111 11111111	65 65 65 65 64 64 64 64 64 64 64 64 64 64 64 64 64		99 99 9333333333 933333333	
0		72 72 72 72 72 72 72 72 72 72 72 72 72 7	7222. 7222. 744)	# # #	11 11 11 11111111 11111111	66 66 66 66 66 66 66 66 66 66 66 66 66 66 66		99 99 99 99 99 99 99 99 99 99 99 99 99	
0		72 72 72 72 73 73 73 73 73 73 73 73 73 73 73 74 74 74 74 74 74 74 74 74 74 74 74 74	722. 722. 779.	# # #	11 11 11 11111111 11111111	65 65 65 65 64 64 64 64 64 64 64 64 64 64 64 64 64		99 99 9333333333 933333333	

1	88888	99 99 99 99 99 99 99 99 99 99			55 55 55 55 55 55 55 55 55 55 55 55 55	55 55 55 55 55 55 55 55 55 55 55 55 55	88 88 88 88 88 88 88 88	25 25 26 26 26 26 25 25 25 25 25 25 25 25 25 25 25 25 25	::: ::: ::: :::	22 22 · 22 22 · 22 22 · 22 22 · 22 · 22	
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			23		œ		88	an.	11	œ	
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				85	œ		80.	8B	11	ee	
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		•	88		œ		86	88	1111111111111		
			886969		000000		88 3	89	11111111111111	000000000000000	
			86969		00000	تست	86	æ	***************************************	60008600000000	

***		***
	program verification information	100
	in all an extended the analysis	-
telestek t	code system: scale version: 4.2	***

****		****

		-
		Thirt is
	program: c0c002	***
	• •	AAA
	creation date: 04/21/95	***
AAAA		1644
	library: /nsutronics/acale/exa	plake A

Antriak Antriak	this is not a scale configuration controlled code	delta.
	••	***
	johneme: davis	***
	date of execution: 02/16/96	***
	CEUE OF EMELLE UZ/10/NO	944
	time of execution: 09:58:23	***
	THE OF BACACIOE OFFICE	***
-		. 144

-iq array has 1 entries.

```
9 entries.
0
         Oct arriery has
                           12 entries.
         1c array has
Oselect 65 nuclides from the master library on logical
         O ructides from the working Library on Logical
         O ruclides from the working Library on Logical 3
           to create the new working library on logical 4
        61 resonance calculations have been requested
         O autout action for amore formatted cross section data
Othe storage allocated for this case is 200000 words
         20 array has 65 entries.
         40 array has 65 entries.
O general information concerning cross section library
    tace identification number
    number of nuclides on table
                                                  66
    number of neutron energy groups
                                                  27
    first themal reutron energy group
                                                   ъ
number of games energy groups 0
0 direct access unit number 9 requires 117 blocks of length 1484 words
- xedm tape 4321
                          scale 4.2 - 27 grap neutron burnup library
                             based on endf-b version 4 data with endf-b version 5 fission products
                                 compiled for mc
                                                       1/27/89
                                    last undated
                                                       9/16/93
                                       Linipetrie -
O rucilides from xechn tape
          1/v cross sections normalized to 1.0 at 0.0253 ev
                                                                                                999
                                                                                               1001
          hydrogen erchi/b-liv met 126
b-10 1273 218rgp 042375 p-3 288k
                           erc#/b-iv met 1269/thrm1002 updated 10/13/89
                                                                                               5010
           baran-11
                           erdi/b-iv met 1160
                                                            updated 10/13/89
updated 10/13/89
                                                                                               5011
           aygen 16
                                                                                               80%
                           endif/b-iv set 1276
                           endif/b-iv met 1276
                                                            uzdated 10/13/89
                                                                                                  6
           aygen lo
                           m 102,103,103,105,105,107
m 102
                                                            undeted 10/13/89
                                                                                              34083
           kr-83
                                                                                              3605
           kr-85
                           mt=102
                                                            uzdated 10/13/89
                                                                                              38090
           87-90
           y-80
                           mt=102
                                                            updated 10/13/89
                                                                                              3000
    101112131415
                                   102
                                                                                              40093
                              mt=
                           mt=102
                                                            updated 10/13/89
                                                                                              40094
           zr-94
                                                            updated 10/13/89
updated 10/13/89
           27-95
                           mt=102
                                                                                              40095
                                                                                              40B02
           zircallov
                           endf/b-iv mat 1284
                                                            uzdated 10/13/89
                                                                                              41094
                           mt=102
           rb-94
    16
                           mt=102
                                                            updated 10/13/89
                                                                                              42095
           m-95
                                                                                              43099
    17
                                                            undeted 10/13/89
           tc-99
                           mt=102
                                                            undated 10/13/89
                                                                                              44101
                           mt=102
    18
           ru-101
                                                                                              44105
45103
    19
                                                            undeced 10/13/89
           ru-106
                           mt=102
           rh-103
                                                            uzzletoszi 10/13/89
                           mt=102
    222224025
                              mt= 102
                                                                                              45105
           rh-105
                                                            updated 10/13/89
                                                                                              46105
           pd-105
                           mt=102
           pd-108
                                                            undated 10/13/89
                                                                                              4610B
                           at=102
                           endf/b-iv mat 1139
                                                            umbted 10/13/89
                                                                                              47109
           silver-109
                           mt=102
                                                            uzdated 10/13/89
                                                                                              51124
           sb-124
                           mt=102,105,104,105,105
mt=102,105,104,105,105
eruif/b-iv met 1294
                                                            uzdeted 10/13/89
                                                                                              54131
           xe-131
                                                            updated 10/13/89
                                                                                              54132
           xe-132
                                                                                              5415
           ASTOT 135
                                                            undeted 10/13/89
    EX SERVE
                           mt= 102, 105, 104, 105, 107
erof/c-iv mst 1141
                                                                                              5156
           xe-136
                                                                                              $133
$134
           cesium 133
                                                            updated 10/13/89
                                                            uculated 10/13/89
                           mt=102
           cs-134
                                                                                              35 T.S.
                              mt= 102
           CS-CD
           cs-137
                           mt=102
                                                            updated 10/13/89
                                                                                              5137
```

```
ba-136
                            mt=102
                                                             undeted 10/13/89
                                                                                               56136
    mt=102
                                                             undeted 10/13/89
                                                                                               57139
            la-139
                                                                                               58144
           OE-144
                               mt= 102
           p-141
                            mt=102,103,104,105,105,107
                                                             undeted 10/13/89
                                                                                               59141
                           mt=102
                                                             umboad 10/13/89
                                                                                               59143
           p-1/3
                                                             undstad 10/13/89
                                                                                               60143
           nd-1/43
                            mt=102
                                                             updated 10/13/89
                                                                                               60145
           nd-145
                            nt=102
                                                                                               60147
                           mt=102
                                                             undered 10/13/89
           nd-147
           pn-147
                                                             undeted 10/13/89
                            mt=102
           pn-148
                               mt= 102
                                                                                               61148
            sn-147
                            endf/b-v fission product
                                                             updated 10/13/89
                                                                                               62147
                                                                                               62149
                                                             undated 10/13/89
           an-149
                            mt=102,103,107
                                                             undeted 10/13/89
                                                                                               62150
           ant-150
                            mt=102
                                                             undeted 10/13/89
                            mt=102,108,104,105,106,107
                                                                                               62151
           ST 51
                            mt=102,103,104,105,106,107
                                                             updated 10/13/89
                                                                                               62152
           sn: 152
                           mt=102,105,104,105,106,107
mt=102,105,104,105,106,107
                                                                                               खाञ
           ar 53
                                                             undeted 10/13/89
                                                                                               63154
           ar 54
                                                             updated 10/13/89
                            mt=102,103,104,105,105,107
                                                             undeted 10/13/89
                                                                                               63155
           ar 155
                                                                                               64195
    SELECTOR
                            nd=102
                                                             undeted 10/13/89
           마 122
                                                                                               92234
           U-254 10/3 sign=5+4 maxtags p-3 255k f-1/e-n(1.+5)
                                                                                               9225
9228
                          erclf/b-iv met 1261
                                                             ucubood 10/13/89
           uraniun-235
          u-256 1163 sign-5+4 resklacs p-3 256k f-1/e-s(1.+5)
                                                                                               9238
                                                             undated 10/13/89
           uranium-238 endf/to-iv met 1262
                                                                                               9237
9428
9429
                                                             updated 10/13/89
           reptunium 237 endiforiv met 1263
          pu-29 1050 sign-54 newless p-3 28k f-1/e-m(1.45)
plutonius-29 endi/o-iv met 126
plutonius-240 endi/o-iv met 126
plutonius-241 endi/o-iv met 126
update
                                                             undered 10/13/89
                                                                                               92340
92341
92342
    60
                                                             undated 10/13/89
    61
                                                             undated 10/13/89
           plutonium-242 endi/b-iv met 1161
                                                             underted 10/13/89
                                                                                               95241
           an-241 1056 sign-544 newlacs 218 gp p-3 256k
           an-2/3 1/057 218 gp wt f-1/e-m 09/08/6 p3 2/3k
                                                                                               95243
                                                                                               96244
           arium 24
                            andf/b-iv and 1162
                                                             undeted 10/13/89
OIAV cross sections normalized to 1.0 at 0.023 ev
                                                                                              temperature=
                  ercli/b-iv met 1269/thrm1002 updated 10/13/29 1001 thermal scattering metrix runber 2 at a temperature of
                                                                                              temperatures 607.60
O hychogen
                                                                                               550.00 was selected.
Ob-10 1273 218mp 042375 p-3 258k
                                                                                    5010
                                                                                              temperature= 607,60
                                                                                               550.00 was selected.
                                thermal scattering matrix number 2 at a temperature of
                                                   updated 10/13/69
0 boran-11
                  endf/b-iv met 1160
                                                                                    5011
                                                                                              temperatures 607.60
                                thermal scattering matrix number 2 at a temperature of
                                                                                                550.00 uns selected
0 aggan-16
                  endf/b-iv met 12/6
                                                   updated 10/13/89
                                                                                    8016
                                                                                              temperature 975.00
                                                   updated 10/13/80
                                                                                              temperatures 607.60
0 coopen-16
0 kr-83
                  erulf/to-liv met 1276
                                                                                   36083
                                                                                              temperature= 975.00
                  mt=102, 103, 105, 105, 106, 107
                                                   uzdated 10/13/89
Oresonance data for this rucilida
                                82.702
                                                                                   = 975.000
Omese number (a)
                                                        tenperature(kelvin)
                                  7.004
                                                        lumped nuclear density
                                                                                   = 7.2509016E-07
Opotential scatter signa =
                           = 4988.190
Ospin factor (g)
                                                        lump dimension (a-ber)
                                                                                   = 4.6812201E-01
Oimer radius
                                                                                   = 3.4269261E-01
                            = .00000000=+00
                                                        denoff correction (c)
Othe absorber will be treated by the northelm integral method.
                                                     signa(per absorber atom)= 2.3550131EH05
Omes of moderator-1 = 15.995
Oxederator-1 will be treated by the norchein integral serbed.

Oxes of moderator-2 = 237,933 signs(per al
                                                     signe(per absorber aton)= 2.627460E+05
Oncobrator-2 will be treated by the northern integral method.
Othis rescrence material will be trested as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.0000
Ouroup
Ouroup
               res abs
                                res fias
                                                res scat
           -9,819651E-04
                                            -1.251875E-03
                               .000000E+00
                                             9.9059EE-05
  12
           2.167537E-02
                               .0000000
                                             -7.50/XXE-02
  13
           -2.39978/E-01
                               _000<del>000E+</del>00
           4.781998E-05
                               .000<del>1</del>
                                             -1.721927E-05
Opices rescrence integrals
```

```
Ω
                   resolved
Osbsonstian
                  1.45000E+02
 fission
                   .00000E+00

    elapsed time

                   .OO min.
0 kr-85
                                                                              36086
                    mt= 102
                                                                                                      975.00
                                                                                       temperature=
                 mt=102
                                                undated 10/13/89
                                                                              39000
02-20
                                                                                       temperature=
                                                                                                      975.00
0 y-89
                 mt=102
                                                updated 10/13/89
                                                                              39089
                                                                                       temperatures
                                                                                                      975.00
Oresonance data for this nuclide
Omes runber (a)
                                                    temperature(kelvin)
                                                                              = 975.000
Opportual scatter signa =
                               3.64
                                                                             = 5.4740689E-06
                                                    lurped nuclear density
                                                                              = 4.6812201E-01
Ospin factor (g)
                              78.664
                                                    lump dimension (a-bar)
Oirner radius
                         = .000000E+00
                                                                             = 3.4269261E-01
                                                    derpoff correction (c)
Othe absorber will be treated by the norcheim integral method.
Oness of moderator-1 = 15.995
                                                  signature absorber atoms= 3.11%320E+04
Oncderator-1 will be treated by the northern integral method.
Oness of acclerator-2 = 257.953
                                                 signs(per absorber aton)= 3.4803137E+04
Oncorator 2 will be treated by the norcheim integral method.

Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for scatial self-shielding=1,00000
              res abs
                            res fiss res scat
.00000E+00 9.697892E-06
grap
          -7.380091E-07
          -3.1896Z/E-05
                            .00000E+00 -8.988161E-05
  10
Opices recommon integrals
                   resolved
Cabsorption
                  1.46470E-01
 fission
                   .00000E+00

    elacoad time

                   .00 min.
0 2-35
                    nt= 102
                                                                              40093
                                                                                       temperatures
0 27-94
                 mt=102
                                                undated 10/13/89
                                                                              4000%
                                                                                       temperature
                                                                                                     975.00
Oresonence data for this nuclide
Omes rusber (a)
                                                    temperature(kelvin)
                                                                              = 975.000
                                                                             = 9.2634256E-06
Opotential scatter signs =
                               3.779
                                                    lurped ructeer density
Ospin factor (a)
                             190,853
                                                    lump dimension (a-bar)
                                                                             = 4_f812201E-01
Cirner radius
                         = .000000E+00
                                                    dencoff correction (c)
                                                                             = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
Omes of suderstor-1 = 15,995
                                                  signatoer absorber atout= 1.8433756E+04
Occulerator-1 will be treated by the northern integral method.
Oness of suderator-2 = 257.953
                                                 signs(per absorber atox)= 2.056534E+04
Oraclerator-2 will be treated by the northeim integral method.
Othis rescreme material will be treated as a 2-dimensional object.
Oxclure fraction of lump in cell used to account for scatial self-shielding-1,0000
Ograp
             res abs
                             res fiss
                                             res scet
          -3.996329E-07
                            .000000000
                                         -3.981763E-04
          -1.74039'E-05
                            .000000E+00
                                         -1.543847E-03
Descess resonance integrals
                   resolved
                 3,44067E-02
Osbsorption
fission
                   .00000E+00
  elapsed time
                   .00 min.
0 25-95
                mt=102
                                               updated 10/13/89
                                                                              40075
                                                                                       tenperatures 975.00
0 zircalloy
                erdf/b-iv met 1284
                                               undeted 10/13/89
                                                                              40302
                                                                                       terceratures
Oresonance data for this nuclide
Omes runber (a)
                                                    temperature(kelvin)
                                                                              = 650.000
Opotential scatter signa =
                               6.355
                                                    lumped ructeer density
                                                                             = 4.25 500E-02
                               1.079
                                                    lump dimension (a-bar)
                                                                            = 5,4610002E-01
Ospin factor (g)
Olmer radius
                         = 4.7878999E-01
                                                   dencoff correction (c)
                                                                            = 5.056/657E-01
Othe absorber will be treated by the northeim integral method.
Othis resonance material will be treated as a 2-dimensional object,
Oxclume fraction of lump in cell used to account for spatial self-shielding-1.00000
grap
              res abs
                             res fiss
                                             Tes scat
```

```
4.20/007:00
          -1:70096C-65
                           .000000E+00
          ·5.000732-02
                           -800000F+80
                                        -2.675297E+00
 10
          -6.99930E-02
                           .000000E+00
                                       -1.6013216+00
  11
         -1_853937E-01
                           -000000E+00 +7.920912E-01
Ocuces resorume integrals
                  resolved
Oabsorption
                 2.25539E-01
fission
                  .0000E+00
- elaced time
                  .02 min.
                                             undated 10/13/89
                                                                          41094
0 rb-94
                mt=102
                                                                                    temeratures 975.00
Oresonance data for this ruclide
Omess number (a)
                             93,101
                                                  temperature(kelvin)
                                                                          = 975.000
Ocotential scatter signa =
                              3.779
                                                  lumed nuclear density
                                                                          = 3.6019209E-12
                        = 43808,801
                                                                          = 4.6812201E-01
Ospin factor (g)
                                                  lump dimension (a-bar)
                         ≈ .000000€+00
Oirner radius
                                                  dencoff correction (c)
                                                                          = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
Ones of audientor-1 = 15.995
                                               signature absorber atom)= 4.740752E+10
Oxiderator-1 will be treated by the northern integral method.
Ones of moderator-2 = 257.953
                                               signa(per absorber atom)= 5.2892492E+10
Onoderator-2 will be treated by the northeim integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.00000
apreg0
             nes abs
                            res fiss
                                           nes scat
  13
          1.042787E-02
                           .00000E+00
                                       9.25207ZE-04
 ĩ,
                           .00000E+00 -4.05484EE-04
          9.836727E-0B
Coces resumes interrals
                  resolved
Oabsorption
                 9.15001E+01
fission
                  .0000E+00

    elassed time

                  .02 min.
0 mg-95
                mt=102
                                              updated 10/13/89
                                                                          42095
                                                                                    temperature= 975.00
Oresonance data for this nuclide
Oness Linbar (a)
                                                  temperature(kelvin)
                                                                          × 975.000
Ocotential scatter signs =
                              3.806
                                                  lurged nuclear density
                                                                          = 6.1215087E-06
                        = 607.724
Ospin factor (g)
                                                  lum dimension (a-bar)
                                                                          = 4.6812201E-01
Oimer radius
                         = .00000000+00
                                                                          = 3.4269251E-01
                                                 denoif correction (c)
Othe absorber will be treated by the nurcheim integral method.
Omes of moderator-1 = 15.995
                                               sign(per absorber atom)= 2.7895053E+04
Omericator-1 will be treated by the northein integral method.
Ourse of moderator-2 = 257.953
                                               signs(per absorber atom)= 3.112218/E+04
Omzerator-2 will be treated by the norchelm integral method.
Othis resource material will be treated as a 2-dimensional object,
Ovolume fraction of lump in cell used to account for spatial self-shielding=1,00000
appe 0
             res abs
                            res fiss
                                           res acat
          -1.39331E-03
                                        -7,621617E-0B
                           .000000E+00
 10
 iĭ
         -2.255119E-03
                           .000000
                                        -4_000109E-03
 12
         -1.778537E+00
                           .000000E+00
                                       -2.047859E+00
                                       -2.53386/E-05
 13
          1.600225E-04
                           .000000E+00
Ocuces resonance integrals
                  resolved
Osbsorption
                 1.01012E+02
fission
                  .00000E+00
- elapsed time
                  .02 min.
0 12 99
               mt=102
                                             updated 10/13/89
                                                                          43099
                                                                                    temperatures 975.00
Oresonance data for this nuclide
                             98,150
                                                                          = 975.000
Omes number (a)
                                                 temperature(kelvin)
Opotential scatter signa =
                                                 lumped nuclear density
                                                                          = 8,9671950E-06
                             6.000
                        = 4527.940
                                                                          =4.6812201E-01
Ospin factor (g)
                                                 (a-bar) (a-barith qual
Oimer radius
                        20000000
                                                 dencoff correction (c)
                                                                          = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
```

```
Omess of moderator-1 = 15.995
                                                     signs(per absorber aton)= 1.9042719E+04
Oncderator-1 will be treated by the norchein integral method.
Oness of moderator-2 = 237.953
                                                    signa(per absorber atom)= 2.12/5/32E+04
Onockretor-2 will be treated by the norchein integral method.
Othis resorance asterial will be treated as a 2-disensional object.
Oxolure fraction of lump in cell used to account for spatial self-shielding-1.0000
              res abs
                               res fiss
                                                res scat
Garato
           -1.14306E-02
                              .00000E+00 -5.3973E/E-03
  11
  12
                              .000000E+00
                                            -9.676807E-05
           -2.896091E-03
  13
          -1.84459E-01
                              .000000E+00
                                            -9.85668E-03
  14
           -4.066178E+00
                              .000000E+00
                                            -1,301287E-01
                              .000000E+00
           1.0712545-02
                                            -5.40210/E-04
           4.836073E-03
                                            -2.802250E-04
  16
                              _000000E+00
                                            -1.19165ZE-05
  17
           2.07432XE-04
                              .000000E+00
Oceans resorance integrals
                    resolved
                   3.2972E+02
Osbscrption
 fission
                    .000E+00
                    .OB min.

    elapsed time

0 ru-101
                  mt=102
                                                   uzdated 10/13/89
                                                                                   44101
                                                                                             temperature: 975.00
Oresonence data for this nuclide
                                                                                  = 975.000
                           = 100,039
                                                       temperature(kelvin)
Omess number (a)
                                                                                  = 7.8990079E-06
                                3.965
                                                       lumped nuclear density
Ocotential scatter signs =
                           = 8785.290
                                                                                  = 4,6812201E-01
                                                       lump distarsion (a-bar)
Ospin factor (g)
                           = .000000E+00
                                                       dereoff correction (c)
                                                                                  = 3,4269261E-01
Oirmer radius
Othe absorber will be treated by the northern integral method.
                                                     signs(per absorber atom)= 2,1617857E+04
Oness of acclerator-1 = 15.995
Oncderator-1 will be treated by the northeim integral method.
                                                     signaturer absorber atom)= 2.4118799E+04
Oness of moderator-2 = 257.953
Oncerator-2 will be treated by the norderin integral method.

Othis resonance material will be treated as a 2-dimensional object.

Oxclume fraction of lump in cell used to account for spatial self-shielding-1,00000
                                res fiss
(DELOTO)
              nes abs
                                                 res acat
           -3.577319E-02
                              .000000E+00
                                            -3.650390E-03
  11
                                            -1.328257E-02
  12
           -3.62X5/E-02
                              ,000000E+00
           -2.097445-01
                              .000000E+00
                                            -5.654530E-05
  13
           2.376605E-04
                              _000E+00
                                            -4.177690E-05
Ocioces resonence integrals
                    resolved
                   7.96720E+01
Osbeanption
 fission
                    .0000E+00
- elapsed time
                    .CS min.
                  THE TR
                                                   rated MIVE
                                                                                   4116_
                                                                                             temportunes 975.00.
\Delta r_{\rm th} \sim
                                                    updated 10/13/89
                                                                                              terperature: 975.00
 0 rh-10B
                                                                                    45103
                   mt=102
 Oresonence data for this ruclide
                                                                                    = 975.000
                            = 102.021
                                                         temperature(lectivin)
 Omes runber (a)
                                                                                    = 4,4058539E-06
                                                         lumed nuclear density
 Opotential scatter signs =
                                                                                    = 4.6812201E-01
 Ospin factor (g)
                                    .500
                                                         lum dimension (a-bar)
                                                                                    = 3.426925 E-01
                            = .000000E+00
                                                        dencoff correction (c)
 Oimer redius
 Othe absorber will be treated by the northeirs integral method.
                                                      signs(per absorber atont= 3.8/57/57E+04
 Oness of moderator-1 = 15.995 signator at Onoderator-1 will be treated by the northern integral method. Oness of moderator-2 = 257.983 signator at
                                                      signs(per absorber aton)= 4.32/1238E+04
 Oncorator 2 will be treated by the northein integral method.

Othis resonance meterial will be treated as a 2-dimensional object.
 Ovolume fraction of lump in cell used to account for spatial self-shielding-1.00000
                res abs
                                 res fies
                                                  res acat
 (Derecto
                                              2.051222 - 03
                               .000000E+00
             1.289190E-03
            -2.A3722/E-05
                                .000000E+00
                                            -3.4820YE-03
    10
            -8.577483E-03
                                .00000E+00 -7.67585/E-03
```

```
-1.704071E-05
  12
13
          -1.027892E-04
                             .00000000
            .00000E+00
                             .000000E+00
                                             .0000000
  145
             .000000E+00
                             .000000E+00
                                             .00000E+00
           2.306213E-01
                             .000000E+00
                                           3.34454F-03
  16
           3.688781E+01
                             .0000000
                                          -4.548918E-02
  17
          -1.831598E+02
                             .000000E+00
                                          -1.432801E-01
                                           2.61595ZE-01
  18
           8.76400E+01
                             .000000E+00
  ñ
           1.1553275+01
                             -00000E+00
                                          -1.651123E-03
           1.0926365+00
                             .0000000
  20
21
                                          -2.517397E-03
           2.16600E-01
                             .00000E+00
                                           1.924752E-03
  22
           2.583949E-01
                             .00000E+00
                                           2.928509E-0B
  \overline{z}
          -9.880788E-02
                             .000000E+00
                                           1.799112E-03
Ocuces resonance integrals
                   resolved
Osbsorption
                  1.1565/E+03
fission
                   .00000E+00
- elapsed time
                   .05 min.
                    mt= 102
                                                                               45105
                                                                                         terperatures 975.00
0 rh-105
                 mt=102
                                                updated 10/13/89
                                                                               46105
                                                                                        temperature= 975.00
0 pd-105
Oresonence data for this ruclide
Omess runber (a)
                                                     temerature(kelvin)
                                                                               = 975.000
Occupital scatter signs =
                                                                              = 2,4911647E-06
                                4.069
                                                     lumped nuclear density
                                                                              = 4.6812201E-01
Oppin factor (g)
                          = 15210.000
                                                     (a-bar)
Oimer radius
                          = .000000E+00
                                                     dencoff correction (c)
                                                                              = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
                                                  signa(per absorber atom)= 6.85/6125E+04
Ones of audicretor-1 = 15.995
Omoderator-1 will be treated by the norcheim integral method.
Ones of anderstor-2 = 257.933
                                                  signe(per absorber atom)= 7.6476109E+04
Omoderator-2 will be treated by the porchein integral method.

Othis resonance material will be treated as a 2-dimensional object.
Oxclume fraction of lump in cell used to account for special self-shielding-1.00000
              res abs
Ograp
                              res fiss ·
                                              res acet
          4.95329E-02
                             .00000E+00 -7.882353E-04
  Ī
          2.276/23E-02
                             .00000E+00 -5.572332E-05
          7.77755E-04
  14
                             T00000E+00
                                          -8.168058E-05
Oppoess resonance integrals
                   resolved
Ochsarption
                  6.12545E+01
                   .0000E+00
fission
- elapsed time
                 .07 min.
0 pd-108
                nst=102
                                                undated 10/13/89
                                                                               46108
                                                                                        tarperstures 975.00
Oresonence data for this ruclide
                          = 106.977
                                                                              = 975.000
Ones runber (a)
                                                     temperature(kelvin)
Opotential scatter signa = 4.146
                                                     lurged ruclear density
                                                                              = 5.440544E-07
                          = 21175.100
                                                                              = 4.6812201E-01
Oxprin factor (g)
                                                     lump dimension (a-bar)
                          ■ .00000000
                                                                              = 3,4269261E-01
                                                    dencoff correction (c)
Oimer radius
Othe absorber will be treated by the northeim integral method.
Oness of moderator-1 = 15.995 signa(per el
Onoderator-1 will be treated by the northein integral method.
                                                  signs(per absorber atont= 3,139509E+05
Omess of moderator-2 = 257.953
                                                 signs(per absorber atom)= 3.5017556E+05
Oncorator 2 will be treated by the porthein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1.00000
Grant)
              res abs
                              res fias
                                              res scat
                             .000000E+00
                                          3.5325 WE-04
  11
           1,17057E-04
 12
          -4.881945E-01
                             .000000E+00
                                          -3.598531E-01
           6.951076E-03
                             .000000E+00
                                           1.82/893E-03
 13 14
           8.56145ZE-02
                             .000000E+00
                                          -3.20/50E-05
  15
          -1.840804E-01
                             .00000E+00
                                           8.08389F-05
                             .00000E+00
           2.94894E-04
                                          -9.25707E-05
```

```
Devices resonance integrals
                  resolved
                 2.155165+02
Orbeanstian
fission
                   .00000=+00

    elapsed time

                  .07 min.
                                                                                      temperatures 975.00
                                                                            47109
                                               undated 10/13/89
               erctf/b-iv met 1139
0 silver-109
Oresonence data for this ruclide
                                                                            = 975.000
                                                   temperature(kelvin)
                         = 107,969
Omes runber (a)
                                                                            = 3.9128/43E-07
                                                   lumed nuclear density
                               4,988
Opotential scatter signa =
                                                                            = 4.6812201E-01
                        = 1441.870
                                                   lum dimension (a-bar)
Oppin factor (g)
                                                                            = 3.4269261E-01
                                                   dercoff correction (c)
                         = .000000E+00
Oimer radius
Othe absorber will be treated by the northeim integral method.
                                                signa(per absorber atom)= 4,3640809E+05
Oness of moderator-1 = 15.995
Oncorretor-1 will be treated by the northein integral method.
                                                 signs(per absorber atom)= 4.868/538E+05
Omes of moderator-2 = 237.953
Omobrator 2 will be treated by the northeis integral method.

Othis resonance material will be treated as a 2-disensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1.0000
                                             res scat
                             res fiss
             resabs
Grap
          -1.470¥6E-05
                            _000000E+00
                                          1.63290TE-05
                                         -1.091169E-03
          -1.383519E-05
                            .000000E+00
  11
        .-7.052/#2E-01
                            _000000E+00
                                         -3.163157E-02
                                         3.38075XE-02
           7,672281E-01
                            -000000E+00
  ซ
                            .000000E+00
                                         -3.333731E-01
          -3.453221E+00
Deces resonance integrals
                   resolved
                  1,39897E+03
Oabscrption
                   .0000E+00
 fission
- elapsed time
                   .07 min.
                                                                                      terperature 975.00
                                               updated 10/13/89
                 mt=102
0 sb-124
                                                                                       temperatures 975.00
                 mt=102, 105, 104, 105, 106
                                               undered 10/13/89
                                                                             54131
0 xe-131
Orescripto data for this ruclide
                                                                             = 975.000
                                                    temperature(kelvin)
                         = 129.781
Ouese number (a)
                                                                            = 4.162866/E-06
                                                    lusped nuclear density
                               4.301
Opotential scatter signs =
                                                                            = 4.6812201E-01
                                                    luno dimension (a-ber)
                         = 26.825
 Ospin factor (g)
                                                                            = 3.4269261E-01
                                                   dercoff correction (c)
                          = .000000E+00
Oimer nadius
Othe absorber will be treated by the northelm integral method.
                                                 signs(per absorber atum)= 4.1019/38E+04
 Omes of suderator-1 = 15.995
Onchristor-1 will be treated by the northeim integral method.
                                                 signs(per absorber atom)= 4.5765250E+04
 Oness of auderator-2 = 257.953
 Onchretor-2 will be treated by the norchein integral method.
 Othis resorance material will be treated as a 2-dimensional object.
Ordina fraction of lump in cell used to account for spatial self-shielding-1.0000
                                              res acat
                              res fiss
              res abs
 Otab
                                          -1.10960Œ-05
                             -1.15713ZE-06
                                          -6.607881E-05
                             .00+3000000,
           -R 302818E-05
  10
                                          -8.185.BZE-04
                             _000000E+00
   11
           -1.059877E-03
                                          -1.96439E-03
           -2.105276E-02
                             .00000E+00
   12
                                          -B.453453E+01
                             .000000E+00
   13 14
           -3.601871E+01
                                           1,539X52E-02
                             .000E+00
           1,100193E-02
 Descess resonance integrals
                   resolved
                  7,9838/EH02
 Oubscrption
                    .000<del>0E+00</del>
  fission
  - elapsed time
                    .08 min.
                                                                                       terperature 975.00
                                                                              54132
                                                underted 10/13/89
                 mt=102, 103, 104, 105, 106
 0 xe-132
 Oresonence dista for this nuclide
                                                                              = 975.000
                                                     temperature(kelvin)
                             130.77
 Omess runber (a)
                                                                             = 7.0058/5/E-06
                                                     lumed nuclear density
                                4.301
 Onotential scatter signs =
                                                     (up dimension (a-bar)
                                                                              =4.6812201E-01
 Ospin factor (g)
```

```
= .00000000=+00
Oimer redius
                                                    dereoff correction (c) = 3.4269261E-01
Othe absorber will be treated by the northein integral method.
Ones of moderator-1 = 15.995
                                                  signe(per absorber atom)= 2.4375857E+04
Oncommentor-1 will be treated by the northeim integral method.
Oness of moderator-2 = 257.953 signe(per al
                                                 signe(per absorber atom)= 2.71956585+04
Onoderator-2 will be treated by the norcheim integral method.
Othis rescrence material will be treated as a 2-dimensional object.
Oxoluze fraction of lump in cell used to account for spatial self-shielding-1.0000
                              res fiss
Grap
              nes abs
                                              res scat
                                          -4.706HE-05
           -1.05691ZE-05
                             .00000E+00
  10
          -3.331607E-03
                             _000000E+00
                                         -4.241980E-02
           3.3441E-08
                             .000000E+00
                                         -9.285257E-07
  11
Opposs rescrence integrals
                   resolved
                  9.78718E-01
Osbsorotion
                   .0000E+00
 fission

    elamed time

                   .03 min.
                 endf/b-iv met 12%
                                                                              54135
                                                updated 10/13/89
                                                                                        temperatures
221-rigness 0
                 nt= 102, 103, 104, 105, 107
eruf/b-iv met 1141
                                                                              54136
                                                                                        temperatures
                                                                                                      975.00
0 xe-136
                                                updated 10/13/89
0 cesium 133
                                                                              55133
                                                                                        terperature 975.00
Oresonence deta for this nuclide
                          = 131.764
                                                    temperature(kelvin)
                                                                              = 975,000
Onces number (a)
Opotential scatter signa =
                              7,100
                                                    lumped nuclear density
                                                                              = 9.7889797E-06
                                                                             =4.6812201E-01
Ospin factor (g)
                         =
                             374.437
                                                    lump dimension (a-bar)
                                                                             = 3.4269261E-01
Oirmer rectius
                          = .000000E+00
                                                    denote correction (c)
Othe absorber will be treated by the norcheim integral method.
Omess of moderator-1 = 15.995 signs(per absorber atom)= 1.7444074E+04
Omoderator-1 will be treated by the northeim integral mathod.
                                                  signs(per absorber aton)= 1.8711057E+04
Ones of moderator-2 = 258.051
Onoderator-2 will be treated by the norchein integral method.
Othis resource material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.00000
Ograp
             res abs
                              res fiss
                                              Tes scat
          -2.907373E-05
                             .00000E+00
                                         -1.5703XEE-04
                                         -2.538390E-03
  10
          -1.314802E-03
                             _000000E+00
  11
          -5_000/8EE-02
                             00000E+00
                                          -8.8535/E-02
  12
          -7.7935E-02
                             _000000E+00
                                          -1.087077E-02
  13415
                                          -7.041851E-0B
           -1.235005E-01
                             -0000E+00
           -5.8168/4E+00
                             00000E+00
                                          -2.551529E-01
                             .000000E+00
                                          -4.058210E-04
           5.62701/E-03
  16
           2.777945E-03
                             .000000E+00
                                          -2.215582E-04
  17
           2.352170E-03
                             .000000E+00
                                          -1.830EGE-04
                                          -1.679469E-04
           2.2149ESE-03
                             .000000E+00
  18
                                          -9.670768E-05
  19
           1.3170XE-03
                             .00000E+00
Opicies resonance integrals
                   resolved
Osbsorption
                  3.577576+02
fission
                   -0000E+00
                   .10 min.

    elacaed time

                                                updated 10/13/89
                                                                              55134
                                                                                        tenceratures 975.00
0 cs-134
                 nst=102
                    mt= 102
                                                                              25125
                                                                                        tesperatures
                                                                                                      975.00
0 cs-135
                                                                                        temperatures
                                                uzdated 10/13/89
                                                                              55137
                                                                                                      975.00
0 cs-137
                 mt=102
                                                                              56136
                                                                                        temperature=
                                                                                                      975.00
                 mt=102
                                                undeted 10/13/89
0 ba-136
Oresonence data for this ruclide
                                                    temperature(kelvin)
                                                                              = 975.000
                              134.737
Omess number (a)
                          .
                                                                              =4.3204217E-08
Opotential scatter signs =
                                4.85
                                                    lumed nuclear density
                                                                             = 4,6812201E-01
                         = 1247.690
Ospin factor (g)
                                                    lum dimension (a-bar)
                          = .0000000=00
                                                    dencoff correction (c)
                                                                             = 3.4267351E-01
Oimer radius
Othe absorber will be treated by the northeim integral method.
                                                  signe(per absorber atom)= 3.952560E+06
Oness of necestartor-1 = 15.995
```

```
Omoderator-1 will be treated by the norchein integral method.

Omes of inchretor-2 = 237,933 signetoer at
                                                    signe(per absorber atom)= 4,4096290E+06
Occurator-2 will be treated by the norchein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for scatial self-shielding-1.0000
Grap
              res abs
                               res fiss
                                               res scat
            1.325430E-06
  10
                              .00000F+00
                                            5.726989E-07
  11
           1.778946E-05
                              .000E+00
                                            1.5361932-05
Devoess resonance integrals
                   resolved
Osbscrpt ign
                   1.38476E+00
                    .00000E+00
 fission
- elepsed time
                   .10 min.
0 la-139
                 mt=102
                                                  updated 10/13/89
                                                                                 57139
                                                                                           temperature: 975.00
Oreschence data for this ruciida
                           = 137.713
                                                                                 = 975.000
Omess number (a)
                                                      temperature(kelyin)
Opportunitial scatter signs =
                                4,906
                                                      lunped nuclear density
                                                                                = 9.432974/E-06
Ospin factor (g)
                          = 145.855
                                                      lump dimension (a-bar)
                                                                                = 4.6812201E-01
Dirner redius
                           = .0000000E+00
                                                      dencoff correction (c)
                                                                                = 3.4269261E-01
Othe absorber will be treated by the norcheim integral method,
                                                    signs(per absorber atom)= 1.8103422E+04
Ones of moderator-1 = 15.995
Oxodorator-1 will be treated by the norcheim integral method.
Omess of moderator-2 = 237.983 signe(per al
                                                   signatoer absorber atomi= 2.0196658E+04
Occidenator-2 will be treated by the northern integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxclume fraction of lump in cell used to account for spatial self-shielding-1,00000
(prosp
                              res fiss
              res abs
                                               res scat
           2.51561E-05
                              .000E+00
                                            4.217379E-03
          -2.13089XE-04
                              ,000000E+00
                                           -1.47022E-02
  10
  11
             .000000E+00
                             .000000E+00
                                              .00000E+00
  12
          -3.25367E-02
                             .0000000
                                           -1.97A98-02
Opicies resorance integrals
                    resolved
Osbsanstian
                  8.11172=+00
fission
                    .0000E+00

    elapsed time

                   .12 min.
0 ce 144
                    et = 102
                                                                                 58144
                                                                                           temperature= 975.00
0 - 141
                 mt=102,103,104,105,106,107
                                                  updated 10/13/59
                                                                                 59141
                                                                                           temperatures 975.00
Oresonence data for this ruclide
Orness rustber (a)
                          = 139,697
                                                      terperature(kelvin)
                                                                                 975.000
Ocotential scatter signs =
                               4.933
                                                      lunced nuclear density
                                                                                = 7.61/8221E-06
                          = 1026.500
Ospin factor (g)
                                                      turp disension (a-bar)
                                                                                = 4.6812201E-01
Oimer redius
                           = .000000E+00
                                                      densificantestian (c)
                                                                                = 3.4269261E-01
Othe absorber will be trested by the northeim internal method.
Oness of moderator-1 = 15.995
                                                    signature absorber atom)= 2.24187585+04
Omotorator-1 will be treated by the norchesin integral method.
Omes of moderator-2 = 257.953 signs(per al
                                                   signs(per absorber aton)= 2.501234/E+04
Oncderator-2 will be treated by the norcheim integral method.
Othis rescrence material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1.00000
                              res fiss
Ograp
              res abs
                                               res sost
  10
           -2.99004E-03
                              .000000E+00
                                           -1,0505Œ-01
  11
           -4.969222E-02
                             .00000E+00
                                           -6.609460E-01
  12
          -1.083222E-03
                             .000000E+00
                                           -1.048360E-04
Occess resonance integrals
                   resolved
                  1,221392+01
Oubscription
fission
                    .0000E+00
                   .12 min.
- elapsed time
0 p-143
                 RE=102
                                                 undated 10/13/89
                                                                                99143
                                                                                           temperature= 975,00
```

```
0 nd-143
                 mt=102
                                                updated 10/13/89
                                                                              60143
                                                                                        tenperature= 975.00
Oresonence data for this nuclide
Omess number (a)
                                                                              = 975.000
                          = 141.682
                                                    temperature(kelvin)
                                                                             = 7.7590876E-06
Opotential scatter signs =
                               5.000
                                                    lumed nuclear density
                         = 1964.860
Ospin factor (g)
                                                    lumo dimension (a-bar)
                                                                             = 4.6812201E-01
                                                                              = 3,4269261E-01
Oimer radius
                          = .000000E+00
                                                    derpoff correction (c)
Othe absorber will be treated by the northeim integral method.
Oracs of moterator-1 = 15.995
                                                  signs(per absorber atom)= 2.200703E+04
Oncourator-1 will be treated by the northeim integral method.
Oness of auderator-2 = 237,953
                                                 signs(per absorber atom)= 2,455373/E+04
Omobrator 2 will be treated by the nordreim integral method.
Othis resonance material will be treated as a 2-diameteral object.
Oxclume fraction of lump in cell used to account for spatial self-shielding-1.00000
Orrap
                              res fies
                                             Tes scat
              ACR SOL
  10
          -7.957541E-05
                             .000000E+00
                                         -2.3743Z3E-05
  11
          -1.83086/E-01
                             .000000E+00 -2.131639E+00
  12
          -1.198135E-01
                             .00000E+00 -5.897775E-02
Devoess resonance integrals
                   resolved
Odescription
                  5.12357E+01
 fission
                   .0000E+00
- elapsed time
                  .12 min.
                RK=102
                                                updated 10/13/89
0 nd-145
                                                                              60145
                                                                                       temperatures 975.00
Oresonence data for this nuclide
                         = 143.668
                                                                              = 975.000
Omess number (a)
                                                    temperature(kelvin)
Opotential scatter signs =
                                                    lumped nuclear density
                               5.047
                                                                             = 5.6350132E-06
Ospin factor (g)
                         = 1007.250
                                                    lump dimension (arbar)
                                                                              =4.6812201E-01
                                                                             = 3.4259261E-01
Oimer ractius
                          = .000000E+00
                                                    dencoff correction (c)
Othe absorber will be treated by the northeim integral method.
Organs of productor-1 = 15.995
                                                 signaturer absorber atumb= 3.080336E+04
Oncerstor 1 will be trested by the norcheim integral method.
Oness of moderator 2 = 237,953 signator at
                                                 signs(per absorber atom)= 3.3809074E+04
Oncorator-2 will be treated by the northein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1.0000
(Carollo
              res abs
                              res fiss
                                             res scat
                                         -3.55737EE-02
  10
          ·2.23398E-03
                             .000000
                            .00000E+00
                                         -1.048051E-01
  11
          -3.47493E-02
          -8.615519E-01
                             .000000E+00
  12
                                         -5.42782<del>3E+</del>00
  Ĩ
           9.626082E-05
                             .000000E+00
                                          2.037469E-04
  14
          -7.513707E-01
                             .000000E+00
                                          -1.978679E-02
           5.908317E-08
                             .000000E+00
                                          -4.625057E-04
           1.32463E-03
                             .000000E+00
                                          -1.45135/E-04
  16
  17
           9.64237/E-04
                             .0000000
                                          -1.03940E-04
           8.537707E-04
                             .000000E+00
                                          -9313/8E-05
  18
  19
           7.634098E-04
                             .000000E+00
                                          -8.05752ZE-05
  20
           2.839427E-05
                             .000000E+00
                                          -2.921005E-06
Ocuces resonance integrals
                   resolved
Osbsorption
                  2.08187E+02
                   -00000E+00
fission
- elapsed time
                  .13 min.
                mt=102
                                               undated 10/13/89
                                                                                        temperatures 975,00
0 nd 147
0 pm 147
                 mt=102
                                                ucdated 10/13/89
                                                                              61147
                                                                                        temperature 975.00
Oresonence data for this nuclide
Omes runber (a)
                                                    terperature(balvin)
                                                                              = 975.000
Opotential scatter signa =
                                                                             = 2.48/328/E-06
                              5.075
                                                    lunged nuclear density
                         = 21589.500
                                                                             = 4.6812201E-01
Ospin factor (g)
                                                    lump dimension (a-bar)
                         = .0000000=+00
                                                                             = 3.4269251E-01
Oirmer radius
                                                   denoff correction (c)
Othe absorber will be treated by the northeim integral method.
```

```
Oness of anderator-1 = 15.995
                                                 signature absorber atom)= 6.8734750E+04
Omderator-1 will be treated by the northeim integral method.
Oness of moderator-2 = 257.983
                                                 signacper absorber atom)= 7.6685547E+04
Oncderator-2 will be treated by the northeim integral method.
Othis resonance material will be treated as a 2-dimensional object,
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.0000
Caroup
             res abs
                             res fiss
                                             res scat
  12
                            .00000E+00 -3.94839E-02
          -1,223039E-01
          -3.141409E-02
  13
                            .00000E+00 -1.907241E-03
          -5.745860E+01
                            .00000E+00 -2.474550E+01
  15
           4.132830E-02
                            .000000E+00
                                          6.985857E-03
  16
           1.697979E-02
                            .000000E+00
                                          1.74674EE-03
  17
           1.369755E-02
                            _00000E+00
                                          1.150447E-03
                                          9.649050E-04
  18
           1.253/81E-02
                            _000000E+00
  19
          6.998458E-04
                            .000000E+00
                                          5.07252ZE-05
Occess resonance integrals
                  resolved
Cabscrption
                 2.04771E+03
 fission
                   -0000E+00
  elapsed time
                  .13 min.
                   mt= 102
                                                                                      tesceratures 975,00
0 pa-148
                                                                                      terperature= 975.00
0 sa-147
                endf/b-v fission product
                                               updated 10/13/89
Orescrence data for this ruclide
                                                                            = 975.000
Omesa runber (a)
                                                   temperature(kelvin)
                                                                            = 3.668X58E-07
Opotential scatter signa =
                              5.093
                                                   lumed nuclear density
                                                                            = 4.6812201E-01
Oscin factor (g)
                                .000
                                                   lump distension (a-ber)
Dizzer radius
                         = .000000E+00
                                                   darpoff correction (c)
                                                                            = 3.4269251E-01
Othe absorber will be treated by the northein integral method.
                                                 signa(per absorber atom)= 4.665004E+05
Oness of anderstor-1 = 15.995
Onceretor-1 will be treated by the norchein integral method.
                                                 signs(per absorber atunt)= 5.200815%=05
Ones of soderstor-2 = 237,983
Oncerator-2 will be treated by the norde in integral method.

Othis resource material will be treated as a 2-discussional object.
Ovolume fraction of lump in cell used to account for statial self-shielding=1.0000
          res abs
2.896982E-01
Ograp
                             res fiss
                                             res scat
  11
                            .00000E+00
                                         1.1298785+00
  12
                            .00000E+00 -1.330E38E+00
           1.16718E+00
  Ī
                            .00000E+00 -8.91155E-01
          -2.34751<del>6E+0</del>0
  14 15
          -1.6016ZE-01
                            .000000E+00
                                          1.54964ZE-04
                                        -1.99V5/E-03
          3.11946E-01
                            .000000E+00
           7.25788E-03
                            .00000E+00 -3.738721E-04
  16
  17
           4.281512E-03
                            .000000E+00
                                        -2.401627E-04
  18
           3.510471E-03
                            .00000E+00
                                        -1.977298E-04
  19
           2.91064ZE-03
                            .00000E+00
                                        -1.64953E-04
 20
          8.435342-04
                            .000000E+00
                                        -4.627657E-05
Occass resonance integrals
                  resolved
Oubscrption
                 7.242616+02
 fission
                   .0000000
                  . To min.

    elapsed time

                             thermal scattering matrix number 3 at a temperature of 900.03 was selected.
                mt=102,103,107
                                               uzdated 10/13/89
                                                                                      temperatures 975.00
0 sm-149
                                                                            62149
Orescrence data for this nuclide
                                                                            = 975.000
Omes number (a)
                         = 147.638
                                                   temperature(kelvin)
Opotential scatter signa =
                              3,260
                                                   lumed ruclear density
                                                                            = 7.519587E-08
                        = 10407.900
Ospin factor (g)
                                                   lum dimension (a-bar)
                                                                            = 4.6812201E-01
                         = .0000000E+00
                                                                            = 3.4269261E-01
Oimer radius
                                                   dencoff correction (c)
Othe absorber will be treated by the northein integral method.
                                                 signe(per absorber atom)= 2.2708740E+06
Ones of moderator-1 = 15.995
Omderator-1 will be treated by the norcheim integral method.
```

```
signs(per absorber aton)= 2.5335873E+06
Oness of anotherator-2 = 257.953
Oncderator-2 will be treated by the norchein integral method.
Othis rescretce material will be treated as a 2-dimensional object.
Oxclume fraction of lump in cell used to account for spetial self-shielding-1.0000
                              res fiss
Ograp
              res abs
                                               res scat
           8.54609E-03
                                           3.071180E-02
  11
                             -000000E+00
           -5.302WE-02
                             .000000E+00
                                           -1.779283E-01
  12
  Ī
           2.406209E-02
                             .000000E+00
                                           2.974950E-0B
  Ÿ.
           1.500839E-02
                             .00000E+00
                                           -6.463817E-03
Devoess resonence interrals
                   8.0435Z+02
Oabsorption
 fission
                    .00000E+00
                   .15 min.

    elapsed time

0 sn-150
                                                 updated 10/13/89
                                                                                62'50
                                                                                           temperature= 975.00
                  mt=102
Oresonence data for this ruclide
Oness runber (a)
                           = 148.629
                                                                                 = 975.000
                                                      temperature(kelvin)
                                5.162
                                                      lumped nuclear density
                                                                                = 1,7519981E-06
Opotential scatter signa =
                          = 4376,420
                                                      lump dimension (a-bar)
                                                                                = 4.6812201E-01
Ospin factor (g)
                                                                                = 3.4269261E-01
Cimer radius
                           = .0000000:+00
                                                      dencoff correction (c)
Othe absorber will be treated by the northeim integral method.
                                                   signs(per absorber aton)= 9.74556800+04
Omes of moderator-1 = 15.995
Omogratur-1 will be treated by the norche in integral method.
Omess of moderator-2 = 257.953 signs(per al
                                                   signa(per absorber atom)= 1.0874131E+05
Omotivator 2 will be treated by the norcheim integral method.

Othis resonance material will be treated as a 2-dimersional object.
Ovolume fraction of lusp in cell used to account for spatial self-shielding-1.0000
                               res fise
              res abs
                                               res scat
(prorb
           -6.373778E-04
                             _000000E+00
                                           -5.756720E-03
  10
  11
           -1.30XXX/E-02
                             .000000E+00
                                           -1,49010Œ-01
  12
           -4.227013E-02
                             .000000E+00
                                           -1,278060E-02
  13
           -3.09566E+00
                             -000000E+00
                                           -2.4407Z/E+00
                             _000000E+00
                                           -6.413570E-05
           1.066137E-04
Opposs resurence internals
                    resolved
                   2.91/57E+02
Orbearption
 fission
                    .0000E+00
                  . 15 min.
- elapsed time
                  mx=102,103,104,105,106,107
                                                 updated 10/13/89
0 sm-151
                                                                                 62151
                                                                                           tesperature 975.00
Oresonence data for this nuclide
                          = 149.623
                                                      temperature(kelvin)
                                                                                 = 975.000
Chass runber (a)
                                                      lumed nuclear density
                                                                                = 2,873/369E-07
Opotential scatter signs = 5.185
                                                                                = 4_6812201E-01
                          = 75574.703
                                                      lump dimension (a-bar)
Oscin factor (g)
                           = .00000F+00
                                                      denceff correction (c)
                                                                                = 3.4260261E-01
Oimer radius
Othe absorber will be treated by the northeim integral method.
Crass of moderator-1 = 15.995
                                                   signs(per absorber atom)= 5.9447679E+05
Oncorator-1 will be treated by the norcheim integral method.
Onces of moderator-2 = 257.933 signo(per at
                                                   signe(per absorber atom)= 6.6525069E+05
Oncorator-2 will be treated by the norchele integral method.

Othis resonance exterial will be treated as a 2-disensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.00000
                               res fiss
(prosp
                                               res scat
               nes abs
           -1,6393/E-01
                              .000000E+00
                                           -1.796793E-02
                                            7,558513E-02
                             .0000000
  ъ
            1,491918E+01
                                           -6.17376TE-02
           -2.17728E+01
                             _00000E+00
  16
  17
            1.7399492+02
                              _000000E+00
                                            8.2988E-01
                              .00000E+00
                                           -1.78099E+00
  18
           -3.204102E+02
                                            3.868497E-01
  19
           6.2616E+01
                              .000000E+00
  20
            1.1415316+00
                              _000000E+00
                                           -1.4175ZE-04
                                            1.241025-02
  21
                              -7.1178SE-02
```

```
22
           6.95253/E-02
                            .000000E+00
                                          3.83999E-03
  23
          -1.091920E-02
                            .000000E+00
                                           3.374054E-04
Ocices rescrurce integrals
                   resolved
Debeorotion
                  2.05685E+03
                   .00000E+00
 fission
                   .15 min.
- elapsed time
0 sm-152
                 mt=102, 108, 104, 105, 106, 107
                                                                                      temperatures 975.00
                                               undated 10/13/89
                                                                             62152
Onescriptoe dista for this ruclide
                          = 150.615
                                                                             = 975,000
Omess runber (a)
                                                    temperature(kelvin)
Opotential scatter signa =
                               5,208
                                                                            = 8.4890/45E-07
                                                    lumped nuclear density
Ospin factor (g)
                         × 863.594
                                                                            = 4.6812201E-01
                                                    lump dimension (a-ber)
Dirner radius
                          = .000000E+00
                                                   dencoff correction (c)
                                                                            = 3.4269261E-01
Othe absorber will be treated by the northein integral method.
Oness of moderator-1 = 15.995
                                                 signs(per absorber aton)= 2.015302E+05
Oscierator-1 will be treated by the northern integral method.
Oness of moderator-2 = 257.933
                                                 signa(per absorber atom)= 2.2442405E+05
Onoderator-2 will be treated by the northein integral method.
Othis rescrence material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for scatial self-shielding-1,00000
                             res fias
Caroca
             res abs
                                             res acat
           2,408006E-06
                                          1.15891/E-04
                            _00000F+00
  10
          -6.30000E-04
                            .000000E+00
                                        -1.018422E-02
  iĭ
          -9.55688/E-03
                            .00000E+00 -3.65173Æ-02
  12
          -6.559117E-02
                            _00000E+00
                                          -2.09811/E-01
  13
           4.2660E-02
                                           1.033022E-01
                            _000000E+00
                            .000000E+00
                                         -1.170778E+02
          -6.047521E+01
Ocuces resonance integrals
                   resolved
Osbeanstian
                  2.853435+05
 fission
                   .0000E+00

    elacond time

                   .17 min.
0 av 123
                mt=102,103,104,105,106,107
                                               ucdated 10/13/89
                                                                             සස
                                                                                      temerature: 975.00
Oresonence data for this ruclide
Omess number (a)
                         = 151.607
                                                   temperature(kelvin)
                                                                             = 975.000
                                                                            = 3.9505220E-07
Ocotential scatter signs =
                               9.731
                                                   lumped nuclear density
                         = 12265.900
Ospin factor (g)
                                                   lump dimension (a-bar)
                                                                            = 4.6812201E-01
Dimer redius
                         = .000000E+00
                                                   dencoff correction (c)
                                                                            = 3.426726 E-01
Othe absorber will be treated by the northeim integral method.
                                                 signa(per absorber atom)= 4.3225778E+05
Omes of recorator-1 = 15.995
Omderator-1 will be treated by the northein integral method.
Organs of moderator-2 = 257.953
                                                 signs(per absorber atom)= 4.8227506E+05
Omcorator-2 will be treated by the norcheim integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1,0000
             res abs
Όστα Ρ
                             res fiss
                                         res scat
-5_26446E-02
          -2.7008/Æ-01
                            .000000E+00
  12
          -7.12764E-02
                            .00000E+00
  13
                                         -2.768012E-04
          -5.87579E-01
                            .000000
                                          3.18825Æ-CB
  15
          2.867073E+00
                            .000000E+00
                                         -2.053510E-02
          -3.29229E+00
                            .00000E+00
                                          8.199547E-03
  16
  17
           1.505616E-01
                            .000000E+00
                                         -3.43775 E-0B
          7.72588E-02
  18
                            -000000E+00
                                         -2.231243E-0B
          5.055488E-02
                            .000000E+00
                                         -1,541107E-0B
  19
                                         -1.275081E-03
  20
          -1.253801E-01
                            .000000E+00
Oppose resonance integrals
                   resolved
                  1.35573=+03
Oabsorption
 fission
                   -0000E+00
- elapsed time
                  .17 min.
```

```
0 au-154
                mt=102.103.104.105.106.107
                                              undated 10/13/89
                                                                            6354
                                                                                      temperatures 975.00
Oresonence data for this ruclide
                         = 152.601
                                                                            = 975.000
Omes runber (a)
                                                   tarparature(kelvin)
Quotential scatter signa = 9.731
                                                   lurped nuclear density
                                                                            = 4.6287479E-08
                         = 19135_801
                                                                            = 4.6812201E-01
Ospin factor (g)
                                                   lump dimension (a-bar)
Oimer radius
                         = .000000E+00
                                                                            = 3.4269261E-01
                                                   denotif correction (c)
Othe absorber will be treated by the northeim internal method.
Oness of moderator-1 = 15.995
                                                 signator absorber atoms 3.699120E+06
Oncderator-1 will be treated by the norchein integral method.
Oness of moderator-2 = 237.953
                                                signs(per absorber atom)= 4.1158988E+06
Onoderstor-2 will be treated by the northeir integral method.
Othis resonance material will be treated as a 2-diagnosional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.0000
Ouron D
              nes abs
                             res fiss
                                            nes scet
          -3.861222E-01
                            .00000E+00 -6.03247E-02
                                         -2.442/SE-02
  Ī
          -2.99052E-01
                            .000000E+00
                                         1.5058932-02
          3.518871E-01
                            ъ
                            .00000E+00
           2.10/519E-01
                                         2.11900Œ-02
  16
           7,291847E+00
                            .00000E+00
                                         9.2910BE-02
  17
          -1,43/30/E+02
                            .00000E+00
                                         -1_875207E+00
                                          1.859608E+00
  18
           1.133007E+02
                            .0000000
          -1.014582E+02
                            .00000E+00
                                          1.187222=+00
  19
Descess rescremce integrals
                  nesolved
                  2.13713E+03
Orbeanstian
 fission
                   .00000E+00

    elapsed time

                  .18 min.
                mt=102,103,104,105,106,107
                                              updated 10/13/80
                                                                                      temperatures 975.00
0 84-155
                                                                            82
0 0 155
                mc=102
                                              uculated 10/13/80
                                                                            6455
                                                                                      terperature: 975.00
Oresprence data for this ruclide
                         = 153,592
Omes runber (a)
                                                                            = 975.000
                                                   temperature(kelvin)
Occupial scatter signs = 5.277
                                                                           = 7.9815136E-10
                                                   lurped nuclear duraity
                        = 12700,100
Ospin factor (g)
                                                   lump dimension (a-bar)
                                                                            = 4.6812201E-01
                         = .000000E+00
                                                   dencoff correction (c)
                                                                           = 3,4250261E-01
Oirner radius
Othe absorber will be treated by the northein integral method.
                                                 signa(per absorber atum)= 2,1394400E+08
Omes of moderator-1 = 15.995
Oncderator-1 will be treated by the rorchein integral method.
Omes of moderator-2 = 257.953
                                                signs(per absorber atunt= 2,3999478E+08
Oxoderator-2 will be treated by the routheim integral method.

Othis resonance material will be treated as a 2-dimensional object.
Oxclume fraction of lump in cell used to account for spatial self-shielding=1.00000
Ourorb
              res abs
                             res fiss
                                            res scat
  12
          1,439277E+00
                            .00000E+00 -1.839441E-01
  13
           1,5413122+00
                            -00000E+00
                                         1.985278E-01
  14
           2.19137 E-01
                                         9,808348E-03
                            .0000000E+00
          -3.311029E-01
  Ħ
                                        -7.466390E-06
                            .000000E+00
  16
           1.477360E+00
                            .000000
                                         -4.148879E-03
  17
           1.568661E-01
                            .0000E+00
                                        -1.A77119E-03
  18
           9.60516E-02
                            -1.07810Œ-03
  19
           6.2953/4E-02
                            -00000E+00
                                         -8.02652/E-0%
  ä
                                         1.6265 E-04
           1.670418E-02
                            · 000+20000000.
                            .000000E+00
                                           .00000E+00
  2122225
            .000000E+00
                                           .00000E+00
            .000000E+00
                            .000E+00
            .000000E+00
                            .00000E+00
                                           .00000E+00
            .0000000E+000
                            -000000E+00
                                           .00000E+00
                                         -1.621942E+00
1.961451E+00
                            .000000E+00
          -2.127720E+03
  æ
          -5,205625E+03
                            .00000E+00
                            .000000E+00
  27
          -1,63777333+03
                                         7.392510E-01
Openes recommon integrals
                  resolved
```

```
Obbsorption
                  3.97057E+04
 fission
                   .00000=+00
- elapsed time
                   .18 min.
0.-234 1043 sign-5+4 nauklacs p-3 293k f-1/ent(1.+5)
                                                                               074
                                                                                         temperatures 975.00
Oresonence data for this nuclide
                          = 252.029
Owess number (a)
                                                                               = 975.000
                                                     temperature(kelvin)
Opotential scatter signs = 10.021
                                                     lumed nuclear density
                                                                              = 5.0467297E-06
Ospin factor (g)
                          = 6948.450
                                                     lump dimension (a-bar)
                                                                              = 4.6812201E-01
Oirmer redius
                          = .000000E+00
                                                     densoff correction (c)
                                                                              = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
Omes of accidrator-1 = 15.995
                                                   signa(per absorber atom)= 3.38357116+04
Omogratur-1 will be treated by the norchein integral method.

Omes of moderatur-2 = 257.925 signe(per st
                                                   signatoer absorber atom> 3.773547E+04
Omnierator-2 will be treated by the northeim integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for scatial self-shielding=1,00000
              res abs
Grap
                              res fiss
                                               res scat
  11
          -2.45318E-02
                             .000000=+000
                                          -7.04188E-02
  12
          -1.968077E-01
                             _000000E+00
                                           -8.29757E-02
  13
           7.79972/E-04
                                           -6,471130E-04
                             .000000E+00
          -1.93442E+01
  14
                             .000000E+00
                                          -3.151055E+00
Opcess resorance integrals
                   resolved
                  5.80%1E+02
Osbsorotion
                   .0000E+00
 fission
- elapsed time
                   .20 min.
0 uranium 255 endi/to-iv met 1261
                                                 ucdated 10/13/89
                                                                               9225
                                                                                         temperatures 975.00
Oresonence data for this ruclide
Omes number (a)
                          zzz.025
                                                                               = 975.000
                                                     temerature(kelvin)
Opportial scatter signs = 11.500
                                                                              = 5.4047973E-04
                                                     lumped nuclear density
Ospin factor (g)
                          = 15171.100
                                                     lum dimension (a-bar)
                                                                              =4.6812201E-01
                                                                              = 3,4269261E-01
Oimer redius
                          = .0000000E+00
                                                     dercoff correction (c)
Othe absorber will be treated by the norcheim integral method.
Omes of moderator-1 = 15,995
                                                   signs(per absorber atom)= 3.15%098E+02
Occidentary 1 will be treated by the northein integral method.
                                                  signs(per absorber atom)= 3.3905756E+02
Omess of moderator-2 = 258.049
Omodorator-2 will be treated by the northeim integral method.

Othis resonance material will be treated as a 2-dimensional object.
Ordine fraction of turp in cell used to account for spatial self-shielding-1,0000
(Carous)
              res ebs
                              res fiss
                                              res acat
          -2.23772/E+00
                          -1.378543E+00
                                          -5,23937E-02
  13
          -7.708092E+00 -3.834183E+00
                                          -1.4620BE-01
          -6.187115E+00 -3.789083E+00 -4.21299E-02
Descess reconstrue integrals
                  resolved
                  2.09179E+02
Obbsarption
                  1.245/E+02
fission
- elapsed time .22 min.
0.r236 1163 sign-5+4 newlacs p-3 258k f-1/e-m(1.+5)
                                                                               92236
                                                                                        temperatures 975.00
Oresonence data for this nuclide
Ones runber (a)
                         = 254.017
                                                     temperature(kelvin)
                                                                              = 975.000
Opotential scatter signs = 10.995
                                                     lumed nuclear density
                                                                              = 3.080866<del>2</del>E-05
Ospin factor (g)
                          = 6328,490
                                                     lump dimension (a-bar)
                                                                              = 4.6812201E-01
                                                     denoff correction (c)
Oimer radius
                          ≈ .000000€+00
                                                                              = 3.4269251E-01
Othe absorber will be treated by the northeim integral method.
                                                  signs(per absorber atom)= 5,5/26050E+03
Omes of acclerator-1 = 15.995
Omogrator-1 will be treated by the northein integral method.
Omes of moderator-2 × 257.954 signs(per al
                                                  signs(per absorber atom)= 6.1827402E+03
Orockrator-2 will be treated by the northeim integral method.
Othis rescrepce meterial will be treated as a 2-diamesical object.
```

```
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.00000
(prap
              res abs
                              res fiss
                                              res acat
  11
          -1.52566E-01
                             .000±000
                                         -3.8010BE-01
  12
          -8.03467EE-01
                            .000000E+00
                                         -5.583938E-01
  13
          -6.05154E-02
                            .00000E+00
                                         -3.357721E-03
          -2.886258E+01
                            .000000E+00
                                          -2.525250E+00
Opices resonance integrals
                   resolved
                  2.96393E+02
Debecaption
                   .0000E+00
 fission
                   .22 min.

    elaceed time

                                                undated 10/13/89
                                                                               92238
                                                                                        temperature= 975.00
0 uranium 238 endf/b-iv met 1262
Oreschence data for this ruclide
                      = 256.006
                                                                               = 975.000
Omes runber (a)
                                                    temperature(kelvin)
                                                                              = 2.196265E-02
Opptential scatter signa = 10.599
                                                    lunced nuclear density
Ospin factor (g)
                          = 656,527
                                                    lumo dimension (a-bar)
                                                                              = 4.6812201E-01
                                                                              = 3.4269261E-01
Oimer radius
                          = .0000000E+00
                                                    dencoff correction (c)
Othe absorber will be treated by the northeim integral method.
Oness of excitation-1 = 15,995 signs(per absorber atom)= 7.7749991E-00 Oncderator-1 will be treated by the norcheim integral method.
Oracs of moderator-2 = 255.041
                                                 signe(per absorber aton)= 3.3476946E-01
Omderator-2 will be treated by the northein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding=1.0000
Grap
              nes abs
                              res fiss
                                              res scat
          -3.940BŒ-02
                                         -4.050720E-01
                             .000000E+00
          -1.026518E+00
                                          -6,48490E+00
  10
                          -1.75331Æ-05
                            .00000E+00
  11
          -9.709722E+00
                                          -2.690162E+01
                             .000000E+00
  12
          -4.305133E+01
                                          -4.9990BE+01
          -5,401731E+01
                                         -1.7693/8E+01
  13
                             .000000E+00
          -1.0/50/85+02
                            _00000E+00
                                          -6.050081E+00
Oceans resonance integrals
                   resolved
Debeorption
                  1.79873E+01
                  5.09XZE-04
fission

    elapsed time

                 .23 min.
                                                updated 10/13/89
0 reptunium 237 erdf/b-iv met 1263
                                                                               95257
                                                                                         bemeratures 975.00
Orescriptoe data for this ruclide
                                                                               = 975.000
Oness runber (a)
                         = 255,012
                                                    temperature(lectivin)
                                                    lumped nuclear density
                                                                              = 1.207262E-06
Octantial scatter signs = 10.500
                                                                              = 4.6812201E-01
                          = 10100,800
Ospin factor (g)
                                                    lum dimension (a-bar)
                         = .000000E+00
                                                                              = 3,4269261E-01
Oinner nectius
                                                    darboff correction (c)
Othe absorber will be treated by the northern integral method.
                                                  signs(per absorber aton)= 1,3801481E+05
Oness of stoderetor-1 = 15.995
Omoderator-1 will be treated by the northelm integral method.
Omess of moderator-2 = 258.051 signs(per al
                                                  signa(per absorber aton)= 1.4805898E+05
Omobrator-2 will be treated by the norcheim integral method.
Othis resonance material will be treated as a 2-diameteral object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.00000
OETGE 
              res abs
                              res fiss
                                              res scet
           6.323133E-02
                          -1.96361E-06
                                         -7.388209E-03
  11
                          -9.09169/E-05
                                          8.66517E-CS
  12
          3.730817E-02
                                           4.30055E-04
  13
           1.510193E-02
                          9.073739E-05
          -1.96119E-02 -2.89609E-06
                                          -9.108837E-04
Occess rescrerce integrals
                   resolved
Osbeanation
                  2.931<del>65E+</del>02
 fission
                  1.3558E-01
- elapsed time .27 min.
Out-28 1050 sign-5+4 maxiacs p-3 25% f-1/e-m(1.+5)
                                                                               9228
                                                                                        temeratures 975.00
```

```
Oresonence data for this ruclide
                         236.167
                                                                              = 975.000
Omess number (a)
                                                    temperature(kelvin)
Opotential scatter signs = 10,890
                                                    lumped nuclear density
                                                                             = 7.9591842E-08
                         = 13130,600
Ospin factor (g)
                                                    lum dimension (a-bar)
                                                                             = 4.6812201E-01
                                                                             = 3.4269261E-01
Oirmer radius
                          = .00000000=+00
                                                    dencoff correction (c)
Othe absorber will be treated by the northeim integral method.
Omess of moderator-1 = 15.995 signe(per el
Omoderator-1 will be treated by the norcheim integral method.
                                                  signs(per absorber atom)= 2.1/5/420E+06
Ones of moderator-2 = 258,051
                                                  signe(per absorber atom)= 2.30126785+06
Oncobrator 2 will be treated by the norchelm integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for scatial self-shielding-1.0000
Ograp
              nes abs
                              res fiss
                                              res scat
           1.28475E-04
                          -1.34199ZE-05
  11
                                           -1.980659E-04
  12
          4.30372E-05
                          -2.90886E-06
                                          -5.4895E-05
                          7.565257E-02
           4.134514E-01
  13
                                          -9.305857E-03
          -3.822731E-01 -6.989/54E-02
                                           8.53899/E-08
Occess resonance integrals
                   resolved
                  8.25509E+01
Oubscript ion
 fission
                  9.085425+00

    elapsed time

                   .27 min.
0 plutonium-259 endf/b-iv met 1264
                                                updated 10/13/89
                                                                              94239
                                                                                       temperature= 975.00
Orescrence data for this ruclide
Omess runber (a)
                          = 236,999
                                                    temerature(lelvin)
                                                                              = 975,000
                                                    lumped nuclear density
Opotential scatter signs = 10.200
                                                                             = 6.540275/E-05
Ospin factor (e)
                          = 6435.710
                                                    lump dimension (a-bar)
                                                                             = 4.6812201E-01
Oimer radius
                          = .000000E+00
                                                    dencoff correction (c)
                                                                             = 3.4269261E-01
Othe absorber will be treated by the northelia integral method.
                                                  signa(per absorber atunt)= 2.6108943E+03
Omes of molerator-1 = 15.975
Onchristor-1 will be treated by the northelin integral sethod.
Oness of moderator-2 = 238,051
                                                  signs(per absorber atom)= 2.800526/EHOS
Onderstor-2 will be treated by the norders integral method. Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shieldings,0000
Carona O
              res abs
                              res fins
                                              nes scat
          -1.372717E-01 -5.512489E-02
  11
                                          -4.218/BOE-02
  12
          -1.231102E+00
                         -4.618339E-01 -1.62504E-01
  13
          4.05\65Z+00
                          -2.387267E+00
                                          -6.16678E-02
          -1.292019E+00 -6.866961E-01
                                         -1.170952E-02
Oceans resonance integrals
                   resolved
Oubscription
                  3.1163/E+02
 fission
                  1.74552-02
- elapsed time .28 min.
0 plutonium 240 endi/briv met 1265
                                                updated 10/13/89
                                                                             8230
                                                                                       terperatures 975.00
Oresonence data for this ruclide
Omes ruster (a)
                                                    temperature(los/vin)
                                                                             = 975.000
Opotential scatter signa =
                              10.539
                                                    lumped nuclear density
                                                                             = 7.1577624E-06
Ospin factor (g)
                          = 669.244
                                                    (usp disension (a-bar)
                                                                             = 4.6812201E-01
Oimer radius
                          = '.000000E+00
                                                    direction (c)
                                                                             = 3.4269261E-01
Othe absorber will be treated by the norcheim integral method.
                                                  signa(per absorber atom)= 2.356574£+04
Organs of moderator-1 = 15.975
Omnibrator-1 will be treated by the northein integral method.
Oress of moderator-2 = 258.051
                                                  signa(per absorber atom)= 2.5589305E+04
Oxoderator-2 will be treated by the norchein integral method.
Othis rescrence material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1,0000
(prosp
              nes abs
                              res fiss
                                             res scat
          -2.5Z790/E-05 -4.A7Z3/0E-07 -4.A/5885E-05
```

```
-1.671842E-03 -1.040354E-04
                                         -7_689151E-03
  11
           -5.4800XE-02
                         -3.168331E-04
                                         -7.30/0//E-02
  12
          -7.702589E-01
                          -4.20SBE-03
                                         -7.416141E-01
  13
          -9.330225E-02
                         -5.720981E-04
                                         -6.802733E-03
  14
            .000000E+00
                            .000000E+00
                                            .000000E+00
           1.750853E-02
                          3.341980E-06
                                          3.472721E-03
  16
           3.193329E+00
                          6.094609E-04
                                          4.047562E-01
  17
           5.207403E+02
                          9.93858E-02
                                          4.696471E+01
  18
          -5.2415422+03
                         -1.000371E+00
                                         -4.157560E+02
  19
           8.65836ZE+02
                                          6.655/67E+01
                          1.652/87E-01
          -9.297894E+01 -1.77454/E-02
  20
                                          1.7852E+00
Occess rescretce integrals
                  resolved
Opposition
                  6.3/07<del>X+</del>03
 fission
                  2.2311ZE+00
- elapsed time .30 min.
0 plutonium 241 erdf/b-iv met 1266
                                               undated 10/13/89
                                                                            94241
                                                                                      temperatures 975.00
Oresonence data for this ruclide
Orees runber (a) .
                       = 238,978
                                                                            = 975.000
                                                   temperature(kelvin)
Opotential scatter signs = 10.939
                                                   lumed nuclear density
                                                                            = 2.50/5871E-06
Ospin factor (g)
                         = 16/02,100
                                                   lump dimension (a-bar)
                                                                            = 4.6812201E-01
Dirner radius
                         = .000000E+00
                                                   dencoff correction (c)
                                                                            = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
Oness of moderator-1 = 15,995
                                                 signe(per absorber atom)= 6.804859E+04
Oncobrator-1 will be treated by the norcheirs integral method.
                                                 signs(per absorber atunt)= 7.2990789E+04
Omess of moderator-2 = 238.051
Onceretor-2 will be treated by the northern internal method.
Othis resource material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1,0000
Grap
              nes abs
                             res físs
                                             res scat
                        8.74378/E-03
-1,488/23E-01
  12
           9.9102BE-03
                                         6.553351E-04
                                         -6.361959E-03
          -1.570/OEE-01
  13
                         -6.497218E-02
  14
          -1.075350E-01
                                         7.0558125-04
  15
          1.797773E-02
                          1.611609E-02
                                         -4.68530E-04
Ococces resonance integrals
                  resolved
                 5.00079E+02
Ombearption
                 4.26757E+02
 fission
- elapsed time .32 min.
0 plutonium 242 endf/b-iv met 1161
                                               updated 10/13/89
                                                                            9232
                                                                                      temperatures 975.00
Oresonence data for this ruciide
Oness runber (a)
                         = 240.145
                                                   temperature(kelvin)
                                                                            = 975.000
Opotential scatter signs = 10.6%
                                                   lurped nuclear density
                                                                            = 1,172373E-07
                         = 6606.710
Ospin factor (g)
                                                   lump dimension (a-bar)
                                                                            = 4.6812201E-01
                         = .0000000E+00
                                                                            = 3.4259251E-01
Dirner radius
                                                   direction (c)
Othe absorber will be treated by the norcheim integral method.
Orass of moderator-1 = 15.995
                                                signs(per absorber atom)= 1.4563261E+06
Omderator-1 will be treated by the norcheim integral method.
Oness of audienstor-2 = 258.051
                                                signs(per absorber aton)= 1.5621008E+05
Oxoderator-2 will be treated by the northern integral method.

Othis resonence material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.0000
(prap
             res abs
                             res fiss
                                            res scat
                            .00000E+00 -5.90082E-04
  11
12
          -1.59339E-04
          -5.45534E-03
                           .000000E+00
                                        -1.111935E-02
  13
           1.025/80E-04
                           .000000E+00
                                         4.7435/E-05
  14
          8.148E8E-02
                           -00000E+00
                                         1.527 ISE-02
                           .000000E+00
          -1.856679E+00
                                         -1,871/SEE-01
  16
          4.053705E-02
                           .000000E+00
                                         -3,45875ZE-03
           1.550419E-02
                            .000000=000
                                         -1_0/82/4E-03
```

```
18
           1.112560E-02
                             .00000E+00 -1.43067ZE-03
Opcess rescrence integrals
                    resolved
Osbeanstian
                   1.110B/E+03
                    .0000E+00
 fission

    elapsed time

                    .32 min.
0em 241 1056 sign-5+4 reaklacs 210mgp p-3 295k
                                                                                 95241
                                                                                           temperature 975.00
Orescrence data for this ruclide
                                                                                 = 975,000
Oness runber (a)
                           = 258,950
                                                       temperature(kelvin)
Opotential scatter signs =
                                                                                = 3.3970430E-08
                                 9.511
                                                       lumed nuclear density
Ospin factor (g)
                           = 82058.203
                                                       lump dimension (a-ber)
                                                                                = 4.6812201E-01
Oirner radius
                           * .00000E+00
                                                      dencoff correction (c)
                                                                                = 3.4267251E-01
Othe absorber will be treated by the northein integral method.
                                                    signs(per absorber atox)= 5.025755E+06
Omess of moderator-1 = 15.995
Oxederator-1 will be treated by the northein integral method.
Oness of moderator-2 = 238.051
                                                    signatoer absorber atom> 5.3718119E+06
Oncherstor-2 will be treated by the northern integral method.

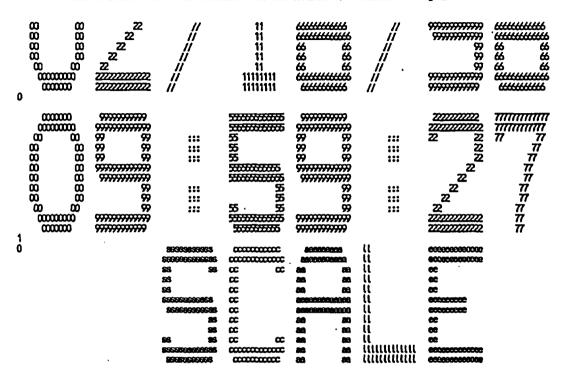
Othis resonance material will be treated as a 2-characianal object.

Ovolume fraction of Jump in cell used to account for spatial self-shielding=1,00000
Ograp
              res abs
                               res fiss
                                                res scat
           4.91918/E-01
                            1.212657E-02
                                             4.934242E-03
           -4.313571E-01 -1.109051E-02 -4.48278/E-03
Opposes resonance integrals
                    resolved
                   1.95473=+02
Ostscrption
 fission
                  1.07612=+00
- elapsed time .32 min.
Ostr-243 1057 218 gp st f-1/e-m 090376 p3 285k
                                                                                 95243
                                                                                           temperatures 975.00
Oresonance data for this ruclide
                          = 30.90
                                                                                 = 975,000
Onese rusber (a)
                                                      temperature(kelvin)
Opotential scatter signs = 9.511
                                                       lumped nuclear density
                                                                                 = 4.264787ZE-09
                           82052.602
                                                                                = 4.6812201E-01
Dispin factor (g)
                                                      lunp dimension (a-bar)
                           # .00000E+00
                                                      denceff correction (c)
                                                                                = 3.4259251E-01
Cirner radius
Othe absorber will be treated by the northeim integral method.
Owes of soderator-1 = 15.995
                                                    signs(per absorber aton)= 4,0039/36E+07
Oncderator-1 will be treated by the norcheim integral method.
                                                    signs(per absorber aton)= 4.2947548E+07
Ornes of anderstor-2 = Z38.051
Omoisrator-2 will be treated by the purchasin integral method.

Othis resonance material will be treated as a 2-dimensional object.
Oxclume fraction of lump in cell used to account for scatial self-shielding-1.0000
(Darraco
              res ebs
                               res fiss
                                                res scat
           -6.647073E-03
                              .000000E+00
                                             4.374598E-04
  13
  14
           2.210911E-02
                              .00000E+00
                                            2.337KE-04
Opicies resonance integrals
                   resolved
Ordenoration
                   1_6052=102
 fission
                    .00000E+00
- elapsed time
                   .32 min.
                                                  uzdated 10/13/89
0 curium-244 enulf/to-iv met 1162
                                                                                 96244
                                                                                           temperatures 975.00
Orescrence data for this ruclide
                           = 242,133
                                                                                 = 975.000
Omess number (a)
                                                      terperature(kelvin)
Opotential scatter signa = 10.320
                                                      lurad ruclear density
                                                                                 = 1.6/65758E-10
                           = 5251.150
                                                                                = 4,6812201E-01
Oppin factor (g)
                                                      lump distansion (a-bar)
                           = .000000E+00
                                                      dencoff correction (c)
                                                                                = 3.4269261E-01
Oimer radius
Othe absorber will be treated by the northein integral method.
                                                    signs(per absorber atunt= 1.05705/3E+09
Omes of moderator-1 = 15.995
Oscilerator-1 will be treated by the norcheim integral method.
Onese of suderetur-2 = 258.051
                                                    signatoer absorber atom= 1.1123822E+09
Ombinator-2 will be treated by the norcheim integral method.
Othis resonance material will be treated as a 2-dimensional object.
```

```
Ordure fraction of lump in cell used to account for spatial self-shielding-1.00000
Grap
              res abs
                               res fiss
                                                 res scat
            2.57795E-04
                            7.054416E-06
                                             3.049273E-04
  11
  12
           6.927479E-04
                            3.252/dbE-05
                                              1.367911E-04
                                              7.12734ZE-04
                            1.35375E-04
  13
           2.717890E-03
           8.385877E-02
                            5.017790E-0B
                                              1.58330E-02
Oceans rescrence interrals
                    resolved
                   6.13903E+02
Ochsorption
                   3.54221E+01
 fission
                    32 min.
   elacaed time
   elapsed time
                    .33 min.
      this xschm working tape was created 02/16/95 at 09:58:23
      the title of the parent case is as follows
      scale 4.2 - 27 group neutron bump library
based on end-b version 4 data with end-b version 5 fission products
                                 1/27/89
             compiled for mc
                                                                                                       65
           tape id
                                                4321
                                                               number of nuclides
                                                  27
                                                                                                       0
          ruiter of neutron groups
                                                               number of genne groups
                                                  15
          first thermal group
                                                               logical unit
                                          table of contents
                                                                                                       933
        1/v cross sections normalized to 1.0 at 0.0253 ev
                                                                                                      1001
         hydrogen
                         ercli/b-iv mat 1269/thmi1002
                                                         underted 10/13/89
                                                                                              ななななななななななななな
                                                                                                      5010
        b-10 1273 218mp 042375 p-3 253k
                         endit/b-iv met 1160
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         baran-11
                                                           updated 10/13/89
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         avgan 16
                         endf/b-iv met 1276
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mt=102,105,105,105,105,107
mt= 102
         avgen-16
                                                           uculated 10/13/89
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                                                          ucdeted 10/13/89
                                                                                                     36083
         kr-83
                                                                                                     34055
         kr-85
                                                                                                     32000
                         nt=102
         sr-90
                                                           unisted 10/13/89
                                                                                                     39089
         7-85
88-42
                         mt=102
                                                          uzdated 10/13/89
                            mt= 102
                                                                                                     40075
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         25-94
                         at=102
                                                          updated 10/13/89
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                         nt=102
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         ED-62
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         tc-99
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         ru-101
                         mt=102
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                                                                                                     44106
         ru-106
                         mt=102
                                                          updated 10/13/89
                                                                                                     4510B
         rh-108
                         mt=102
         rtr-105
                            st= 102
                                                                                                     45105
                                                                                                     46105
         pd-105
                         mt=102
                                                          updated 10/13/89
         pd-108
                         mt=102
                                                          updated 10/13/89
                                                                                                     46108
         silver-109
                         endf/b-iv mat 1139
                                                          updated 10/13/89
                                                                                                     47109
                                                          updated 10/13/89
                                                                                                     51124
         sb-124
                         mt=102
                         mt=102,105,104,105,105
mt=102,103,104,105,105
erof/to-ly mat 1254
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54152
         xe-131
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                                                          updated 10/13/89
         xe-132
                                                          updated 10/13/89
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         xenon-135
                         mt= 102, 105, 104, 105, 107
erof/b-iv met 1141
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         xe-136
                                                          updated 10/13/89
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         cs-134
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                            ot≥
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         CS-135
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         ba-136
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                                                          umbted 10/13/89
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        0-14
p-141
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                            mt= 102
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                         mt=102,105,104,105,105,107
                                                          updated 10/13/89
         44
252
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60143
                         at=102
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                         mt=102
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		-147	mt=102				10/13/89		id	60147			
	(311)	-147	n±=102				10/13/89		id	61147	,		
	ion	-148	ark= '			•			id	61148	}		•
		-147	endf/b-v	fission pr	adet	updated	10/13/89		id	62147			
		r149	nt=102,1	05,107			10/13/89		id	62146			
		-150	at=102				10/13/89		įd	62150			
		-151	mt=102,1	35,104,105 ,	106,107	updated	10/13/89		id	62151			
		152		OB, 104, 105,			10/13/89		id	62152			
		-53		B,104,105,			10/13/89		id	ଷ୍ଟୀସ			
		- 54	mt×102,1	B,104,105,	106,107	updated	10/13/89		id	<u>ស154</u>			
		100	M=102,1	05,104,105,	105,10	updated	10/13/89		id	63155			
		- 55	at=102		m. / 4		10/13/89		id	6415			
			sigo-544 nax		ox t-v		40.00		id	9234			
		enium 2		v mat 1261	m		10/13/89		id	92235			
			sigo-5+4 nax		X 1- 1/		40.00		id	92236			
		eniur 2		V met 1262			10/13/89		jd	92238			
			r-237 endf/b-i		m		10/13/89		id	95257 94259			
			0 sigo=5+4 nau		SOK T-I		10.477.600		įd	9423			
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Odirect access unit 9 requires 12 blocks of length 704 for cross section mixing.
400 d, see2h: bsbook wilcox 15x15, 3.00x2, 20g-c/miu burn high temp
Openeral problem description data block
                                   general problem data
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idia 0/1 = none/density factors 30*
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 idt1 0/1/2/3=rp/sect/srce/flux--out
 isk broad group flues
ibln activity data unit
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      -2/-1/0/magted seect print
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 egas overall convergence
                                   1.0000E-04
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                                  1.0000E-04
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 ptc point convergence
                                  1.0000E+00
                                                            void stressing correction .00000E+00
and normalization factor
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 ev eigenvolus gusss
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or on rew param mod for search 7.5000E-01
 evm eigenvalue modifier
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bf buckling factor=1.420892 1.42089E+00

INFORMATION ONLY

	this case wi		5 locations for mixin	ng .		
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Ò	Bq array	hes 65 entries	•	,,		
0	Kq array					
ŏ	15q array	has 65 entries	data block 2 (mixin	n table etc.)		
ŏ	ruclides	cccc	COLD SYCHE PRINT	mixing table		extra
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	7 36083 8 36085		i	36085	7.25090E-07 3.50117E-07	
	9 38090		i	38090	7.86170E-06	
	10 39089	•	1	39089	5.4740SE-06	
	11 4008		1	42095	6.12150E-06	
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	14 40802		i	40095	2.10190E-06	
	15 41094		1	41094	3.60192E-12	
	16 42095 17 43099		1	43077 45103	8,96719E-06 4,40555E-06	
	18 44101		i	45105	1.67519E-08	
	19 44106		i	44101	7.89901E-05	
	20 45103		1	44106	1.14009E-06	
	21 45105 22 46105		1	46105 46108	2,49116E-06 5,44054E-07	
	25 46108		i	47109	3.9128/E-07	
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	28 54155		i	54136	1,50836E-05	
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      6 -2.3130 E-01 4.520 6E-01 -2.25713E-01 -3.0784/E-01 1.6127/E-01
      7 2.3(30)E-01 4.520(6E-01 -2.257(3E-01 3.0784/E-01 -1.6(276E-01
      8 5.58410E-01 4.52016E-01 2.23713E-01 7.43201E-01 6.68029E-02
     9 -8.50774E-01 -8.5725E-02 6.2683E-01 -1.9855E-01 -4.865E-01
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     13 2.2019E-01 -8.5725E-02 -5.4262E-01 5.1363E-02 -3.4426E-01
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17 -9.648E-01 -4.452E-01 7.73181E-01 4.9105E-01 -6.243E-01  
18 -8.1736(E-01 -4.452E-01 3.208E-01 4.4632E-01 1.4654E-01
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     19 -5.461/E-01 -4.475ZE-01 -3.2026ZE-01 2.7817/E-01
    20 -1.91780E-01 -4.4552E-01 -7.73181E-01 9.7622E-02 4.1725E-01 21 1.91780E-01 -4.4552E-01 -7.73181E-01 -9.76634E-02 -4.1725E-01 22 5.46143E-01 -4.4552E-01 -3.2052E-01 -2.78176E-01 -7.3557E-01
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     6 3.53873E-01 3.80612E-01 7 4.07351E-01 4.24781E-01
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                    lambda 1.10965E+00
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                    radius int. midpoint area volume prod density
.0000E+00 1.295E-02 .0000E+00 2.1090E-03 3.2509E-03
2.5910E-02 4.3340E-02 1.6279E-01 9.4631E-03 1.4626E-02
0 int. zone number
                     6,07710E-02 8,75100E-02 3,81805E-01 2,9403E-02 4,53863E-02
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1.14249E-01 1.7455E-01 7.17848E-01 1.3110/E-01 2.04251E-01 2.34061E-01 2.95967E-01 1.47065E+00 2.21259E-01 3.52725E-01
                                                                                                                                                                                                                  1.7650-01 1.7650-01 1.7650-01 1.5100-01 2.0000-01 2.350870-01 3.50512-01 2.2556+00 1.27890-01 2.09002-01 4.07351-01 4.26780-01 2.55946+00 9.30420-02 1.5600-01 4.56812-01 2.54900-00 1.7600-02 1.5600-01 4.56812-01 2.54900-00 1.1600-02 1.2500-01 4.66812-01 2.54900-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-02 1.2500-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1.1600-00 1
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                                                                                                                                                                                                                                                              400 d. sas2h; bebook willow 15x15, 3,00x2x, 20pd/mtu burn high temp
                     0 total flux
                                                          9 1.55825E-00 1.45855E-00 1.33525E-00 8.2686E-01 7.0039E-01 6.33974E-01 3.7559E-01 2.0859E-01 10 1.5985E-00 1.45855E-00 1.33529E-00 8.29462E-01 7.0079E-01 6.34574E-01 3.75598E-01 2.08592E-01
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18 2.65760E-01 1.74960E-01 3.02029E-02
   19 2.6756E-01 1.79025E-01 3.75437E-02 20 2.7724CE-01 1.8659E-01 3.3300E-02
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21 2,76976-01 1,80076-01 3,47996-02 22 2,77778-01 1,90236-01 3,518976-02 23 2,77256-01 1,89836-01 3,51398-02 3,76706-01 1,89086-01 3,497776-02
- elapsed time .02 min.
  1 fine grap summery for zone 1 by grap including sum for all graps in line 28
      25 7.92351E-01 -1.27465E-01 7.2752E-01 24 5.6745E-01 -1.2254E-01 5.25378E-01
                                                               .00000E+00 8.00365E-02
                                                                                         .00000E+00 5.19793E-01
                                                  .0000E+00
                                                                .0000E+00 7.97521E-02
                                                  .00000E+00
                                                                                         .0000E+00 3.79811E-01
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2	2.4900/E-01	-6.2438E-02	2.16400E-01	.00000E+00	.0000E+00	4.57852E-02	.000E+00	1.58377E-01
26	1.61109E-01	-5.76193E-02	1.30331E-01	.00000E+00	.0000E+00	4.2088/E-02	.00000=000	9.855186-02
27	2.61330E-02	-1.59089E-02	1.6855Æ-02	.000 1	.0000E+00	1.1806E-02	.0000E+00	1.41831E-02
28	2.34541E+01	6.39931E-02	2.34271E+01	.000 0E+ 00	2.25250E-03	4.35177E-01	.0000000	1.613852+01
1fine g	TOUR SURREY	for zone 2	by group incl	luding sum for	all groups i	n line 28		
0 grp.	fix source	fiss source	in scatter	slf scatter	cut scatter	absorption		balance
1	.000E+00	.00000E+00	.0000000	.00000E+00	.0000E+00		-4.65651E-09	1.00000E+00
2	.00000E+00	.00000E+00	.0000E+00	.00000E+00	.0000E+00	.00000E+00		1,0000E+00
3	.000000E+000	.0000E+00	.000000	.0000E+00	.0000E+00		-8.94070E-08	1,00000E+00
4	.0000E+00	.0000E+00	.0000E+00	.00000E+00	.0000E+00		-1.4901Æ-08	1.0000E+00
5	.0000000	.000E+00	.0000E+00	.00000E+00	.000E+00	.0000E+00	.000€	1,00000E+00
6	.000000	.000E+00	.0000€+00	.0000E+00	.0000E+00		-2.98023E-08	1,0000E+00
7	.000000	.000E+00	.000000	.0000E+00	.00000	.0000E+00	-2.900ZE-08	1.0000E+00
8	.000000	.000E+00	.0000€000	.0000E+00	.0000E+00	.OUULE+CO	-3.35Z/Œ-08	1.0000E+00
9	.000000	.0000€+00	.0000€+00	.0000E+00	.000E+00	.000000		9.9999/E-01
10	.000000	.000E+00	.0000E+00	.0000E+00	.00000	.0000000		9.9999E-01
11	.0000	.000E+00	.0000E+00	.00000E+00	.00000		-5.9604E-08	1.0000E+00
12	.00000	.000000	.0000E+00	.0000E+00	.00000		-7.45058E-09	1,000000=+00
13	.000000	.000E+00	.000 0E+ 00	.000 0E+ 00	.0000€	.0000E+00		1.0000E+00
14	.00000	.000E+00	.00000	.0000E+00	.000000	.0000E+00		9.5555E-01
15	.00000	.000E+00	.0000€+00	.000E+00			-1.4901ZE-08	1.0000E+00
16	.00000	.000E+00	.0000€+00	.00000€+00	.00000		-9.3132E-10	1.0000E+00
17	.00000E+00	.0000E+00	.000E+00	.000E+00	.000E+00		-9.31321E-10	1.0000E+00
18	,000€+000	,0000E+00	.000000	.0000E+00	.0000E+00		-1.8526E-09	1.0000E+00
19	.00000	.00000E+00	.00000	.0000E+00	.00000	weem.	-1.8526E-09	1.0000E+00
20	.00000	.000000	.00000	.0000E+00	.00000	HW	-1.8526E-09	1.0000E+00
21 22	.00000	.0000E+00	.000E+00	.0000E+00	.00000	.0000E+00		1.0000E+00
	.00000	.000E+00	.0000E+00	.000E+00	.000 -1	.000E+00		1.0000E+00
25	.000000	.000E+00	.000000	.0000E+00	.0000	.000000		1.0000E+00
24	.000000	.0000E+00	.00000	.0000E+00	.0000E+00		-7.4806E-09	1.0000E+00
25	.000000	.000E+00	.00000	.000E+00	.00000	.0000E+00		1.000000
26	.000000		.000E+00	.000E+00	.000000		-1.1179E-08	1.00000=+00
27	.00000	.0000E+00	.0000	.0000E+00	.000E+00		-3.7 <u>5</u> 22E-09	1.0000E+00
_ 28	.000000	.00000€+00	.0000€+00	.000E+00	.000E+00		-6.33297E-08	9.9999E-01
0 ab	rt by flux		lft by flux	Ift lesiage	LEJU LEGE	fiss rate	flucture2	total flux
1	1.67758E-01	1.096095-02	1.70174E-01	1.09607E-02	.00001	.0000E+00	.00000	5.39583E-08
Ş	1.2652/5+00	1.14487E-01	1.27025E+00	1.14487E-01	.00001	.0000E+00	.0000E+00	4.02476E-02 5.11145E-02
3	1.608308+00	1.449895-01	1.61311E+00	1.44989E-01 8.76831E-02	.0000E+00	.0000E+00	.0000=00	3.17635E-02
5	9.99906-01	8.76531E-02 1.33502E-01	1.0022 /E+ 00 1.5151 /E+ 00	1.3502E-01	.00000	.0000E+00	.00000	4.8025E-02
6	1.51335+00	2.51482E-01	2.91569E+00	2.51482E-01	.000E+00	.0000E+00	.00000=+00	9.24181E-02
7	2.9089/E+00 2.8529/E+00		2.856765-00	1.AZ763E-01	.00000	.0000E+00	.0000=+00	8.9963/E-02
á	2.057395+00		2.06815=00	2.0670E-02	.00000	.0000E+00	.00000	6.5620XE-02
ş		-2.145 CE -CE		-2.1145E-02	.00000	.0000E+00	.000E+00	5.07319E-02
·10		-2.5941/E-02		-2.5% VE-02	.0000E+00	.0000E+00	.00000	4.62847E-02
· ñ	1.333999400			-5.5864E-02	.00000	.0000E+00	.0000E+00	4.23099E-02
12	8.3097E-01	-6.5090/E-02		-6.5000E-02	.00000	_0000E+00	.00000	2.6339E-02
ű	7.0185E-01	-5.5250E-02		-5.5250E-02	.00000	.0000E+00	.00000	2.22492E-02
ŭ		-8.251Œ-02		-8.21511E-02	.00000E+00	.0000E+00	.0000=+00	2.01500E-02
8		-8.090/9E-05		-8.09078E-05	.00000	.000E+00	.000E+00	1.19211E-02
16		-5.1092E-08		-5.1050E-05	.0000E+00		.0000E+00	6.6%ZE-05
17		-5.58201E-05		-5.58201E-03	.0000E+00	.0000E+00	.0000	2.63929E-08
18		-1.57871E-02		-1.5787 E-02	.00000=+00	.0000E+00	.00000=+00	1.96878E-08
ž,		-9.4070BE-05		-9.4070SE-05	.00000	_0000E+00	.000E+00	4.3361/E-05
žő		-2.4747E-02		-2.4747 2 -02	.0000E+00	.00000E+00	.00000=+00	1.400E-02
žĭ		-2.11760E-02		-2.11760E-02	.0000E+00	.0000E+00	.0000E+00	4.07518E-05
22	2.421035-01	-6.1198/E-02		-6.1198/E-02	.0000E+00	.0000E+00	.0000E+00	7.6570BE-08
Ħ		-1.2746E-01		-1.2745E-01	.0000E+00	,0000E+00	.0000E+00	2.520135-02
24		-1.256/E-01		-1.256/E-01	.00000=+00	.00000E+00	.0000E+00	1.871125-02
ž		-6.2433E-02		-6.243E-02	.0000E+00	,0000E+00	.0000E+00	7.92899E-05
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26 1.62576E-01 -5.76195E-02 1.61109E-01 -5.76195E-02	.00000E+00	.00000E+00	.00000=+00	5.1368E-08
27 2.65414E-02 -1.59039E-02 2.61330E-02 -1.59039E-02	.00000E+00	,00000E+00	.0000E+00	8.30021E-04
28 2.3/497E+01 6.39952E-02 2.3/5/1E+01 6.39981E-02		.00000E+00	.0000E+00	7.44253E-01
1 fine group summary for zone 3 by group including sum for				
Ogrp. fix source fiss source in scatter alf scatter		booption	leskage_	belance
1 .0000E+00 .0000E+00 .0000E+00 3.7415ZE-08			-2.7190Œ-03	1.00001E+00
2 .0000E+00 .0000E+00 4.8984ZE-04 2.580YE-02	1.85137E-02 5.	.1258E-05	-1.8075Æ-02	1,00000E+00
3 .0000E+00 .0000E+00 2.62PE5E-03 5.00266E-02		3683KE-04	-1.33X/E-02	9.99995E-01
4 .0000E+00 .0000E+00 5.11053E-03 4.20487E-02 5 .0000E+00 .0000E+00 1.10180E-02 8.19850E-02			-4.3670E-04	9.9999Œ-01
		51991E-04	5.7060Œ-03	1.0000E+00
6 .0000E+00 .0000E+00 1.84Z5TE-02 2.3477E-01		.19974E-04	1.48927E-02	1.00000=+00
7 .0000E+00 .0000E+00 1.22704E-02 2.35139E-01		44680E-04	1.07440E-02	9.9999E-01
8 .0000E+00 .0000E+00 2.1575ZE-03 1.585¥E-01			-5.77059E-03	1,00002E+00
9 .0000E+00 .0000E+00 7.4897E-03 1.0515ZE-01			5.6807X-03	9.9999E-01
10 .0000E+00 .0000E+00 8.77/30E-04 8.5514/E-02		DIME OF	-8.65XE-04	9.9999E-01
11 .0000E+00 .0000E+00 8.4851E=04 7.69776E=02			1.3660E-03	1.0000E+00
12 .0000E+00 .0000E+00 8.6950FE-04 4.6558E-02			4.2155/E-05	1.0000E+00
13 .0000E+00 .0000E+00 8.69817E-04 3.95207E-02		00000E-05	3.620XE-05	1,0000E+00
14 .0000E+00 .0000E+00 8.05197E-04 3.6050E-02 15 .0000E+00 .0000E+00 7.25794E-04 2.05752E-02	6.7756E-04 9.	60/80E-05	3.05027E-05	1.0000E+00 9.99941E-01
			-2.0478/E-04	
16 .0000E+00 .0000E+00 9.47810E-04 1.07803E-02			-5.517XE-05 -7.63360E-06	9.99941E-01 9.99994E-01
17 .0000E+00 .0000E+00 1.0331E-03 4.12690E-03			1.6330/E-04	9.9999E-01
18 .0000E+00 .0000E+00 1.0690EE-05 2.77469E-05 19 .0000E+00 .0000E+00 9.19272E-04 6.84839E-05			-1.35/20E-04	9.9999E-01
19 .0000E+00 .0000E+00 9.1927ZE-04 6.84ZSE-03 20 .0000E+00 .0000E+00 1.21050E-03 2.5005E-02			-3.75081E-05	9.9986E-01
21 .0000E-00 .0000E-00 1.3487E-03 6.054/9E-03			-1.61819E-04	9.9997E-01
22 .0000E+00 .0000E+00 1.828/E-08 1.267/E-02		45151E-04	1.28521E-05	9.99998-01
25 .0000000 .0000000 2.41476-05 4.289000-02			-1.38709E-03	1.0000E+00
24 .0000E+00 .0000E+00 3.85987E-03 3.0174/E-02			-9.84919E-04	1.00000=+00
25 .0000E+00 .0000E+00 3.7289E-03 1.16002E-02		9/85/E-04	3.486E-04	1.0000E+00
26 .0000E+00 .0000E+00 1.55394E+05 8.41237E+05		673 DE-04	7.4833Æ-05	1,000000=+00
27 .0000E+00 .0000E+00 3.22360E-04 1.57856E-08		155 KE-04	2.06027E-04	1.0000E+00
28 .0000E+00 .0000E+00 8.4986/E-02 1.4053/E+00			-7.64218E-03	9.99981E-01
0 grp. rt boy flux rt lesiage lift boy flux lift lesiage		fiss rate	fluxdb"2	total flux
1 1,68154E-01 8.24157E-05 1,69758E-01 1,09606E-02	1.00211E-04	.00000E+00	.0000E+00	3.668SE-02
2 1.2680Ex00 9.64112E-02 1.26636Ex00 1.14487E-01		.00000E+00	.0000E+00	2.72274E-01
3 1.5E525E+00 1.31664E-01 1.60E30E+00 1.4498EE-01		.00000E+00	.00000E+000	3.A3814E-01
4 9,84981E-01 8.72454E-02 9.97590E-01 8.76831E-02		.000000E+000	.0000E+00	2.14974E-01
5 1,48825E+00 1.39208E+01 1.51033E+00 1.33502E+01		.00000E+00	.0000E+00	3.24981E-01
6 2.85319E+00 2.66375E-01 2.9089XE+00 2.51X82E-01		.00000E+00	.000000=+00	6.25403E-01
7 2.8055E+00 1.53507E-01 2.85597E+00 1.42763E-01		.00000E+00	.000000	6.11107E-01
8 2.05427E+00 1.48999E-02 2.05738E+00 2.05708E-02		.0000E+00	.0000E+00	4.47640E-01
9 1.602135+00 -1.5/6/25-02 1.592925+00 -2.11/565-02		.00000€+00	.000E+00	3.46948E-01
10 1.46317E+00 -2.6747ZE-02 1.458BTE+00 -2.57414E-02		.0000E+00	.0000	3.16648E-01
11 1.34321E+00 -5.7200E+02 1.33390E+00 -5.5864/E+02		.0000E+00	.00000	2.9014/E-01
12 8.4127E-01 -6.51325E-02 8.3009E-01 -6.5000E-02		.0000E+00	.000E+00	1.81242E-01
13 7.1089E-01 -5.5247ZE-02 7.018/3E-01 -5.5250E-02		.0000E+00	.0000E+00	1,53140E-01 1,37833E-01
14 6.4X6E-01 -8.21205E-02 6.3X0XE-01 -8.21510E-02		,0000E+00	.0000E+00	8.157496-02
15 3,77182E-01 -8.2935EE-03 3,7575EE-01 -8.0909E-03 16 2,0936E-01 -5.16910E-03 2,0869E-01 -5.11392E-03		.0000E+00	.0000E+00	4.52811E-02
16 2.0333E-01 -5.16910E-03 2.0849TE-01 -5.1133E-03 17 9.0315E-02 -5.5884E-03 8.9547E-02 -5.5820E-03		.0000E+00	.0000E+00	1.99099E-02
18 6.4799E-02 -1.5629E-02 6.2299E-02 -1.5787E-02		.00000E+00	.000E+00	1.37856E-02
19 1,3829E-01 -9.5436E-03 1,3676E-01 -9.4070E-03		.00000E+00	.0000E+00	2.981335-02
20 4.58198E-01 -2.47850E-02 4.5425E-01 -2.4787SE-02		0000E+00	.0000E+00	9.8875/E-02
21 1,5269/E-01 -2.1337/E-02 1,2833/E-01 -2.117/6/E-02		00000E+00	.0000E+00	2.8412E-02
22 2.51697E-01 -6.11855E-02 2.42103E-01 -6.1198/E-02		.0000E+00	.0000E+00	5.3575Œ-02
23 8. WARE-01 -1,28652E-01 7,9574E-01 -1,27465E-01		0000E+00	.000E+00	1.74674E-01
24 6.080/E-01 -1.256/E-01 5.915/E-01 -1.226/E-01		.0000E+00	.000E+00	1.30177E-01
25 2.5921/E-01 -6.20953E-02 2.5063/E-01 -6.24/3/E-02		.0000E+00	,0000E+00	5.53362E-02
26 1.7007E-01 -5.7546E-02 1.6257EE-01 -5.76192E-02		.00000E+00		3.61325E-02

27		-1.56978E-02			.00000€+000	.00000€+000		5.99467E-03
28	2.3425XE+01	5.635 TE-02	2.3 4/79E+ 01	6.3995ZE-02	1.00211E-04	.000E+00	.0000E+00	5.07547E+00
1fine s	TOLD SUMBRY	for zone 4	by group incl	lucting sum for	all groups i	n line 28		
0 grp.	fix source		in acatter	slf scatter	cut scatter	absorption	leekage	belance
1	.0000E+00	.00000E+00	.0000E+00	5.9119 3E- 08	7.8249Œ-03	4.1705E-04	-8.2415TE-03	9.97 7/7E- 01
2	.00000E+00	.0000E+00	4.4898 E-03	7.5759E-02	9.98352E-02	1.0696E-08	-9.64112E-02	9.999626-01
3	.00000E+00	.000E+00	4.75567E-02	6.8805/E-02	1.79019E-01	5.40B0/E-06	-1.31663E-01	9.99977E-01
4	.00000=+00	.00000E+00	7.0059XE-02	4.57825E-02	1.5730/E-01		-8.72/63E-02	9.99987E-01
Š	.00000=+00	.0000E+00	1.2960EE-01	1.48577E-01	2.6981/E-01		-1.3920E-01	9.99991E-01
6	.0000E+00	.0000E+00	2.7457UE-01	4.55137E-01	5.4095/E-01		-2.66375E-01	9.9999E-01
7	.000000	.0000E+00	5.52K0Œ-01	7.9475E-01	7.05897E-01		-1.53007E-01	9.99987E-01
á	.0000E+00	.000E+00	7.35272E-01	1.00050E+00	7.50191E-01		-1.48998E-02	9.999125-01
ğ	.0000E+00	.0000E+00	7.40/80E-01	9.1555E-01	7.25003E-01	9.58498E-05	1.5460E-02	9.9989E-01
10	.0000E+00	.0000E+00	7.21750E-01	8.6/6/0E-01	6.94867E-01	2.11270E-04	2.6747E-02	9.99896E-01
ñ	.0000E+00	.0000E+00	6.9989E-01	8.0457E-01	6.42347E-01	4.56830E-04	5.72210E-02	9.99940E-01
12	.0000E+00	.000E+00	5.59151E-01	4.1956/E-01	4.95433E-01	5.96709E-04	6.51329E-02	9.9979E-01
13	.0000E+00	.00000	4.8877E-01	3.37852E-01	4.33347E-01	8.97357E-04	5.5X72E-02	9.9970E-01
14	.0000E+00	.0000E+00	4.7002XE-01	3.2500E-01	3.8644E-01	1.46407E-05	8.2120E-02	9.99980E-01
2 25	.00000	.0000E+00	2.5176/E-01	1.29275E-01	2.42180E-01	1.2880/E-05	8.20673E-03	9.9998E-01
16		.0000€+00	1.67 K/E-01	5.46797E-02	1.61092E-01	8.251225-04	5.1701 E-03	9.9998-01
	.0000E+00 .0000E+00	.0000E+00	8.63418E-02	1.54186E-02	B.0223/E-02	4.3067E-04	5.58573E-03	1.00082+00
17				1.10905E-02	6.0500Œ-02	3.3888E-04	1.56203E-02	1.000BE+00
18	.0000E+00	.00000=+00	7.65626E-02					
19	.00000	.00000	1.26/9/E-01	3.50070E-02	1.161893-01	7.67316E-04	9.5567₹-03	1.000 E+00
20	.00000	.000E+00	3.077XE-01	2.49256E-01	2.81818E-01	3.1880XE-03	2.4787Æ-02	1.0000E+00
21 22	.000000	.0000E+00	1.46271E-01	4.75720E-02	1.257E-01	1.17872E-03	2.1339Œ-02	1.00004E+00
22	.0000E+00	.00000E+00	2.78161E-01	1.37742E-01	2.1435Œ-01	2.61822E-03	6.118EE-02	9.9999CE-01
25 24	.0000E+00	.00000E+00	6.61823E-01	7.94182E-01	5.21518E-01	1.14496E-02	1.205 E-01	1.0001E+00
7.	.0000E+00	.00000E+00	6.75005E-01	6.9800BE-01	5.38798E-01	1.250E-02	1.254Æ-01	1.0001E+00
25	.00000E+00	.0000E+00	4.34602E-01	2,83751E-01	3.6530/E-01	7.20201E-03	6.Z094E-02	1.0000E+00
25	.0000€+00	.0000E+00	3.4294Œ-01	3.01452E-01	2.78/31E-01	6.964 WE-03	5.75426E-02	1.00001E+00
27	.000 0E+ 00	,00000E+00	1.13939E-01	6.29167E-02	9.5847Æ-02	2.39401E-05	1.56979E-02	9.9 3333E- 01
28	.000000		9.16517E+00	9.081325+00	9.16517E+00		-5,63700E-02	9.9 7700E -01
0 gap-	rt bdy flux		lft bdy flux	lft leekage	non rete	fias rate	flucture?	total flux
1	1.67374E-01	9.5170£-09	1.6815/E-01	8.24150E-05	4.32742E-10	.0000E+00	.000000:+00	1.91561E-01
2	1.23737E+00		1.2480E+00	9.6411ZE-02	.0000E+00	.000 0E+00	,00000E+00	1.41672E+00
3	1.56766200	3.644E-08	1.5552500	1.3166/E-01	.000000	.0000E+00	.00000E+00	1.7554E+00
4	9.71839E-01	3.75537E-08	9.84981E-01	8.7366E-02	,0000€000	.0000E+00	.000 00E+ 00	1.134E+00
5	1.458XE+00	5.8%33 E -08	1.488250	1.3920E-01	.0000E+00	.0000E+00	.00000E+00	1.67980E+00
6	2.81914E+00	-1,89576E-08	2.85319=+00	2.6637 5E -01	.0000E+00	.0000E+00	.0000E+00	3.23071E+00
7	2.7833E+00	1.01430E-07	2.80 66E+ 00	1.53507E-01	.0000E+00	.0000E+00	.000E+00	3.1852/E+00
8	2,06435E+00	4.740/ /E- 08	2,05427E+00	1.48999E-02	.000 0E+ 00	.0000E+00	,00000E+00	2.36199E+00
9	1.60(20E+00)	1,44253E-07	1,60213:+00	-1.54648E-02	.0000000	.0000DE+0D	,00 0000E+ 00	1.83500E+00
10	1.467732+00	3.97199E-08	1,463172+00	-2.67472E-02	.0000000	.00000E+00	.0000E+00	1,67973E+00
11	1.35330E+00	7.564/8E-08	1.34321E+00	-5.7220XE-02	.0000E+00	.0000E+00	.00000€+00	1,54809E+00
12	8.52/53E-01	4.70535E-08	8.41297E-01	-6.502 2E- 02	.0000E+00	,00000€+000	.00000€+000	9.7482BE-01
13	7.19952E-01		7.10889E-01	-5.53472 E -02	.000000	.00000E+00	.000E+00	8.23472E-01
14	6.65269E-01	-2.58478E-08	6.49463E-01	-8.21205E-02	.0000E+00	.00000E+00	.0000E+00	7.58190E-01
15	3.7774E-01	1.17375E-05	3.77182E-01	-8.2955BE-03	.00000E+00	.0000E+00	.00000E+00	4.32571E-01
16	2.0991SE-01	1.014 KE-05	2.07536E-01	-5.16910E-03	.0000E+00	.0000E+00	.0000E+00	2.40520E-01
17		-3.68692E-06	9.0'S19E-02	-5.5806/E-CB	.0000E+00	.0000E+00	.000000	1.0/515E-01
18	6.760GE-02	-3.45730E-06	6.4799E-02	-1.56Z39E-02	.0000E+00	.00000E+00	.000000	7.711516-02
19		-5.7200E-06	1,3829XE-01	-9.542/SE-05	.00000E+00	.00000E+00	.00000E+00	1.59953E-01
žõ	4.620B/E-01	2.19781E-05	4.58198E-01	-2.47850E-02	.0000E+00	.00000E+00	.00000E+00	5,28690E-01
21		-8.1818E-06		-2.13378E-02	.00000E+00	.00000E+00	.0000E+00	1.53996E-01
ž	2.63122E-01	2.645/E-05		-6.1995E-02	.0000E+00	.00000E+00	.0000E+00	3.000B2E-01
Ħ		-5.58053E-07		-1.20052E-01	.0000E+00	.00000E+00	.00000E+00	9.60176E-01
7.		-2.05871E-06		-1.25/9E-01	.0000E+00	.00000=+00	.00000E+00	7.26/69E-01
ž		-8.833ZZE-07		-6.2095E-02	.000000=+00	.0000E+00	.0000E+00	3.13032E-01
x		-2.05815E-06		-5.754Æ-02	.0000E+00	.0000E+00	.0000E+00	2.1255E-01
77		1.46157E-07			.0000E+00	.0000E+00	.00000=+00	3.85081E-02
_								

28 2.34641E+ 1 fine group summ	01 -1.91602E-05	2.34299E+01	5.63513E-02	4.32742E-10	.0000E+00	.00000=+00	2.68450E+01
Ogrp. fix sour		in scatter	slf scatter	aut scatter	absorption	leekage	balance
1 .0000E+		.0000E+00	2.21701E-02	2.105256-02	3.60905E-05	9,5170Œ-09	9.9882KE-01
2 .0000E+		7.2757E-03	2.67X8E-01	1.8/3/E-01		·5.43/83E-08	1.00002E+00
3 .0000E+		7.60814E-02	2.7960E-01	2.75875E-01	1.570BYE-02	3.61414E-0B	9.9778YE-01
4 .0000E+		1.14020E-01	1.93002E-01	2.3056E-01	7.53892E-03	3.75537E-08	1.0000E+00
5 .0000E+	00 1.64899E-01	2.0842E-01	4.88521E-01	3.68741E-01	4.6045E-05	5.8%XXE-08	9.99989E-01
6 .0000E+		4.27561E-01	1.34390E+00	5.9850E-01	7.37721E-05	-1.87576E-08	1.00001E+00
7 .0000E+		6.63089E-01	1.7753/E+00	7.43416E-01	8.00577E-0B	1.01438E-07	9.99989E-01
8 .0000E+	00 1.36205E-02	7.8000E-01	1.789985+00	7.731E-01	1.43741E-02	4.7404Æ-08	9.9330E-01
9 .0000E+	00 9.88735E-04	7.69859E-01	1.5557ZE+00	7.465E-01	2.439X5E-02	1.44253E-07	9.9988E-01
10 ,0000E+	00 7.34411E-05	7.4330Œ-01	1.40770E+00	7.05389E-01	3.705/BE-02	3.9719XE-08	9,9389 7E- 01
11 ,0000Œ+		7.1140Œ-01	1.30199E+00	6.5124E-01	6.02097E-02	7.56448E-08	9. 933×2E- 01
12 .0000Œ+		5.68147E-01	7.04020E-01	5.08660E-01		-4.7053E-08	9.93774E-01
13 ,000000		4.9960E-01	5.5403/E-01	4,40209E-01		-9.Z7500E-09	9.99971E-01
14 .0000E+ 5 .0000E+		4.769EE-01	5.11443E-01	3.94578E-01		-2.5847EE-08	9.99989E-01
5 .0000E+		2,600305-01	2.38050E-01	2.51949E-01	8.05198E-03	1.17399E-06	1.000116+00
16 .0000E+		1.77789E-01	1.05776E-01	1.71720E-01	5.44952E-05	1.0KKE-06	1.00011E+00
17 .00000E+		9.51138E-02	3.45256-02	8.89116E-02		-3.68500E-06	1.000 DE+00
18 .0000E+		8.49250E-02	2.40580E-02	6.703585-02		•3.673Œ-06	1.00009E+00
19 .00000		1.351192-01	6.71547E-02	1.25000 -01		·5,7288E-06	1,00011E+00
20 .0000E+ 21 .0000E+		3.21742E-01	3.79767E-01	2.9284E-01		2.19781E-05 -8.18188E-05	1.00010E+00
21 ,0000E+		1.5738E-01	7.6525/E-02	1.34080E-01			1,00011E+00
22 .0000E+ 23 .0000E+ 24 .0000E+		2.92750E-01	1.97) ISE-01	2.2556E-01	6.61639E-02	2.645/E-05	1,0000E+00
Z .0000E		6.8008E-01	1.014136+00	5.44097E-01		-5.5053E-07	1.00010E+00 1.00007E+00
Z0000E+		7.023/26-01	8.491185-01	5.66291E-01		-2.0387E-05	
25 .0000E+ 26 .0000E+		4.58256-01	3.41057E-01	3.853/Æ-01		-8.852XE-07	1.0007E+00
₹ .0000€		3,5/25E-01	3.41289E-01	2.85222E-01		-2,05819E-05 1,46157E-07	1.0001E+00
Z7 .0000E+		1.16352E-01	6.9%7E-02	9.6977Æ-02	1.93725E-02	-1.90419E-05	9.9997E-01
-28.00000€ 0gm.ntbd/fl			1.57559E+01	9.85100E+00	fiss rate	flu cto** 2	total flux
0 grp. rt bdy fl 1 1.675/4E-		1.7505/E-01	lft leskage 00+30000.	n2n nate 2.33518E-05	2_6039E-03	.0000E+00	3.52741E-01
2 1.25/3/6		1.32142E+00	.000E+00	1.73374E-05	1.18240E-02	.0000E+00	2.63/FE+00
3 1,56766		1.6762E+00	.0000E+00	.0000	1.454ZE-02	.000000	3.3200E+00
4 9.71839E-		1.040225+00	.0000E+00	.0000	6.250E-05	.0000E+00	2.0670E+00
5 1.458/E+		1.57460E+00	_0000E+00	.00000E+00	1.8394E-05	.000000=+00	3.11997E+00
	00 -1,895766-08	3.02575+00	.000E+00	.0000E+00	1,62739E-05	.0000E+00	6,00132E+00
7 2.781335+		2.90/5/E+00	.0000E+00	.00000E+00	1.626/0E-05	.00000E+00	5.8612E+00
8 2.0533	00 4.7404E-0B	2,079999-00	.0000E+00	.00000E+00	1,67775E-05	.00000E+00	4.30577E+00
9 1.604265+		1.58316+00	.0000E+00	.0000E+00	2,26989E-05	.0000E+00	3.32917E+00
10 1,46793E+	00 3.97199E-0B	1.44483E+00	.0000E+00	,00000E+00	4,834622-05	.000 0	3.0412KE+00
11 1,3533C+	00 7.56448E-08	1.3037ZE+00	.000 0E+ 00	.0000E+00	1.01361E-02	.000000	2.7860E+00
	01 -4.70533E-08	7.95094E-01	,000 0E+ 00	.0000E+00	1.315395-02	.0000E+00	1.739635+00
	01 <i>-9.27</i> 500E-07	6.72019E-01	.000E+00	.0000E+00	1.35217E-02	.0000E+00	1. <i>A6975</i> E+00
	01 -2,58478E-08	5.91297E-01	.000 0E+00	.0000E+00	8.7818£-05	.0000E+00	1.33712=+00
15 3.777VE-		3.71197E-01	_0000E+00	.0000E+00	2.205XE-05	.0000E+00	7.82327E-01
16 2.09919E-		2.05792E-01	.00000=+00	.0000E+00	1.50475E-05	.000E+00	4.3/6/CE-01
17 9.1369Œ-		8.6500E-02	.000E+00	.0000E+00	2.00824E-05	.0000E+00	1.8730/E-01
	02 -3.45730E-06	5.210E-02	.000000	.00000	2.005128-05	.00000	1.319/9E-01
	01 -5.720000-06	1.317528-01	.000E+00	.00000	3.19801E-05	.0000	2.86196E-01
		4.41158E-01	.000000	.0000E+00	1.65072E-02 1.35003E-02	.0000E+00	9,49516E-01
21 1.36618E-		1.17871E-01	.0000E+00 OO+3000D.	,0000E+00	3.9511E-02	.00000	2.72790E-01 5.13625E-01
22 2.63122E- 23 8.41693E-		2.07574E-01 7.27752E-01	.00000	.00000=000	8.005/6E-02	.00000	1,6798/E+00
	01 -2.05871E-06	5.237E-01	.0000=+00	.00000	7.97521E-02	.0000E+00	1.2517640
	01 -8.83322E-07	2.16/00E-01	.000E+00	.0000E+00	4.5785ZE-02	.00000	5.34696E-01
	01 -2.05815E-06	1.3033 E-01	.000E+00	.00000E+00	4.2088E-02	.0000E+00	3.52153E-01
27 3.48789E-		1.685562-02	-000E+00	.0000E+00	1.1806/E-02	.0000E+00	5.952196-02
	01 -1.91602E-05	2.34Z7E+01	.000E+00		4.35177E-01	.0000	4.880725+01
PA P12-101 P1.			J				

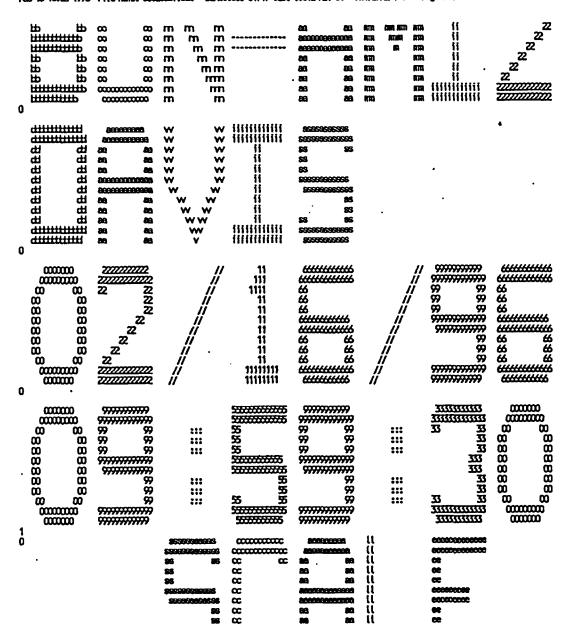
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    elapsed time .02 min.

         Odirect access unit 9 requires 516 blocks of length 1456 for cross section weighting.
         1 transport cross section weighting function
      1 2.5 V.C. 03 2.47/5E-02 3.50/7E-02 1.50/7E-02 4.27/5E-02 4.57/7E-02 4.57/7E-02 4.57/7E-03 1.50/7E-02 1.50/7E-02 4.57/7E-02 4.57/7E-02 4.57/7E-03 3.27/7E-02 4.57/7E-02 4.57/7E-02 4.57/7E-02 4.57/7E-03 3.27/7E-02 4.57/7E-02 4.57/7E-02 4.57/7E-02 4.57/7E-03 3.27/7E-02 4.57/7E-02 4.57/7E-
                                   e grp. 9 grp. 10 grp. 11 grp. 12 grp. 13 grp. 14 grp. 15 grp. 16
1 4.7529E-03 5.8129E-03 1.269E-02 1.469E-02 1.2607E-02 1.8199E-02 1.830EE-03 1.1651E-03
2 7.1083E-03 8.7209E-03 1.879E-02 2.1880E-02 1.8575E-02 2.7619E-02 2.7197E-03 1.7700E-03
       Ozone grp. 9
                                  3 5.7105E-03 8.1829E-03 1.7565E-02 2.0251E-02 1.7167E-02 2.552KE-02 2.551E-03 1.5974E-03 4 1.9021E-03 3.3287E-03 7.1528E-03 8.1256E-03 6.9805E-03 1.0266E-02 1.1101E-03 6.6928E-04 5 3.31430E-03 4.7803E-03 1.01667E-02 1.1701KE-02 9.9524E-03 1.47598E-02 1.5246E-03 9.39700E-04
   Ozore grp. 17 grp. 18 grp. 19 grp. 20 grp. 21 grp. 22 grp. 23 grp. 24
1 1.2460E-03 3.4662E-08 2.1187E-08 5.5588E-08 4.668E-08 1.3527E-02 2.888EE-02 2.6824E-02
2 1.87639E-03 5.3060E-03 3.4629E-08 8.3183EE-08 7.11816E-08 2.0572E-02 4.2849E-02 4.12017E-02
                                3 1.7551E-05 4.8794E-05 2.9378E-05 7.6552E-05 6.6054E-05 1.97531E-02 3.8554E-02 3.85320E-05 4 7.00512E-04 1.9254E-05 1.2053E-05 3.1571E-05 2.6554E-05 1.2053E-05 1.5571E-05 1.0052E-05 2.77656E-05 1.77774E-05 4.4841E-05 3.77719E-05 1.0059E-02 2.31125E-02 2.21147E-02
5 1.002E-05 2.765E-05 1.7776E-05 4.4841E-05 3.7978E-05 1.0080E-02 2.5162E-02 gpt, 25 gpt, 26 gpt, 27 gpt, 28 1 1.362E-02 1.260E-02 3.258E-05 3.8827E-01 2 2.0097E-02 1.7892E-02 5.368E-05 5.8777E-01 3 1.9500E-02 1.7892E-02 4.91070E-03 5.497E-01 4 7.868E-03 7.1373E-03 1.7975E-03 2.18080E-01 5 1.11987E-02 1.01800E-02 2.6603E-03 3.1250E-01 40 d, see2h: batcock wilcox 15x15, 3.00x15, 20x16/mtu burn high temp
    Ocell averaged fluxes
 1.574C=01 1.5514C=00 1.5744C=00 7.5435C=01 1.4642C=0 2.5635C=00 2.
 1.3770E-02 1.3770E-01 1.3370E-01 1.3370E-01 1.242E-01 1.
 Ozore grp. 25 grp. 26 grp. 27
1 2.3008E-01 1.4318E-01 2.0607E-02
2 2.4647E-01 1.61646-01 2.6643E-02
3 2.5538E-01 1.6677E-01 2.7660E-02
                                  4 2.7500E-01 1.6517E-01 3.36/51E-02 5 2.56657E-01 1.69187E-01 2.85965E-02
    Offux disadvantage factors (zone average/cell average-flux)

        Comm
        Gr. 1
        Gr. 2
        Gr. 3
        Gr. 4
        Gr. 5
        Gr. 6
        Gr. 7
        Gr. 8

        1
        1.0277E+00
        1.0370E+00
        1.0325E+00
        1.035E+00
        1.035E+00
        1.005E+00
        1.005E+00
```

	•		
2 9.5944E-01 9.58178E-01 9.55878E-01 3 1.00035E-00 9.59560E-01 1.00035E-00 4 1.0025E-00 1.0043E-00 1.0003E-00 5 1.0000E-00 9.5768E-01 9.7856E-01 9.5768E-01 3 1.0005E-00 1.0046E-00 1.0004E-00 1.0004E-00	1.00000+00 gp. 13 gp. 20 gp. 21 gp. 20 gp. 2	1,0000E+00 9p. 15 9,4818E-01 9,9856E-01 9,8836E-01 9,9856E-01 1,0018E+00 1,0000E+00 1,0000E+00 1,0000E+00 1,0000E+00 1,0000E+00 1,0000E+00 9p. 22 9p. 23 8,5668E-01 9,3552E-01 9,7773E-01 9,8956E-01 1,0017E+00 9,9856E-01 1,0023E+00 1,0078E+00	1.0000E+00 grp. 16 9.5072E-01 9.5007E-01 1.0055E+00 1.0055E+00 9.000E+00 grp. 24 9.1487E-01 9.7773FE-01 9.8008E-01 1.0525E+00
3 5.7109E-03 8.18257E-03 1.7563E-02 4 1.90215E-03 3.32257E-03 7.1528E-03 5 3.3433E-03 4.73531E-03 1.01657E-02 02018 grp. 17 grp. 18 grp. 19 1 1.24160E-03 3.4065E-03 3.16215E-03 3 1.7555E-03 5.3060E-03 3.16215E-03 3 1.7555E-03 4.8794E-03 2.9337E-03 4 7.00612E-04 1.9366E-03 1.20433E-03	2.9756-02 4.4880-02 2.7788-02 4.2568-02 1.0925-02 1.2456-02 gp. 12 1.4696-02 1.2078-02 2.18308-02 1.5758-02 2.10312-02 1.5758-02 2.10312-02 1.7578-02 2.10312-02 1.7578-02 2.10312-03 1.7578-02 2.10312-03 1.7578-02 2.10312-03 1.7578-02 2.10312-03 1.7578-02 2.10312-03 1.7578-03 2.1031	8.0580E-02 4.59EE-02 3.3577E-02 1.9255E-02 4.658E-02 2.6643E-02 9p. 14	6.9488E-05 5.55032-05 1.9953E-05 3.30782-05 1.14541E-05 1.7100E-05 1.5973-E-05 6.6927E-04 9.3070E-04 97. 24 2.6929E-02 4.12077E-02 3.8230E-02
1 6.8843E-01 3.30753E-01 2 3.17562-02 1.5246E-02 3 2.16724E-01 1.04122E-01 4 1.14454E-00 5.4678E-01 5 2.08144E-00 1.0000E-00 - elapsed time .05 min. 0requested permhalt8, skippellut, skipshipdata passe 3, ever halts after pass 8 1 Hittitititi coccoccocco m Hittititititi coccoccoccocco m Hittititititi coccoccoccocco m Hittititititi coccoccoccoccocco m Hittititititi coccoccoccoccoccoccoccoccoccoccoccoccoc		1988888 MT2 FT7 19888888 MT21 BERT 1988 MT21 FT7 1988 MT21 MT2 1988 MT21 MT2 1988 MT2 MT2	



program verification information

should code system scale version: 4.2 should
```
1 -1q array has 1 entries.
0 -1q array has 4 entries.
0 1q array has 6 entries.
0 1q array has 6 entries.
1 2q array has 2 entries.
1 logical assignants
0 master library 12
acrach file 18
naw library 1
Oproblem description
0 igregometry (0/1/2/3--inf mad/slab/cyl/sphere 2
0 izer-nucler of zores or material regions 4
0 izer-mixing table length 70
0 ill--shielded cross section edit option (0/1-no/yes) 0
0 ill--bundarento factor edit option (0/1-no/yes) 0
0 ill--bundarento factor edit option (0/1-no/yes) 0
0 ill--bundarento factor option 0
0 convergence criterion 1.0000E-05
0 openatry correction factor for wigner rational approximation 1.350E-00
0 3q array has 70 entries.
```

0 5q array has 70 entries. 0 6q array has 4 entries. 0 7q array has 4 entries. 0 8q array has 4 entries. 0 9q array has 4 entries. 0 10q array has 70 entries. 0 11q array has 4 entries. 0 11q array has 4 entries. 0 11q array has 4 entries.	•
Ountry mixture isotope number of	
1 3 8016 2.097 2 3 1001 4.194 3 5010 3.85 4 3 5011 1.548 5 2 40802 4.251 6 1 9225 1.787 7 1 9224 1.669 8 1 9225 1.787 9 1 9228 7.264	10E-02 201 20E-02 202
3 3 5010 3,815	55E-06 20 5
4 3 5011 1.548 5 2 40802 4.251 6 1 9225 1.787 7 1 9224 1.668	34E-05 204 54E-02 205
5 2 40802 4.2515 6 1 92235 1.787	\$\frac{2000}{2000}
7 1 922% 1,66%	27E-06 200007
8 1 92236 1.0190 9 1 92238 7.2663	00E-05 200008 21E-08 200009
8 1 92236 1.0190 9 1 92238 7.2643 10 1 8016 1.506	11E-02 200010
11 1 8016 1.153	SE-02 200011
12 1 36083 2.398 13 1 36085 1.158	XE-07 200012 2E-07 200013
14 1 38090 2,600	22-07 2000 14 28E-05 2000 14
15 1 39089 1,810	6/E- 06 200015
16 1 42075 2.024 17 1 40078 1.978	70E-06 200016 25E-06 200017
18 1 40094 3.063	XE-06 20018
18 1 40074 3.053 19 1 40075 6.952	10E-07 200019
20 1 41034 1.191 21 1 43039 2.968	56E-12 200020 26E-06 200021
22 1 45108 1 <i>.45</i> 77	ZE-05 200022
25 1 4516 5.540 24 1 44101 2.612 25 1 44106 3.770	75E-09 200025
25 1 44101 2.512 25 1 44105 3.770	52E-06 200024 55E-07 200025
26 1 46105 8.239	60E-07 200026
26 1 46105 8.239 27 1 46108 1.759 28 1 47109 1.284	&E-07 200027
28 1 47109 1.254° 29 1 51134 3.327	18E-07 200028 22E-11 200029
30 1 54131 1.376	£15E-06 2000®0
31 1 54132 2,317	
32 1 54135 2.183 33 1 54136 4.978	22E-09 200052 VCE-06 200053
34 1 55134 7.361 35 1 55135 1.558	75E-08 200084
<u> </u>	SE-06 2000 5 5
26 1 46105 8.259 27 1 46108 1.264 28 1 47109 1.264 29 1 51134 3.327 30 1 54131 1.376 31 1 54132 2.317 32 1 54135 2.317 33 1 54136 4.973 34 1 55134 7.361 35 1 55135 1.558 36 1 55137 3.131 37 1 56136 1.428 38 1 57139 3.119 39 1 59141 2.519 40 1 59144 1.666	2E-06 200E6 2E-08 200E7
38 1 57139 3.119	200058
39 1 59141 2.519	29E-06 200039 99E-07 200040
40 1 59143 1,3014 41 1 58144 1,666	12E-06 200041
42 1 6013 2.566	S/E-05 2000/2
43 1 60145 1,869 44 1 61147 8,216	80E-06 20003 77E-07 20004
45 1 611/8 2.25	SÆ-09 2000/5
46 1 60147 4.389	53E-08 2000%
47 1 62147 1,210 48 1 62149 2,487	21E-07 200047 12E-08 200048
49 1 62150 5.75%	78E-07 2000/A
50 1 62151 9.500 51 1 62152 2.807	67E-08 200050

```
2.63991E-10
       224222222222222222222
                                                                                                                                          20053
                                                      63153
                                                                                1.3055E-07
                                                                                                                                          200054
                                                      63154
                                                                                1.53097E-08
                                                                                                                                          20025
                                                      ຜ135
                                                                                1.69089E-08
                                                                                                                                          20056
20057
                                                      40802
                                                                               4.42681E-03
                                                                               2.30630E-02
                                                        1001
                                                                               2.09787E-06
                                                                                                                                          200058
                                                        5010
                                                        5011
                                                                                                                                          200059
                                                                               8.51673E-06
                                                      55133
                                                                              3.25775E-06
                                                                                                                                          200060
                                                                                                                                          200061
                                                      927
                                                                                4.0922E-07
                                                      94Z3B
                                                                                                                                          200062
                                                                                2.63252E-08
                                                     9239
9230
9231
                                                                                                                                          200053
200064
                                                                                2.16321E-05
                                                                               2.36745E-05
                                                                                                                                          20005
                                                                               8.29987E-07
                                                      922
                                                                              3.87820E-08
                                                                                                                                          200066
                                                                                                                                          200067
                                                      95241
                                                                                1.1255E-08
                                                                                                                                          200098
                                                      95243
                                                                                1,41059E-09
       æ
                                                      9624
                                                                              5.44610E-11
                                                                                                                                          200059
                                                                              3.30753E-21
                                                                                                                                          200070
Ogometry and material description
 Ozone mixture outer climarsion
                                                                                                                                                                    type (0/1--fuel/trod)
                                                                                          temperature
6.07500E+02
                                                                                                                                          extra xs
                                                                                                                                     7.9056/E-01
1.23052E+01
                                                        6.33X60E-01
                                                                                              6.5000E+02
                                                        6.73100E-01
                                                                                              6.07600E+02
                                                                                                                                    3.54852=+00
                                                        8.14000E-01
                                                        2.96100E+00
                                                                                              9.75000E+02
                                                                                                                                   2.3283E-01
8057 locations of 20000 available are required to make a new master containing the self-shielded values. One nuclides in your problem have bonderente factor data**bonsed will copy from logical 12 to logical 1
                          iss in your problem have bordered to factor detailed
999 1/v cross sectio from log 12 to log 1
1001 hydrogen from log 18 to log 1
1001 hydrogen from log 18 to log 1
1001 hydrogen from log 18 to log 1
5010 b-10 1273 218 top from log 18 to log 1
5010 b-10 1273 218 top from log 18 to log 1
5010 b-10 1273 218 top from log 18 to log 1
5010 b-10 1273 218 top from log 18 to log 1
                                                                                                                                                    bundaranko trigger 0
 Офру
bonderenko trigger 0
                                                                                                                                                      bordererico trigger 0
मुस्स्मित्त
                                                                                                                                                      bondarento trigger 0
                                                                                                                                                     bordarerko trigger 0
bordarerko trigger 0
                                                                                                                                                      burdererles trigger 0
                                                                                     from Log 12 to Log 18
from Log 18 to Log 1
from Log 18 to Log 1
from Log 12 to Log 1
from Log 12 to Log 18
                           5011
5011
                                                                                                                                                      bordererko trigger 0
                                             baran-11
                                                                                                                                                      bundarento trigger 0
 Осфу
                                             boron-11
                            5011
                                                                                                                                                      bundarerlas trigger 0
Ocepy
                                             boron-11
EEEEE
                           8016
                                                                                                                                                      bordererlo trigger 0
                                             COOPET-16
                                                                                       from Log 18 to Log 1
                                                                                                                                                      borderello trigger 0
                           8016
                                             aygen-16
                                                                                    from log 18 to log 1
from log 18 to log 1
from log 12 to log 1
                                                                                      from lag 18 to lag
                                                                                                                                                      burdererko trigger 0
                           8016
                                             0000m-16
                                                                                                                                                      borderelo trigger 0
                           8016
                                             oxygen-16
kr-83
                                                                                                                                                      bondarerico trigger 0
 Опру
                          36083
PERERRE
                          36055
                                                                                                                                                      bondarento trigger 0
                                             kr-85
                         38090
                                             a-90
                                                                                                                                                      bondererlos trigger 0
                         37080
40073
                                             74 88
88 88
                                                                                                                                                      bordererio trigger 0
                                                                                                                                                      bandarerlas trigger 0
                          40074
                                             #-9X
                                                                                                                                                      borderello trigger 0
                          40095
                                             25-95
                                                                                                                                                      bondenenko trigger 0
                                                                                                                                                     bundarento trigger 0
                          40002
                                             zircallov
A THE PRESENT OF THE PROPERTY 
                         4002
4002
                                                                                                                                                      bondarento trigger 0
                                             zircalloy
                                                                                                                                                      borderarios trigger 0
                                             zincelloy
                         41094
                                                                                                                                                     bonderento trigger 0
                                             rb-94
                         42095
                                                                                                                                                      bandarerko trigger 0
                                             10-95
                                                                                                                                                     bondarerico trigger 0
                         43077
                                             FE-599
                         44101
                                                                                                                                                     burderello trigger 0
                                             ru-101
                         44106
                                                                                                                                                     barbrerko trigger 0
                                             ru-106
                                                                                       from lag 12 to lag
                                                                                                                                                     bordererio trigger 0
                         4510B
                                             rh-103
                         45105
                                             rtr-105
                                                                                      from lag 12 to lag
                                                                                                                                                     bondererico trigger 0
                                           pd-105
                                                                                      from log 12 to log 1 from log 12 to log 1
Ocepy
                         46105
                                                                                                                                                     bandarenko trigger 0
                                             ⊞-108
                                                                                                                                                    bonderento trigger 0
                          46108
```

```
from lag 12 to lag 1 from lag 12 to lag 1
                        47109
                                           silver-109
                                                                                                                                                  bordarerico triquer 0
 Офру
                        51124
                                           sb-124
                                                                                                                                                  bonderario trigger 0
 0copy
                                          xe-131
                                                                                    from lag 12 to lag
                                                                                                                                                  bandarerko trigger 0
                         54131
 000by
000by
                         54132
                                           xe-132
                                                                                    from log 12 to log
                                                                                                                                                  bandanenko trigger 0
                        545
xeron-135
                                                                                    from log 12 to log
                                                                                                                                                  bondarerico trigger 0
                                                                                   from log 12 to log
from log 12 to log
from log 12 to log
from log 12 to log
from log 12 to log
from log 12 to log
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from log 12 to log
from log 12 to log
from log 12 to log
from log 12 to log
from log 12 to log
from log 12 to log
from log 12 to log
                        54136
                                                                                                                                                  bondererko trigger 0
                                           xe-136
                        25133
                                           cesiun-133
                                                                                                                                                  banderenko trigger 0
                         范诺
                                                                                                                                                  bordarerko trigger 0
 Ocepy
                                           cs-134
                                                                                                                                                  bordererko trigger 0
                        55135
                                           CS-135
 Ocepy
Octoby
Octoby
                        55137
                                           CS-137
                                                                                                                                                  bandererko trigger 0
                                                                                                                                                  bordererico trigger 0
                        56136
                                           ba-136
                                                                                                                                                  bordererico trigger 0
57139
                                            la-139
                        9914
9914
9913
                                           ce-144
                                                                                                                                                  bordererko trigger 0
                                           14 PA 24 PA 
                                                                                                                                                  bonderento trigger 0
                                                                                                                                                  burdarerico trigger 0
 Occipy
                        60143
                                           143
                                                                                                                                                  burdarello trigger 0
 Occipy
                                                                                   from log 12 to log
from log 12 to log
000py
000py
                        60145
60147
                                           nd-145
                                                                                                                                                  bundarenko trigger 0
                                            rd-147
                                                                                   from log 12 to log
from log 12 to log
from log 12 to log
from log 12 to log
from log 12 to log
from log 12 to log
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from log 12 to log
from log 12 to log
from log 12 to log
from log 12 to log
                                                                                                                                                  bondereriko trigger 0
61147
                                                                                                                                                  burdererko trigger 0
                                            DO: 147
                        61148
                                            pn 148
                                                                                                                                                  bonderento trigger 0
                       62147
62149
                                            sn-147
                                                                                                                                                  banderento trigger 0
                                           sn-149
                                                                                                                                                  bordererio trigger 0
62150
                                           sm-150
                                                                                                                                                  bordererko trigger 0
                        62151
                                            sm-151
                                                                                                                                                  bandarento trigger 0
bonderenko trigger 0
                         62152
                                            em-152
                        ಆಬ
                                            er-153
                                                                                                                                                  bondaranko trigger 0
                        6354
                                           ar 154
                                                                                                                                                  bandanerko trigger 0
                      6155 eu-155 from log 12 to log 1
6155 gd-155 from log 12 to log 1
9224 u-234 1033 sigos from log 12 to log 1
9225 u-snius-25
9225 u-snius-25
9225 u-snius-28
9227 neptunius-27
9228 p-28 1050 sigos from log 12 to log 1
9228 p-28 1050 sigos from log 12 to log 1
9229 plutonius-29
9240 plutonius-29
9240 plutonius-24
9242 plutonius-24
9242 plutonius-24
9243 sm-24 1056 sigo from log 12 to log 1
9234 sm-24 1056 sigo from log 12 to log 1
9234 sm-24 1056 sigo from log 12 to log 1
9234 sm-24 1056 sigo from log 12 to log 1
9234 sm-24 1056 sigo from log 12 to log 1
9234 sm-24 1056 sigo from log 12 to log 1
9234 sm-24 1056 sigo from log 12 to log 1
9234 sm-24 1056 sigo from log 12 to log 1
                        855
                                                                                                                                                  bondarerico trigger 0
 Oppy
                                           ar 155
Octable
Octable
                                                                                                                                                  bundarento trigger 0
                                                                                                                                                  burdererlo trigger 0
banderario trigger 0
                                                                                                                                                  bondarerlos trigger 0
                                                                                                                                                   bondarento trigger 0
                                                                                                                                                  bondarerico trigger 0
 Ocepy
bondarenko trigger 0
                                                                                                                                                  bondererko trigger 0
                                                                                                                                                  bondererico trigger 0
                                                                                                                                                  bondererico trigger 0
                                                                                                                                                  bardererico trigger 0
                                                                                                                                                  burdererko trigger 0
 Ocepy
                        952/3 em 2/3 1057 218 from log 12 to log 1
952/4 curium 2/4 from log 12 to log 1
                                                                                                                                                  bondarerko trigger 0
 Oxpy
Осфу
                                                                                                                                                  bandarenko trigger 0
              scale 4.2 - 27 grap neutron bump library
based on enti-b version 4 data with enti-b version 5 fission products
                              compiled for mo
                                                                                1/27/89
                                      last updated
                                                                               9/16/98
                                             l.m.petrie omi
                                                                                                                4321
                                                                                                                                                  number of nuclides
                                                                                                                                                                                                                                                70
                         tace id
                                                                                                                                                  number of genne groups
logical unit
                                                                                                                                                                                                                                                 ñ
                        number of neutron groups
                        first themal group
                                                                                                                     15
                                                                                                    table of contents
                    1/v cross sections normalized to 1.0 at 0.0253 ev hydrogen end/b-iv met 1269/thm/002 up
                                                                                                                                                                                                                                        200070
                                                                                                                                                                                                                          ななななななななが
                                                                                                                                       updated 10/13/89
                                                                                                                                                                                                                                               202
                                                                                                                                                                                                                                        200057
                                                           erdif/b-iv met 1269/thres1002
                                                                                                                                       uzzlated 10/13/89
                      hydrogen
                    b-10 12/3 218mp 042375 p-3 293k
                                                                                                                                                                                                                                       203
200058
                    b-10 12/3 218mg 042575 p-3 25%k
                                                                                                                                                                                                                                       20%
                      boron-11
                                                           endif/b-iv met 1160
                                                                                                                                         umbted 10/13/89
                                                                                                                                        updated 10/13/89
                      baran-11
                                                           erolf/b-iv mat 1160
                                                                                                                                                                                                                                                201
                      Coyper-16
                                                           endf/b-iv next 1276
                                                                                                                                        updated 10/13/89
                                                                                                                                                                                                                                        200010
                       daygen 16
                                                           endf/b-iv set 1276
                                                                                                                                        undeted 10/13/89
```

avygan-16	endif/b-iv and 1276	updated 10/13/89	id 2000	11
kr-83	nt=102,103,103,105,106,107	undeted 10/13/89	id 2000	12
kr-85	nt= 102		id 2000	13
sr-90	nt=102	undated 10/13/89	id 2000	_
y-89	nt=102	updated 10/13/89		
zr-95	nst≠ 102		id 2000	
zr-94	mt=102	updated 10/13/89	id 2000	18
zr-95	n£=102	updated 10/13/89	id 2000	19
zircalloy	ersif/briv met 1284	uzdated 10/13/89	id 2	Œ.
zircalloy	erulf/to-iv met 1204	ucdeted 10/13/89	iā 2000	
up-8%	nt=102	updated 10/13/89	id 2000	
ND-95	π£=102	updated 10/13/89	id 2000	
tc-99	nt=102	uzdated 10/13/89	id 2000	21
ru-101	mt=102	updated 10/13/89	id 2000	24
ru-106	nt=102	updatud 10/13/89	id 2000	
rh-103			id 2000	
	mt=102	updated 10/13/89		
rh-105	nt= 102		id 2000	
pd-105 .	mt=102	updated 10/13/89	id 2000	
pd-108	mt=102	updated 10/13/89	id 2000	27
silver-109	endf/b-iv mat 1139	uzzleted 10/13/89	id 2000	28
sb-124	at=102 .	underted 10/13/89	id 2000	
				_
же- <u>131</u>	mt=102,103,104,105,106	updated 10/13/89	id 2000	
xe-132	nt=102,103,104,105,105 endi/b-iv net 1254	updated 10/13/89	id 2000	
xenon-135	endif/or iv mat 1234	updated 10/13/89	id 2000	2 2
xe-136	nt= 102, 103, 104, 105, 1 erulf/b-iv met 1141	107	id 2000	33
cesium 133	errit Aniv met 1141	updated 10/13/89	id 2000	
	4 LA/O 14 MMC 14-1	10/17/60	id 2000	
CS-134	mt=102	updated 10/13/89		- :
CB-135	nt≈ 102		· id 2000	
cs-137	mt=102	uppleted 10/13/89	id 2000	
ba-136	mt=102	updated 10/13/89	id 2000	37
la-139	mt=102	uzdated 10/13/89	id 2000	38
œ-144	nt= 102		id 2000	41
pr-141		ucdated 10/13/89	id 2000	
	mt=102,103,104,105,106,107			
pr-143	mt=102	updated 10/13/89	id 2000	
nd-143	献 102	updated 10/13/89	id 2000	
nd-145	rt=102	updated 10/13/89	id 2000	43
nd-147	mt=102	undeted 10/13/89	id 2000	46
pa-147	mt=102	updated 10/13/89	id 2000	
m-148		denote id plan	id 2000	
	mt= 102			
87 147	endi/b-v fission product	updated 10/13/89	· id 2000	
sra-149	nt=102,108,107	updated 10/13/89	id 2000	
sm: 150	mt×102	updated 10/13/89	id 2000	49
an-151	nt=102,108,104,105,106,107 nt=102,108,104,105,106,107	updated 10/13/89	id 2000	50
sm-152	mt=102,105,104,105,105,107	undsted 10/13/89	id 2000	51
er 133	mt=102,103,104,105,106,107	underted 10/13/89	id 2000	
		uculation; 10/13/89	id 2000	
eur <u>154</u>	mt=102,103,104,105,106,107			
eu-155	mt=102,103,104,105,106,107	updated 10/13/89	id 2000	
gh 155	nd=102	updated 10/13/89	id 2000	82
u-234 1043 sign	>54 resklacs p-3 295k f-1/e-s	(1.45)	id 2000	07
unanium 235	erdi/b-iv mat 1261	updated 10/13/89	id 2000	06
1578 1163 ele	x514 naklaca p-3 255k f-1/en	r1 45)	id 2000	ñR .
	and Aniseme 1202	100 \$10.01 AD	id 2000	
uranium 238	enditoriy met 1262	undated 10/13/89		
neptunium 23/	erof/b-iv met 1263	updeted 10/13/89	id 2000	
pr-258 1050 sig	p-5+4 nextlacs p-3 295k f-1/e-	気(1.45)	id 2000	
plutanius 239	endf/b-iv set 1264	uzzlated 10/13/89	id 2000	ഒ
plutonius 240	erchi/b-iv mat 1265	undated 10/13/89	id 2000	64
	endif/b-iv set 1266	undated 10/13/89	id 2000	
		Updatoxi 10/13/89	id 2000	
PULLUTURE STATE	endf/b-iv met 1161	design in the		
#1741 JUDO \$1	p54 raklas 218mp p-3 200	•		
am 263 TUDY ZIK	gp wt f-1/e-m 090376 p3 283k		fd 2000	8
	-			

curium 244 erdif/b-iv 0 tape capy used 0 f, 1 m m mm m mm m mm m	/o's, and took .00 seconds	### ### ### ### ### ### ### ### ### ##	~ ~~~~~~~~~
ditititititi seccesses di di sa sa di di seccesses di di secces di secces di di secces di di secces di secces di di secces di secces di secces di di secces di secc		\$55555555555 \$5	
	# 11 # 11 # 11 # 11 # 11 # 11 # 11 # 11 # 11 # 11	######################################	
	######################################	99999999999999999999999999999999999999	MINIMUM 11 MINIMU
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96596	396995	œ		800000	0000000	ll	66865666
	96	œ		88	80	11	œ
	88	œ		86 ,	86	แ	ee
SS	96	œ	Œ	86	80	11	ee
\$9999	3999998	00000	20000000	80	80	ummunu	eeeenacceee
96696	383228	0000	XXXXXX	86	86	шшшшш	6606000000000

```
1
0 -iq array has 1 entries.
0 0q array has 4 entries.
0 tq array has 12 entries.
0 tq array has 12 entries.
0select 5 ruclides from the master library on logical 1
65 ruclides from the working library on logical 3
0 ruclides from the working library on logical 0
to create the new working library on logical 4
```

1 resonance calculations have been requested
0 cutput option for anyx formatted cross section data
Othe storage allocated for this case is 200000 words
0 2q array has 70 entries.
0 3q array has 15 entries.
0 4q array has 5 entries.

```
O general information concerning cross section library
tape identification number
number of nuclicies on tape 65
number of neutron energy groups 27
first themal neutron energy group 15
number of gama energy groups 0
O direct access unit number 9 requires 72 blocks of length 1484 words
- soon tape 4321

scale 4.2 - 27 group neutron burnsp library
based on endit-b version 4 data with endit-b version 5 fission products
compiled for mc 1/27/89
last unisted 9/16/93
l.m.patrie - orni.
```

xsdm weighted tape--parent case entitled-- 400 d, sas2h: baboock wilcox 15x15, 3.00x42, 20p.d/miu burn high tapp

0 ruclide	s from xechn te	ace .		
1	hydrogen	endf/b-iv mat 1269/thrm1002	updated 10/13/89	202 205 204
2	b-10 1273 218	gp 0/2375 p-3 283k	•	205
2 3 4	baran-11	erdf/b-iv aut 1160	updated 10/13/89	204
4	aygen 16	endi/b-iv mat 1276	undeted 10/13/89	201 205
5	zircalloy	endf/b-iv met 1284	updated 10/13/89	205
0 nuclide	s from work to	ADB	•	
6	1/V cross sect	tions normalized to 1.0 at 0.02		999
7	hydrogen	endf/b-iv met 1269/thms/002	updated 10/13/89	1001
8	b-10 1273 218	up 042375 p-3 283k	•	5010
9 10	baran-11	ercif/to-liv met 1160	updated 10/13/89	5011
10	avgen-16	endi/b-iv met 1276	updated 10/13/89	8016
11	ON/GET) TIÓ	endf/b-iv set 1276	updated 10/13/89	6
12	KT-83	mt=102,103,105,105,105,107	updated 10/13/89	36083
13 14	kr-85	mt= 102	•	3605
14	sr-90	mt=102	updated 10/13/89	33090
15	y-89	mt=102	updated 10/13/89	37087
15 16	zi~95	mt= 102	•	40095
17	zr-94	pat=102	undeted 10/13/89	400%
18	25-95	at=102	updated 10/13/89	40075
19	zircalloy	endf/b-iv met 1284	undeted 10/13/89	40302
20	rb-94	mt=102	updated 10/13/89	41094
21	11D-52	st=102	updated 10/13/89	42095
22	tc-99	mt=102	undeted 10/13/89	43099
25	ru-101	mt=102	ubdated 10/13/89	44101
24	ru-106	#£=102	undeted 10/13/89	44105
25	rh-103	mt=102	updated 10/13/89	45105
26	rh-105	mt= 102	•	45105
27	pcf-105	pt=102	undeted 10/13/89.	46105
28	pd-108	mt=102	updated 10/13/89	46108
29	silver-109	endf/b-iy ast 1139	undeted 10/13/89	47109
30	sb-124	mt=102	updated 10/13/89	51126
31	X2-131	mc=102,105,104,105,106	updated 10/13/89	54131
32	xe-132	mt=102,105,104,105,106	undeted 10/13/89	54132
33	251-ronex	endi/b-iv aut 12%	updated 10/13/89	54135
34	xe-136	mt= 102, 108, 104, 105, 1	07	54136
earnnananararayaya	cesium 133	erof/b-iv met 1141	updated 10/13/89	५० व्या
36	cs-134	mt=102.	updated 10/13/89	55134
37	CB-135	nt= 102	•	55135
38	C3-137	mt=102	updated 10/13/89	55137

```
56136
           be-136
                                                            undeted 10/13/89
                           at=102
                                                                                              57139
    40
           la-139
                           st=102
                                                            undated 10/13/89
                                                                                              58144
    ce-144
                             mt= 102
                                                                                              59141
                           mt=102,105,104,105,106,107
                                                            underted 10/13/89
           pr-141
           p-143
                           mt=102
                                                            undeced 10/13/89
                                                                                              59143
           nd-143
                           mt=102
                                                            undered 10/13/89
                                                                                              60143
                                                                                              60145
           nd-145
                           mt=102
                                                            undeted 10/13/89
                                                            updated 10/13/89
                                                                                              60147
           nd-147
                           nt=102
           pn-147
                           mt=102
                                                            undated 10/13/89
                                                                                              61147
           pm-148
                                                                                              61148
                             mt= 102
                                                                                              62147
           SR-147
                           entif/b-v fission product
                                                            updated 10/13/89
                                                                                              62149
           SET-149
                           mt=102,103,107
                                                            undeted 10/13/89
           sm-150
                           mb=102
                                                            undecad 10/13/89
                                                                                              62150
                          mx=102,105,104,105,105,107

mx=102,105,104,105,105,107

mx=102,105,104,105,105,107

mx=102,105,104,105,105,107

mx=102,105,104,105,105,107
                                                            updated 10/13/89
                                                                                              62151
           sm 151
                                                            updated 10/13/89
                                                                                              62152
           sm 152
           ar 53
                                                            undeted 10/13/89
                                                                                              សារ
                                                                                              63154
                                                            undated 10/13/89
           ar 154
                                                            undsted 10/13/89
                                                                                              63135
           er pp
           화ਲ
                           mt=102
                                                            undated 10/13/89
                                                                                              64155
                                                                                              92234
          u-234 10/3 sigo-544 maxtacs p-3 2/5k f-1/e-s(1.45)
           uranium-255 endi/to-iv mat 1261
                                                            undeted 10/13/89
                                                                                              9225
    60
                                                                                              9236
          u-236 1163 sigo-544 reaklass p-3 288k f-1/е-п(1.+5)
           uranium 238 endi/b-iv mat 1262
neptunium 237 endi/b-iv mat 1263
                                                            updated 10/13/89
                                                                                              92238
    61
                                                            undeted 10/13/89
                                                                                              95237
    82
                                                                                              9429
9429
9430
    ᇙ
          pr-ZSB 1050 sign-5-4 resolacs p-3 25% (-1/e-n(1.+5))
plutonius-ZSP entit/b-iv set 1264 update
    64
                                                            undeted 10/13/89
           plutonium-240 endi/to-iv met 1265
                                                            undeted 10/13/89
    Б
                                                                                              92341
92341
92341
           plutonium-241 endi/to-iv aut 1266
                                                            uculated 10/13/89
           plutonium-242 endf/b-iv mat 1161
                                                            undstood 10/13/89
    Ø
          an-241 1056 sign-644 madaca 218mp p-3 250k
an-243 1057 218 gp at f-1/em 0905/6 p3 250k
                                                                                              9523
                                                                                              9624
           AS-mira
                           endf/b-iv mat 1162
                                                            undated 10/13/89
                  erclf/b-iv met 1269/thrm1002
                                                  undated 10/13/89
                                                                                     202
                                                                                             temperature= 607.60
O hydrogen
                                thermal acettering matrix number 2 at a temperature of
                                                                                               $50.00 yes selected.
                                                                                     28
                                                                                             terperature 607.60
Ob-10 1273 210mp 042575 p-3 255k
                                                                                               50.00 was selected.
                                thermal scattering metrix ruster 2 at a temperature of
                                                  undered 10/13/89
                  erdf/b-iv met 1160
                                                                                    204
                                                                                             temperature= 607.60
0 boron-11
                                thermal acettering metrix ruster 2 at a temperature of
                                                                                               50.00 vas selected
                                                  updated 10/13/89
                                                                                    201
                                                                                             temperature= 607.60
0 avgen-16
                  endf/b-iv seet 1276
0 zircalloy
                                                  updated 10/13/89
                                                                                     205
                                                                                             temperature= 650,00
                  endf/b-ly met 128%
Orescrence deta for this nuclide
                                90.436
                                                                                  = 650,000
                                                       temperature(ke(vin)
Omesa nuaber (a)
                           =
                                 6.385
                                                       lumped nuclear density
                                                                                  = 4.255602E-02
Cootential scatter signa =
Ospin factor (g)
                                 1.079
                                                       lum dimension (a-bar)
                                                                                  = 6.7309999E-01
                                                                                  = 1,6805907E-01
                           = 6.326000E-01
                                                       dercoff correction (c)
Oimer radius
Othe absorber will be treated by the northein integral method.
Othis rescretce material will be treated as a 2-disensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1.0000
                               res fiss
                                                res scat
Ouroso
              res abs
                              .00000E+00 -7.806083E-01
           -1.15675ZE-03
           -4,629778E-02
                              .0000000
                                           -2.073270E+00
                                            -1,35198/E+00
          -5.962230E-02
                              .000000E+00
  10
                              .000000E+00
                                            -7.350731E-01
  11
          -1.761672E-01
Opicies resonance integrals
                    resolved
                   2.9240ZE-01
Outparption
                    .00000=+00
 fission
                    .Omm.

    elapsed time

  elapsed time
                    .02 min.
     this xxxim working tape was created 02/16/96 at 09:59:31
```

the title of the parent case is as follows asch: belook wilcox 15x15, asch: belook wilcox 15x15, 3.00x1x, 20xx1/mu burn high temp

tape id		S70		er of nuclides			70 0
		27 15		er of gama gro	40		ž
first them	ngup	of contar		ical unit			-
hydrogen	endf/b-iv met 1269/thra			10/13/89		id	202
h-10 1273 218	up 0/23/5 p-3 25%		que	id nin		id	202 203
baran-11	endf/b-iv mat 1160		undeted	10/13/89		id	20%
asygen-16	endif/b-iv met 1276			10/13/89		id	201
zircalloy	endi/b-iv mat 1284			10/13/89		id	205
	tions normalized to 1.0 at	t 0.0253		14 14 22		id	999
hydronen	endif/b-iv mat 1269/thra			.10/13/89		id	1001
	pp 042375 p-3 269k			.4		id	5010
boron-11	endf/b-iv mat 1160		undated	10/13/89		id	5011
arygen-16	endir/b-iv set 1276			10/13/89		fd	8016
arygen-16	erdi/b-iv met 1276			10/13/89		id	6
kr-83	mt=102,108,108,105,106,	.107		10/13/89		id	36083
kr-85	mt= 102		•	• •		id	36085
sr-90	st=102		updated	10/13/89		id	38090
y-89	nt=102		updated	10/13/89		id	39089
zr-95	mt= 102		•	-		id	40095
27-9 4	at=102		updated	10/13/89		id	40094
27-95	at=102			10/13/89		id	40095
zircalloy	erdř/b-iv met 1284			10/13/89		id	40302
up-&	st=102			10/13/89		kd	41094
mo-95	at×102			10/13/89		id	42075
tc-99	st=102			10/13/89		id	43099
ru-101	mt=102			10/13/89		id	44101 44101
ru-106	nt=102			10/13/89		id	44105
rh-103	mt=102		Library	10/13/89		id	45105
rh-105	at= 102			40.47.00		id	45105
pd-105	mb=102			10/13/89		id	46105
pd-108	mt=102			10/13/89		id	46108
silver-109	endi/b-iv mst 1139			10/13/89		id id	47109 51124
sb-124	#E=102			10/13/89 10/17/89		id	54131
xe-131 xe-132	mt=102,105,104,105,105			10/13/89 10/13/89		ŭ	5412
xenon-135	mt=102,105,104,105,106 endf/b-iv mat 1254		Question i	10/13/80		ũ	£15
xe-136	## 102 108 104	105 100	7	NA CAO		ĩď	£156
cesium 133	ercif/b-iv mat 1254 ercif/b-iv mat 1254 ercif/b-iv mat 1141	w, w	Lestand	10/13/80		ũ	5503
cs-134	st=102		Limbted	10/13/89		id	55134
CS-135	at= 102			.4		id	55135
cs-137	nt=102		undeted	10/13/89		id	55137
ba-136	st×102			10/13/89		id	56136
lar-139	st=102			10/13/89		id	57139
ce-144	mt= 102			• •		id	58144
pr-141	mt=102,105,104,105,106,	,107	updated	10/13/89		id	59141
pr-143	nt=102		updated	10/13/89		id	59143
in:143	art=102			10/13/89		id id	60143
nd-145	sst=102			10/13/89		id	60145
nd-147	nt=102			10/13/89		id	60147
pm-147	nt=102		updated	10/13/89		id	61147
pn-148	mt= 102			40.00	•	id	611/8
sm-147	endi/b-v fission produ	ct		10/13/89		id	62147
sm-149	st=102,108,107			10/13/89		id	62149
an 150	est=102	407		10/13/89		id	62150
sm-151	nt=102,103,104,105,106,	, IV	upososo.	10/13/89		id	62151

INFORMATION	OKLY
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snr 152 nt=102,1	05,104,105,106,107	updated 10		id 62		
	05,104,105,106,107			त छ		
	68,104,105,105,107			id ଶ୍ରୀ		
eu-155 nt=102,1 oc-155 nt=102	08,104,105,106,107			id 631 id 641		
gd-155 mt=102 u-254 1043 sigo-544 new	Jan n.3 2004 6.1/	updated 10	CYON	id 92		
	v mst 1261	updated 10	/11/80	₩ 92		
u-256 1163 sigo-544 reu	lacs n-3 20% f-1/		, cyco	₩ 92		
	v mat 1262	undsted 10	/13/89	id 92		
neptunium-237 endif/b-1		updated 10		id 93		
p.r-238 1050 sigo-5+4 ns				id 94		
plutonium-239 erolf/b-		updated 10	/13/89	id 92	239	
plutonium-240 endf/to-i	v mat 1265	updated 10		id 942		
	v mat 1266	updated 10		id 94		
plutonium 2/2 erai/to-i		updated 10	/13/89	id %		
em 241 1056 sigp-5+4 ns				id 95		
an-243 1057 218 co let f				id 95		
	V met 1162	updated_10	/ נטקט	1d 96	544	
	i/o's, and took	.00 seconds			m m	
1 XX XX 989899999999 XX XX 939999999999	********	mmmm	m m	AHHHHHP .		
XX XX 939393935569696 XX XX 8S 98		u u	an m	P P		
X X 85	. 11	u u	mm m			
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0						
000000 277777772	//	11	64444444	//	777777777	*********
00000000 222222222	: <i>ii</i>	111	HHHHHH	ii ii	9777777777	CHARACTERS.
00 00 22 22		. 1111	66	ii	99 99	66
o o z	ii	· `11	6 6	ii	99 99	66
$\widetilde{\omega}$ $\widetilde{\omega}$ \widetilde{z}	: <i>ii</i>	ii	66	ii	99 99	66
00 00 22	i ii	11	CHARREST	jj .	97777777777	644444
00 00 22	ii ii	11	***********	ii -	9777777777	CHARACTER
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00 00 22	. !!	11	(((((((((((((((((((((((((((((((((((((#	9	66 65
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			88	~		88	88	ii	œ	
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		90999999	000	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	~	20	86	minimi	BECCEPOREDOOD	

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progress verification information	delt
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httm: code system: scale version: 4.2	**
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handa _r	***
	100
AMA program: c0c001	***
Addr.	194
creation date: 04/27/95	***
holds:	***
library: /neutronics/scale/esa	***
n ia	1944
	**
this is not a scale configuration controlled code	**
rid	the
*** jobneme: davis	ylada:
than the state of	with the state of
think date of executions 02/16/96	**
inder the second	***
time of executions 09:59:32	alleder
hith	10-01

```
400 d, second part of sas2h pass to make library
                          1 entries.
        •1q array has
        Og array has
                          11 entries.
                          5 entries.
         1ci arrey has
         20 array has
                          10 entries.
        3d arrey has
                          12 entries.
        4c array has
                          9 entries.
                         12 entries.
        50 array has
Otherect access unit 9 requires 12 blocks of length 704 for cross section mixing.
                        400 d, second part of ses2h page to make Library
Openeral problem description data block
                                 general problem data
                                                   isn quadrature order
 ige 1/2/3 = plane/cylinder/sphere
                                                   isct order of scattering
levt 0/1/2/3/4/3/6-0/k/alpha/c/z/r/h
 ian runber of zones
 ing number of special intervals
                                                                                          20 20 0
     0/1/2/3 = vacum/refl/per/shite
                                                   in irrer iteration seximan
 ibr right boundary condition
                                                   ion outer iteration maximum
                                                   icle -1/0/n-flat res/sn/opt
mox number of mixtures
                                         7Ū
                                                   ith Q/1 = forward/adjoint
                                                                                           0
ms mixing table length
                                                   iflu not used always upto)
                                        27
 ign number of energy groups
                                                                                           0
                                                   iprt -2/-1/Q/mmixture xsec print
my number of neutron groups
                                                   idl 0/1/2/3-ro/prt m/pch n/both
                                         ۵
ngo number of general groups
                                                   ipbt -1/0/1-none/fine/all bal. prt
ifty runber of first themal group
                                         15
                                  special options
 ifg 0/1 = name/heighting calculation
                                                   ipn 0/1/2 diff. coef. paren
                                                   idm 0/1 = none/density factors 30*
 ion volumetric sources (0/1770/yes)
 ipm brundary sources (Q/nero/yes)
ifn Q/1/2 = input 33*/34*/Lee last
                                                   isz Q/n = nore/n activities by zone
                                                   iai O/I-none/activities by interval
 itus meximum time (minutes)
                                                   ifct Q/1-ro/yes upscatter scaling
                                                   ipt 0/1/2-ro/k/alpha persectric arch
                                                                                           0
 idt1 0/1/2/3-rp/resect/srce/flux--out
                                                   isen outer iteration acceleration
 isk broad group fluxes
 ibln activity data unit
                                                  ribrid band rebaln parameter
 itkl 0/1/2 buckling geometry
                                    weighting data (ifg=1)
                                                   ihtf total seect pen in brd go tables
 ican -1/0/1=cell/zone/region weight
                                                  ndsf pan g-g or file number
 ignif runber of broad groups
 itp 0/10/20/30/40 0/c/e/ac/a
                                                  rusf table length or associate
                                         -2
                                                  seem extra 1-d x-sect positions
 Î
     -2/-1/0/mented assect print
 iap
     -1/n anian xsect print
                                 floating point parameters
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                                                       cyl/plaint for buckling
eas overall convergence
                                1.0000E-04
                                                  σż
                                                        plane doubt for buckling 2,00000E+02
ptc point convergence
                                1,0000E+00
                                                        void streaming correction .0000E+00
     normalization factor
                                                  VCC
                                 .000E+00
                                                        lovt=1/2--k/alcha
                                                                                  1.0000E+00
     eigenvalua guess
                                                   eck evidenge eps for search 1.0000E-03
eun eigenvolue modifier
                                 .00000E+00
     buckling factor=1.420892 1.42089E+00
                                                  Arpa resi persen and for search 7.50000E-01
                                 2611 locations for mixing
     this case will require
     this case has been allocated 200000 locations
                        400 d, second part of seson pass to make library
                         70 entries.
        13q array has
Õ
        14q array has
                         70 entries.
                         70 entries.
        150 errey has
                                      data block 2 (mixing table, etc.)
```

0	nuclides	ccc		mixing table	2	extra
	on tape	identification	mixture	corporent	atom density	xsect ids
	1 202		3 3 3 3 2 1	201 202	2.09710E-02	
	2 205 3 204 4 201		3		4.19420E-02	
	3 204 4 201		2	205 204	3,81515E-05 1,5488/E-05	
	5 205		3	205	4.25156E-02	
	5 205 6 999 7 1001 8 5010		1	92236	1.78765E-04	•
	7 1001		i	92234	1.66922E-06	
	8 5010		i	92236	1.01900E-05	
	9 9011		i	92238	7.26421E-03	
	10 8016		i	8016	1.50511E-02	
	11 6		i	6	1.153 DE-02	
	12 36083		1	36083	2.3982¥E-07	
	13 36085		1	36085	1.15802E-07	
	14 38090		1	38090	2.60028E-06	
	15 39089]	39089	1.81056E-06	
	16 40078			42095	2.02470E-05	
	17 40094		1	40095	1.97826E-06	
	11 6 12 34083 13 34085 14 38990 15 39089 16 40093 17 40094 18 40095 19 40802		1	40094	3,06990E-06 6.95210E-07	
	19 40802 20 41094	•	i	40095 41094	1.19135E-12	
	21 42095		i	43099	2.9692E-06	
	22 43077		i	45105	1.45725E-06	
	25 44101		i	45105	5.54075E-09	
	24 44106		i	44101	2.61262E-05	
	20 410% 21 420% 22 430% 23 4410 24 44106 25 45106 27 46106 28 46108		·i	44106	3.77085E-07	
	26 45105		Í	46105	8.23960E-07	
	27 46105		1	4610B	1.79X8E-07	
	28 46108		1	47109	1.29418E-07	•
	29 47109		1	51124	3.3272E-11	
	30 51124		1	54131	1.376BE-06	
	31		1	54132	2.31720E-06	
	22 5/132		1	54135	2.1837E-09	
	33 54135		}	54136 55134	4.97240E-06 7,36179E-08	
	34 54136 35 55133			55135	1,55852E-06	
	36 353		į	8187 8187	3.13142E-06	
	37 55136		i	25137 56136	1,42899E-08	
	38 55137		i	57139	3.1199BE-06	
	39 56136		i	59141	2.519ZE-05	
	40 57139		1	59143	1,30169E-07	
	41 58144		1	58144	1.65612E-06	
	42 59141		1	60143	2.565XE-06	
	43 59143		1	60145	1.86380E-06	
	44 . 60143		1	61147	8.21697E-07	
	45 60145		!	61148 60147	2,25854E-09 4,38963E-08	
	46 60147		}	62147	1.21021E-07	
	47 61147 48 61148		i	62149	2,48712E-08	
	40 01M0		i	62150	5.7947E-07	
	49 62147 50 62149		i	62151	9.50067E-08	
	4 20 20 20 20 20 20 20 20 20 20 20 20 20		i	62152	2.80778E-07	
	\$ 62151		i	64155	2.63991E-10	
	\$ 62152		i	ଣୀସ	1.3050E-07	
	54 63153		İ	63154	1.53097E-08	
	55 63154		1	63155	1.690B6E-0B	
	56 63155		1	. 40302	4.4269E-05	
	57 64155		.1	1001	2.30630E-02	
	58 92234		1	5010	2.09787E-05	

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8.5167<del>3E</del>-06
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                    96244
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      elepsed time
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        24259 locations will be used
                   35q array has
                                                             29 entries.
                   360 errey has
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                   40q array has
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                 5.5000±402 9.2618±407 2.0594±407 1.0000±402 1.5129±401 1.0108±407 3.0000±401 1.27165±401 5.29595±406 1.0000±401 1.38155±401 3.2957±406 3.04999±400 1.55471±401 1.7052±406 4.2000±401 1.55471±401 1.7052±406 4.2000±401 1.55471±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±407 4.2000±401 1.7052±407 4.2000±401 1.7052±407 4.2000±401 1.7052±407 4.2000±401 1.7052±407 4.2000±401 1.7052±407 4.2000±401 1.7052±407 4.2000±401 1.7052±407 4.2000±401 1.7052±407 4.2000±401 1.7052±407 4.2000±401 1.7052±407 4.2000±401 1.7052±407 4.2000±401 1.7052±407 4.2000±401 1.7052±407 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.2000±401 1.7052±406 4.20
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5.55753E-02 -2.31301E-01
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5.55953E-02 5.58410E-01
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Occupations for p( 3) scattering
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Cargl set 1
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        1 -2.790XE-01 8.8325E-01 6.74KJE-02 -6.16919E-01 -1.7770E-02
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        4 -6.0%192-01 4.520162-01 3.163792-01 -8.0%532-01 -1.74562-01 5 -5.594102-01 4.520162-01 2.257142-01 -7.432016-01 -6.680292-02
       6 -2.31301E-01 4.5206E-01 -2.23713E-01 -3.0784E-01 1.61276E-01 7 2.31301E-01 4.5206E-01 -2.23713E-01 3.0784E-01 -1.61276E-01
       8 5,58/102-01 4,520/62-01 2,257/32-01 7,4320/2-01 6,690/26-02 9 -8.507/42-01 -8.572562-02 6,268/32-01 -1,98/5/62-01 -4,8/68/56-01
      10 -8.2178/E-01 -8.5725/E-02 5.428/2E-01 -1.9169/E-01 -3.442/SE-01
      11 -6.0198E-01 -8.5725E-02 .0000E-00 -1.40890E-01 3.4424/E-01
     13 -2.20196-01 -8.5725E-02 -5.4285E-01 -5.1363E-02 3.4435E-01 12 -2.20196-01 -8.5725E-02 -5.4285E-01 -5.1363E-02 3.4435E-01 12 2.20196-01 -8.5725E-02 -5.4285E-01 5.1363E-01 -3.4435E-01 4.60193E-01 -8.5725E-02 .0000E-00 1.4630E-01 -3.4435E-01 1.91696E-01 -8.5725E-02 5.4285E-01 1.91696E-01 3.4435E-01 16 -9.8305E-01 -4.4952E-01 8.3485E-01 5.0070E-01 -7.5100E-01
     16 -9.8905E-01 -4.4952E-01 8.368EE-01 5.0970E-01 -7.5100E-01 17 -9.6413E-01 -4.4952E-01 7.73181E-01 4.910EE-01 -6.2433E-01
     17 -9.6442-01 -4.4528-01 -7.75181-01 -4.16502-01 -1.46542-01 
18 -8.17361-01 -4.4528-01 -3.2032-01 -4.16502-01 -1.46542-01 
19 -5.4643-01 -4.4528-01 -3.2032-01 -2.78176-01 
7.36572-01 
20 -1.917602-01 -4.45282-01 -7.751812-01 -9.768342-02 -4.172342-01 
21 1.917602-01 -4.45282-01 -7.751812-01 -9.768342-02 -4.172342-01 
22 5.46432-01 -4.45282-01 -3.20322-01 -2.781762-01 -1.46542-01 
23 8.173612-01 -4.45282-01 -3.20322-01 -4.163202-01 -1.46542-01
      24 9.441/E-01 -4.4952/E-01 7.7318/E-01 -4.9108/E-01 6.243/E-01
      nt redii mid pts
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9.93666-01 9.817626-02
       3 7.90575E-02 1.1858/E-01
4 1.58115E-01 1.9764/E-01
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       5 2.37172E-01 2.76701E-01 6 3.16250E-01 3.55759E-01
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2.48566E+00 2.15989E-01
        7 3.95289E-01 4.34816E-01
       8 4.74345E-01 5.13874E-01
                                                                             2.98040E+00 2.55258E-01
                                                                            3.47715E+00 1.4255E-01
3.7250E+00 1.52175E-01
            5.53403E-01 5.73167E-01
      10 5.92951E-01 6.12696E-01
      11 6,32460E-01 6,42620E-01
                                                                             3,97385E+00 8,20460E-02
            6.52780E-01 6.62940E-01
                                                                             4.10154E+00 8,46409E-02
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      13 6.73100E-01 6.9688E-01
      14 7.20067E-01 7.A3550E-01
                                                                             4.52(31E+00 2.1942ZE-01
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15 7.67083E-01 7.90517E-01
                                            4_81941E+00 2_332E2E-01
   16 8.14000E-01 8.62795E-01
                                            5.11451E+00 5.29051E-01
   17 9.11591E-01 9.60886E-01
                                            5.72769E+00 5.88891E-01
   18 1.00918E+00 1.10677E+00
                                            6.3/08E+00 1.35731E+00
   19
      1.20(3(E+00 1.30195E+00
                                            7.5672/EHOD 1,59667EHOD
       1.39955E+00 1.49714E+00
   20
                                            8.7950E+00 1.85603E+00
      1.59473=+00
                   1,692325+00
                                            1,00200E+01 2,07540E+00
   21
   22
       1.78991E+00 1.88750E+00
                                            1.1265E+01 2.31476E+00
   25
      1.98509E+00 2.08269E+00
                                            1.24727E+01 2.55412E+00
      2.18027E+00 2.27785E+00
                                            1,36991E+01 2,79549E+00
                                            1.49254E+01 3.05285E+00
   20
       2.37545E+00 2.47305E+00
       2.5706/E+00 2.66823E+00
                                             1.61518E+01 3.27221E+00
       2.76582E+00 2.81461E+00
   27
                                             1.73781E+01 1.72587E+00
   28 2.85341E+00 2.91220E+00
                                            1.79713E+01 1.78571E+00
   29 2.96100E+00
                                            1.850455+01
  elapsed time .00 min.
1 outer irrer 1 - balance eigenvalue 1 - source 1 - scatter 1 - upscat
                                                                               rbnese
                                                                             pereneter
                                                                                             (min)
                                           ratio
                                                       ratio
   iter iters
                                                                   ratio
         209 -6.7947E-06 1.10245E+00 -1.13242E-01 1.0000E+00 -3.37148E-02
                                                                                              œ.
                                                                              .00000E+00
         310 9.83679E-05 1.11343E+00 -1.52187E-05 -1.43890E-02 -4.0229E-05
                                                                                              .0167
                                                                             .0000E+00
        371 -1.7XXXE-07 1.11XXXE+00 -1.85561E-04 -1.61512E-03 -8.33010E-04
                                                                             .00000=+00
                                                                                             .0167
         450 3.41931E-07 1.11512E+00 -3.48739E-05 -3.4256E-04 -1.7305/E-04
                                                                                             .0167
                                                                             .0000E+00
         470 -3.07752E-07 1.11519E+00 -7.1289E-06 -7.1546E-05 -3.5336E-05
                                                                                             .0167
                                                                             .000E+00
                                                                   grp to grp inner wid
                                                                                           max. flux maf max. scale coarse
                                                                               iters int.
                                                                                            difference int.
                                                                                                                factor
                                                                                           1.87323E-06
                                                                                                             1.0000E+00
                                                                                       17
                                                                                                         28
                                                                                       17 2.27993E-06
                                                                                                         28
                                                                                                             1.0000E+00
                                                                                       17 2.113ESE-06
                                                                                                         28
                                                                                                             1.0000E+00
                                                                                                             1.0000E+00
                                                                                       17 2.05738E-06
                                                                                                         28
                                                                                                         28
                                                                                        17
                                                                                           2.1720E-06
                                                                                                             1.00000E+00
                                                                                       17
                                                                                           1.4875E-06
                                                                                                         28
                                                                                                             1.0000E+00
                                                                             6
                                                                                                             1.0000E+00
                                                                                           8.67U/8E-07
                                                                                                         28
                                                                                           1.58248E-07
                                                                                                             1.0000E+00
                                                                                                         20
                                                                                       27 9.39YE-06
                                                                                                         28
                                                                                                             1,00001E+00
                                                                                       26 2.9889E-06
                                                                                                         28
                                                                                                             1,00000E+00
                                                                     10
                                                                            10
                                                                                                         28
                                                                     11
                                                                            11
                                                                                       26 2,403Œ-06
                                                                                                             1.0000E+00
                                                                                          6.88BE-07
3.40879E-06
                                                                     12
                                                                            12
                                                                                       26
                                                                                                         28
                                                                                                             1.0000E+00
                                                                     13
                                                                                       26
                                                                                                         28
                                                                                                             9.99997E-01
                                                                            13
                                                                                                             9.9999E-01
                                                                     14
                                                                            14 15
                                                                                           1.07215E-06
                                                                                                         28
                                                                                       25
                                                                                           3.6186ZE-05
                                                                                                             9.9975XE-01
                                                                                                         28
                                                                                           4.45262E-05
                                                                                                         28
                                                                                                             9.99963E-01
                                                                            16
                                                                     17
                                                                            17
                                                                                                         28
                                                                                       27 9,69789E-05
                                                                                                             1.00002E+00
                                                                                                         28 9.99924E-01
                                                                     18
                                                                            18
                                                                                           5.90921E-05
                                                                                           5.16568E-05
                                                                            19
                                                                     19
                                                                                                         28
                                                                                                             9.99875E-01
                                                                                           4.13519E-05
                                                                                                             9,99919E-01
                                                                     20
                                                                            20
                                                                                                         28
                                                                     2122
                                                                            71
72
73
73
                                                                                           6.3397 E-05
                                                                                                         28 9.99945E-01
                                                                                       Z 2.90040E-05
                                                                                                         28
                                                                                                             9.9996E-01
                                                                                           2.77437E-05
                                                                                                         28
                                                                                                             1.00001E+00
                                                                            24.25
                                                                                           3.29003E-05
                                                                                                          9
                                                                                                             1.00002E+00
                                                                                           3.33667E-05
                                                                                                             1,000025+00
                                                                                                          8
                                                                                           2.60977E-05
                                                                                                             1.00002=+00
                                                                     26
                                                                                                          6
                                                                            26
                                                                                                             1.00001E+00
                                                                     27
                                                                                           2.52250E-05
     6 517 -1.470/SE-06 1.11521E+00 -1.32897E-06 -1.474/SE-05 -7.75289E-06
                                                                            .0000E+00
                                                                                              -0167
            final monitor
                                                                                        angular flux on 16
                   lambda 1.11520E+00
                                              production/absorption 1.12581E+00
  elapsed time
                 .02 min.
                      400 d, second part of see2n pass to make library
                     radius int. midpoint area volume producently .0000E+00 1.9764/E-02 .0000E+00 4.9088E-03 .0000E+00
0 int. zone runber
                   3.95287E-02 5.9285E-02 2.48566E-01 1.4726/E-02 .0000E+00
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7,90575E-02 1.18585E-01 4,96753E-01 5,89057E-02 .00000E+00 1.5815E-01 1,97646E-01 9,93466E-01 9,81762E-02 .00000E+00
                                                                                                                      2.37/72E-01 2.7670E-01 1.4020E+00 1.374/7E-01 3.1623E-01 3.7575E-01 1.9859E+00 1.7677E-01 3.9529E-01 4.3484E-01 2.48344E+00 2.1538E-01 4.7636E-01 5.13874E-01 2.98040E+00 2.9526E-01
                                                                                                                                                                                                                                                                                                                                                                                                                                    .0000E+00
                                                                                                                                                                                                                                                                                                                                                                                                                                    .0000E+00
                                                                                                                                                                                                                                                                                                                                                                                                                                   .0000E+00
                                                                                                                                                                                                                                                                                                                                                                                                                                    .0000E+00
                                                                                                                         5.5340BE-01 5.73167E-01 3.4771BE+00 1.42BEE-01
                                                                                                                                                                                                                                                                                                                                                                                                                                   .0000E+00
                                                                                                                         5.9251E-01 6.1269E-01 3.7250E-00 1.52173E-01
                                                                                                                                                                                                                                                                                                                                                                                                                                    .0000E+00
                                                                                                         5,9231E-01 6,1269E-01 3,7250E+00 1,5217E-01 ,.0000E+00 6,5270E-01 6,4250E-01 4,7057E+00 8,2470E-02 ,.0000E+00 6,73100E-01 6,9260E-01 4,10154E+00 8,4470E-02 ,.0000E+00 6,73100E-01 6,9260E-01 4,52331E+00 2,0556E-01 ,.0000E+00 7,20057E-01 7,3550E-01 4,52331E+00 2,5325E-01 ,.0000E+00 7,5703E-01 7,9517E-01 4,51331E+00 2,5325E-01 ,.0000E+00 8,4200E-01 8,6277E-01 5,11451E+00 5,52057E-01 2,7539E-02 9,1537E-01 9,4039E-01 5,72759E+00 5,52057E-01 2,7539E-02 1,0037E+00 1,0077E+00 6,3470E+00 1,35737E-00 6,2437E-02 1,2033E+00 1,0077E+00 7,55724E-00 1,35737E-00 1,2625E-00 1,47744E-00 8,7850E-00 1,8500E-00 9,1262E-02 1,5747E-00 1,8625E-00 1,1262E-02 1,7537E-00 9,1262E-02 1,7537E-00 1,8625E-00 1,2477E-01 1,2477E-01 2,5347E-00 1,000E-01 1,9500E-00 2,000E-00 1,2477E-00 1,2477E-01 2,5347E-00 1,000E-01 1,000E-01 1,000E-01 2,000E-00 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,000E-01 1,0
                              22222422
                                                                                              1.78571640 1.8652640 1.2727640 2.55472640 1.01006-01 1.9650640 2.27782640 1.26772640 2.55472640 1.26576-01 2.37562640 2.27782640 1.4659640 1.26576-01 2.37562640 2.46730640 1.4659640 3.0526640 1.30566-01 2.5705640 2.4652640 1.6518640 1.7576640 1.7576640 7.42666-02 2.85341640 2.91220640 1.7976640 1.76571640 7.68556-02 2.85341640 2.91220640 1.7976640 1.76571640 7.68556-02
                                                                                                         2.96100E+00
                                                                                                                                                                                                                                                                          1.850(SE+01
1 total flux
0 total flux
0 total flux
0 total flux
0 total flux
1 1.2657e-02 8.95451e-02 1.11854e-01 6.8758e-02 1.0254e-01 1.9250e-01 1.9250e-01 1.4690e-01 2 1.2605e-02 8.95451e-02 1.11854e-01 6.8758e-02 1.0254e-01 1.9254e-01 1.9250e-01 1.4690e-01 3 1.2605e-02 8.9545e-02 1.1180e-01 6.8754e-02 1.0253e-01 1.9254e-01 1.
                                                                                                                                           400 d, second part of see2n pass to make library
         0 total flux
                             27 1.3076E-02 9.6002E-02 1.2046E-01 7.44120E-02 1.1146E-01 2.0985E-01 2.0864E-01 1.4892E-01
                              28 1.30743E-02 9.59726E-02 1.20426E-01 7.4365E-02 1.11427E-01 2.0765E-01 2.0860E-01 1.4860E-01
         0 int. grp. 9 grp. 10 grp. 11 grp. 12 grp. 13 grp. 14 grp. 15 grp. 16
1 1.55516-01 1.07028-01 1.007428-01 6.552616-02 5.550316-02 5.34708-02 2.94676-02 1.60000-02
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2 1. ESE E-01 1.0078E-01 1.0078E-
                                                 2 1.565/E-01 1.0702E-01 1.0074E-01 6.5331/E-02 5.565/E-02 5.3477/E-02 2.917/E-02 1.6200E-02 3 1.586/E-01 1.0705E-01 1.0072E-01 6.5307E-02 5.586/E-02 5.345/E-02 2.9166E-02 1.6307E-02
          0 int. grp. 25 grp. 26 grp. 27
1 3.0556E-02 2.1505E-02 4.5592E-03
                                                 2 3.05783E-02 2.18945E-02 4.15685E-03
3 3.05051E-02 2.1824E-02 4.14383E-03
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INFORMATION ONLY
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4 3,01527E-02 2,16951E-02 4,11622E-03
                     5 2,99252E-02 2.14949E-02 4,07445E-03
                       6 2.96217E-02 2.12253E-02 4.01718E-08
                     7 2,9255E-02 2,08794E-02 3,94217E-05
               7 2,9256-02 2,0034-02 3,927/c-05
8 2,87276-02 2,00428-02 3,8524-05
9 2,85226-02 2,00533-02 3,75746-05
10 2,77936-02 1,97200-02 3,6376-05
11 2,7738-02 1,9725-02 3,6376-05
12 2,76486-02 1,9726-02 3,63276-05
13 2,76486-02 1,93128-02 3,53266-05
14 2,70786-02 1,85016-02 3,4553-05
15 2,76486-02 1,85016-02 3,4553-05
                15 2.6336-02 1.55016-02 3.25996-05
16 2.57315-02 1.751116-02 3.10172-05
17 2.46306-02 1.66782-02 2.90578-05
18 2.41972-02 1.25016-02 2.75982-05
19 2.345906-02 1.55082-02 2.65946-05
              19 2.3/500-02 1.59/63-02 2.629/4-03
20 2.53916-02 1.59/63-02 2.55/60-03
21 2.55/47-02 1.48/90-02 2.46/17-03
22 2.269/6-02 1.46/90-02 2.46/17-03
23 2.705/4-02 1.45/90-02 2.49/90-03
25 2.19026-02 1.45/90-02 2.49/90-03
25 2.19026-02 1.45/90-02 2.40/91-03
27 2.17/7/6-02 1.42/90-02 2.39/90-03
27 2.1726-02 1.A26/0E-02 2.3980/E-03
28 2.17395-02 1.A26/0E-02 2.3980/E-03
- elapsed time .02 min.

1fine group summy for zere 1 by group including sum for all groups in line 28
0 gpt. fix source fiss source in scatter slf scatter out scatter sls soutce in 1,0000-00 .00000-00 .00000-00 .00000-00 .00000-00 .00000-00 .00000-00 .00000-00 .00000-00 .00000-00 .00000-00 .00000-00 .00000-00 .00000-00 .00000-00 .00000-00 .00000-00 .5.47300-05 1.41550-02 9.22434-05 -1.02342-02 9.99978-01 .00000-00 .00000-00 .5.54700-03 .5.58700-03 1.41550-02 9.22434-05 -1.02342-02 9.99978-01 .00000-00 .00000-00 .5.54700-03 .5.58700-03 1.41550-02 9.22434-05 -1.02342-02 9.99978-01 .00000-00 .00000-00 .00000-00 .5.54700-03 .5.58700-02 1.40550-02 4.99978-05 -1.02550-02 9.99978-01 .00000-00 .00000-00 2.43650-02 3.44799-02 4.99978-02 4.99978-05 -1.02550-02 9.99978-01 .00000-00 .00000-00 2.43650-02 3.44799-02 4.99978-02 4.99978-05 -1.02550-02 9.99978-01 .00000-00 .00000-00 4.21650-02 6.05000-00 5.87220-02 5.4798-02 6.12000-05 -1.99270-02 9.99978-01 .00000-00 .00000-00 5.82520-02 7.85160-02 5.87220-02 3.68980-05 -1.99270-03 9.99978-01 .00000-00 .00000-00 5.77650-02 7.25720-02 5.87220-02 3.68980-05 -1.99270-03 9.99978-01 .00000-00 .00000-00 5.77650-02 7.25720-02 5.87250-02 3.68980-05 1.48630-05 9.99978-01 .00000-00 .00000-00 5.77650-02 7.25720-02 5.87370-02 3.68980-05 1.48630-05 9.99978-01 .00000-00 .00000-00 5.77650-02 7.25720-02 5.25750-02 3.68980-05 1.48630-05 9.99978-01 .000000-00 .00000-00 5.77650-02 7.25720-02 5.25750-02 3.68980-05 1.48630-05 9.99978-01 .000000-00 .00000-00 5.77650-02 7.25720-02 5.25750-02 3.68980-05 3.473700-05 9.99978-01 .000000-00 .00000-00 5.77650-02 7.25720-02 5.25750-02 3.68980-05 3.473700-05 9.99978-01 .000000-00 .000000-00 5.77650-02 2.85650-02 3.66980-02 3.66980-02 4.06980-05 9.99980-01 .000000-00 3.94780-02 2.85650-02 3.86980-02 3.66980-02 4.06980-05 9.99980-01 .000000-00 3.94780-02 2.85650-02 3.86980-02 3.86980-02 3.86980-03 3.000000-00 3.94780-02 3.86980-02 3.86980-02 3.86980-02 3.86980-02 3.86980-02 3.86980-02
                  28 2,17389E-02 1,42640E-02 2,39807E-03
                                                                                0000000 6.85376-02 8.34136-02 5.4756-02 1.21056-03 1.2508-02 0000000 7.35826-02 7.8566-02 6.05612-02 1.42736-03 1.19526-02 0000000 4.85736-02 3.32856-02 4.27366-02 8.44676-03 5.281606-03 0000000 3.9025-02 3.710376-02 3.42706-02 8.55026-03 3.85286-03
                                                                                                                                                                                                                                                                                                                                                           1.0000(E+0)
                                     .000000
                                    .0000E+00
                                    .0000E+00
                                                                                                                                                                                                                                                                                                                                                           1,00001E+00
                                                                                  .0000E+00 1.3Z87E-02 8.05151E-03 1.22456E-02 3.0472E-04 6.5400E-04
                                                                                                                                                                                                                                                                                                                                                           1.0000E+00
                                     _0000E+00
                                                                                 .0000E+00 8.0541E-01 8.0077E-01 8.0541E-01 6.62813E-05 -6.6052E-05 9.9977E-01
     0 gp. rt bd/ flux rt leskage lft bd/ flux lft leskage non rate
1 1,26246-02 -6,98546-04 1,25086-02 .000006-00 3,55546-11
                                                                                                                                                                                                                                                                                                             flucture total flux
                                                                                                                                                                                                                                                                    fiss rate
                                                                                                                                                                                                                                                                     .0000E+00 1.95222E-05
                                                                                                                                                                                                                                                                                                                                                           1.57829E-02
                                                                                                                                                                                                                       .00000E+00
                                                                                                                                                                                                                                                                      .0000E+00 8.81274E-05
                     2 9.10870E-02 -7.79466E-05 8.96060E-02
                                                                                                                                                                           _0000E+00
                                                                                                                                                                                                                                                                                                                                                             1.13399E-01
                                                                                                                                                                            _0000E+00
                                                                                                                                                                                                                         .00000E+00
                                                                                                                                                                                                                                                                      .00000E+00 9.18164E-05
                     3 1.14058E-01 -1.0434/E-02 1.1190/E-01
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4 7.8527E-02 -6.8241E-03 6.8607E-02 .0000E+00 .0000E+00 .0000E+00 4.1627E-03 8.7278E-02 5 1.0518E-01 -1.0681E-02 1.0259E-01 .0000E+00 .0000E+00 4.9208E-03 1.30250E-01
0:4000.
0:4000.
0:4000.
0:4000.
0:4000.
0:4000.
0:4000.
0:4000.
0:4000.
0:4000.
0:4000.
0:4000.
0:4000.
0:4000.
0:4000.
                                                                                                                                                                            2,44749E-01
2,44207E-01
1,84890E-01
                                                                                        .0000E+00
                                                                                                                                    .0000E+00 8.337X2E-05
            6 1.97987E-01 -1.96277E-02
                                                             1.9273/E-01
            7 1,96079E-01 -1,19949E-02
                                                             1.95059E-01
                                                                                                                                    ,00000E+00 5.92586E-05
  7,0000+00 ,0000+00 2,8819-05 1,5809-06 8,2258-08
28 ,0000+00 ,00000+00 5,0832-03 8,4409-02 5,0832-03
0 gp. rt bdy flux rt lesiage (ft bdy flux lft lesiage rich rate
1 1,24616-02 -8,5462-03 1,2624-02 -6,9854-03 5,7864-03
2 9,1549-02 -8,8422-03 9,10870-02 -7,78446-03 ,00000+00
3 1,14446-01 -1,117776-02 1,14666-01 -1,03446-02 ,00000+00
4 7,05789-02 -6,86000-03 7,08626-02 -6,82446-03 ,00000+00
                                                                                                                                   fire rate fluction2 total flux
                                                                                                           n2n rate
                                                                                                                                  .0000E+00 1.59470E-06 2.10592E-05 .0000E+00 1.10152E-05 1.52047E-02
                                                                                                                                  .0000E+00 1.252/7E-05 1.9044E-02
.0000E+00 7.4177/9E-06 1.17470E-02
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VINO MOITAMAONIN

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.0000E+00 .0000E+00 8.6243E-06 1.75694E-02 .0000E+00 1.0171E-05 3.30015E-02
         5 · 1.05537E-01 - 1.05724E-02 1.05190E-01 - 1.06881E-02
      6 1,982/E-01 -1,8808/E-02 1,9758/E-01 -1,982/Te-02 7 1,986/EE-01 -1,1459/E-02 1,9809/E-01 -1,1994/E-02 8 1,476/E-01 -2,7700/E-08 1,476/E-01 -2,4217/E-08 9 1,1578/E-01 5,8476/E-04 1,1579/E-01 2,6681/E-04 1,066/E-01 1,486/E-08 1,066/E-01 1,486/E-08
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6 2.009*E-01 -2.939%E-02 1.9262E-01 -1.809%E-02 .0000E-00 .0000E-00 1.9262E-06 1.279%E-01 7 1.920E-01 -1.799%E-02 1.9262E-01 -1.929%E-01 -2.790E-05 .0000E-00 .0000E-00 1.7962E-05 1.279%E-01 9 1.8552E-01 9.1926E-05 1.1926E-05 1.279%E-05 .0000E-00 .0000E-00 1.7926E-05 7.460%E-02 11 9.939%E-05 5.3052E-05 1.229%E-05 1.229%E-05 .0000E-00 .0000E-00 1.7926E-05 7.460%E-02 11 9.939%E-05 5.3052E-05 1.229%E-05 1.229%E-05 .0000E-00 .0000E-00 1.7926E-05 7.460%E-02 11 9.939%E-05 5.3052E-05 1.229%E-05 1.229%E-05 .0000E-00 .0000E-00 9.939%E-06 6.526%E-02 1.5926E-05 5.460%E-02 4.0528%E-05 4.0528%E-05 .0000E-00 .0000E-00 9.939%E-06 6.526%E-02 1.540%E-05 5.860%E-05 4.0528%E-05 .0000E-00 .0000E-00 9.939%E-06 6.526%E-02 1.540%E-05 5.860%E-05 9.329%E-05 .0000E-00 .0000E-00 4.540%E-05 3.939%E-02 1.540%E-05 5.860%E-05 5.460%E-05 5.460%E-
                                                                            6 2.0097E-01 -2.9399E-02 1,9826E-01 -1.8808E-02 .0000E-00 .0000E-0 4.4699E-05 1,31210E-01 7 1,9807E-01 -1.7990E-02 1,9649E-01 -1.14198E-02 .0000E-00 .0000E-0 3,14830E-05 1,2743E-01 8 1,4772E-01 -3.66987E-08 1,4773E-01 -2.7700IE-03 .0000E-00 1,7186E-05 9,71437E-02
                                                                 1,4772E-01 -3,65987E-05 1,47432E-01 -2,77001E-05 9 1,75554E-01 9,18432E-04 1,15782E-01 5,8470E-04 1,15782E-01 5,8470E-04 1,15782E-01 5,8470E-04 1,15782E-01 5,8470E-04 1,15782E-01 1,42944E-05 11 9,90744E-02 5,3550E-05 9,9465E-02 3,38521E-05 12 6,3482E-02 6,35092E-05 6,4108E-02 4,0428E-05 13 5,4527E-02 5,81137E-05 5,4747E-02 3,7879E-05 14,770E-07 1,770E-07                                                                             4 7.3567E-02 -7.4699E-08 7.5566E-02 -1.0510E-02 .0000E+00 5.7625E-08 8.8667E-04 1.8676E+00 5 1.1199E-01 -1.3067E-07 1.0700E-01 -1.6117E-02 .0000E+00 1.6916E-08 1.05126E-08 2.8515E+00 6 2.0970E-01 -1.3523E-07 2.0897E-01 -2.9399E-02 .0000E+00 1.44218E-08 1.73119E-08 5.3183E+00
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7 2.08560E-01 4.72277E-07 1.	.98001E-01	-1.75909E-02	.0000E+00	1.43317E-0B		5,16917E+00
		-3,65987E-05	.0000000	1.47657E-05	6.9761ZE-04	3.78777€+00
9 1.152116-01 5.857456-06 1	.153546-01	9.1842 4E -04	.0000E+00	2.0004E-05	4.70879E-04	2.93/30E+00
10 1.05478E-01 1.95573E-06 1.	.06287E-01	2.3086E-05	.0000E+00	4.27250E-05	4.28257E-04	2.68789E+00
11 9.72367E-02 1.50113E-06 9	.9094E-02	5.35505E-05	.000E+00	9.0344E-05	3.867/E-04	2,48091E+00
	34182E-02	6.32092E-05	.0000E+00	1.18367E-02	2.27595E-04	1.56520E+00
	.41521E-02	5,81137E-08	.0000E+00	1.22719E-02	1.95662E-04	1.33390E+00
	.02467E-02	8.48/90E-0B	.0000	8.08807E-05	1.768ZE-04	1.23149E+00
	878192-02	1.61121E-0B	.00000	2.03167E-03	1.11532E-04	7.21075E-01
16 1.57140E-02 -3.27042E-06 1	.5987£-02	8.51850E-04	.00000	1.39BOE-03	5.82700E-05	4.00918E-01
	.0047.E-03	6.44412E-04	.00000=+00	1.86029E-05	2.283698-05	1.73500E-01
	3170E-03	1.468422-05	.0000	1.89211E-05	1.34029E-05	1.23793E-01
	.08129E-02	1.129825-05	.0000=+00	2.9790/E-05	3.5788/E-05	2.66599E-01
	-585/E-02		.0000E+00	1.5/512E-02	1.2897£-04	8_88591E-01
		3.13671E-03		1.33122-02	2.91867E-05	2.61231E-01
	.07792:-02	2.25421E-03	.0000		5.305XE-05	
	.22336-02	6.751/E-03	.0000E+00	3.92745E-02		5.08776E-01
	.527/E-02	1.82042E-02		8.27260E-02	1,8069E-04	1.73629E+00
24 5.0946/E-02 -7.86148E-07 5	.9531Æ-02	1.69667E-02	.0000E+00	8.44330E-02	1.07313E-04	1.3288/E+00
	.6216E-02	8.020286-05	.0000E+00	4.85251E-02	3.65120E-05	5.70198E-01
	.80720E-02	6.18781E-08	.00000E+00	4. <i>49167</i> E-02	1.7921/E-05	3.7652DE-01
	.25510E-03	1.256 33E -05	.0000000	1.25005E-02	1.8346E-06	6.34222E-02
28 1.74397E+00 -1.67794E-05 1	.755335:+00	-1,05122E-02	2.215BSE-03	4.37757E-01	1.1940Œ-02	4,44725001
If ine group aumary for system						
0 grp. fix source fiss source in	n scatter	slf scatter	out acatter	absorption	leskage	belance
	.0000E+00	2.1845E-02	2.09611E-02	3.7728E-08	·8.2545E-09	9.98898E-01
	.44801E-03	2.59471E-01	1.848ZE-01	1.5504E-02	-9.29967E-08	1,00001E+00
	.66347E-02	2.67795E-01	2.75841E-01	1.6405ZE-02	-8.61707E-0B	9.99987E-01
	.13750E-01	1.84157E-01	2.2990BE-01	7.8/853E-03	-7.46999E-0B	9.9999E-01
5 _00000E+00 1_64661E-01 2	.0756/E-01	4.6618E-01	3.66916E-01		-1.308/7E-07	9.99990E-01
	-24007E-01	1.2632+00	5.9350E-01	8.4231E-05		1_00001E+00
	583/6E-01	1.67033=+00	7.300XE-01		4.72277E-07	9.99990E-01
8 .0000E+00 1.35773E-02 7	.75682E-01	1.70404E+00	7.7587/E-01	1.3/2/0E-02	3.860 E-08	9.99919E-01
	///0/E-01	1,48807E+00	7.45581E-01	2.200525-02	5.867(32-06	9.99866-01
10 .00000=400 7.32011E-45 7	.4200E-01	35607E+00	7.0000000000000000000000000000000000000	3.3300E-02	1.968735-06	9.99895E-01
	13/4E-01	1.26318E+00	6.5932/E-01	5.41//E-02	1,50113E-06	9.97740E-01
12 .0000E+00 4.0559E-07 5	.74053E-01	6.831ZE-01	5.15718E-01	5.83594E-02		9.9975E-01
	.03192-01	5.48460E-01	4.550B2E-01	5.42482E-02	1 00514E-0K	9.99973E-01
	.90837E-01	5.16054E-01	4.1450E-01	7.623528-02	-3 637/E-07	9.99989E-01
15 .0000E+00 1.4387E-09 2	70891E-01	2.3426E-01	2.63160E-01		4.7858/E-06	1.000116+00
16 ,0000E+00 4.23/5Æ-10 1.	.8/3/SE-01	1.08002E-01	1.79121E-01		-3.270X2E-06	1.00011E+00
	BOOKE-02	3.AZ80E-02	9.2864E-02		1.20/0/E-05	1.00007E+00
	.81969E-02	2.4250E-02	7.1347E-02	1 WW.E-10	-2.4390E-06	1.000076+00
	.4135ZE-01	6.75802E-02	1.33192E-01	8.1507Æ-05	-E 2187E-06	1.00010E+00
	.3880E-01	3.89810E-01	3.112792-01		-9.9511Æ-05	1.000125+00
		8.05287E-02	1.45789E-01	2.2773DE-02		1.0000£+00
	.6805Æ-01	2.1679/E-01	2.566E-01	6.5998E-02		1.0007E+00
22 .0000E+00 3.8022E-11 3	.2269XE-01					1.0008E+00
	.8730ZE-01	1.176/BE+00	6.4475Æ-01	1.4247E-01	7.43641E-06	1.0000£+00
24 .0000E+00 9.89678E-12 8	136526E-01	1.01839E+00	6.9019E-01	1.46281E-01		
	.537628-01	4.140BOE-01	4.72447E-01		4.555/E-07	1.0000Æ+00
26 .0000E+00 2.03149E-12 4	.30514E-01	4.2019/E-01	3.56512E-01		-2.01242E-07	1.00035+00
	.4Z\$78E-01	8.56141E-02	1.21272E-01		-3.5641ZE-08	1.00012+00
28 .0000E+00 1.0000E+00 1	.042535+01	1.59613E+01	1.0/232+01		-1.653E-05	9.9997E-01
0 gp. rt bdy flux rt leskage lf 1 1,30728E-02 -8.2365E-09 1		Ift lesiage	ngu Late	fiss rate	flucti-2	total flux
	.Z00E-02	.000E+00	2.2057E-03	2.45399E-05	3.1%19E-04	3.58548€-01
	2000E-02	.000E+00	1.6092E-05	1.07749E-02	1.7250E-05	2.62561E+00
	.1190XE-01	.0000E+00	.0000E+00	1.3351E-02	1.9761Æ-08	3.292962+00
	88079E-02	.000000	.0000E+00	5.74283E-05	9.54011E-04	2.033XE+00
	.0257865-01	.000E+00	.00000	1.6601/E-05	1.1156E-03	3.0/800E+00
	.9275/E-01	.0000E+00	.0000€	1.44218E-05	1.8594E-05	5.72/31E+00
7 2.05560E-01 4.72277E-07 1	10-3000.	.0000E+00	.www.	1.43317E-05	1.3251/E-03	っついのこう

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8 1,4889E-01 3,8669E-08 1,469ZE-01
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                          9 1.15211E-01 5.8576E-06 1.15850E-01
                                                                                                                                                                                                                                                        _00000E+00
                                                                                                                                                                                                                                                                                                                   .00000+00 4.27578-05 4.8558-04 2.95977+00 .00000+00 9.02468-08 4.85502-04 2.85508+00 .00000+00 1.85678-02 2.46718-04 1.49758+00 .00000+00 1.22778-02 2.116/8-04 1.448548-00 .00000+00 8.085078-08 1.92258-04 1.34000+00 .00000+00 4.085078-08 1.97828-04 7.815778-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.81578-04 7.8
                      10 1.05478E-01 1.96879E-06 1.07020E-01
                                                                                                                                                                                                                                                        -00000E+00
                      11 9.72567E-02 1.5010E-06 1.00754E-01
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                      12 6.12/03E-02 -2.25212E-07 6.5317ZE-02
13 5.2173E-02 -1.07514E-05 5.385/EE-02
                                                                                                                                                                                                                                                        .00000E+00
                                                                                                                                                                                                                                                        .00000E+00
                     14 4,8000E-02 -3,63765E-07 5,3458E-02
15 2,8250E-02 -4,7650E-06 2,9167E-02
16 1,57140E-02 -3,27042E-06 1,6205E-02
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                                                                                                                                                                                                                                                        .0000000
                                                                                                                                                                                                                                                                                                                     .0000E+00 1.3890E+05 6.2670E+05 4.3428E+01 .0000E+00 1.8622E+05 2.46757E+05 1.8628E+01 .0000E+00 1.8621E+05 1.47375E+05 1.35374E+01 .0000E+00 2.97504E+05 3.8526E+05 2.8946E+01
                                                                                                                                                                                                                                                         .00000E+00
                      17 6,75082E-05 1.20404E-06 7.18797E-05
                                                                                                                                                                                                                                                         .00000E+00
                     18 4.81296E-03 -2.43780E-05 5.77216E-03
19 1.04274E-02 -5.21187E-05 1.11345E-02
20 3.44734E-02 -9.95116E-05 3.6753E-02
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                                                                                                                                                                                                                                                                                                                         .00000E+00 1.5/512E-02 1.38527E-04 9.6/21/E-01
                    21 1.069E-02 -3.1789E-05 1.1700E-02
22 1.969E-02 -3.630E-05 2.4609E-02
23 6.7056E-02 7.4364E-05 8.2539E-02
                                                                                                                                                                                                                                                                                                                        .0000E+00 1.33112E-02 3.17576E-05 2.8690E-01
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                                                                                                                                                                                                                                                                                                                       .0000E+00 3.92745E-02 5.82947E-05 5.57637E-01 .0000E+00 8.27240E-02 1.96947E-04 1.90047E+00
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                                                                                                                                                                                                                                                .0000000 8.443900-02 1.177870-04 1.461000-00 .0000000 4.88516-02 4.04300-05 6.28238-01 .000000-00 4.88516-02 2.019670-05 4.181160-01 .000000-00 1.28036-02 2.159740-05 7.12566-02 .000000-00 2.221660-03 4.377570-01 1.28426-02 4.81516-01
                    2. 5.004/E-02 -7.85/E-07 6.77/52-02
25 2.17/40E-02 4.55/5/E-07 3.088/E-02
26 1.42682-02 -2.012/2-07 2.190/2-02
27 2.398/E-08 -3.56/12-08 4.160/E-03
                      28 1.74397E+00 -1.6779/E-05 1.76/8/E+00

    elapsed time .02 min.

    Odirect access unit 9 requires 556 blocks of length 216 for cross section weighting.
    1 transport cross section weighting function
  Date gr. 1 gr. 2 gr. 3 gr. 4 gr. 5 gr. 6 gr. 7 gr. 8
1 1.11943E-03 5.0059E-03 5.2759E-03 2.5054E-03 3.1899E-03 5.5275E-03 3.7189E-03 1.7429E-03
2 6.8195E-04 4.9262E-03 5.7709E-03 3.8366E-03 4.2862E-03 6.7594E-03 4.3363E-03 2.4774E-03
3 1.4476E-03 5.4276E-03 5.8574E-03 2.9122E-03 3.8440E-03 6.7769E-03 4.3363E-03 1.8256E-03 4.2012E-03 1.7773E-03 5.81150E-04 4.3265E-03 4.9656E-03 2.4104E-03 2.2012E-03 4.2012E-03 3.3364E-03 1.7773E-03 5.81150E-03 4.2012E-03 4.9656E-03 2.4104E-03 2.2012E-03 4.2012E-03 3.3364E-03 1.7773E-03 5.81150E-03 4.2012E-03 4.9656E-03 2.4104E-03 2.2012E-03 4.2012E-03 3.3364E-03 1.7773E-03 5.81150E-03 4.9656E-03 5.7775E-03 5
 0278 972. 9 972. 10 972. 11 972. 12 972. 13 972. 14 972. 15 972. 16 1.1125/E-03 1.075/E-03 1.075/E-
1. MASK-US 1.JOS118-US 1.U0128-US 7.JOS128-US 0.2248-US 0.00008-US 2. MASK-US 1.JOS108-US 7.JOS128-US 
  Ozore 979. 25 979. 26 979. 27 979. 28
1 8,907/05-04 6,325/05-04 9,64295-05 4,20055-02
2 1,352/85-05 1,01685-05 1,74/755-04 5,528/05-02
                           3 1,41951E-03 1,09539E-05 1,9985/E-04 5,1880/E-02
                          4 3.7080E-04 2.2550E-04 2.7548E-05 3.5550E-02 5 4.2583E-04 2.65059E-04 3.6073E-05 3.5458E-02
      forced group persisters
                                               upper energy mid energy
                                                                                                                                                                                                             velocity
                                                     2.0000E+07
                                                                                                                            2.6457E+06
                                                                                                                                                                                                  1.966E+09
                                                                                                                                                                                                                                                                         7.1931E-01
                                                  9.000E+05
                                                                                                                            1.507/E+05
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                                                                                                                                                                                                                                                                         2.8069E-01
                                                    4.0000E-01
                                                                                                                            1.25/E-01
                                                                                                                                                                                                                                                                          1.224E-10
                                                                                                                                                                                               3,67282+05
                                                  1.0000E-05
                                                                                                                                                 400 d. second part of see2h page to make Library
   Ocett averaged fluxes
   Ozone grp. 1 grp. 2 grp. 3
1 3.88749E-01 1.13781E+00 2.34521E-01
                          2 3.9985E-01 1.13922E+00 2.24/99E-01
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3 3.56952E-01 1.13956E+00 4 4.14091E-01 1.14221E+00 5 4.1240E-01 1.1419E+00 Offux disadventage factors (zone a	1.9029/E-01 1.952/0E-01			·
2 9.5539E-01 9.9762E-01 3 9.6265E-01 9.9792E-01 4 1.0049E+00 1.0022E+00	97- 3 1.2135=00 1.1633=00 1.1633=00 1.1620=00 9.8670=-01 1.0000=00			
1 1.70652-02 1.82180E-02 2 1.91328E-02 2.5664E-02 3 1.9206E-02 2.2122E-02	1.0492/E-02 1.05520E-02 3.0753/E-03 3.462/Æ-03			
1 1.25695-00 4.55256 2 1.666975-01 6.051695 3 6.982695-01 2.393875 4 2.55626-01 9.24265 5 2.75405-01 1.000005 - elepsed time "US min.	-03 -02 -01			
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922360 tot-cap 7,26699E+01
            92280 to 92270 5,8524E-02
         92230 fission 8.74312=01
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92230 nu-sigf 2.44057E+00
92230 to 92230 3.78177E-04
92230 to 92230 7.9304E+00
            922380 tot-cap 8,863456-00
922370 to 992360 1,334026-02
            932370 fission
                                                                                                                    4.73060E+00
            932370 nu-sigf 1,42424E+01
932370 to 932350 5,10354E-05
            952370 to 952380 2,86381E+02
            932370 to 932371 7.04022E-01
        92370 to 92371 7,0022-01

92370 to 92370 2,9122-02

92390 to 92370 2,1423-03

92390 fission 2,0937-01

92390 ru-sigf 5,93746-01

92390 to 92340 1,20033-05
            9/2380 to 9/2390 2,608/4E+02
9/2380 to 9/2381 2,7/889E+00
         9/230 to 9/230 2./400000
9/230 to 9/230 1.13/65-02
9/230 fission 8/48173-02
9/230 nu-sigf 2/4365-03
9/230 to 9/230 1,95198-05
       92390 to 92390 1,95192-05
92390 to 92300 1,9520-05
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        953410 ru-sigf 3.8612E-01
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                                                                                                                    3.16277E+00
1.06299E+01
        95230 to 95240 3.9710/E+02
95230 tot-cap 4.002/7E+02
962440 to 962630 5.23166E-03
    963/40 fission 1.4253E+01
963/40 ru+sigf 4.7681/E+01
963/40 to 963/20 5.2172E-05
        98240 to 98250 1.31908=02
98240 to 98241 3.50638=00
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962440 tot-cap 1,46148E+02
 Othe reaction 50100 to 30070 was not used, because 50100 is not in library., (in subr pool)
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 Othe reaction 50100 to 40090 was not used, because 50100 is not in library., (in subr pool)
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 Othe reaction 50110 to 40090 was not used, because 50110 is not in library., (in subr pool)
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 Othe reaction 50100 to 40100 was not used, because 50100 is not in library., (in subr pool)
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Othe reaction 80160 to 80161 was not used, because 80161 is not in library., (in sub-pool) Othe reaction 621470 to 621471 was not used, because 621471 is not in library., (in sub-pool) Othe fission product transitions for 922540 were not used. Library fissile nuclides are
         922330 922350 942410 922380 942390
One substitute ructide in block 8 data. or, undete with new fission yield data.

Othe reaction 922340 to 922341 was not used, because 922341 is not in library., (in sub-pool)

Othe reaction 92250 to 92251 was not used, because 92251 is not in library., (in sub-pool)
Othe fission product transitions for $92360 were not used. Library fissile ruclides are $2230 $2250 $42410 $92380 $4250
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Othe fission product transitions for $22370 were not used. Library fissile nuclides are $22330 $2250 $42410 $2250 $4250 $4250
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Othe rection 952570 to 952571 was not used, because 952571 is not in library. (in subr pool)

Othe fission product transitions for 942580 were not used. Library fissile ructides are
92230 92250 94240 92250 94250
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Othe reaction 9/250 to 9/251 was not used, because 9/251 is not in Library., (in sub-pool)
Othe fission product transitions for 9/2/00 were not used. I library fissile nuclides are 92230 92250 9/2/10 92230 9/2/30
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Othe fission product transitions for $4200 were not used. Library fissile ruclides are
$2230 \quad \text{92250} \quad \text{9240} \quad \text{9230} 
 Ouse substitute ructide in block 8 data. or, update with new fission yield data.
Othe fission product transitions for $52410 were not used. I throny fissile ruclides are $2230 $2250 $42410 $2250 $4250
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Othe fission product transitions for $2230 were not used. Library fissile rucides are
$2230 \quad \text{$9250} \quad \text{$9240} \quad \text{$9250} \quad \quad \text{$9250} \quad \text{$9250} \quad \text{$9250} \quad \t
Ouse substitute ructide in block 8 data. or, update with new fission yield data.

Othe fission product transitions for 96340 were not used. Library fissile nuclides are
         922330 922550 942410 922580 942390
Ouse substitute nuclide in block 8 data. or, update with new fission yield data. Othe reaction 962440 to 962441 was not used, because 962441 is not in library., (in sub-pool)
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program verification information

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-iq array has 1 entries.

O q i, prec. machine word applied has, at least, a 16 significant figure accuracy.

o short-lived split test fraction, on = 9.1188E-04

helf-norm of matrix used, an = 7.0000E-00

4-place-accuracy-retention ratio, ratio4 = 6.4516E-15

O q array has 20 entries.

O 3q array has 1 entries.

O 3q array has 1 entries.

O 4q array has 1 entries.

O 4q array has 1 entries.

O 5q array has 1 entries.

O 5q array has 1 entries.
```

cross-section data taken from position number 1 of library on unit 15.

```
pass 3
pass 1
pass 0
*scale-system control module sec2 library*
tused a time-dependent noutron spectrum, for each of the above passes pass 0 applies start-up fuel densities
pass n applies mid time densities of nth library interval
first library updated tes...
pass 1
pass 0
```

```
*scale-system control module sas2 library*
     used a time-dispordent nautron spectrum, for each of the above passes
       pass 0 applies start-up fuel densiities
        pass n stolles mid time densities of nth library interval
      first library updated was...
                   prelim lun origens binary working library-id = 11/3
                made from modified card-image origins libraries of scale 4.2
             data from the light element, actinide, and fission product libraries decay data, including game and total energy, are from endf/o-vi
             neutron flux spectrum factors and cross sections were produced from
            the "cresas2" case updating all nuclides on the scale "burnup" library
                         fission product yields are from endifly-v
                     photon libraries use an 18-anargy-group structure
                    the photon data are from the master photon data base,
                     produced to include bremsstrehlung from up2 metrix
               see information above this box (if present) for later updates
                other identification and sizes of library.
                 data set rune: ft15f001
                          date library was produced total number of nuclides in Library
              2/16/1996
                           number of light-element nuclides
                    129
                           number of actinide nuclides
                          number of fission product nuclides
number of nonzero off-diagonal matrix elements
                    879
see2n: betweek wilcox 15x15, 3.00x2, 20xx/www.burn high temp
power= 8.466E-05mu, burn.p=2.0518E-02mxd, flux= 1.62E-13y/cm*2-sec
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        2.22E-20 2.82E-20 3.33E-20 4.0E-20 4.77E-20 4.75E-20 5.59E-20 6.51E-20
       2.94-13 3.63-13 4.42-13 5.32-13 6.34-13 6.34-13 7.53-13 8.84-13
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        5.14E-06 5.07E-06 5.04E-06 4.97E-06 4.97E-06 4.97E-06 4.97E-06 4.87E-06
5.67E-04
                  5.5/E-04 5.40E-04 5.27E-04
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                                                                      5.02E-04
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                                                                                3.9E-05
        4,09E-0B
                  4.44E-0B
                             4.67E-08 4.88E-08 5.11E-08 5.10E-08 5.32E-08 5.54E-08
        2.20E-02 2.20E-02 2.20E-02 2.10E-02 2.10E-02 2.10E-02 2.10E-02
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        3.2E-09
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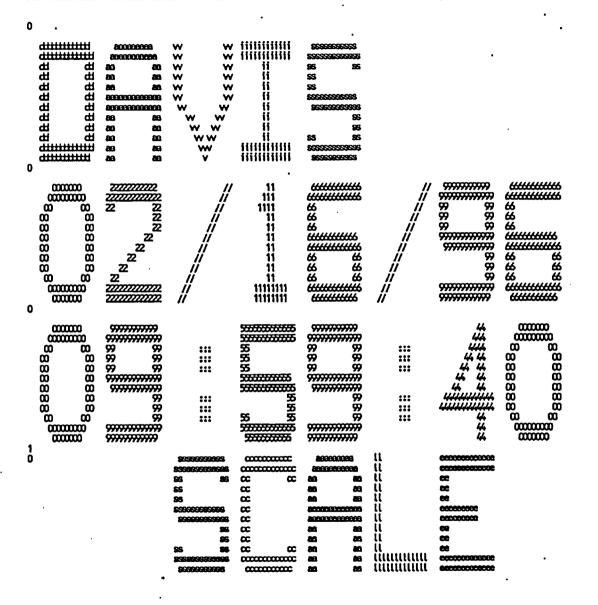
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                                          18
                           56q array has
                                                                                              2 entries.
                           56g array has
                                                                                               1 entries.
                           500 arrey has
                                                                                                    entries.
                           Soci array has
                                                                                                    entries.
                           500 array has
                                                                                                 lentries.
                           560 array has
                                                                                                    entries.
                           560 array has
                                                                                              1 entries.
                           570 arrey has
                                                                                             3 entries.
                               1g array has
                                                                                          20 entries.
                               lig array has
                                                                                           10 entries.
                 1116 60826
                                   33663 nudata (((brary) storage size
                                    33734
                 1103 75953
                           50q array has
                                                                                             4 entries.
                          60g array has
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```

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Opput	····	3		····									
0 linp		0000E+00 9		XXE+00	ı			•					
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n-gem	a, fission of interval	and total	. nev/fi	sion : 1,6187	E 25.17		5.7 335E+ 00	1.9541	E+02	2.011 5E +	œ		
	a, fission		nev/fi				5.8325E+00	1.955	E+02	2.01345+	02		
	of interval			1.6166			E CECTCAM	4 (5.6		3 MEZ-	m ·		
	a, fiasion of intervel		(DEV/TI	1.6152			5.955E+00	1.956	E-PUZ	2.0157E+	uz.		
(1-genia	a, fission	and total	nev/fi	ission	2		6.033E+00	1.957	E+ 02	2.0178E+	œ		
	of intervel of intervel			1.6147	X+13 Œ+00								
	e, fission		nev/fi				6.1503E+00	1.938	E+02	2.0199E+	Œ		
	of interval			1.6148			6.2%(0E+00	1.992	E-W2	2.02185	m		
	a, fission of interval	flux =	-	1.6157	SE+ 13						VZ.		
0 case	or subcasse	1 ses	iZh: bek	XXXX M	ilook 15v	ന്ട്, 3	.00.ex, 20pm	Matu burn hi	gh besp	•			
0	Scq array		30 entri 1 entri								•		
Ŏ	Serie/		1 estri										
0	500 array		3) entri										
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Uneques	ted permite	uto,skip: its after	SUME'S	901 (1980) 8	posta								
1 1	4, execha HHHHb	000000	2000	m	п	1		800000000	IER	m	**********	777777	
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	шшь	∞	æ	m	W II	-		8000000000000		MIN KIR EA KIR	ii ii	. 2	22 `
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* *



```
program verification information
                   code system: scale version: 4.2
                program c0c008
          creation date: 04/27/95
                library: /nsutronics/scale/exe
      this is not a scale configuration controlled code
                idonene: devis
      date of executions 02/16/96
      time of exacutions 09:59:41
1 entries.
4 entries.
6 entries.
2 entries.
```

```
-1q array has
0q array has
1q array has
 O carray has
O ca array has
Classical assignments
Classer library 12
Locking library 0
Scratch file 18
The Library 1
new library 1

Oproblem description

Oigregementy (Qt/2/3--inf med/slab/cyt/schere 2

Oize-runber of zones or material regions 4

One-mixing table length 66

Oible-shielded cross section edit option (Qt--no/yes) 0

Oibr-burdarento factor edit option (Qt--no/yes) 0

Oiseopt--dancoff factor option 0

Coonvergence criterion 1.0000E-03

Opeometry correction factor for wigner rational approximation 1.250E-00

O 3q array has 66 entries.
                          3q array has
4q array has
                                                                       ස entries.
                          5q array has
                                                                       66 entries.
                           60 array has
                                                                         4 entries.
                          7q array has
8q array has
                                                                          4 entries.
                                                                          4 extries.
                                                                      4 etries.
6 etries.
                          90 array has
                        100 array has
110 array has
                                                                          4 entries.
   Onixing table
```

		1		
Oentry	mixture 1	180tope 9225	number density 4.902516-04	new identifier 9225
ż	i	0074	4.84730E-06	92774
234567891011	1 1 1	92236	3.98239E-05	92236
4	1	92238	2.19185E-02	92238
5	1	8076 8076	4,55359E-02 2,09710E-02	8016 6
2	3 1	36083	2.09710E-02 9.77039E-07	36083
Ŕ	i	34065	4.7095 6E- 07	36085
9	1	32090	1.06191E-05	38090
10	1	37089	7.901 <i>6</i> 5E-06	37089
11	1 1 1	42095	9.68029E-06 8.21429E-05	42095
12 13 14 15	1	40095 40094	8.2%2E-05 1.2783E-05	40095
1/4	4		2.0759XE-05	40075
15	i	40095 41094	5 <i>L9077E-</i> 12	41094
16	1	43077	1,24470E-05	43099
17	1	451Œ	6.A7551E-06	45103
18	į	45105	1.83593E-08	45105
79	1	44101 44106	1.1066EE-05	44101 44106
21	1	46105	1,6500/E-06 3,81543E-06	46105
22	i	46108	9.3052/E-07	46108
丒	1	47109	6.6833 5E -07	47109
24	1	51124	1.62036E-10	51124
25	1	54131 54132	5.77241E-06 1,0060 5E- 05	54131 54132
20	1	X12 X13	6.65420E-09	5415 5415
28	•	54136	2.104352-05	<u> </u>
29	1	55134	4.214435-07	55134
30	1	55135	6.6381/E-06 1.3190/E-05	55135
<u>31</u>	1	55137	1,3190/E-05	55137
꾶	1	56136 57139	8.151 KE-08 1.31073E-05	56136 57139
뀙	i	59141	1,098/0E-05	59141
35	1	59143	3.8502/E-07	591/3
36	1	58144	5,87019E-06	58144
37	1	60143	1,06631E-05	60143
38	į	60145 61147 61148	7.73967E-06	60145 61147
<i>3</i> 9	1	611/R	3.14142E-06 8.83976E-09	61148
41	i	60147	1.31597E-07	60147
42	1	62147	6.67818E-07	62147
43	1	62149	8.0202 5E -08	62149
. #	1	62150 62151	2.54419E-05 3.32006E-07	62150 62151
<u>ښ</u>	1	62152	1.24460E-06	62152 62152
7	i	641 5 5	1.18371E-09	64155
48	i	छ153	6.30790E-07	63153
49	1	63154	9.52980E-08	63154
50	1	63155	7.3134/E-08	<u>ଶ୍</u> ୟକ୍ତ
51 21	11111123337	40802 1001	4.2515 6E -02 4.19420E-02	40502 1001
53	3	5010	3.815152-05	5010
<u>\$</u>	ž	5011	1.5488/E-05	5011
55	1	55133	1.36297E-05	5333
56	1	93237	1.97949E-06	93237 94278
;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;	1	94238 94239	1.775/8E-07 8.2655E-05	94293 97,780
50	i	9230	1.1579Œ-05	920
	•	,		

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94241
94242
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                              94241
                                            5.05481E-06
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    61
                                            3.41071E-07
    2000
                              95%1
95%3
                                            9.6680E-08
                                            1.8483E-08
                                            1.0/617E-09
                                                                               96244
                              96244
    65
                                             1.0000E-20
                                 999
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    66
                                 999
                                             1.0000E-20
Concretive and material description
Ozone mixture outer dimension temperature
1 1 4.68122E-01 9.75000E+02
                                                                                             type (0/1--fuel/mod)
                                                                          9.0584E-01
5,49010E-01
                               4.68122E-01
                                                    2.93000E+02
                                4.78750E-01
                                                    6.5000E+02
                                                                            .000000=+00
                               5.46100E-01
                               8.1396E-01
                                                    6,07600E+02
                                                                            .0000E+00
        7711 locations of 20000 available are required to make a rew master containing the self-shielded values
One nuclides in your problem have burderente factor datar borems will copy from logical 12 to logical 1 copy 999 1/v cross sectio from log 18 to log 18 borderente trigger 0 copy 999 1/v cross sectio from log 18 to log 1 borderente trigger 0 copy 999 1/v cross sectio from log 18 to log 1 borderente trigger 0 copy 999 1/v cross sectio from log 18 to log 1 borderente trigger 0
               1001 hydrogen from log 12 to log 1
5010 b-10 1273 218rgp from log 12 to log 1
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                                                from log 12 to log 1 from log 12 to log 18
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                                                                                    bundarako trigger 0
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from log 18 to log
from log 12 to log
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kr-63
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Осфу
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bundarerko trigger 0
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from log 12 to log 1
from log 12 to log 1
from log 12 to log 1
from log 12 to log 1
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from log 12 to log 1
              36055
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                          kr-85
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Octpy
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               43009
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                                                                                    bordererlo trigger 0
Ocepy
              4101
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                                                from log 12 to log
from log 12 to log
0ccpy
                         ru-101
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              45108
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                          rh-105
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               46105
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Operation (
                         四-105
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              4610B
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Oppy
                         pd-108
                                                                                    burchrenico trigger 0
Oppy
                         silver-109
              51124
                                                                                    bordererlo trigger 0
0ccpy
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              5415
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0copy
                          xe-131
                                                                                    burdererlo trigger 0
                                                from log 12 to log
from log 12 to log
from log 12 to log
from log 12 to log
from log 12 to log
from log 12 to log
Occipy
                          xe-132
                                                                                    bondereriko trigger 0
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Oppy
                          XETOT- (35
              Coopy
                         xe-136
                                                                                    bonderenko trigger 0
Octoby
                         cesium-133
                                                                                    bondarento trigger 0
              534
                                                                                    burchrerlo trigger 0
OCEPY
OCEPY
                          cs-134
                                                from log 12 to log
from log 12 to log
from log 12 to log
from log 12 to log
from log 12 to log
              cs-135
                                                                                    bondarenko trigger 0
Oppy
                          cs-137
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Occid
              57139
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0ccpy
                                                                                    bondererlo trigger 0
                                                from lag 12 to lag
from lag 12 to lag
from lag 12 to lag
Офру
              58144
                         ce-144
                                                                                    bordererko trigger 0
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OCEDA
OCEDA
              59141
                         pr-141
              59743
60743
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                          p-143
                                                                                    bondererlos trigger 0
                                                from lag 12 to lag
from lag 12 to lag
                                                                                    borderello trigger 0
Octoby
                         int-143
                                                                                    bondererlo trigger 0
                         nd-145
0ccpy
                                                from log 12 to log 1 from log 12 to log 1
              60147
                         nd-147
                                                                                    bonderenko trigger 0
0copy
                                                                                    bonderenko trigger 0
0copy
              61147
```

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0ccpy
            61148
                     pn-148
                                          from log 12 to log 1 from log 12 to log 1
                                                                         banderenko trigger 0
0045A
            62147
                      sm-147
                                                                         bonderenko trigger 0
            62749
                     ST0-149
                                          from lag 12 to lag
                                                                         bandererko trigger 0
000py
            62150
                     sn-150
                                          from lag 12 to lag 1.
                                                                         bondererko trigger 0
            62151
62152
                                          from log 12 to log
from log 12 to log
0000
                     sm-151
                                                                         bondarerko trigger 0
                                                                         bondarento trigger 0
Octov
                     sm-152
            853
                                          from log 12 to log
0ccpy
                     er-153
                                                                         bandarenko trigger 0
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                      ar 154
                                          from lag 12 to lag
                                                                         bandarenko trigger 0
                                          from lag 12 to lag
            8755
                      av-155
                                                                         bondererlos trigger 0
0ccpy
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            64155
                     gJ-155
                                          from log 12 to log
                                                                         bondererico trigger 0
           9224 U-234 1043 sigo= from Log 12 to Log
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9226 U-236 1163 sigo= from Log 12 to Log
0фу
                                                                         bordererko trigger 0
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0ccpy
0ccpy
                                                                        bandarerica trigger 0
Oppy
            92238
                      uranium-258
                                          from lag 12 to lag
                                                                         bordererlos trigger 0
                                          from lag 12 to lag
            95237
                     reptunium 257
                                                                         bondererko trigger 0
Octpy
           923/ reptinion-23/ from log 12 to log 1 9239 pt.28 1050 sign from log 12 to log 1 9239 pt. 1050 sign from log 12 to log 1 9230 pt. 1050 sign from log 12 to log 1 9231 pt. 1050 sign from log 12 to log 1 9231 pt. 1050 sign from log 12 to log 1 9231 sm-241 1056 sign from log 12 to log 1 9233 sm-243 1057 218 from log 12 to log 1 9233 sm-243 1057 218 from log 12 to log 1 9233 sm-243 1057 218 from log 12 to log 1
                                                                         bondarello trigger 0
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                                                                        bandarenko trigger 0
                                                                        bordererko trigger 0
Oppy
                    curium 24
                                          from lag 12 to lag 1
                                                                        bondererko trigger 0
            963/4
Coopy
       scale 4.2 - 27 group neutron burnup library
           based on endi-b version 4 data with endi-b version 5 fission products
                                        1/27/89
               caspiled for mc
                   last updated
                                        9/16/98
                      Lanpetrie -
                                                                                                                       86
            tace id
                                                                         number of nuclides
            runber of neutron groups
                                                          27
                                                                         number of gamma groups
            first themal grap
                                                                         logical unit
                                                  table of contents
                                                                                                                       999
          1/v cross sections normalized to 1.0 at 0.0253 ev
                                                                                                            ならならななななななななななななななななななななななな
          1/v cross sections normalized to 1.0 at 0.023 ev
                                                                                                                        66
         hydrogen endf/b-fv ast 1269/thres1002
b-10 1273 218rgp 0/2375 p-3 293k
boron-11 endf/b-fv set 1160
                                                                                                                      1001
                                                                   updated 10/13/89
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updated 10/13/89
           doygen-16
                             endif/briv mat 1276
                                                                                                                      8016
           aygan 16
kr-83
                             endf/b-iv met 1276
                             att=102,108,108,105,106,107
                                                                    undeted 10/13/89
                                                                                                                     360BŠ
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38070
           kr-85
                                 pat= 102
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                                                                    undeted 10/13/89
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           7-83
8-83
                                                                    updated 10/13/89
                             mt=102
                                                                                                                     400%
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                                 ini =
                             mt=102
           21-94
                                                                    updated 10/13/89
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                                                                    updated 10/13/89
           Zr-95
                             mt=102
                                                                    updated 10/13/89
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           zircalloy
                             endf/b-iv mat 1284
                                                                    updated 10/13/89
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           rb%
                             mt=102
                                                                    updated 10/13/89
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           m-95
                             mt=102
                                                                    updated 10/13/89
           tc-99
                             mt=102
                                                                                                                     43099
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                                                                    undeted 10/13/89
           ru-101
                                                                                                                     44106
45105
                                                                    updated 10/13/89
           ru-106
                             mt=102
           rh-103
                                                                    updated 10/13/89
                             at=102
                                                                                                                     45105
           rh-105
                                 mt= 102
                                                                                                                     46105
                             mt=102
                                                                    updated 10/13/89
           四-105
                                                                                                                     46108
           pd-108
                             mt=102
                                                                    undated 10/13/89
           silver-109
                                                                    updated 10/13/89
                                                                                                                     47109
                             endf/b-iv mat 1139
                                                                    uppleted 10/13/89
uppleted 10/13/89
                                                                                                                    51124
54131
           sb-124
                             mt=102
                             mt=102,108,104,105,105
           xe-131
                             mt=102,105,104,105,105
                                                                   updated 10/13/89
                                                                                                                     54132
           xe-132
```

xenor-135	endf/b-iv mat 1294	updated 10/13/89	id 54155
xe-136	mt= 102, 103, 104, 105, 10	7	id 54136 '
cesium-133	erdi/to-iv met 1141	undated 10/13/89	id 55133
cs-134	mt=102	updated 10/13/89	id 55134
cs-135	nt= 102	•	id . <u>55135</u>
cs-137	mt=102 .	undated 10/13/89	id 55137
ba-136	mt=102	underted 10/13/89	id 56136
la-139	nt=102	uzdated 10/13/89	id 57139
ce-144	nt= 102	aparata in agra-	id 58144
pr-141	mt=102,103,104,105,106,107	uzzhtad 10/13/89	id 59141
pr-143	nt=102	underted 10/13/89	id 59143
H-123	mt=102	uzdated 10/13/89	id 60143
nd-145	mt=102	undeted 10/13/89	id 60145
nd-147	mt=102	updated 10/13/89	id 60147
	nt=102	updated 10/13/89	id 61147
par 147	mt= 102	drawn id nim	id 61148
pn-148		undated 10/13/89	id 62147
sn: 147	endf/b-v fission product	umbted 10/13/89	સ્ત્રિ <i>દે</i> ટા <i>પૈંગ</i>
sm-149	mt=102,103,107	undeted 10/13/89	ર્ષે દર્શે
971 ⁻ 150	mt=102		id 62151
sm-151	mt=102,103,104,105,104,107	updated 10/13/89	
sn-152	mt=102,103,104,105,105,107	unisted 10/13/89	iq 합값 iq 정泛
er ស្ត្រ	mt=102,103,104,105,105,107	updated 10/13/89	id 63154
eu-154	mt=102,103,104,105,106,107	updated 10/13/89	10 07124
er 155	mz=102,103,104,105,106,107	updated 10/13/89	id 63155
gd-55	mt=102	uppleted 10/13/89	id 64155
	9514 newlacs p-3 259k f-1/em	1077	id 9224
urenium 255	erdf/b-iv mat 1261	upphoed 10/13/89	id 9235 id 9236
	554 rs.klacs p-3 225k f-1/e-m		
urenius 238	erdi/oriv mat 1262	updated 10/13/89	id 92238
repunium-zv	erdf/b-iv nat 1263	updated 10/13/89	id 95257
br-sas iron aid	p-544 neuklacs p-3 205k f-1/e-s	(1.45)	id 94238 id 94239
	ercli/to-iv mat 1254	updated 10/13/89	
	erdi/b-iv ant 1255	updated 10/13/89	id 9500
	erdi/to-iv ant 1266	updated 10/13/89	id 94241 , id 94342
puteriurais	erdf/b-iv mat 1161	updated 10/13/89	17 12-77
817-261 TUDO 810	p-5-4 nextees 218rpp p-3 288k		
	3 gp lut f-1/em 090376 p3 223k		id 9333
curium 24	end/b-iv ant 1162	updated 10/13/89	id 96344
0 pathe outhy res		0 seconds	11
1 ' <u>m</u>		commons.	W W !! ·
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m	<u>m</u> <u>m</u> !!	tt accommonon	M MM M II
<u>m</u>	<u>m</u> m !!	tt m m	WAR WAR WAR II
<u>m</u>	mm jj	tt as as	
<u>m</u>	m!!	tt as as	
. <u>m</u>	<u>m !!!!!!!!!</u>	tt aa aa	******
m m	m iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	tt as as	m m millimin
0			
		220220222	
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다 다 프	a w w	ii 98 98	
4 4 5	** W W	ii se	
4 4 5	ab W W	· · · · · · · · · · · · · · · · · · ·	
	weensomm W W	11 99999999999999999999999999999999999	
dd dd aene	900000000 W #	11 269696968688	

0	######################################	889 889 880 889 880 889 880 889	w w	14 16 16 16 16111111111111111111111111	25 25 25 25 25 25 25 25 25 25 25 25 25 2					
0	8888 8888 8888 8888 8888 8888 8888 8888 8888			11 111 1111 11 11 11 11 11 11 11111111			99999999999999999999999999999999999999	######################################		
1		9777777777 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97	::: ::: :::	55 55 55 55 55 55 55 55 55 55 55 55 55	9777777777 9	· :::		11 111 1111 11 11 11 11 11 11 11 111111		
ö			######################################	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		u u u u u u u u u u u u u	60000000000000000000000000000000000000			
	sense program verification information sense sen									

```
DECORPORE COCODE
                                                   creation date: 04/27/55
                                                           library: /mutronics/scale/eve
                                             this is not a scale configuration controlled code
                                                           jobnane: devis
                                             date of executions 02/16/96
                                              time of executions 09:59:41
           -1q array has
0q array has
1q array has
0
                                    1 entries.
                                   9 entries.
0 1q array has 12 entries.
Oselect 65 nuclides from the master library on logical 1
            0 ruclides from the working library on logical 2
            O ruclides from the working Library on logical 3 to create the new working Library on logical 4
          61 resonance calculations have been requested 0 output option for saps forgatted cross section data
Othe storage allocated for this case is 200000 words
0 2q erray has 65 entries.
0 3q erray has 95 entries.
0 4q erray has 65 entries.
0 general information concerning cross section library
     tape identification rusber
     number of nuclides on tape
                                                               66
27
     number of reutron energy groups
                                                                ъ
     first themal neutron energy group
number of general energy groups 0
0 direct access unit number 9 requires 117 blocks of length 1484 words
- xedm tape 4321
                                 scale 4.2 - 27 group neutron burnup l'ibrary
based on enti-b version 4 data with enti-b version 5 fission products
                                         compiled for nrc
                                                                     1/27/89
                                              Last updated
                                                                     9/16/93
                                                 Limpetrie
0 ruclides from sedm tage
            1/v cross sections normalized to 1.0 at 0.0233 ev
hydrogen endf/b-iv net 1269/thm#002 updated 10/13/89
b-10 1273 218hpp 042375 p-3 295k
boron-11 endf/b-iv net 1160 updated 10/13/89
                                                                                                                         999
                                                                                                                        1001
                                                                                                                       5010
5011
8016
              aygan 16
                                   ercif/b-iv met 12/6
                                                                           undated 10/13/89
              00/00m 16
kr-63
                                   erclif/b-iv set 1276
                                                                           updated 10/13/89
                                                                                                                           6
                                  mt=102,105,105,105,105,107
mt= 102
                                                                           updated 10/13/89
                                                                                                                      36083
              kr-85
                                                                                                                      36065
              Sr-90
                                  mt=102
                                                                           updated 10/13/89
                                                                                                                      32070
```

INFORMATIONALY

10	y-89	at=102	undated	10/13/89		39089	
11	zr-93	mt= 102	•	-		40095	
12	<u>zr-%</u>	mt=102		10/13/89		40094	
13		mt=102		10/13/89		40095	
14 15				10/13/89		40502	
Ď				10/13/89		41094	
		at=102		10/13/89		42095 43099	
17				10/13/89 10/13/89		44101	
18 19				10/13/89		44106	
20				10/13/89		45108	
25222424222222222222222222222222222222	rh-105	mt= 102	drawn	id ide		45105	
22			unbted	10/13/89		46105	
23				10/13/89		4610B	
₹.	silver-109			10/13/89		47109	
25	sb-124	mt=102		10/13/89		51124	
26	ж - 131	mt=102,105,104,105,106	updated	10/13/89		54131	
27	xe-132	mt=102,105,104,105,105 endf/b-iv mst 1294	updated	10/13/89	•	5412	
28	xeron-135	endf/b-iv net 1294	_updated	10/13/89		54135	
29	же-136	int= 102, 103, 104, 105, 10	7	40.07.00		54136	
30		endi/b-iv set 1141		10/13/89		55133	
31		mt=102	domerora	10/13/89		55134 55135	
-X	CS-135	mt= 1,02 mt=1,02	استنساء	10/13/89		£ 137	
33 7/		nt=102		10/13/89		56136	
죾		mt=102		10/13/89		5739	
36	œ-144	nt= 102	4	14 240		58144	
₹	p-141	mt=102,103,104,105,105,107	undsted	10/13/89		59141	
3B	gr-143	nt=102		10/13/89		59143	
39		pt=102		10/13/89		60143	
40		mt=102		10/13/89		60145	
94 44 43		mt=102	updated	10/13/89		60147	
42		nt=102	updated	10/13/89		61147	
43	par 148	mt= 102		40.00.00	•	61148	
4.		endf/b-v fission product	фака	10/13/89		62147	
	sn-149	mt=102,108,107		10/13/89		62149 62150	
40	sn-150	mt=102	uposuci	10/13/89 10/17/89		62151	
44 18	sn-151 sn-152	mt=102,103,104,105,105,107 mt=102,103,104,105,104,107 mt=102,103,104,105,104,107	unisted	10/13/89 10/13/89		62152	
20	er 22	m-102, 105, 104, 105, 106, 107	undeted	10/13/89		ভার	
šń		mt=102,105,104,105,106,107	unhted	10/13/89		63154	
51	er 155	mt=102,103,104,105,105,107	undebed	10/13/89		63155	
######################################		mt=102	undeted	10/13/89		64155	
. 53 ເ	-234 1043 sigo	544 nauklacs p-3 255k f-1/end	1.+5)			92234	
54	uraniun-235	endif/to-iv mat 1261	updated	10/13/89		92236	
55 t	r26 1163 sigo	54 naklacs p-3 285k f-1/e-nt	1.+5)			92236	
56	uranium 238			10/13/89		92238	
<u>⋝</u>			updated	10/13/89		93237	
25 F	11-28 JUN 818	o-514 navdacs p-3 28% f-1/e-s	(1.5)	10 477 400		94238 94239	
<i>57</i>	puuniur29			10/13/89 10/13/89		9/2/0	
		endi/b-iv met 1265 endi/b-iv met 1266		10/13/89		921	
62	plumaturen	endiforive set 1161		10/13/89		9262	
8 1	1056 sin	564 naklacs 218np p-3 250k	4			95241	
84	m-243 1057 218	gp ut f-Ven 0905/6 p3 253k				9523	
ã.	arium 24	entif/b-iv met 1162	undeted	10/13/89		96244	
	sections rooms	lized to 1.0 at 0.0253 ev	-		977	terperature=	975.00
hydragen	endf/b-i	v mat 1269/thm/1002updated			1001	toposture	
•		thermal scattering matrix			ture of	_ 550.00 Mas s	
b-10 127 3	218rpp 042575 p	9-3 25%			5010	terperature:	607.60

```
thermal scattering matrix runber 2 at a temperature of
                                                                                           550.00 was selected.
0 boron-11
                                                 ucdated 10/13/89
                                                                                5011
                                                                                          temperature= 607.60
                  endf/b-iv met 1160
                               thermal scattering matrix number 2 at a temperature of
                                                                                           $50.00 was selected.
                  endf/b-iv mat 1276
                                                 ucdsted 10/13/89
0 awaen-16
                                                                                8016
                                                                                          temperature= 975.00
                 endf/b-iv met 1276
                                                 updated 10/13/89
                                                                                          temperatures 607.60
                                                                                   6
0 axygen-16
                 mt=102, 103, 108, 105, 106, 107
                                                 updated 10/13/89
                                                                               34083
                                                                                          temperature= 975.00
0 kr-83
Oresonance data for this nuclide
                          = 82,202
                                                                               = 975.000
Omes number (a)
                                                     temperature(kelvin)
Opotontial scatter signa = 7,004
                                                     lurped nuclear density
                                                                              = 9.7703935E-07
Ospin factor (g)
                          = 4988.190
                                                     lump dimension (a-ber)
                                                                               = 4.6812201E-01
                                                                               = 3.425026 E-01
Oimer radius
                          = .000000E+00
                                                     dencoff correction (c)
Othe absorber will be treated by the northeim integral method.
Oness of moderator-1 = 15.995
                                                   signa(per absorber atom)= 1.747728E+05
Omosrotor-1 will be treated by the northein integral method.
Omes of moderator-2 = 257.933 signator at
Omess of moderator-2 = 27,933 signator absorber atom)= 1.9499170E+05
Ometerator-2 will be treated by the norchelm integral method.
Othis rescrence meterial will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.0000
aurao
              nes abs
                              nes fiss
                                               res scat
                                          -1,757590E-03
           -1.385/RDE-03
                             .000000E+00
  11
  12
           2.166790E-02
                             .000000E+00
                                           9.90167E-0B
  13
           -3.21601Æ-01
                             .000000E+00
                                           -9.862398E-02
  14
                             .000000E+00
                                          -1.72260E-05
           4.782765E-05
Occass resonance integrals
                   resolved
Oabsonation
                   1.44905E+02
                    .00000E+00
 fission

    elapsed time

                   .00 min.
0 kg-85
                    mt= 102
                                                                                          temperatures 975.00
0 ar-90
                 mt=102
                                                 undated 10/13/89
                                                                               39090
                                                                                          temperature= 975.00
                                                 ucdated 10/13/89
                                                                               39089
                                                                                          temperature= 975.00
0 y-89
                 nd=102
Onescrience data for this ruclida
Omess runber (a)
                               88,142
                                                                               = 975,000
                                                     temperature(kelvin)
                          =
Opotential scatter signa =
                               3.64
                                                     lunped nuclear density
                                                                               = 7.90165Z/E-06
                          = 78.664
                                                     lum diamaion (a-bar)
                                                                               = 4.6812201E-01
Ospin factor (g)
Oirmer nactices
                          = .000000E+00
                                                     dercoff correction (c)
                                                                               = 3.4269261E-01
Othe absorber will be treated by the norchein integral method.
Oness of moderator-1 = 15,995
                                                   signature absorber atomb= 2.1610631E+04
Omoserstor-1 will be treated by the norcheim integral method.

Omes of moderator-2 = 257.93 signa(per at
                                                  signa(per absorber atom)= 2.4110725E+04
Omoterator-2 will be treated by the northeim integral method.

Othis resonance meterial will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.00000
Carono
              resabs
                              res fiss
                                               res scat
  9
           -1.668715E-06
                             .000000E+00
                                          -8.2×2978E-05
  10
          -4.720001E-05
                             .00000E+00 -1.330676E-04
Ocucess rescrence integrals
                   resolved
                  1.4644E-01
Osbsorption
fission
                    .0000E+00
- elapsed time
                   .00 min.
0 27-95
                    st= 102
                                                                                          temperature: 975.00
                 mt=102
                                                                                40094
0 25-94
                                                 updated 10/13/89
                                                                                          terperatures 975.00
Oresonance data for this ruclide
Omesa number (a)
                               93,100
                                                     temperature(kelvin)
                                                                               = 975,000
                                                     lurped nuclear density
                                                                               = 1.278/30E-05
Opotential scatter signs =
                                3.779
Ospin factor (g)
                          = 180.853
                                                     lump dimension (a-bar)
                                                                               = 4.6812201E-01
Oirner radius
                          = .0000000E+00
                                                    dencoff correction (c)
                                                                               = 3.4269261E-01
Othe absorber will be treated by the nurcheim integral method.
Oness of applerator-1 = 15.995
                                                  signature absorber atom>= 1.3356976E+04
```

```
Oncderator-1 will be treated by the northeim integral method. 
Oness of moderator-2 = 237.933 signa(per el
                                                   signa(per absorber atom)= 1.4902220E+04
Orockrator-2 will be treated by the norcheim integral method,
Othis rescrence material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for scatial self-shielding-1,0000
              res abs
Ograpo
                              res fias
                                               res acat
           -6.7477YE-07
                             .000000E+00
                                           -6.500250E-04
          -2.44607E-05
                             .000000E+00
                                          -2.1670EE-03
Ocicess resonance integrals
                   resolved
                  3.43940E-02
Odboorption
fission
                    .00007+000
- elapsed time
                    .00 min.
0 27-95
                                                 ucdated 10/13/89
                                                                                40095
                 mt=102
                                                                                          tencerature 975.00
                 endf/b-iv met 1284
                                                 updated 10/13/89
                                                                                41302
                                                                                          temerature:
                                                                                                         680.00
0 zircalloy
Oresonance data for this ruclide
                               90.436
Omess runber (a)
                                                      temperature(kelvin)
                                                                                = 650,000
                                                                                = 4.2515602E-02
Opotential scatter signs =
                                6.36
                                                      lumped nuclear density
Ospin factor (g)
                                1.079
                                                      lump dimension (a-bar)
                                                                                = 5.4610002E-01
                          =4.7878999E-01
Oimer radius
                                                      dencoff correction (c)
                                                                                = 5.0364637E-01
Othe absorber will be treated by the northeim integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding=1.00000
(group
              resabs
                              res fiss
                                               res scat
          -1.78099Œ-03
                             .000000=+00
                                           -1.286907E+00
  8
  9
          -5.8837E-02
                             .000000E+00
                                           -2.695297E+00
                             .000<del>000E+0</del>0
                                          -1.601321E+00
  10
          -6.99983E-02
  11
          -1.883757E-01
                             .00000E+00
                                          ·7.920912E-01
Ocioces resonence integrals
                   resolved
Osbsorption
                  2.25539E-01
fission
                    .00000E+00
                   .02 min_

    element time

0 rb-94
                 mt=102
                                                 updated 10/13/89
                                                                                41094
                                                                                          tenceratures 975.00
Orescrence data for this nuclide
Orace runber (a)
                               95.101
                                                                                = 975,000
                                                      temperature(kelvin)
                          =
Opportunities scatter signs =
                               3.779
                                                      lumped nuclear density
                                                                                = 5.489788E-12
                          = 43808,801
Ospin factor (g)
                                                      lump dimension (a-bar)
                                                                                = 4.6812201E-01
Oimer redius
                          = .0000000E+00
                                                      dencoff correction (c)
                                                                                = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
Oness of moderator-1 = 15.995 signs(per absorber storp= 3.1105079E+10
Oncderator-1 will be treated by the norchelm integral method.
                                                   signs(per absorber atom)= 3.4700569E+10
Ones of moderator-2 = 257.953
Omperator 2 will be treated by the norcheim integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for statial self-shielding-1,0000
              res abs
                              res fiss
Grap
                                               res acat
                                           9.2538732-04
           1.043419E-02
                             _00000E+00
  13
                             _00000E+00
                                          -4.064784E-04
          9.836701E-03
Opicios resonance integrals
                   resolved
                  9.15001E+01
Orbsonation
                   .000000
fission
- elapsed time
                   .02 min.
0 m-95
                 mt=102
                                                 updated 10/13/89
                                                                                42095
                                                                                          tencerature 975.00
Oresonence data for this ruclide
Oness runber (a)
                               94.091
                                                                                = 975.000
                                                      tamperature(kelvin)
Occurrial scatter signs
                                3.806
                                                      lumbed nuclear density
                                                                                = 9.680255 E-05
                             607.7%
                                                                                = 4.6812201E-01
Ospin factor (g)
                                                      lump dimension (a-bar)
Oimer radius
                             -000000E+00
                                                     dereoff correction (c)
                                                                                = 3.4269261E-01
```

```
Othe absorber will be treated by the northein integral method.
                                                    signa(per absorber aton)= 1.7639945E+04
 Opess of acclarator-1 = 15.995
Omogratur-1 will be treated by the norchein integral method.
Omess of moderator-2 = 237,933 signs(per et
                                                    signs(per absorber ston)= 1.9680678E+04
Ommerator-2 will be treated by the northeim integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spetial self-shielding=1.00000
 Curoup
               res abs
                                res fiss
                                                res scat
                              .00000E+00 -1.21928/E-02
   10
           -2.101411E-03
  11
           -3.741213E-03
                              .000000E+00
                                            -6.328940E-03
   12
           -2.7688525+00
                              .00000E+00
                                            -3.185731E+00
  ß
            1.591845E-04
                              .000000E+00
                                            -2.37/023E-05
 Opicess resonence integrals
                    resolved
                   9.9788XE+01
 Oabsonation
 fission
                     .0000E+00

    elapsed time

                    .02 min.
0 tc-99
                                                  updated 10/13/89
                                                                                  43099
                                                                                            temperatures 975,00
                  nst=102
Oresonance data for this nuclide
 Omess number (a)
                                98,150
                                                       temperature(kelvin)
                                                                                  = 975.000
Ocotential scatter signs =
                                                       lumped nuclear density
                                                                                 = 1.246981E-05
                                 6.000
Ospin factor (g)
                           = 4527.940
                                                       lum dimension (a ber)
                                                                                 = 4.6812201E-01
Oirrer radius
                           = .000000E+00
                                                      dencoff correction (c)
                                                                                  = 3,4269261E-01
Othe absorber will be treated by the northein integral method.
                                                    signs(per absorber aton)= 1,371896/E+04
Oness of accerator-1 = 15.995
Oncderator-1 will be treated by the norcheim integral method.
Oness of moderator-2 = 257,953
                                                    signs(per absorber aton)= 1.5306087E+04
Oncderator-2 will be treated by the northein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for special self-shielding=1.0000
                               res fiss
               res aba
Ograp (
                                                res scet
                                            -7.53288E-08
  11
           -1.596682E-02
                              .000000E+00
  12
                              _000000E+00
                                            -1,416189E-04
           4.13008 E-03
  Ï
           -2,602912E-01
                              .000E+00
                                            -1.37228E-02
  14 15
           -5.62X67E+00
                              .0000E+00
                                            -1.783EE-01
            1,0708/5E-02
                              .00000E+00
                                            -5.377120E-04
  16
            4.836022E-03
                              .000000E+00
                                            -2.80231/E-0%
  17
           2.074402E-04
                              .00000E+00
                                            -1.192082E-05
 Ocicess resonance integrals
                    resolved
Oabscrotion
                   3.275492+02
                     .000E+00
 fission
 - elapsed time
                    .OB min.
                                                  updated 10/13/89
101-un 0
                  ast=102
                                                                                            tesperature: 975.00
Oresonance data for this ruclide
Omes runber (a)
                                100.039
                                                      temperature(kelvin)
                                                                                  975.000
                                                       lumoed nuclear density
Ocotential scatter signs =
                                 3.935
                                                                                 = 1.105653/E-05
                           = 8785.200
                                                       lump dimension (a-bar)
                                                                                 = 4.6812201E-01
Ospin factor (g)
Cirner rectius
                           # .000000E+00
                                                      denoff correction (c)
                                                                                 = 3.4259251E-01
Othe absorber will be treated by the northein integral method.
                                                    signs(per absorber atom)= 1.5/30277E+04
Ones of moderator-1 = 15.995
Omogrator-1 will be treated by the northeirs integral method.

Omog of moderator-2 = 257,983 signs(per signs)
                                                    signa(per absorber aton)= 1.7215379E+04
Oncerator-2 will be treated by the norcheim integral method.
Othis resource material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for greatial self-shielding=1.00000
Ograp
11
              res abs
                               res fiss
                                                res acet
           -3.600798E-02
                              .000000E+00
                                            -3.661600E-CB
           -7.148226E-02
                                            -2.07244E-02
  12
                              .000000E+00
           -2.960912E-01
                              .000000E+00
                                            -7.97719E-03
  13
```

```
14 · 2.374839E-04
                            .00000E+00 -4.170899E-05
Occess rescrence integrals
                   resolved
Orbearotion
                  7.9526E+01
                   .00000E+00
fission
- elapsed time
                   .CB min.
0 ru-105
                mt=102
                                                ucdated 10/13/89
                                                                              44106
                                                                                        terrografure=
                                                                                                      975.00
0 rh-103
                                                                                        temperatures 975.00
                 mt=102
                                                ubdated 10/13/89
                                                                              45103
Oresonence data for this nuclide
Oness number (a)
                                                     temperature(kelvin)
                                                                              = 975,000
Ocotential scatter signa =
                                5.408
                                                    lumed nuclear density
                                                                              = 6.4755103E-06
                                                                             = 4.6812201E-01
Ospin factor (g)
                                 .500
                                                     lump dimension (a-bar)
                                                                              = 3.4269261E-01
Oirmer radius
                         = .000000E+00
                                                    derpoff correction (c)
Othe absorber will be treated by the northein integral method.
Omess of moderator-1 = 15.995
                                                  signs(per absorber atom)= 2.6370074E+04
Omderator-1 will be treated by the norcheim integral method.
                                                  signs(per absorber atom)= 2.9420779E+04
Oness of acclerator-2 = 257.933
Oroderator-2 will be treated by the northeim integral method.
Othis rescrance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.0000
                              res fiss
Orosp
             res abs
                                              res scat
                            .0000000
           1.271471E-03
                                           1.996385E-05
  10
          -2.9770BE-0B
                            .0000000
                                          -4.186531E-03
  11
                                          -1.136710E-02
          -1.281989E-02
                            .000000E+00
  12
          -1.833917E-04
                            ,00000E+00
                                          -1.934018E-05
  But
            .00000E+00
                            .000000
                                             .00000E+00
                            .000000E+00
                                             _000000E+00
            .000<del>000E+</del>60
           2.28852E-01
                            .000E+00
                                          3.32405 E-03
  16
17
          3.506692=+01
                            .000000E+00
                                          -5,38797E-02
          -1_8/2000E+02
                            -000000E+00
                                          -1.504310E-01
           8.7371335+01
                                           2.613078E-01
  18
                            00+E0000000,
  19
           1.151897E+01
                            .00000E+00
                                          -1.560780E-03
                            .000000E+00
                                          -2.4/579E-03
  20
           1.05/6385+00
  21
                            .000000E+00
                                           1.90/899E-03
           2.16929E-01
  22
           2.583943E-01
                            .000<del>1</del>
                                           2.9252/E-03
  3
          -9.880321E-02
                            .000000E+00
                                           1.79905/E-05
Occess resonance integrals
                   resolved
                  1.557-03
Osibsonation
 fission
                   .0000E+00
                   .07 min.

    elacsed time

                   mt= 102
                                                                              45105
                                                                                        temperature: 975.00
0 rh-105
0 pd-105
                mt=102
                                                updated 10/13/89
                                                                              46105
                                                                                        temperature= 975.00
Oresonence data for this nuclide
                                                                              = 975.000
Omes number (a)
                         = 104.004
                                                     temperature(icelvin)
Opotential scatter signa =
                               4.059
                                                    lumped nuclear density
                                                                              = 3.815434/E-06
Ospin factor (g)
                         = 15210,000
                                                    lump dimension (a-bar)
                                                                              = 4.6812201E-01
Oimer radius
                         = .0000000E+00
                                                    dencoff correction (c)
                                                                              = 3.4269251E-01
Othe absorber will be treated by the northein integral method.
                                                  signs(per absorber atom)= 4.4754777E+04
Omes of acclerator-1 = 15.995
Omobrator-1 will be treated by the northein integral method.
Omes of moderator-2 = 257.953 signs(per al
                                                  signa(per absorber atom= 4.993290E+04
Onderator-2 will be treated by the norcheim integral method.

Othis resonence material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.0000
Grap
             res abs
                              res fiss
                                              res scet
  12
          -5.267407E-02
                            .000000
                                          -1.0/9829E-03
  13
          5.370175E-03
                            .00000E+00 -3.614218E-04
                                         -8.157203E-05
           7.7734XE-04
                            .0000000
Opicese resonance integrals
```

```
0 .
                   resolved
Oabscrption
                  6,12702=+01
 fission
                   .00000E+00

    elacsed time

                   .07 min.
0 pd-108
                nt=102
                                                undated 10/13/89
                                                                             4610B
                                                                                       temperature: 975.00
Oresonance data for this nuclide
Omess number (a)
                                                    tenperature(kelvin)
                                                                             = 975.000
                                                                             = 9.3032725E-07
Ocotential scatter signs =
                                4.146
                                                    lumped nuclear density
Ospin factor (g)
                          = 21175,100
                                                    lump dimension (a-bar)
                                                                             = 4.6812201E-01
                          = .0000000E+00
                                                    denote correction (c)
                                                                             = 3.4269261E-01
Oimer radius
Othe absorber will be treated by the norcheim integral method.
Oress of ancierator-1 = 15.995
                                                 signs(per absorber atom)= 1,8354798±405
Oncderator-1 will be treated by the northeim integral method.
                                                 signs(per absorber atom)= 2.0478253E+05
Oness of moderator-2 = 237.933
Oncderator-2 will be treated by the northein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.00000
Ozrazo
              res abs
                              res fiss
                                             res scat
           1.170385E-04
                            .000000E+00
                                          3.53185Æ-04
  11
  12
          -8.421333E-01
                            .0000000=+00
                                          -6.2026FXE-01
                                          1.834003E-03
  13
                            .000000E+00
           6.8888E-03
  14
           8.56TXXE-02
                            .000000E+00
                                          -3.20709/E-05
                                          8.0838025-05
  15
          -1.84048E-01
                            .000000
          2.94658E-04
                                          -9.2566E-06
                            .000000E+00
  16
Ocioces resonence integrals
                   resolved
Oubscription
                  2.13080E+02
                   -COCCE+CO
 fission

    elapsed time

                   .07 min.
                                                updated 10/13/89
                                                                                       temperatures 975.00
0 silver-109 entif/b-iv met 1139
                                                                             47109
Oresonence data for this nuclide
                         = 107.969
                                                                             = 975.000
Oracs runber (a)
                                                    temperature(belvin)
                                                                             = 6.6533/5 E-07
Opotential scatter signs = 4,988
                                                    lumped nuclear density
                         = 1441.870
Ospin factor (g)
                                                    lump dimension (a-bar)
                                                                             = 4.6812201E-01
                                                                             = 3.4269251E-01
Oimer ractius
                          = .000000E+00
                                                   dencoff correction (c)
Othe absorber will be treated by the northeim integral method.
Oness of moderator-1 = 15.995 signo(per absorber atum)= 2.9950083005
Omoderator-1 will be treated by the nordhelm integral method.
Oness of moderator-2 = 257.953
                                                 signs(per absorber atom)= 2.6505872E+05
Oncorator 2 will be treated by the norcheim integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1.0000
              res abs
                              res fiss
                                             res scat
Otraco
          -5.320/8/E-05
                            .00000E+00 -3.392181E-05
  10
                            _000+00
                                          -2.078532E-03
  11
          -2.755/OXE-03
                                          -3.26690E-02
  12
          -7.117940E-01
                            .00000E+00
                                          3.380747E-02
           7.671432E-01
                            .000000E+00
  13
  14
          -6.185493E+00
                            .00000E+00
                                          -5.8/707E-01
Osicess resonance integrals
                   resolved
Debearation
                  1.37527E+03
 fission
                   .0000E+00
                   .07 min.

    elarged time

                                                updated 10/13/89
0 sb-124
                 nt=102
                                                                                       tesperatures 975.00
                                                                             54131
0 xe-131
                 mt=102, 103, 104, 105, 106
                                                undated 10/13/89
                                                                                       temperature= 975.00
Oresonence data for this nuclide
                                                                             = 975.000
Omes runber (a)
                              129.781
                                                    temperature(izelvin)
                                                                             = 5.7724000E-06
Quotential scatter signa =
                                4.301
                                                    lumed nuclear density
                             26.825
                                                    lusp dimension (a-bar)
                                                                             = 4.6812201E-01
Ospin factor (g)
                                                                             = 3.4269261E-01
                          = .000000E+00
                                                   direction (c)
Dirner radius
```

```
Othe absorber will be treated by the norcheim integral method.
                                                  signs(per absorber aton)= 2.9582066E+04
Omess of moderator-1 = 15.995
Omederator-1 will be treated by the northern integral method.
                                                  signa(per absorber atom)= 3.300/363E+04
Oness of moderator-2 = 237.933
Omderator 2 will be treated by the norcheim integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding=1.00000
                             res fiss
(aroa)
             resabs
                                              res scet
                                         -1,644019E-05
          -1.746571E-06
                            .000000E+00
          -1.21708E-04
                            -000<del>000E+00</del>
                                         -1.011729E-04
  10
  11
          -1.522077E-03
                            -00000E+00
                                         -1.149251E-03
                                         -2.748222E-03
          -2.946790E-02
                            .000000E+00
                                          -1.140201E+02
          -4,860811E+01
                            .000000E+00
  13
                                           1.520%/E-02
           1.086607E-02
                             .000000E+00
Ocuces resonance integrals
                   resolved
Osbsorption
                  7.83722=+02
                   .0000E+00
fission
- elapsed time
                   .08 min.
                                                                                       temperature 975.00
                                                                              54132
                mt=102,103,104,105,106
                                                updated 10/13/89
0 xe-132
Oresonence data for this ruclide
                                                                              975.000
                                                    temperature(kelvin)
Omess runber (a)
                                                                             # 1,0060623E-05
                                                    lurped nuclear density
Opotential scatter signa =
                               4.301
                                                                             = 4.6812201E-01
Ospin factor (g)
                         = 675.899
                                                    lump dimension (a-bar)
                                                                             = 3.4269261E-01
Oimer radius
                          = .0000000E+00
                                                    dencoff correction (c)
Othe absorber will be treated by the northeim integral method.
Orace of moderator-1 = 15.995
                                                  signs(per absorber atun)= 1.69/30/4E+04
Oppderator-1 will be treated by the northeim integral method.
                                                  signe(per absorber atom)= 1.835658E+04
Omes of moderator-2 = 257.953
Ombinator 2 will be treated by the northein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.00000
                                              res scat
(prap
             res abs
                             res fiss
                                          -6.967560E-05
          -1.53612ZE-05
                            .0000000
                            .00000E+00 -6.07913E-02
          -4.77511Œ-Œ
          3.33800E-08
                             .00000E+00 -9.216579E-07
  11
Occess rescrence integrals
                   resolved
                  9.7625Œ-01
Outboarpt for
fission
                   .coce+co
                   .OB min.
- elapsed time
                                                updated 10/13/89
                                                                              54135
                                                                                        temperature= 975.00
0 xeron-135
                endf/b-iv met 12%
                   mt= 102, 103, 104, 105, 107
                                                                              54136
                                                                                        temperature-
0 xe-136
                                                                                        tenperature= 975.00
                endf/b-iv met 1141
                                                                              55133
0 cesium 133
                                                uzdated 10/13/89
Oresonence data for this nuclide
                                                                              = 975.000
                         = 131.764
                                                    terperature(kelvin)
Omes ruster (a)
                                                                              = 1.362953E-05
Opotential scatter signs = 7.100
                                                     lumped nuclear donsity
                         = 374.437
                                                                              = 4.6812201E-01
                                                    lusp dimension (a-bar)
Ospin factor (g)
                                                    derpoff correction (c)
                                                                             = 3.4269261E-01
Oimer radius
                         = .0000000E+00
Othe absorber will be treated by the northeirs integral method.
                                                  signs(per absorber atom)= 1.2520547E+04
Oress of suckrator-1 = 15.995
Oncderator-1 will be treated by the northern integral method.
                                                  signa(per absorber atom)= 1.3439517E+04
Oness of moderator-2 = 258,051
Omedinator 2 will be treated by the northeim integral method.
Othis rescrerce naterial will be treated as a 2-diagraicral object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.0000
                             res fiss
             res abs
                                              res scat
(grap
                                         -2.371830E-04
          -3.90214ZE-05
                            _000+300000E+00
                                         -3.566480E-0B
                             .000000E+00
          -1,855911E-US
                             .0000E+00
                                          -1.231307E-01
          -7.0301/1E-02
```

```
-1.08736/E-01
                             .000000E+00
                                          -1.5K590E-02
  Ī
          -1.806647E-01
                             .000000E+00
                                           -9.5XXXXE-05
  ĩ,
           -8.02715/E+00
                             .000000E+00
                                           -3.51725 E-01
  15
           5.6250VE-03
                             .000000E+00
                                           -4.054427E-04
                                           -2.26274E-04
  16
           2.777885E-03
                             .000000E+00
  17
           2.3522/3=-05
                             .000000E+00
                                          -1.830700E-04
  18
           2.25057E-03
                             .000000E+00
                                           -1.67948E-04
  19
           1.317054E-03
                             .00000E+00
                                           -9.67162SE-05
Cences resonence integrals
                   resolved
Osbsorotion
                  3.5673/E+02
 fission
                    .00000E+00
- elapsed time
                   .10 min.
0 cs-134
                 mt=102
                                                 updated 10/13/89
                                                                               55134
                                                                                          temerature:
0 cs-135
                    mt= 102
                                                                               55135
                                                                                          temperature= 975.00
0 cs-137
                 mt=102
                                                 updated 10/13/89
                                                                               55137
                                                                                          temperature= 975.00
0 ba-136
                 nt=102
                                                 undeted 10/13/89
                                                                                56136
                                                                                          temperatures 975.00
Oresonence data for this ruclide
Omess runber (a)
                          = 134,737
                                                     temperature(kelvin)
                                                                               = 975,000
Ocotential scatter signs =
                                4.85
                                                     lumed nuclear density
                                                                               = 8.1511402E-0B
                          = 1247.690
                                                     (a-bar)
                                                                               = 4.6812201E-01
Osoin factor (g)
Oimer radius
                          = .0000000E+00
                                                     dencoff correction (c)
                                                                               = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
Omes of acclerator-1 = 15.995
                                                  signe(per absorber atom)= 2.0949178E+06
Omogrator-1 will be treated by the northern integral method.
Omess of moderator-2 = 237.953 signators at
                                                  signe(per absorber aton)= 2.3372/50E+06
Onoderator-2 will be treated by the northeim integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.00000
(Drain
              res abs
                              res fiss
                                              res scet
           1.264087E-06
                             .000000E+00
                                          5,433292E-07
  10
  11
           1.019501E-05
                             .000<del>1</del>
                                           8.952/31E-06
Descess rescrence integrals
                   resolved
Onbranction
                  1.384792+00
                    _00000E+00
fission
                   .10 min.

    elapsed time

                                                 updated 10/13/89
0 La-139
                mt=102
                                                                                         temperatures 975.00
Oresonance dista for this nuclide
Oness runber (a)
                                                                               = 975.000
                              137.713
                                                     terperature(kelvin)
Occtential scatter signs =
                                4.906
                                                     lumed nuclear density
                                                                               = 1.3107317E-05
                              145.855
                                                                               = 4.6812201E-01
Ospin factor (g)
                          =
                                                     lump dimension (a-bor)
                          # .000000E+00
Oimer radius
                                                    dencoff correction (c)
                                                                               = 3.425925 E-01
Othe absorber will be treated by the northeim integral method.
Oress of moderator-1 = 15.995
                                                  signacper absorber atom)= 1,3027813E+04
Omparator-1 will be treated by the northerns integral method. 
Omess of moderator-2 = 237.953 signa(per al
                                                  signacoer absorber atom= 1,453/978E+04
Omderator-2 will be treated by the norde in integral method.
Othis resource material will be treated as a 2-diamaional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1.0000
Garanto
              res abs
                              res fias
                                              res scet
           1.241050E-05
                             .000000E+00
                                           2.71770Œ-03
  10
          -2.747689E-04
                             .000<del>.</del>
                                          -1.73175 E-02
                             .00000E+00
            .000000E+00
  11
                                             -00000E+00
          -4.49B419E-02
  12
                             _00000E+00
                                           -2.71745XE-02
Descess rescrence integrals
                   resolved
Obbsorption
                  8,096125+00
                    -0000E+00
fission
                   .12 min.

    elapsed time
```

```
0 ce-144
                                                                                        temperatures 975.00
0 pr-141
                 mt=102, 103, 104, 105, 106, 107
                                                                              59141
                                                undated 10/13/89
                                                                                        temperature= 975.00
Oresonence data for this nuclide
Omess number (a)
                          = 139,697
                                                     temperature(kelvin)
                                                                              = 975,000
Occupital scatter signs =
                                                                              = 1.0987054E-05
                               4.953
                                                     lumed nuclear density
Ospin factor (a)
                         = 1025,500
                                                     lump dimension (a-bar)
                                                                              = 4.6812201E-01
Oimer redius
                          = .000000E+00
                                                     demoff correction (c)
                                                                              = 3.4269261E-01
Othe absorber will be treated by the norcheim integral method.
Organia of ancierator-1 = 15,995
                                                  signs(per absorber atom)= 1.5541925+04
Oppderator-1 will be treated by the northein integral method.
Ones of approximator-2 = 257.953
                                                  signa(per absorber atom)= 1.7339%5E+04
Orochrator-2 will be treated by the norchein integral method.
Othis resonance material will be treated as a 2-dinaraional object.
Ovolume fraction of lump in cell used to account for scatial self-shielding=1,00000
grap
              res abs
                              res fiss
                                              nes scat
                            .00000E+00 -1.46416E-01
           -4.312013E-03
  10
  11
          -7.1248B7E-02
                             .00000E+00 -9.4750E/E-01
          -1.590714E-0B
                             .00000E+00 -1.548419E-04
  12
Descess resonance integrals
                   resolved
Osbsorption
                  1.2174ZH01
 fission
                   -0000F+00

    elacsed time

                   .12 min.
                                                                              99143
0 p-143
                 mt=102
                                                updated 10/13/89
                                                                                        temperature 975.00
0 rd-143
                 mt=102
                                                updated 10/13/80
                                                                              60143
                                                                                        temperature: 975.00
Oresonence data for this nuclide
Orace runber (a)
                                                                              = 975.000
                         = 141,692
                                                     tesperature(kelvin)
Opotential scatter signa =
                               5.000
                                                     lunced nuclear density
                                                                              = 1.0563101E-05
                                                                              = 4.6812201E-01
Ospin factor (g)
                          = 1964.860
                                                     luno dimension (a-bar)
Oimer radius
                          = .0000000E+00
                                                                              = 3.4257251E-01
                                                    dencoff correction (c)
Othe absorber will be treated by the norcheim integral method.
Oness of moderator-1 = 15,995
                                                  signe(per absorber atom)= 1_6014073E+04
Oppderator-1 will be treated by the porchein integral method.
                                                  signs(per absorber atom)= 1.78567(3E+04
Omes of anderstor-2 = 257,953
Omderator 2 will be treated by the northein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spetial self-shielding-1,00000
              ada aen
                              res fiss
(Barro
                                              res scat
           -1.073421E-04
                                          -4.67256E-05
                            .000000E+00
  10
                            .00000E+00
                                          -2.911259E+00
  11
          -2.502638E-01
          -1.644718E-01
                            _CONTEXT
                                          -8.000/49E-02
  12
Ociocci rescrence integrals
                   resolved
                  5.10661E+01
Ostsarction
fission
                   .0000E+00
                   .12 min.

    elapsed time

0 nd-1/5
                mt=102
                                                updated 10/13/89
                                                                              60145
                                                                                        temperature= 975.00
Oresonence data for this nuclide
Draws runber (a)
                                                                              = 975.000
                                                     tenperature(kelvin)
Ocotential scatter signa =
                               5.047
                                                     lunced nuclear density
                                                                             = 7.7393689E-06
                         = 1007.250
Ospin factor (g)
                                                                             = 4.6812201E-01
                                                     lump dimension (a-bar)
                          = .000000E+00
Dimer redius
                                                    dereoff correction (c)
                                                                              = 3.4257251E-01
Othe absorber will be treated by the norchein integral method.
Ones of moderator-1 = 15.995
                                                  signacper absorber atom= 2.2052930E+04
Oncderator-1 will be treated by the norcheim integral method.
Oness of moderator-2 = 257,953 signe(per al
                                                  signaturer absorber atom> 2.4615338E+04
Onchretor-2 will be treated by the northeim integral method.
Othis resonance auterial will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1,0000
                              res fiss
             res abs
(dansarb)
                                              res acet
```

```
-3.127119E-03
                            .00000000
                                        4,925112E-02
  10
          -4.7800E-02
                            .000000E+00
                                         -1.440322E-01
  11
                                        -7.36430E+00
  12
          -1.169613E+00
                            .000000E+00
  ī
           9.60987ZE-05
                            .000000E+00
                                         2.040021E-04
          -1.043070E+00
                            .00000E+00
                                         -2.743980E-02
  ъ
           5.904867E-03
                            .0000000
                                         4.61922 E-03
           1.3266VE-03
                            .000000E+00
                                        -1.451367E-04
  16
           9.6424FFE-04
                            .000000E+00
                                         -1.05983E-04
  17
                            .00000E+00 -9.3140B7E-05
  18
           8.53978/E-04
                            .00000E+00 -8.070501E-05
           7.63/3/Æ-04
  19
  20
           2.833992E-05
                            .000000E+00
                                        -2.919078E-06
Opicess resonance integrals
                   resolved
                  2.07412=+02
Oabsorption
                   .0000E+00
 fission

    elapsed time

                   .13 min.
0 rd-147
                mt=102
                                               updated 10/13/89
                                                                                      temperature 975.00
                                                                            61147
                                                                                      terperature= 975.00
0 pn-147
                                               updated 10/13/89
                 mt=102
Oresonence data for this nuclide
                                                   temperature(kelvin)
Oness runber (a)
                         = 145.653
                                                                            = 3.1414177E-06
                                                   lumed ructeer density
Opotential scatter signa =
                              5.025
                                                                            = 4.6812201E-01
                         = 21589,500
                                                   lump dimersion (a-bar)
Ospin factor (g)
                         = .000000E+00
                                                   dencoff correction (c)
                                                                            = 3.4269261E-01
Oimer rectius
Othe absorber will be treated by the northein integral method.
                                                signe(per absorber atom)= 5.4357527E+04
Omes of moderator-1 = 15.995
Oroderator-1 will be treated by the northeim integral method.
uness or moderator-2 = 257.933 signe(per absorber atom)= 6.05/4055E+04
Oroderator-2 will be treated by the northern integral method.
Othis rescrence meterial will be treated as a 2-dimensional object.
Oxclure fraction of lump in cell used to account for spatial self-shielding-1.0000
                                             res sost
(Darab
              res abs
                             res fias
                            .00000E+00 -5.028190E-02
  12
          -1.563809E-01
                            .00000E+00 -2.360/57E-03
  13
          -4.01222E-02
  Ÿ.
          -7.182008E+01
                            .000000=+00 -3.087/03=+01
                                          6,981774E-03
  15
                            .000000E+00
           4.130/0E-02
                                          1.746737E-03
  16
           1.697950E-02
                            .00000E+00
           1.369752E-02
  17
                            .000000E+00
                                          1.150×00E-03
           1.253762E-02
                            .000000E+00
                                          9.649074E-04
  18
           6.99946E-04
                            .000000E+00
                                          5.069173E-05
  19
Descess resonance integrals
                   resolved
Ordenotion
                  2.02910E+03
 fission
                   .00000E+00

    elapsed time

                   .13 min.
                                                                            61148
                                                                                      temperatures 975.00
0 par 148
                   mt= 102
0 sn-147
                 endf/b-v fission product
                                               uzdated 10/13/89
                                                                            62147
                                                                                      temperatures 975.00
Oresonence data for this ruclide
                                                                            = 975.000
                         = 145.653
                                                   temperature(ke(vin)
Omes number (a)
                                                                            = 6.67817ATE-07
Opotential scatter signs =
                              5.073
                                                   lumed ructeer density
Ospin factor (g)
                                                   lump dimension (a-bar)
                                                                            = 4.6812201E-01
                                .000
                                                   dercoff correction (c)
Oirmer ractius
                         = .000000E+00
                                                                            = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
                                                 signs(per absorber aton)= 2,55698116+05
Ones of moderator-1 = 15.995
Oppoint and I will be treated by the northern integral method.
                                                signs(per absorber aton)= 2.852758E+05
Orees of moderator-2 = 257.933
Oxederator-2 will be treated by the northern integral method.
Othis rescreme material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.00000
(marb
              res abs
                             res fiss
           2.836913E-01
                            .00000E+00 1.11250/E+00
```

```
1.0998455+00
                                .00000E+00 -1.40853E+00
   1345
            -2.806831E+00
                                .000000E+00 -1.302509E+00
            -2.406620E-01
                                -00000E+00
                                               -1.391501E-03
            3.117676E-01
                                .000000E+00
                                               -1.918673E-03
   16
             7.28784ZE-03
                                .000000E+00
                                               -3.73870Æ-04
   17
             4.281479E-03
                                .000000E+00
                                               -2.4015TE-04
            3.5103RE-03
   18
                                               -1.99705/E-0%
                                .000000E+00
   19
            2.910600E-03
                                 .000000E+00
                                               -1.6/9/39E-04
                                               -4.62685E-05
   20
            8.434973E-04
                                .000000E+00
 Descess rescrence integrals
                      resolved
Orbsorption
                    7.255ZE+02
                      .0000E+00
 fission
                     . 15 min.

    elapsed time

                                  thermal scattering matrix number 3 at a temperature of 900,03 was selected.
                   mt=102,103,107
0 sm-149
                                                      undeted 10/13/89
                                                                                       62149
                                                                                                 temerature 975.00
Crescrence data for this ruclide
OTHESS PLANDER (A)
                                                           temperature(kelvin)
                                                                                       = 975.000
 Ocotential scatter signa =
                                   3.260
                                                           lurped nuclear density
                                                                                      = 8.0202490E-08
                             = 10407.900
                                                                                       = 4.6812201E-01
Ospin factor (g)
                                                           lump dimension (a-bar)
Oirmor radius
                             denoif correction (c)
                                                                                      = 3.4269261E-01
Othe absorber will be treated by the northern integral method.
Oness of moderator-1 = 15.995 signs(per absorber atom)= 2.12910735-06
Onuderator-1 will be treated by the nordnein integral method.
Oness of moderator-2 = 237.933 signs(per absorber atom)= 2.37541985-06
Onuderator-2 will be treated by the nordnein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for scatial self-shielding-1,0000
Orap
               res abs
                                 res fiss
                                                   res scat
                                                3.071172 -02
   11
            8.546618E-03
                                .000000E+00
   12
            -5,400369E-02
                                .000000E+00
                                               -1.79696/E-01
   13
            2.356363E-02
                                .000000E+00
                                                2.89901Æ-05
   14
            9.786990E-03
                                .000000E+00
                                               -7.090800E-03
Descess resonance integrals
                     resolved
Outperption
                    8.04343=+02
 fission
                      .00000=+000

    elapsed time

                     .15 min.
0 sm-150
                   mt=102
                                                      updated 10/13/89
                                                                                       £2150
                                                                                                  tenperature= 975.00
Oresonence data for this nuclide
Omes runber (a)
                             = 148.629
                                                          temperature(kelvin)
                                                                                       = 975.000
                                                                                      = 2.5441905E-06
Ocotential scatter signs =
                                   5.162
                                                          lumped nuclear density
Ospin factor (g)
                             = 4376.420
                                                          lump dimension (a-bar)
                                                                                      = 4.6812201E-01
Oirner ractices
                             = .000000E+00
                                                          dencoff correction (c)
                                                                                      = 3.4269261E-01
Othe absorber will be treated by the northein integral method.
Omes of moderator-1 = 15.995 signet per al
Omderator-1 will be treated by the norcheim integral method.
Omes of moderator-2 = 257.953 signet per al
                                                        signs(per absorber atom)= 6.7117500E+04
                                                        signe(per absorber atom)= 7.4852203E+04
Oncorator 2 will be treated by the northern integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxclume fraction of lump in cell used to account for spatial self-shielding-1.0000
Gran
               res abs
                                 res fiss
                                                   TES SCOOL
            -8.860412E-04
                                .000000E+00
   10
                                               -8.238277E-03
  11
           -1.909252E-02
-6.202067E-02
                                .000000
                                               -2.169535E-01
  12
                                .000000=+00
                                              -1,54718E-02
  Ī
            -4.471614E+00
                                .000000E+00
                                               -3.522/575+00
  14
            1.05973E-04
                                .000000E+00
                                               -6.409712E-05
Opcess resonence internals
                     resolved
Orbeanstian
                    2.808625+02
```

```
.0000E+00
fission
- elapsed time
                  .15 min.
                                                                                      temperature* 975.00 *
                mt=102,105,104,105,106,107
                                               undated 10/13/89
                                                                            62151
0 and 151
Oresonence data for this ruclide
                        = 149.623
                                                                            = 975.000
Oness number (a)
                                                   temperature(kelvin)
                                                   lurped nuclear density
                                                                            = 3.3200570E-07
Opotential scatter signs = 5.185
Ospin factor (g)
                                                   lump dimension (a-bar)
                                                                            = 4.6812201E-01
                        = 75574.703
                                                                            = 3.4269261E-01
Oimer redius
                         = .000000E+00
                                                   dencoff correction (c)
Othe absorber will be treated by the northein integral method.
                                                 signa(per absorber atom)= 5.1432759E+05
Oness of moderator-1 = 15.995
Oppderator-1 will be treated by the norchein integral method.
                                                 signs(per absorber atom)= 5.7382525E+05
Oness of moderator-2 = 257.953
Omoderator-2 will be treated by the norcheim integral method.
Othis resource material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.00000
                            res fiss
             res abs
                                             res acat
Ograp
                            .00000E+00 -1.953556E-02
          -1.9025E-01
  14
15
          1,487455E+01
                            .00000E+00
                                         7.541747E-02
          -2.17916E+01
                            .000000E+00
                                         -6.18460E-02
  16
          1.737730EH02
  17
                            .000000E+00
                                          8,28736E-01
                            .000000E+00
                                         -1.782191E+00
  18
          -3.205274E+02
                            .00000E+00
                                          3.8/8173E-01
  19
          6.255297E+01
                            .000000E+00
                                         -1,408118E-04
  20
           1.141377E+00
                            .00000E+00
                                          1,244099E-02
  21
          -7.11759XE-02
                            .00000E+00
                                          3.838921E-03
  22
          6.952561E-02
                                          3.374055E-04
  23
          -1.091915E-02
                            .00000E+00
Occess resonance integrals
                  resolved
                  2.056585+03
Ostsorption
                   .00000E+00
 fission
- elapsed time
                  .15 min.
                mt=102, 103, 104, 105, 106, 107
                                               undated 10/13/89
                                                                            62152
                                                                                      temperature: 975.00
0 sm-152
Oresonence data for this ruclide
                        = 150.615
                                                                            = 975.000
Omes number (a)
                                                   temperature(kelvin)
Opotential scatter signa = 5.208
                                                   lumed nuclear density
                                                                            = 1.2460DE-06
                                                                            = 4.6812201E-01
Ospin factor (g)
                         = 863.5%
                                                   lum dimension (arbar)
                                                   dercoff correction (c)
                                                                            = 3.4269261E-01
                         = .00000000. =
Oimer redius
Othe absorber will be treated by the northein integral method.
Omess of receivator-1 = 15,995 signators absorber atom)= 1.3720031E-05 Ometerator-1 will be treated by the northein integral method.
Oness of acclerator-2 = 257.953
                                                 signature absorber atom> 1,5307278E+05
Omderator 2 will be treated by the northern integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.0000
             res abs
                             res fiss
                                             res ecet
(Darraco
  9
           2,402917E-06
                            _000000E+00
                                          1.15882/E-04
  10
          -9.66BOXOE-04
                            -1.52728TE-02
                            .000000E+00
                                         -5,43862EE-02
          -1,426153E-02
  11
                            _000000E+00
                                         -3.073029E-01
  12
          -9.67270Œ-02
                            .000000E+00
                                          1.027757E-01
  13
           4.225409E-02
          -8.74542ZE+01
                            .000000E+00
                                         -1.69067ZE+02
Descess resonence integrals
                  resolved
                  2.79775+03
Outboorption
fission
                   -0000E+00
                  .17 min.

    elapsed time

                mt=102, 103, 104, 105, 106, 107
                                               undated 10/13/89
                                                                             សស
                                                                                       temperature 975.00
0 av 153
Oregonence data for this ruclide
                                                   temperature(kelvin)
                                                                             = 975.000
                        = 151.607
Omess runber (a)
Opotential scatter signa = 9.731
                                                   lumed nuclear density
                                                                            = 6.3078977E-07
```

```
Ospin factor (g)
                         = 12265.900
                                                                            = 4.6812201E-01
                                                    lump dimension (e-bar)
                         = .000000E+00
                                                    derpoff correction (c)
                                                                            = 3.4269261E-01
Oirner radius
Othe absorber will be treated by the norcheim integral method.
                                                 signa(per absorber aton)= 2.7070775E+05
Omes of ancierator-1 = 15,995
Oncorrator-1 will be treated by the norchesis integral method.

Ones of moderator-2 = 237.933 signs(per elements)
                                                 signs(per absorber atom)= 3.0202547E+05
Oppokrator-2 will be treated by the northeim integral method.
Othis rescrerce meterial will be treated as a 2-dimensional object.
Oxcluse fraction of lump in cell used to account for spatial self-shielding=1.0000
Orap
                             res fiss
             res abs
                                             res acat
  12
          -2.7728/6E-01
                            .000000E+00
                                         -5.40000XE-02
  ß
          -1.013753E-01
                            .000000E+00
                                         -2.0713292-03
          -6.82480EE-01
                            .000000E+00
                                          1.708121E-05
  15
          2,400970E+00
                            .00000E+00
                                         -2.694529E-02
  16
          -3.29473E+00
                            .00000E+00
                                          8.15825 E-03
  17
          1.50560E-01
                            .00000E+00
                                         -3.437719E-03
  18
          7.72<del>(200</del>E-02)
                            .00000E+00
                                         -2.231190E-03
                                         -1.54181E-08
  19
          5.05546E-02
                            .000000E+00
 20
          -1.253801E-01
                            .000000E+00
                                         -1.27506E-05
Occess resorance integrals
                  resolved
                 1.3519E+03
Octoorption
                   .00000E+00
fission

    elamed time

                  _17 min_
0 ar 154
                at=102,103,104,105,106,107
                                               updated 10/13/89
                                                                             6354
                                                                                       temperature= 975.00
Oresonence data for this nuclide
                                                                             = 975.000
Omess runber (a)
                                                    temperature(kelvin)
                              9.731
                                                    lumped nuclear density
                                                                             = 9.5290013E-08
Onotential scatter signs =
                        × 19135_801
                                                    lump dimension (a-ber)
                                                                            = 4.6812201E-01
Ospin factor (g)
                                                                            = 3.4269261E-01
Oirmer radius
                         = .0000000E+00
                                                    dencoff correction (c)
Othe absorber will be treated by the nurcheim integral method.
Omes of acceptor-1 = 15,995
                                                 signs(per absorber atom)= 1,7918/93E+06
Outlingtor-1 will be treated by the northeim integral method.
Oness of moderator-2 = 257.953
                                                 signs(per absorber aton)= 1.9991453E+06
Onoderator-2 will be treated by the northern integral method.
Othis resonance material will be treated as a 2-dimensional object.
Orolume fraction of lump in cell used to account for spatial self-shielding-1.0000
Grap
             res abs
                             res fiss
                                             res scat
                                          -6.03351E-05
          -3.87911E-01
                            _000000E+00
  12
  13
          -3.05059/E-01
                            .000000E+00
                                         -2.464727E-02
  14
          3.A280VE-01
                            .000000E+00
                                           1.48980E-02
                                          2.110265E-02
  Б
                            .000000E+00
          1,89302/E-01
  16
          7.2576765+00
                            .000000E+00
                                          9.253874E-02
                                          -1.8X837E+00
  17
          -1.A39729E+02
                            .000000E+00
                                           1,859022E+00
          1.1371635+02
                            .000000E+00
 18
  19
          -1.014623E+02
                            .000000E+00
                                           1.1872546+00
Occas resonance integrals
                  resolved
                 2.13692E+03
Oabsorption
                   -00000E+00
fission

    elapsed time

                  .18 min.
                mt=102,105,104,105,106,107
                                                                             හැන
0 er-155
                                               undsted 10/13/89
                                                                                       temperatures 975.00
                mt=102
                                                undeted 10/13/89
                                                                             6455
                                                                                       temperatures 975.00
0 pt 155
Oresonence data for this ruclide
                                                                             = 975.000
Omess number (a)
                                                    temperature(kelvin)
Octential scatter signs =
                               5.277
                                                    lumped nuclear density
                                                                             = 1.1837079E-09
                         = 12700.100
                                                                             = 4.6812201E-01
                                                    lump dimension (a-bar)
Dispin factor (g)
                                                                             = 3.4269261E-01
Cirner radius
                         = .0000000E+00
                                                   dercoff correction (c)
Othe absorber will be treated by the northeim integral method.
                                                 signs(per absorber atom)= 1.442833E+08
Oness of acceptor-1 = 15.995
```

```
Omoderator-1 will be treated by the norche in integral method. Omes of moderator-2 = 257.933 signs(per el
                                                  signe(per absorber atom)= 1.609473/E+08
Omoderator 2 will be treated by the northeim integral sethod.

Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.00000
                              res fiss
Ograup
              res abs
                                              nes acet
           -1.439291E+00
                             _00000E+00 -1_839456E-01
  12
                             .000000E+00
  13
           1.541241E+00
                                           1.985186E-01
  14 15
           2.19076E-01
                             _000000E+00
                                           9,807291E-03
           -3.322711E-01
                             .000000E+00
                                          -3.4516ZE-05
           1,477359E+00
                             .000000E+00
                                           -4.148859E-03
  16
  17
           1.56854E-01
                             .000000E+00
                                          -1.479120E-03
  18
           9.605173E-02
                             -000000E+00
                                          -1.078083E-03
  19
           6.295319E-02
                             .000000E+00
                                           -8.024469E-04
  ã
           1.670382E-02
                             .0000E+00
                                           1_627042E-04
  21
            .00000E+00
                             .000000E+00
                                             _00000E+00
                             .00000E+00
                                             .00000E+00
             .000000E+00
  ガみろ
             .00000E+00
                             .000000E+00
                                             .00000E+00
             000000E+00
                             .000000E+00
                                             .000000E+00
                             .000000E+00
          -2.127761E+03
                                          -1.621977E+00
  圂
          -5.205660E+03
                             .000000E+00
                                            1.961465E+00
  27
          -1.689969E+03
                             .000000E+00
                                           7.392578E-01
Ocucess resonance integrals
                   resolved
Debsonation
                  3.97057E+04
 fission
                   .00000E+00
- elapsed time .18 min.
0r-234 1043 sign-5+4 resolacs p-3 298k f-1/e-n(1.+5)
                                                                                         temperatures 975.00
Oresonance dista for this ruclide
                         = 252.029
Omess runber (a)
                                                     temperature(belvin)
                                                                               = 975.000
Opotential scatter signs = 10.021
                                                     luroid nuclear density
                                                                               = 4.878789E-06
                                                                              = 4.6812201E-01
Ospin factor (g)
                          = 6948.450
                                                     lump dimension (a-bar)
                          .000000E+00
Oimer natius
                                                     derpoff correction (c)
                                                                              = 3.426926 E-01
Othe abscrizer will be treated by the northein integral method.
Oness of moderator-1 = 15,995
                                                  signs(per absorber aton)= 3.5212695E+04
Oncderator-1 will be treated by the northeim integral method.
Oness of accierator-2 = 257.955
                                                  signe(per absorber atom)= 3.9274359E+04
Oncderator-2 will be treated by the porchain integral method.
Othis resonance material will be treated as a 2-dimensional object
Oxclume fraction of lump in cell used to account for spetial self-shielding=1.0000
                              res fiss
Carress
Carress
              res abs
                                              res scat
                             .00000E+00 -6.765317E-02
          -2.32000E-02
  11
  12
          -1.89116Œ-01
                             .00000E+00 -7.934187E-02
          7.759874E-04
                             .000000E+00
                                          -6.47154E-04
  13
          -1.85Z9E+01
                             .00000E+00 -3.053657E+00
Occess resonance integrals
                   resolved
Oubscription
                  5.81870E+02
fission
                   .0000E+00
- elapsed time
                  .20 min.
0 uranium 255 endf/b-iv met 1261
                                                underted 10/13/89
                                                                               925
                                                                                         temperature 975.00
Oresonence data for this nuclide
                                                     temperature(ke(vin)
                                                                               = 975.000
Omess number (a)
Opotential scatter signs * 11.500
                                                     lurged ruclear density
                                                                              = 4.9025129E-04
Ospin factor (g)
                          × 15171.100
                                                     luno dimension (a-bar)
                                                                              = 4.6812201E-01
Oimer radius
                          * .0000000E+00
                                                     dencoff correction (c)
                                                                              = 3.425725 E-01
Othe absorber will be treated by the northern integral method.
                                                  signs(per absorber atom)= 3.4831055E+02
Omes of moderator-1 = 15,995
Omderator-1 will be treated by the northeim integral method.
Oness of auderator-2 = 258.049
                                                  signature absorber atom)= 3.757953E+02
```

```
Oncobrator-2 will be treated by the norchein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for scatial self-shielding-1.0000
(Darraco
              res abs
                              res fies
                                               res scat
          -2.04447E+00
                          -1.275228E+00 -4.78500EE-02
  ũ
          -7.108612E+00
                          -3.537716E+00 -1.535470E-01
          -5.7105/E+00 -3.5021/0E+00 -3.89579/E-02
Descess rescrence integrals
                   resolved
Orbeanstian
                  2.1097E+02
fission
                   1.25499E+02
                   .22 min.
- elepsed time
0.-236 1163 sigo-5+4 nouklass p-3 293k f-1/e-m(1.+5)
                                                                                9236
                                                                                          temperatures 975.00
Oresonence data for this nuclide
                          = 234.017
                                                      tancersture(kelvin)
                                                                                = 975.000
Omess number (a)
Opotential scatter signs = 10.995
                                                      lumed nuclear density
                                                                                = 3.9825901E-05
Deplin factor (a)
                          = 6328,490
                                                      lusp dimension (a-bar)
                                                                                = 4.6812201E-01
                          = .000000E+00
                                                      dencoff correction (c)
                                                                                = 3.4269261E-01
Dinner radius
Othe absorber will be treated by the northeim integral method.
Omes of moderator-1 = 15,995
                                                    signa(per absorber atom)= 4.2878804E+08
Omporator 1 will be treated by the norchein integral method.
Omass of moderator 2 = 257.954 signs(per el
                                                   signs(per absorber atunt)= 4.7831025E+03
Omoderator-2 will be treated by the northein integral method.

Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for special self-shielding=1,0000
                              res fias
Caroco
              nes abs
                                               res acat
                             .000000E+00
  11
           -1.949282E-01
                                           -4.880803E-01
  12
          -1,041916E+00
                             .000000=+00
                                           -7.15506E-01
  Ī
          -6.308/67E-02
                             .00000E+00
                                           -3.45BE-B
          -3.5E00BE+01
                             .000000E+00
                                           -3.132152H00
Ocices resonance integrals
                   resolved
Debearation
                  2.874382+02
fission
                    .00000=000

    elected time

                   .22 min.
0 uranium 258 endf/b-iv sex 1262
                                                 updated 10/13/89
                                                                                          tenperatures 975.00
Onesonence data for this nuclide
Omess runber (a)
                                                      temperature(kelvin)
                                                                                = 975.000
                               10,599
                                                                                = 2.1918545E-02
Ocotential scatter signs =
                                                      lumbed nuclear density
Ospin factor (g)
                          = 656.527
                                                      lunp dimension (a-bar)
                                                                                = 4.6812201E-01
Oirner redice
                             .000000E+00
                                                      dencoff correction (c)
                                                                                = 3.4269261E-01
Othe absorber will be treated by the norcheim integral method.
Omess of moderator-1 = 15.975
                                                    signe(per absorber atom)= 7.7905/89E+00
Onederator-1 will be treated by the northein integral method.
Oness of moderator-2 = 255.041
                                                   signa(per absorber atom)= 3.3544329E-01
Oncerator-2 will be treated by the northeim integral method.

Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for scatial self-shielding-1.0000
                                               res scat
              res abs
                              res fiss
(parab
                             .000000E+00
           -3.93997E-02
                                           -4_0X6975E-01
                          -1.75037E-05
          -1.025897E+00
                                           -6.481733=+00
  10
                             .000000E+00
                                           -2_680807E+01
  11
          -9.70802/E+00
          -4,304811E+01
  12
                             .000000E+00
                                           -4.998776E+01
  13
          -5,401412<del>-1</del>01
                             .0000000
                                           -1.769151E+01
          -1.0/500Œ+02
                             .000000E+00
                                           -6_057761E+00
Ocicess resonance integrals
                   resolved
                  1_800B0E+01
Outbeamption
                  5.03969E-04
fission
                   .23 min.

    elapsed time
```

```
0 neptunium-237 endf/b-iv mot 1263
                                               updated 10/13/89
                                                                                      terperature= 975.00
Oresonence data for this ruclide
Omes number (a)
                         = 255.012
                                                                            = 975.000
                                                   tasparature(kelvin)
Ocotential scatter signs = 10.500
                                                                            = 1.9794916E-06
                                                   lumped nuclear density
Ospin factor (g)
                         = 10100,800
                                                                           = 4.6812201E-01
                                                   lunp dimension (a-bar)
Oirner radius
                         = 3.4269261E-01
                                                   dencoff correction (c)
Othe absorber will be treated by the norcheim integral method.
Oness of moderator-1 = 15.995
                                                signaturer absorber atunt= 8.625/41/E+04
Oncderator-1 will be treated by the northein integral method.
                                                signa(per absorber atunt)= 9.2528891E+04
Oness of moderator-2 = 258,051
Oncderator 2 will be treated by the northern integral method.

Othis resource material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for scatial self-shielding-1,0000
Ocean
             res abs
                             res fiss
                                            res acat
  11
          6.33853 E-02
                         -2.012413E-06
                                        -7,400325E-03
  12
          3.14865E-02 -9.85238E-05
                                        7.9%27E-03
  13
          -4.917679E-03
                         8.935276E-05
                                         -4.40547E-04
  14
          -4.483762E-02 -5.801127E-06
                                        -1.160987E-03
Ocicess resonance integrals .
                  resolved
Opposition 1
                 2,951035+02
fission
                 1.3857/E-01
- elamed time
                  .27 min.
0xx-258 1050 sigo-5+4 resklacs p-3 255k f-1/e-#(1.+5)
                                                                            94238
                                                                                     temperature: 975.00
Oresonance data for this nuclide
Oness number (a)
                        = 256.167
                                                   temperature(kelvin)
                                                                            = 975.000
Opotential scatter signs = 10.890
                                                   lumped nuclear density
                                                                            = 1.775477Æ-07
Ospin factor (g)
                        = 13130.600
                                                   lup dinasion (a-bar)
                                                                            = 4_6812201E-01
Oimer radius
                         = .000000E+00
                                                  dencoff correction (c)
                                                                            = 3.4269261E-01
Othe absorber will be treated by the northein integral method.
Oness of moderator-1 = 15,995
                                                signs(per absorber atom)= 9.625250E+05
Onoderator-1 will be treated by the porcheim integral method.
Oness of moderator-2 = 238.051
                                                signa(per absorber atom)= 1.052/856E+06
Onoderstor-2 will be treated by the northein integral method.
Othis rescrence auterial will be treated as a 2-diversional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.00000
                             res fiss
(grasp
             res abs
                                            res acat
          -8.05250/E-04
                         -1.198629E-04
                                         -8.325750E-04
 11
 12
          -5.152005E-04 -5.715002E-05
                                        -2.714374E-04
 13
          4.091211E-01
                         7.547670E-02
                                        -9.684728E-03
          -3.82565E-01 -6.99014E-02
 14
                                         8.53901 E-03
Occess recommon integrals
                  resolved
                 8.25438E+01
Orbination
                 9.08/A/E+00
fission

    elapsed time

                  .27 min.
O plutonium 259 endf/b iv met 1264
Oresonence data for this ruclide
                                              undsted 10/13/89
                                                                            94239
                                                                                     temperature: 975.00
Ones nurber (a)
                        = 256.999
                                                  temperature(kelvin)
                                                                            = 975.000
Opotential scatter signs =
                             10,200
                                                   lurbed nuclear density
                                                                           = 8.265/89E-05
                        = 6/35.710
Oboln factor (g)
                                                  lum dinersion (a-bar)
                                                                           = 4_6812201E-01
Oimer radius
                        = .0000000F+00
                                                  dencoff correction (c)
                                                                           = 3.4269261E-01
Othe absorber will be treated by the northein integral method.
Oness of studerator-1 = 15.995
                                                signature absorber atom)= 2.0572075+03
Onoderator-1 will be treated by the northein integral method.
Omes of moderator-2 = 258.051
                                                signaturer absorber atomi= 2,2157563E+08
Oncderator 2 will be treated by the northeim integral method.
Othis rescrence material will be treated as a 2-dimensional object.
Oxclume fraction of lump in cell used to account for scatial self-shielding=1,00000
                            res fiss
Gran
             resabs
                                            THE SCOOL
```

```
-1.731143E-01 -6.96258E-02
  11
                                          -5.30925/E-02
                         -5.794014E-01
                                          -2_03313/E-01
  12
          -1.543983E+00
          -5.09869E+00
  13
                         -2.983939E+00
                                         -7.734127E-02
          -1.616615E+00 -8.59855E-01
                                         -1.44785ZE-02
Ococess rescrence integrals
                  resolved
Osbsorption
                 3.09609E+02
fission
                 1.738735+02
- elapsed time
                  .28 min.
0 plutonium 240 endf/b-iv met 1265
                                                undated 10/13/89
                                                                              94340
                                                                                       temperature: 975.00
Oresonence data for this nuclide
                         = 257,992
                                                                             = 975.000
Omess runber (a)
                                                    temperature(kelvin)
Opotential scatter signs = 10.599
                                                    lumped nuclear density
                                                                             = 1.1577618E-05
Oppin factor (g)
                         * 669.244
                                                    lump dimension (a-bar)
                                                                             = 4.6812201E-01
Oirner radius
                         = .000000E+00
                                                    dencoff correction (c)
                                                                             = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
                                                  signatper absorber atomi= 1.4746573E+04
Omess of moderator-1 = 15.995
Omnierator-1 will be treated by the northeim integral method.
Oness of moderator-2 = 238.051
                                                  signe(per absorber atom)= 1,5817633E+04
Omoderator 2 will be treated by the norcheim integral method.

Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1,00000
             res abs
                          res fiss
-8.45460E-07
grap
                                             res acat
          -3.527370E-05
                                         -1.122160E-04
                         -1,699441E-04
  10
          -2.741197E-03
                                         -1.2330E-02
  11
          -8.856678E-02
                          -5.12013/E-04
                                          -1.178721E-01
  12
          -1,23/5125+00
                          -6.752137E-03
                                          -1.188553E+00
  ī
          -1,511770E-01
                          -9.25065E-04
                                          -1.10198/E-02
                            .00000E+00
            .000000E+00
                                            .000000E+00
           1.7494E-02
  ъ
                          3.330303E-06
                                          3.451913E-03
  16
           3.0752/92+00
                           5,897248E-04
                                          3.877E0E-01
  17
           4.904770E+02
                          9.360970E-02
                                           4,40670/E+01
  18
          -6.4093<del>(SE+</del>03
                          -1.225254E+00
                                          -5.070545E+02
  19
           7,6633/65+02
                          1,462583E-01
                                           5.942987E+01
          -9.327890E+01 -1.780269E-02
  20
                                           1.79813/E+00
Occess rescreme integrals
                  resolved
                 5.5642/EHOS
Osbsorption
                 2.07910E+00
fission
- elapsed time
                  .30 min.
0 plutonium 241 andf/b-iv met 1266
                                                uzdated 10/13/89
                                                                             94241
                                                                                       temperatures 975.00
Orescriptoe data for this nuclide
                         = 258.978
Omeas runber (a)
                                                    temperature(kelvin)
                                                                             = 975.000
Opotential scatter signs = 10.939
                                                                             = 5.0548110E-06
                                                    lumped nuclear density
                         = 16402,100
                                                                             = 4.6812201E-01
Oscin factor (g)
                                                    lump dicension (a-ber)
Oimer radius
                         * .000000E+00
                                                    dencoff correction (c)
                                                                             = 3.4259261E-01
Othe absorber will be treated by the northeirs integral method.
Omess of moderator-1 = 15,995
                                                 signa(per absorber atox)= 3.3/81617E+04
Oncderator-1 will be treated by the northeim integral method.
Omes of moderator-2 = 258,051
                                                 signe(per absorber atom)= 3.6252116+04
Oncorretor 2 will be treated by the norche in integral method.

Othis resonance material will be treated as a 2-dimensional object.
Oxclume fraction of lump in cell used to account for spatial self-shielding-1.0000
Oproup
             res abs
                             res fiss
                                             res scat
  12
          5.990879E-03
                          5.1385KE-03
                                          6.303210E-04
  Ü
          -3.513053E-01
                         -2.733082E-01
                                          -1.095470E-02
                                          -1.548980E-05
          -2.874569E-01
                         -1.940983E-01
  14
           1.7942ZE-02
                          1.608441E-02
                                          -4.67521/E-04
  15
Opices rescrence integrals
                  resolved
```

```
Osborotion
                 5.086116+02
                 4.2640/E+02
fission
- elegged time
                  .32 min.
                                              ucdated 10/13/89
                                                                            94242
0 plutonium 242 endf/b-iv met 1161
                                                                                     temperaturer 975.00
Oresonence data for this ruclide
                                                                           = 975.000
Oness ruther (a)
                                                   temperature(kelvin)
                                                                           = 3.4107089E-07
                                                   lunged nuclear density
Opotential scatter signs =
                             10.694
                         = 6606,710
                                                                           = 4.6812201E-01
Oppin factor (g)
                                                   lump dimension (a-bar)
                                                                           = 3.4269261E-01
Dirmer radius
                         = .000000E+00
                                                  denoff correction (c)
Othe absorber will be treated by the northeim integral method.
                                                signs(per absorber aton)= 5,00674/E+05
Oness of moderator-1 # 15,995
Ourdenstor-1 will be treated by the northein integral method.
Omess of moderator-2 = 258.051 signet per at
Omoderator-2 will be treated by the northelm integral method.
                                                signs(per absorber atom)= 5.37020792+05
Othis rescrence material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for scatial self-shielding-1.00000
apress
             res abs
                             res fiss
                                            res scat
  11
          -7.8698E-04
                           .00000E+00
                                        -2.27278E-03
  12
          -1.841652E-02
                           .000000E+00
                                        -3.615677E-02
  ซี
                                         4.300362E-06
                           .000000E+00
          5.776821E-05
  14 15
          8.144961E-02
-6.458304E+00
                           .000000E+00
                                         1.525802E-02
                                         -5.533113E-01
                           .000000E+00
  16
          4.032914E-02
                            .00000E+00
                                        -3.45725E-03
                           -00000E+00
  17
                                        -1.8/82/0E-03
           1.550592E-02
  18
           1.112569E-02
                           -000000E+00
                                        -1.A3069E-03
Opiciess resonance integrals
                  resolved
                 1.107892+03
Orbeanstian
                  .0000E+00
fission

    elamed time

                  .32 min.
Oan 241 1056 sigo-544 newlacs 218mg p-3 255k
                                                                            95241
                                                                                     temperatures 975.00
Orescrence data for this nuclide
                                                                            = 975.000
Omes ruster (a)
                         = 258,950
                                                   temperature(kelvin)
                                                   lumped nuclear density
                                                                           = 9.6535480E-08
Opotential scatter signs =
                              9.511
                                                                           = 4.6812201E-01
Oscin factor (g)
                         = 82058,203
                                                   lum dimension (a-bar)
                                                                           = 3.4269261E-01
Oirner radius
                         = .000000E+00
                                                  dencoff correction (c)
Othe absorber will be treated by the northeim integral method.
                                                signs(per absorber atom)= 1.7670494E+06
Omess of moderator-1 = 15.995
Onoderator-1 will be treated by the norchein integral method.
Oness of moderator-2 = 258,051
                                                signs(per absorber atom)= 1.8953921E+05
Omoderator-2 will be treated by the norchesia integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.00000
                             res fiss
             res abs
                                            res scat
Otab
           4.905576E-01
                         1,212019E-02 4,871396E-03
          -4.36/51/E-01 -1.11339/E-02 -4.60611E-03
Oceans resonence integrals
                  resolved
                 1.9545E+02
Osbearption
fission
                 1.07605E+00
- elapsed time .32 min.
Dam-243 1057 218 gp skt f-1/e-m 090376 p3 258k
                                                                            95243
                                                                                     benoerature= 975.00
Oresonence data for this ruclide
                         = 240,940
                                                                            = 975.000
Omess number (a)
                                                   temperature(kelvin)
                                                   lumped nuclear density
                                                                           = 1.866027E-08
Opotential scatter signs =
                              9.511
                                                                           = 4.6812201E-01
Dispin factor (g)
                         = 82052.602
                                                   lump dimension (a-bar)
                         = .000000E+00
                                                  derpoff correction (c)
                                                                           = 3.4269261E-01
Oinner rectices
Othe abouter will be treated by the northein integral method.
                                                signs(per absorber atom)= 9.2460830E+06
Ones of moderator-1 = 15.995
Onoderator-1 will be treated by the northein integral method.
```

```
signs(per absorber atom)= 9.9176360E+06
Oness of moderator-2 = 258.051
Onoderator-2 will be treated by the norcheim integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.00000
(group
             res abs
                             res fiss
                                             res scat
          -6.80679ZE-03
                            _000000E+00
                                          4.320/E/E-04
  13
 14
          2.13/22E-02
                            .00000E+00
                                          2.224311E-04
Oscess resonance integrals
                  resolved
Osbsorption
                 1.60150E+02
fission
                   .0000E+00
  elapsed time
                  .32 min.
0 curium-244 endf/b-iv met 1162
                                               ucdated 10/13/89
                                                                            96244
                                                                                      temperature= 975.00
Oresonence data for this nuclide
Oness runber (a)
                                                   temperature(kelvin)
                                                                            = 975.000
Opotential scatter signs = 10.320
                                                                            = 1.0461749E-09
                                                   lunged nuclear density
Ospin factor (g)
                                                                            = 4.6812201E-01
                         = 521.150
                                                   lump dimension (a-bar)
Oimer redius
                         = .0000000E+00
                                                   dencoff correction (c)
                                                                            = 3.4269261E-01
Othe absorber will be treated by the nurtheim integral method.
                                                 signa(per absorber atunt= 1.6322289E+08
Orass of moderator-1 = 15.995
Onoderator-1 will be treated by the norchein integral method.
                                                 signs(per absorber aton)= 1.75077935+08
Oness of moderator-2 = 238.051
Oppderator-2 will be treated by the northern integral method.
Othis resorance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.0000
                          res fiss
6.985260E-06
Carous
             res abs
                                             res scat
           2.55580E-04
                                          3.01531Æ-04
 11
 12
          6.831913E-04
                          3.211379E-05
                                          1.340Y0E-04
                          1.32%17E-04
                                          7.12190E-04
 B
          2.705537E-03
          7.9383/E-02
                          4.761576E-03
                                          1.46292/E-02
Osices resorance integrals
                  resolved
                 6.1389E+02
Osbsorption
fission
                 3.54218E+01

    elapsed time

                  .33 min.
  elapsed time .33 min.
     this xscim working table was created 02/16/95 at 09:59:42
     the title of the parent case is as follows
     scale 4.2 - 27 grap neutron burnsp library
        based on graft-b version 4 data with graft-b version 5 fission products
                                1/27/89
           carpiled for nrc
                                            4321
                                                          number of nuclides
                                                                                               66
         tace id
         number of neutron groups
                                              27
                                                          number of gamma groups
         first themal group
                                                          logical unit
                                       table of contents
        1/v cross sections normalized to 1.0 at 0.0253 ev
                                                                                               999
                       ercif/b-fv mot 1269/tirmi002 updated 10/13/89
                                                                                      1001
        hydrogen
       b-10 1273 218rgp 042375 p-3 258k
                                                                                              5010
                                                                                              5011
                                                      undeted 10/13/89
        boron-11
                       endf/b-iv met 1160
                        endf/b-iv mat 1276
                                                      undeted 10/13/89
                                                                                              2016
        Coloration (Section 1979)
        00/02m 16
                        endif/b-iv set 1276
                                                      undeted 10/13/89
                                                                                                6
                       mt=102,105,105,105,105,107
mt= 102
                                                                                            36083
                                                     underted 10/13/89
        kr-83
                                                                                            34095
        kr-85
        sr-90
                       st=102
                                                      undeted 10/13/89
                                                                                             38090
                                                     undeted 10/13/89
                                                                                            39089
         y-80
                       mt=102
                                                                                             40075
        zi-Ø
                               102
                          (本)
                                                                                            40094
        25-94
                       mt=102
                                                      undeted 10/13/89
                                                                                            40075
        21-95
                       mt=102
                                                      updated 10/13/89
                                                      updated 10/13/89
                                                                                            40302
        zircalloy
                       end#/b-iv met 1284
                                                                                            410%
        rb-%
                                                      undated 10/13/89
```

mo-95							****
	at=102		dated 10			id	42095
tc-99	nt=102	ų p	obsted 10,	/13/89		id	43099
ru-101	mt=102	uż.	absted 10	/13/89		id	44101
ru-106	st=102	uż	detect 10	/13/89		id	44106
rh-103	mt=102		dated 10			id	4510B
rh-105	mt= 102	7				id	45105
	mt=102	100	dated 10	/17/90		Ĩď	46105
pr-105						ŭ	4610B
pd-108	mt=102		dated 10			i,	
silver-109	endi/orivinat 1139		dated 10			id	47109
sb-124	mt=102	_ up	deced 10			id	51124
ж е -131	mt=102,103,104,105,10	8 up	dated 10			r r r r r r	54131
xe-152	et=102,103,104,105,10	X u‡	dsted 19	/13/89		id	54132
X2111-135	endi/b-iv mat 1294	ui:	deted 10	/13/89		id	54136
xe-136	mt= 102, 103, 104			·		id	54136
cesium 133	encif/b-iv met 1141	,, ur	dsted 10	/13/80		id	55133
cs-134	mt=102		detect 10			ũ	55134
		4	mich id	CO		ដ	555
CS- <u>135</u>	mt= 102					id	
cs-137	mt=102		dsted 10			id	5537
ba-136	at=102		detec 10			id	56136
la-139	nt=102	ų p	zasteci 10	/13/89		id	57139
ce-144	mt= 102	-				id	58144
pr-141	mt=102,108,104,105,10	15.107 uc	disted 10	/13/89		id	59141
pr-143	nt=102	-, 	abted 10			id	59143
m+ ¥3	nt=102		relational 10			id	601/3
						ŭ	60145
nd-145	et=102		detect 10			10	
nd-147	mt=102		distad 10)Q	60147
pn-147	at=102	ų p	obsted 10	/13/8/		ja	61147
pn-148	mt= 102					id	61148
sm-147	edf/b-v fission prod	ict 4	adested 10	/13/89		ಗ್ರಹಗ	62147
sm-149	me=102,105,107	uż	dated 10	/13/89		id	62149
sm-150	mt=102		clated 10			id	62150
sa-151	#1=102,105,104,105,10		dated 10			id	62151
			dated 10			ធ	62152
sar 152	mt=102,105,104,105,10	<i>U</i> , ivr u					
		¥ 107		/TT/RO		u	ATIST
នាញ	mt=102,108,104,105,10		disted 10			id id	<u>ស្ត្</u>
eu-154	mt=102,108,104,105,10	15,107 up	obsted 10	/13/89		id	63154
eu-154 eu-155	mt=102,108,104,105,10 mt=102,108,104,105,10	15,107 up 15,107 up	zisted 10 zisted 10	/13/89 /13/89		id id	63154 63155
eu-154 eu-155 gd-155	mt=102,108,104,105,10 mt=102,108,104,105,10 mt=102	15,107 up 15,107 up 14	xlated 10 xlated 10 xlated 10	/13/89 /13/89		id id	6154 6155 64155
eu-154 eu-155 gd-155	mt=102,108,104,105,10 mt=102,108,104,105,10	15,107 up 15,107 up up c f-1/e-π(1.∗	zisted 10 zisted 10 zisted 10 5)	/13/89 /13/89 /13/89		r r r	63154 63155 64155 92234
eu-154 eu-155 gd-155 u-254 1043 sig urenium-255	mt=102,108,104,105,10 mt=102,108,104,105,10 mt=102 p=544 neuklacs p=3 258k endf/b=1v mat 1261	8,107 up 8,107 up up c f-1/e-π(1.∻ up	zisted 10 zisted 10 zisted 10 5) zisted 10	/13/89 /13/89 /13/89		r r r r	63154 63155 64155 92234 9225
eu-154 eu-155 gd-155 u-254 1043 sig urenium-255	mt=102,108,104,105,10 mt=102,108,104,105,10 mt=102 p=544 neuklacs p=3 258k endf/b=1v mat 1261	8,107 up 8,107 up up c f-1/e-π(1.∻ up	zisted 10 zisted 10 zisted 10 5) zisted 10	/13/89 /13/89 /13/89		r r r r	63154 63155 64155 92234
eu-154 eu-155 gd-155 u-254 103 eig urentur-255 u-256 1163 eig	mt=102,103,104,105,10 at=102,103,104,105,10 mt=102 mt=102 endf/b-1v mat 1261 p=5+4 max(acs p-3 238k	8,107 up 8,107 up up (f=1/e=n(1.+ up (f=1/e=n(1.+	dated 10 dated 10 dated 10 5) dated 10 5)	/13/89 /13/89 /13/89 /13/89		r r r r	63154 63155 64155 92234 9225
eu-154 eu-155 gu-155 u-254 1043 sig u-254 1163 sig u-254 1163 sig u-261 un-258	mt=102,108,104,105,10 mt=102,103,104,105,10 mt=102 pr5+4 resoluce p-3 250s erch/b-1v met 1261 pr5+4 resoluce p-3 250s erch/b-1v met 1262	8,107 up 8,107 up up up up up up up up up	dated 10 dated 10 dated 10 5) dated 10 5) dated 10	/13/89 /13/89 /13/89 /13/89 /13/89		ក្រភពក្រភព	63154 63155 64155 92254 92256 92256 92288
eu-154 eu-155 gd-155 u-254 103 eig urenium-235 u-236 1163 eig urenium-237 nectunium-237	mt=102,103,104,105,10 mt=102,103,104,105,10 mt=102 p=5-4 resolucs p=3 250k eruif/b=1v mat 1261 p=5-4 resolucs p=3 250k eruif/b=1v mat 1262 eruif/b=1v mat 1263	8,107 up 8,107 up up (f-1/e=(1.+ up (f-1/e=(1.+ up up	dated 10 dated 10 dated 10 5) deted 10 5) dated 10 dated 10	/13/89 /13/89 /13/89 /13/89 /13/89		REFERE	63154 63155 64155 92254 92256 92256 92286 92288 95287
eu-154 eu-155 gd-155 u-234 10/3 eig u-enium-235 u-236 11/3 eig u-enium-237 pu-238 1050 ei	mt=102,103,104,105,10 mt=102,103,104,105,10 mt=102 p=5-4 resoluces p=3 250k ercli/b=1v mst 1261 p=5-4 resoluces p=3 250k ercli/b=1v mst 1262 ercli/b=1v mst 1263 p=5-4 resoluces p=3 253 p=5-4 resoluces p=3 253	8,107 up 8,107 up c f-Ven(1 up c f-Ven(1 up up k f-Ven(1.	złated 10 złated 10 złated 10 5) złated 10 5) złated 10 złated 10 +5)	/13/89 /13/89 /13/89 /13/89 /13/89 /13/89		a a a a a a a a a a a a	63154 63155 64155 92754 92756 92756 92756 92757 9278
au-154 eu-155 gd-155 u-234 10/3 sig ureniur-235 u-236 11/3 sig ureniur-238 neptuniur-239 pu-238 10/30 sig plucaniur-239	mt=102,103,104,105,10 mt=102,103,104,105,10 mt=102 p=544 maxtacs p=3 2354 endf/b=1v mst 1261 p=544 maxtacs p=3 2354 endf/b=1v mst 1262 y=5544 maxtacs p=3 235 p=5544 maxtacs p=3 235 endf/b=1v mst 1264	15,107 up 15,107 up 15,107 up 15,107 up 15,108 up	zisted 10 zisted 10 zisted 10 5) zisted 10 zisted 10 zisted 10 +5) zisted 10	/13/89 /13/89 /13/89 /13/89 /13/89 /13/89	·	a a a a a a a a a a a a	63154 63155 64155 92254 9226 9226 9228 9228 9428 9429
su-154 su-155 gd-155 u-234 103 sig urentur-235 u-236 113 sig urentur-238 neptuntur-239 pu-238 1050 si plutantur-239 plutantur-239	mt=102,103,104,105,10 mt=102,103,104,105,10 mt=102 pr5-4 resoluces p-3 25% erdif/b-1v mst 1261 erdif/b-1v mst 1262 erdif/b-1v mst 1263 pr5-4 resoluces p-3 25% erdif/b-1v mst 1264 erdif/b-1v mst 1266	8,107 up 8,107 up 1 f-Ven(1.4 up 1 f-Ven(1.4 up up k f-1/en(1.	zisted 10 zisted 10 zisted 10 5) zisted 10 zisted 10 zisted 10 zisted 10 zisted 10	/13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89		KKKKKKKKKKK	6154 63155 64155 9224 9225 9226 9228 9228 9238 9429 9429 9420
su-154 su-155 gd-155 u-254 10/3 sig urentur-235 u-236 1163 sig urentur-238 nepturtur-237 pu-238 1050 si plutantur-240 plutantur-240	mt=102,103,104,105,10 mt=102,103,104,105,10 mt=102 pr544 resultacs p-3 2584 ercif/b-1v mat 1261 pr544 resultacs p-3 2584 ercif/b-1v mat 1262 pr544 resultacs p-3 253 ercif/b-1v mat 1264 ercif/b-1v mat 1265 ercif/b-1v mat 1265	5,107 up 5,107 up c f-Ven(1,- up c f-Ven(1,- up k f-1/en(1,- up up up	zisted 10 zisted 10 zisted 10 5) zisted 10 zisted 10 zisted 10 zisted 10 zisted 10 zisted 10	/13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89		are e e e e e e e e	63154 63155 64155 92234 92256 92286 9228 9228 94289 94289 94240 94241
eu-154 eu-155 gd-155 u-234 10/3 eig ureniun-235 u-236 11/3 eig ureniun-238 neptuniun-237 pu-238 10/50 ei plutoniun-239 plutoniun-241 plutoniun-241 plutoniun-241	mt=102,103,104,105,10 mt=102,103,104,105,10 mt=102 pr5-4 resulence p-3 225k eruif/b-1v met 1261 pr5-4 resulence p-3 225k eruif/b-1v met 1263 pr5-4 resulence p-3 225 eruif/b-1v met 1264 eruif/b-1v met 1264 eruif/b-1v met 1266 eruif/b-1v met 1266 eruif/b-1v met 1266	5,107 up 5,107 up 1: f-Ve-m(1 up 1: f-Ve-m(1 up k f-1/e-m(1 up up up up	zisted 10 zisted 10 zisted 10 5) zisted 10 zisted 10 zisted 10 zisted 10 zisted 10	/13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89		<u> </u>	63154 63155 64155 92734 9275 9275 9276 9277 9428 9429 94240 94241 94242
eu-154 eu-155 gd-155 u-234 10/3 eig ureniun-235 u-236 11/3 eig ureniun-238 neptuniun-237 pu-238 10/50 ei plutoniun-239 plutoniun-241 plutoniun-241 plutoniun-241	mt=102,103,104,105,10 mt=102,103,104,105,10 mt=102 pr5-4 resulence p-3 225k eruif/b-1v met 1261 pr5-4 resulence p-3 225k eruif/b-1v met 1263 pr5-4 resulence p-3 225 eruif/b-1v met 1264 eruif/b-1v met 1264 eruif/b-1v met 1266 eruif/b-1v met 1266 eruif/b-1v met 1266	5,107 up 5,107 up 1: f-Ve-m(1 up 1: f-Ve-m(1 up k f-1/e-m(1 up up up up	zisted 10 zisted 10 zisted 10 5) zisted 10 zisted 10 zisted 10 zisted 10 zisted 10 zisted 10	/13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89		rccccccccccc	63154 63155 64155 92254 92256 92256 92257 94259 94240 94241 94241 94241 94241 94241
su-154 su-155 gd-155 u-234 10/3 sig ureniur-235 u-236 11/3 sig ureniur-235 nepuniur-237 puteniur-237 pluteniur-240 pluteniur-240 pluteniur-240 pluteniur-242 ser-241 10/36 si	mt=102,103,104,105,10 nt=102,103,104,105,10 nt=102 po5-4 maxilecs p-3 2384 eruif/b-1v met 1261 po5-4 maxilecs p-3 2384 eruif/b-1v met 1263 po5-4 maxilecs p-3 238 eruif/b-1v met 1264 eruif/b-1v met 1264 eruif/b-1v met 1266 eruif/b-1v met 1266 eruif/b-1v met 1266 eruif/b-1v met 1266 eruif/b-1v met 1266 eruif/b-1v met 1266	5,107 up 5,107 up 1,107 up 1,1	zisted 10 zisted 10 zisted 10 5) zisted 10 zisted 10 zisted 10 zisted 10 zisted 10 zisted 10	/13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89		KKKKKKKKKKKK	63154 63155 64155 9224 9225 9225 9228 9228 9228 9229 9229 9220 92241 92241 92241 92243
su-154 su-155 gd-155 u-254 103 sig urentur-255 u-261 163 sig urentur-28 repturiur-28 pu-283 1050 si plutoniur-241 plutoniur-241 plutoniur-242 sm-241 1050 si sm-243 1057 21	mt=102,103,104,105,10 mt=102,103,104,105,10 mt=102,103,104,105,10 mt=102 p=544 resoluces p=3 2584 erdif/b=1v mat 1263 p=544 resoluces p=3 258 erdif/b=1v mat 1263 p=544 resoluces p=3 258 erdif/b=1v mat 1263 erdif/b=1v mat 1265 erdif/b=1v mat 1265 erdif/b=1v mat 1265 erdif/b=1v mat 1265 erdif/b=1v mat 1265 erdif/b=1v mat 1265 erdif/b=1v mat 1365	5,107 up 5,107 up c f-Ve-m(1 c f-Ve-m(1 up k f-1/e-m(1 up up p-3 225k p3 225k	chited 10 chited 10 chited 10 chited 10 chited 10 chited 10 chited 10 chited 10 chited 10 chited 10 chited 10 chited 10 chited 10 chited 10 chited 10 chited 10	/15/89 /15/89 /15/89 /15/89 /15/89 /15/89 /15/89 /15/89		rccccccccccc	63154 63155 64155 92254 92256 92256 92257 94259 94240 94241 94241 94241 94241 94241
su-154 su-155 gd-155 u-254 103 sig urentur-235 u-236 1163 sig urentur-238 nepturiur-239 plutoniur-249 plutoniur-249 plutoniur-241 plutoniur-242 sm-241 1056 si sn-243 1057 21 curiur-242	mt=102,103,104,105,10 mt=102,103,104,105,10 mt=102 pr5-4 resolutes p-3 258 erdif/b-1v mat 1261 pr5-4 resolutes p-3 258 erdif/b-1v mat 1262 erdif/b-1v mat 1263 pr5-4 resolutes p-3 258 erdif/b-1v mat 1266 erdif/b-1v mat 1266 erdif/b-1v mat 1266 erdif/b-1v mat 1266 erdif/b-1v mat 1266 erdif/b-1v mat 1266 erdif/b-1v mat 1266 erdif/b-1v mat 1266 erdif/b-1v mat 1266 erdif/b-1v mat 1162 erdif/b-1v mat 1162 erdif/b-1v mat 1162	5,107 up 5,107 up 6,107 up 6,1-10-m(1 1,- 1,- 1,- 1,- 1,- 1,- 1,- 1,- 1,- 1,	chited 10 chited 10	/15/89 /15/89 /15/89 /15/89 /15/89 /15/89 /15/89 /15/89		KKKKKKKKKKKK	63154 63155 64155 9224 9225 9225 9228 9228 9228 9229 9229 9220 92241 92241 92241 92243
su-154 su-155 gd-155 u-234 10/3 sig u-236 11/3 sig u-236 11/3 sig u-238 10/50 si plutaniun-239 plutaniun-249 plutaniun-241 plutaniun-242 sm-2/3 10/57 21 curiun-244 tape copy us	mt=102, 103, 104, 105, 10 mt=102, 103, 104, 105, 10 mt=102 pr5-4 readless p-3 285k erch/b-1v mst 1261 pr5-4 readless p-3 285k erch/b-1v mst 1262 erch/b-1v mst 1263 pr5-4 readless p-3 285 erch/b-1v mst 1265 erch/b-1v mst 1266 erch/b-1v mst 1266 erch/b-1v mst 1266 erch/b-1v mst 1161 pr5-4 readless 218 tp st f-1/er mst 1162 erch/b-1v mst 1164 erch/b-1v mst	5,107 up 5,107 up c f-Ve-m(1.* c f-Ve-m(1.* k f-1/e-m(1.* up p-3 225k p-3 225k p-3 225k p-3 225k	chited 10 chited 10 chited 10 chited 10 5) chited 10 5) chited 10	/13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89	· m	EGEGEGEGEGEG	63154 63155 64155 92254 92256 9226 9226 9228 9229 94240 92341 92324 92344
su-154 su-155 gd-155 u-234 10/3 sig ureniun-235 u-236 11/3 sig ureniun-235 pp. 238 10/50 si plutoniun-240 plutoniun-240 plutoniun-241 plutoniun-241 plutoniun-241 plutoniun-242 sm-243 10/57 21 curiun-244 tape copy us	mx=102,103,104,105,10 mx=102,103,104,105,10 mx=102,103,104,105,10 mx=102 p=5-4 resoluces p=3 258 erdi/b=1v mat 1262 erdi/b=1v mat 1263 p=5-4 resoluce p=3 258 erdi/b=1v mat 1264 erdi/b=1v mat 1266 erdi/b=1v mat 1266 erdi/b=1v mat 1266 erdi/b=1v mat 1266 erdi/b=1v mat 1266 erdi/b=1v mat 1266 erdi/b=1v mat 1266 erdi/b=1v mat 1266 erdi/b=1v mat 1161 p=5-4 resoluces 218-pp 8 pp wt f=1/e-m 0505/6 erdi/b=1v mat 1162 erdi/b=1v mat 1266 erdi/b=1v mat 1263 erdi/b=1v mat 1263 erdi/b=1v mat 1263 erdi/b=1v mat 1263 erdi/b=1v mat 1263 erdi/b=1v mat 1263 erdi/b=1v mat 1263 erdi/b=1v mat 1263 erdi/b=1v mat 1263 erdi/b=1v mat 1263 erdi/b=1v mat 1263 erdi/b=1v mat 1263 erdi/b=1v mat 1263 erdi/b=1v mat 1263 erdi/b=1v mat 1264 erdi/b=1v mat 1264 erdi/b=1v mat 1264 erdi/b=1v mat 1264 erdi/b=1v mat 1265 erdi/b=1v mat 1264	5,107 up 5,107 up 5,107 up 6,1-1/e-m(1 4,1 4	chated 10, chated 10,	/13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89		- FREEFEREEFE	63154 63155 64155 92254 92256 9226 9227 9228 9227 9428 9429 94241 94242 95241 95244 95244
su-154 su-155 gd-155 u-254 1033 sig urentus-235 u-261 163 sig urentus-238 reptuntus-239 pu-238 1050 si pitumitus-239 pitumitus-249 pitumitus-241 pitumitus-242 sm-241 1056 si sm-263 1057 21 curitus-244 tape copy us 1 xx xx sss	mt=102,103,104,105,10 mt=102,103,104,105,10 mt=102 pr5-4 resulters p-3 258 ertif/b-iv mat 1261 pr5-4 resulters p-3 258 ertif/b-iv mat 1262 ertif/b-iv mat 1263 pr5-4 resulters p-3 258 ertif/b-iv mat 1266 ertif/b-iv mat 1266 ertif/b-iv mat 1266 ertif/b-iv mat 1266 ertif/b-iv mat 1161 ertif/b-iv mat 1162 ertif/b-iv mat 1162 ertif/b-iv mat 1163 ertif/b-iv mat 1266 ert	5,107 up 5,107 up c f-Ven(1 c f-Ven(1 k f-Ven(1 up p3 225k p3 225k p3 225k up p3 125k	chated 10, chated 10, chated 10, 5) whated 10, chated 1	/13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89	m	EEFFEFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	63154 63155 64155 9224 92256 92286 9228 9228 9429 9420 94241 94241 94242 95241 95244 95244
su-154 su-155 gd-155 u-254 10/3 sig urentur-255 u-256 11/3 sig urentur-235 nepturiur-238 nepturiur-239 plutoniur-239 plutoniur-249 plutoniur-241 plutoniur-242 sm-241 10/5 si sm-2/3 10/7 21 curiur-244 0 tape copy us 1 xx xx sss xx xx sss xx xx sss	mt=102,103,104,105,10 mt=102,103,104,105,10 mt=102 pr5-4 newlacs p-3 258 endf/b-1v mnt 1261 pr5-4 newlacs p-3 258 endf/b-1v mnt 1262 endf/b-1v mnt 1263 pr5-4 newlacs p-3 258 endf/b-1v mnt 1263 endf/b-1v mnt 1265 endf/b-1v mnt 1265 endf/b-1v mnt 1265 endf/b-1v mnt 1265 endf/b-1v mnt 1265 endf/b-1v mnt 1161 pp5-4 newlacs 218 pp endf/b-1v mnt 1162 endf/b-1v mnt 1265 endf/b-1	5,107 up 5,107 up 6,107 up 6,107 up 6,107 up 6,108 m 6,108 m 7,108 m 8,108 m 8	chated 10, chated 10,	/13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89	m	HEED ERFERERERERERERERERERERERERERERERERERER	63154 63155 64155 92234 92256 9228 9228 9429 9429 94240 94241 94242 95241 94242 95241 96244 p mm mm
eu-154 eu-155 gd-155 u-234 10/3 eig urenium-235 u-236 1163 eig urenium-236 neptunium-237 pu-238 1050 ei plutonium-247 plutonium-247 plutonium-242 em-243 1057 ei em-243 105	mt=102,105,104,105,10 nt=102,105,104,105,10 nt=102,105,104,105,10 nt=102,105,104,105,10 nt=102,105,104,nt 1261 erdif/b-1v mat 1262 erdif/b-1v mat 1263 pp544 nsedacs p-3 2254 erdif/b-1v mat 1264 erdif/b-1v mat 1266 erdif/b-1v mat 1266 erdif/b-1v mat 1266 erdif/b-1v mat 1266 erdif/b-1v mat 1266 erdif/b-1v mat 1266 erdif/b-1v mat 1266 erdif/b-1v mat 1266 erdif/b-1v mat 1265 erdif/b-1v m	5,107 up 5,107 up 5,107 up 6,107 up 6,107 up 6,107 up 6,107 up 7,108 up 7,225k 7,008 7,108	chited 10 chited 10 chited 10 5) chited 10 chi	/13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89	m i	#### 5666666666666666666666666666666666	63154 63155 64155 92234 92236 92236 92236 94239 94240 94241 94242 95241 95241 95242 95244 95244 95244 95244 95244 95244 95244 95244 95244 95244 95244 95244
su-154 su-155 gd-155 u-234 103 sig urentur-235 u-236 1163 sig urentur-238 neptuntur-238 pputantur-239 piutantur-239 piutantur-241 piutantur-24	mt=102,103,104,105,10 mt=102,103,104,105,10 mt=102,103,104,105,10 mt=102,105,104,105,10 mt=102,105,104,mt 1261 erdif/b-1v mat 1262 erdif/b-1v mat 1263 pp544 resedees p-3 2284 erdif/b-1v mat 1264 erdif/b-1v mat 1266 erdif/b-1v mat 1267 erdif/b-1v	6,107	chited 10 chited 10 chited 10 5) chited 10 chi	/13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89	E E E	4444444 221 221 221 221 221 221 221 221	63154 63155 64155 92234 92236 92236 92238 92239 94240 94240 94242 95241 95241 95244 p mm mm mm pp mm mm mm
au 154 au 155 gd 155 ur 254 1003 a ig urentur 255 ur 261 163 a ig urentur 275 ur 276 1163 a ig urentur 278 put 278 1050 a i put 278 1050 a i put 278 1050 a i put 278 1050 a i put 278 1050 a i put 278 1050 a i put 278 1050 a i an 273 1057 21 cur iur 274 0 tapa copy us 1 xx xx xx xx xx xx xx xx xs xx xx xs xx xx ss	mt=102,103,104,105,10 mt=102,103,104,105,10 mt=102,103,104,105,10 mt=102,105,104 mt=1243 p=5-44 maxilacs p=3 2254 p=5-44 maxilacs p=3 2254 p=5-44 maxilacs p=3 225 p=5-44 maxilacs p=3 225 p=5-44 maxilacs p=3 225 p=5-44 maxilacs p=3 225 p=5-44 maxilacs 218 pp mt=1265 p=147-b=14 max 1265 p=147-b=14 max 1265 p=147-b=14 max 1265 p=147-b=14 max 1162	6,107	chated 10, chated 10,	/13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89		######################################	63154 63155 64155 92234 92235 92235 92236 93237 94240 94241 94242 95241 95241 95241 95244 95244 95244 95244 95244 95244 95244 95244 95244 95244 95244 95244 95244 95244 95244 95244
au 154 au 155 gd 155 ur 254 1003 a ig urentur 255 ur 261 163 a ig urentur 275 ur 276 1163 a ig urentur 278 put 278 1050 a i put 278 1050 a i put 278 1050 a i put 278 1050 a i put 278 1050 a i put 278 1050 a i put 278 1050 a i an 273 1057 21 cur iur 274 0 tapa copy us 1 xx xx xx xx xx xx xx xx xs xx xx xs xx xx ss	mt=102,103,104,105,10 mt=102,103,104,105,10 mt=102 pr5-4 newlacs p-3 250 ercif/b-1v met 1261 pr5-4 newlacs p-3 250 ercif/b-1v met 1262 ercif/b-1v met 1262 ercif/b-1v met 1263 pr5-4 newlacs p-3 253 ercif/b-1v met 1265 ercif/b-1v met 1265 ercif/b-1v met 1265 ercif/b-1v met 1265 ercif/b-1v met 1265 ercif/b-1v met 1265 ercif/b-1v met 1161 pr5-4 newlacs 218rpp 8 up wt f-1vem 10506 ercif/b-1v met 1162 ercif/b-1v met 1162 ercif/b-1v met 1163 pr5-4 newlacs 218rpp 8 up wt f-1vem 10506 ercif/b-1v met 1162 ercif/b-1v met 1163 ercif/b-1v met 1163 ercif/b-1v met 1163 ercif/b-1v met 1163 ercif/b-1v met 1163 ercif/b-1v met 1163 ercif/b-1v met 1163 ercif/b-1v met 1163 ercif/b-1v met 1163 ercif/b-1v met 1163 ercif/b-1v met 1163 ercif/b-1v met 1163 ercif/b-1v met 1265 ercif	15,107	chited 10 chited	/13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89	33333	######################################	63154 63155 64155 92234 92235 92236 92236 94239 94239 94240 94241 94242 95241 95241 95241 95241 95241 95241 95244 P mm mm mm pp mm mm mm pp mm mm mm
au 154 au 155 gd 155 ur 254 1003 a ig urenium 255 ur 256 1163 a ig urenium 256 ur 256 1163 a ig urenium 278 par 258 1050 a i plutanium 249 plutanium 241 plutanium 241 plutanium 242 am 241 1056 a ii am 263 1057 2 i cur ium 244 0 tapa copy us 1 xx xx ss xx xx ss xx xx ss xx xx ss xx xx ss xx xx ss xx xx ss xx xx ss xx xx ss xx xx ss xx xx ss xx xx ss xx xx ss xx xx ss	mt=102,105,104,105,10 mt=102,105,104,105,10 mt=102,105,104,105,10 mt=102,105,104,105,10 mt=102,105,104 mt 1261 erdif/b-1v mt 1262 erdif/b-1v mt 1262 erdif/b-1v mt 1263 erdif/b-1v mt 1263 erdif/b-1v mt 1264 erdif/b-1v mt 1266 erdif/b-1v mt 1267 erdif/b-1v mt 12	######################################	chated 10, chated 10,	/13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89		######################################	63154 63155 64155 92234 92235 92235 92236 93237 94240 94241 94242 95241 95241 95241 95244 95244 95244 95244 95244 95244 95244 95244 95244 95244 95244 95244 95244 95244 95244 95244
su-154 su-155 gd-125 u-234 103 sig urentur-235 u-236 1163 sig urentur-235 nepturtur-238 nepturtur-239 plutoniur-240 plutoniur-240 plutoniur-241 plutoniur-242 sm-241 1056 si sn-263 1057 41 cur-kur-244 0 tepe copy us 1 xx	mt=102,103,104,105,10 mt=102,103,104,105,10 mt=102,103,104,105,10 mt=102,103,104,105,10 mt=102,103,104,105,10 mt=104,104 mt=1261 mt=104,104 mt=1262 mt=104,104 mt=126	5,107	chited 10 chited	/13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89 /13/89	33333		63154 63155 64155 92234 92235 92236 92236 94239 94239 94240 94241 94242 95241 95241 95241 95241 95241 95241 95244 P mm mm mm pp mm mm mm pp mm mm mm

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Ó				900000000000 900000000000 90 90 90 90 90		######################################	((() () () () () () () () () () () () (60000000000000000000000000000000000000	

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program verification information
                                                   code system: scale version: 4.2
                                                program c0x001
                                         creation date: 04/27/95
                                                library: /neutronics/scale/exe
                                     this is not a scale configuration controlled code
                                                jobneme: devis
                                     date of executions 02/16/96
                                     time of execution: 10:00:45
                          560 d, sas2h: beboock wilcox 15x15, 3.00x1X, 20gxc/mtu burn high temp
         •1q array has
                             1 extries.
                            5 entries.
          1q array has
                            10 entries.
          20 array has
                            12 entries.
         3d array has
         4q array has
5q array has
                             9 entries.
                            12 entries.
Odirect access unit 9 requires 12 blocks of length 704 for cross section mixing.
                          560 d, ses2h: beboock wilcox 15x15, 3.00x1X, 20g-c/mtu burn high temp
Ogeneral problem description data block
                                    orneral problem data
                                                        ian quadrature order
 ige 1/2/3 = plane/cylinder/sphere
                                                        iact order of scattering
levt 0/1/2/3/4/5/6-0/k/skha/c/z/r/h
lim irrer iteration maximum
ion outer iteration maximum
 iza number of zones
 in runber of special intervels
                                                                                                    20
 ibl 0/1/2/3 = vecum/refl/per/shite
 ibr right burdary condition
                                                        fclc -1/0/n-flat res/en/opt
mox runber of mixtures
                                                        ith Q/1 = forward/adjoint
ms mixing table length
                                             85
                                             Z7
                                                        iflu not usedkalusys ugtab
 ign runber of energy groups
                                                        iprt -2/-1/0/meixture xxxc print idi 0/1/2/3-mo/prt nd/pch n/both ipbt -1/0/1-mone/fine/all bal. prt
                                             27
 ring number of reutron groups
                                                                                                    53
reg runber of games groups
ifty runber of first thermal group
                                              Ō
                                             15
```

special options

```
ign 0/1/2 diff. coef. param
                                                                                                n
ifg 0/1 = none/weighting calculation
ion volumetric sources (Q/n=no/yes)
                                                      idin 0/1 = none/density factors 38*
ipm boundary sources (Q/1770/yes)
ifn Q/1/2 = input 33*/34*/use last
                                                      isz O/n = nore/n activities by zone
                                                     iai O/1-nune/activities by interval
                                           53
itus assimum time (mirutes)
id:1 0/1/2/3=ro/ssect/srce/flux--out
                                                     ifct (V1=ro/yes upscatter scaling ip/t (V1/2=ro/k/alpha peresetric srch
                                                                                                ŏ
                                                     isen outer iteration acceleration
                                                                                                 ۵
isk broad group fluxes
ibin activity data unit
                                                     ritrd band rebaln parameter
ibkl 0/1/2 buckling geometry
                                     ueighting data (ifg=1)
icon -1/0/i=cell/zone/region weight
                                                      intf total yeart pen in brd go tables
                                                     ndsf pan gra or file number
nusf table length or max order
                                           27
ignif number of broad groups
to 0/10/20/30/40 0/c/e/ac/a
                                           -2/-1/0/magted assect print
                                           -Ž
                                                     mean extra 1-d x-sect positions
     -1/n anish xsect print
                                   floating point parameters
                                                                                        .00000E+00
ens overall convergence
                                  1.0000E-04
                                                          cyl/pla ht for buckling
                                                     핲
                                  1.0000E-04
                                                           plane depth for buckling
                                                                                        .0000E+00
ptc point convergence
                                  1,00000=+00
                                                                                        .00000=+00
    romelization factor
                                                           void streaming correction
                                                     VSC.
     eigenvalue guess
                                   .00000=+00
                                                           iox=1/2--k/alcha
                                                                                       1,0000E+00
EV
                                                                                     1.0000E-03
    eigenvolue modifier
                                   00+300000
                                                     ed evidence aps for search 1.0000E-03 
organization and for search 7.5000E-01
     buckling factor=1.420892
                                   420895+00
    this case will require
                                   25 locations for mixing
    this case has been allocated 200000 locations
                         560 d, sas2h: baboock wilcox 15x15, 3.00x1X, 20g-ci/mtu burn high temp
       13q array has
                          65 entries.
       14d array has
                          65 entries.
       15q array has
                          & entries.
                                        data block 2 (mixing table, etc.)
     rucl ides
                                                              mixing table
                                                                                                             ectra
      on tage
                  identification
                                                   mixture
                                                              concorent
                                                                             atom density
                                                                                                          xsect id's
                                                                9225
                                                                             4.90251E-04
                                                                             4.8/73E-05
          1001
                                                                92234
         5010
                                                                92236
                                                                             3.98239E-05
         5011
                                                                92253
                                                                             2.1918EE-02
         80%
                                                                 8016
                                                                             4.55359E-02
                                                                    6
                                                                             2.09710E-02
        36083
                                                                36083
                                                                             9.77039E-07
                                                                36085
                                                                             4.7075<del>(E-</del>07
        36065
                                                                38030
39089
        32090
                                                                             1,061918-05
        39089
40095
                                                                             7.90165E-06
                                                                42095
   11
                                                                             9.68029E-06
   12
        40094
                                                                40075
                                                                             8.21428E-05
   ซี
        40095
                                                                40094
                                                                             1.278/3E-05
                                                                             2.0759XE-06
        40B02
                                                                40095
                                                                41094
   15
        41094
                                                                             5.AB777E-12
   16
        42095
                                                                             1.24470E-05
        43099
                                                                4510B
                                                                             6.47551E-06
   892223345A7
        44101
                                                                45105
                                                                             1.899/25E-0B
        44105
                                                                44101
                                                                             1.10565E-05
        45103
                                                                44106
                                                                             1.65007E-05
        45105
                                                                46105
                                                                             3.8543E-06
        46105
                                                                4610B
                                                                             9.3052/E-07
        46108
                                                                47109
                                                                             6.68335E-07
        47109
                                                                51124
54131
                                                                             1.62036E-10
        51124
                                                                             5.77241E-06
        X131
X12
                                                                SIZ
                                                                             1.00606E-05
                                                                5415
                                                                             6.65420E-09
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	28 \$415 29 \$416 30 \$513 31 \$513 31 \$513 32 \$515 33 \$5157 33 \$5157 34 \$613 35 \$7137 34 \$613 37 \$613 38 \$613 39 \$613 39 \$613 40 \$6147 42 \$6147 42 \$6147 43 \$6148 44 \$6247 44 \$6219 44 \$6219 45 \$6215 50 \$615 50	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	KENDER STATES OF	2.10/35E-06 4.24/35E-07 6.681/4E-06 1.3190/E-06 8.151/4E-06 1.3090/E-06 3.800/4E-07 5.800/4E-06 1.0600/E-06 3.14/4ZE-07 6.6818E-07 6.6818E-07 6.6818E-07 6.6818E-07 6.6818E-07 6.800/2E-08 1.315/4E-08 4.315/4E-08 4.315/4E-08 4.315/4E-08 4.315/4E-08 1.35/4E-08 1.35/4	igh temp	
0	po energy lethergy selfitted bundaries bundaries velocities velocities 1 2,0000±07 -6,98147±01 4,6581±09 2 6,4340±06 4,4698±01 2,8873±09 3 3,0000±06 1,28740±00 1,75473±09 5 1,4000±06 1,96611±00 1,4653±09 6 9,0000±05 3,2489±00 4,0542±09 7 4,0000±05 3,2489±00 4,0542±09 7 4,0000±05 3,2489±00 4,7745±08 9 1,7000±06 6,37735±00 1,0552±08 9 1,7000±06 6,37735±00 1,0552±08	eters broad gp numbers 1 2 3 4 5 6 7 8 9	calc 50 0 0 0	grap bard 1 2 . 3 4 5 6 7 8 9	right albata 1.000000+00 1.000000+00 1.00000+00 1.00000+00 1.00000+00 1.000000+00 1.000000+00	left albedo

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    10 3.0000E+03 8.11173E+00 4.82124E+07 ·
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                                                                                               1.0000E+00
    11 5.5000E+02 9.80818E+00 2.05946E+07
                                                        11
                                                                                     12
                                                                                                1.0000E+00
    12 1.0000E+02 1.15129E+01 1.01086E+07
                                                        12
                                                                                     13
    13 3,0000E+01 1,27169E+01 5,69399E+06
                                                        13
                                                                                                1.0000E+00
        1.0000E+01 1.38155E+01 3.2057E+06 3.0699E+00 1.5003E+01 2.10601E+06
                                                                                               1.00000E+00
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                                                                                               1.0000E+00
                                                        15
        1.77000E+00 1.55471E+01
                                                                                                1.00000E+00
                                     1.705225+06
                                                        16
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                                                                                                1.0000E+00
        1.2999E+00 1.58557E+01 1.52545E+06
                                                        17
    17
                                                                                                1.00000E+00
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        1.12999E+00 1.59999E+01 1.42867E+06
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                                                                                                1.0000E+00
        1,0000E+00 1,61181E+01 1,31002E+06
        8.0000E-01 1.63412E-01 9.0580E-05
4.0000E-01 1.70544E-01 8.17974E-05
3.2500E-01 1.7050E-01 4.8593E-05
2.2500E-01 1.7050E-01 4.8593E-05
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22
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8
        9.9999E-02 1.84207E+01 3.5776/E+05
        5.0000E-02 1.9113E+01 2.71875E+05
                                                                                                1.0000E+00
    2
                                                                                               1.0000E+00
                                                        26
        3.0000E-02 1.96247E+01 1.87283E+05
        1.0000E-02 2.07253E+01 8.88201E+04
                                                        27
                                                                                               1.0000E+00
        1.0000E-05 2.76310E+01
                          560 d. seeth; bebook wilcox 15x15, 3.00x1X, 20p.d/mtu burn high temp
                                                                               and starte constants
                       arder p(l)
                                         activity table
           mixture
                                                                      weights directions refl direc
          by zone
                        by zone
                                      metlino. reaction
                                                                                                               WE X COS
                                                                             -2.7900/E-01
                                                                                                                   0
                                                                       O 
                                                                   5.05 K3E-02 -1.972EE-01
                                                                                                             -9.98548E-05
                                                                   5.06 KNE-02 1.97284E-01
                                                                                                              9.98548E-05
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                                                                             -6.04419E-01
                             3
                                                                        0
                                                                   5.5973E-02 -5.58410E-01
5.5973E-02 -2.31301E-01
                                                                                                             -3.10/50E-02
                                                                                                     8
                                                                                                             -1,25575E-02
                                                                   5.5955E-02 2.31301E-01
5.5955E-02 5.58410E-01
                                                                                                              1,255/25 02
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                                                                                                              3.10/50E-02
                                                                        0 -8.50774E-01
                                                                                                                   n
                                                                                                              4.29XBE-02
                                                                   5.228/4E-02 -8.2178/E-01
                                                                                                    15
                                                                   5.2284E-02 -6.0158E-01
5.2284E-02 -2.2019E-01
                                                                                                             -3.1637E-02
    はおなななななない
                                                                                                             -1.1512E-02
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                                                                   5.2264E-02 2.20196E-01
                                                                                                    12
                                                                                                              1.15128E-02
                                                                   5.2284E-02 6.0158EE-01
                                                                                                              3.14537E-02
                                                                                                    11
                                                                   5.2284E-02 8.2178/E-01
                                                                                                    10
                                                                                                              4.2065E-02
                                                                               -9.83032E-01
                                                                                                                   0
                                                                   4.5350E-02 -9.64143E-01
4.5350E-02 -8.17361E-01
                                                                                                              -4.37099E-02
                                                                                                             -3.7055E-02
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                                                                                                             -2.47597E-02
                                                                   4.5350E-02 -5.46143E-01
    19
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                                                                                                             -8.6044F-05
                                                                   4.5356E-02 -1.91780E-01
    20 21
                                                                   4.53552-02 1.91780E-01
4.53552-02 5.46143E-01
                                                                                                              8.6944E-03
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                                                                                                              2.47597E-02
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    . ŽŽ
                                                                   4.5350E-02 8.17561E-01
                                                                                                              3.70<del>222E-</del>02
                                                                                                    18
    23
                                                                   4.53353E-02 9.64143E-01
                                                                                                              4.37077E-02
Occupations for p( 3) scattering
Oangl set 1
                        set 2
                                                     set 4
                                                                    set 5
     1 - 2.700/E-01 8.855/E-01 6.76/E-02 - 6.169/E-01 - 1.7170/E-02
2 - 1.9726/E-01 8.855/E-01 .00000-00 - 4.36228-01 1.2141/E-02
     2 -1.972845-01 8.85256-01
                                       .0000E+00 4.3622EE-01 -1.2141E-02
     3 1,97289E-01 8,8325E-01
     4 -6.0419E-01 4.52016E-01 3.1637E-01 -8.0435E-01 -1.7456E-01 5 -5.58410E-01 4.52016E-01 2.2571/E-01 -7.452016-01 -6.66028E-02
     6 -2.31301E-01 4.52016E-01 -2.25713E-01 -3.0784E-01 1.61276E-01
     7 2.31301E-01 4.52016E-01 -2.2571E-01 3.0784E-01 -1.61276E-01 8 5.58410E-01 4.52016E-01 2.2571E-01 7.43201E-01 6.6802E-02
     9 -8.50774E-01 -8.5725E-02 6.2643E-01 -1.98454E-01 -4.8655E-01
    10 -8.2178/E-01 -8.5725/E-02 5,428/E-01 -1.9169/E-01 -3,442/SE-01
    11 -6.01588E-01 -8.5725E-02 .0000E+00 -1.40830E-01 3.4424E-01
    12 - 2.2019/E-01 - 8.57/25/E-02 - 5.426/E-01 - 5.136/3E-02 3.443/SE-01
```

```
13 2.2019/E-01 -8.5725E-02 -5.426/E-01 5.136/3E-02 -3.4426/E-01
    14 6.015BEE-01 -8.5725E-02
                                     .00000E+00 1.40830E-01 -3.44245E-01
    15 8.2178/E-01 -8.5725E-02 5.428/E-01 1.9169/E-01 3.4/2/E-01 16 -9.8305E-01 -4.49528E-01 8.3485E-01 5.0070E-01 -7.51005E-01
    17 -9.64143E-01 -4.4952E-01 7.73181E-01 4.91083E-01 -6.24438E-01
    18 -8.17361E-01 -4.49529E-01 3.20262E-01 4.16520E-01 1.46514E-01
    19 -5.46/45-01 -4.49528-01 -3.20628-01 2.78176-01 7.36578-01 20 -1.917808-01 -4.49528-01 -7.731818-01 9.76698-02 4.17258-01 21 1.917808-01 -4.49528-01 -7.731818-01 -9.76598-02 -4.17258-01 22 5.46/48-01 -4.49528-01 -3.20628-01 -2.78176-01 -7.36578-01
    25 8.17361E-01 -4.4522E-01 3.20262E-01 -4.16522E-01 -1.4654E-01 24 9.6443E-01 -4.4522E-01 7.73181E-01 -4.91053E-01 6.26438E-01
                                                                     volumes
                         mid pts
                                                       arces
                                                                                   dens fact
                                                                                                 ractius mod
                                                                                                                  spec(int)
1 int redii
                                      zone no.
                       1.29351E-02
              0
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                                                                   2,10909E-03
                                                                                  1.0000E+00
     2 2.59102E-02 4.33405E-02
3 6.0770E-02 8.75100E-02
                                                     1.62798E-01 9.47318E-03
                                                                                  1,0000E+00
                                                                                                      0
                                                    3.81835E-01 2.94045E-02
                                                                                  1.0000E+00
                                                                                                      0
      4 1.1424/E-01 1.74155E-01
                                                    7.178/8E-01 1.3110/E-01
                                                                                  1.0000E+00
                                                                                                      0
                                                     1,4705E+00 2,2129E-01
     5 2.34061E-01 2.93967E-01
                                                                                  1.0000E+00
     6 3.53873E-01 3.80612E-01
                                                    2.223/SE+00 1.27890E-01
                                                                                 1.0000E+00
                                                    2.55946000 9.30425E-02 1.0000E+00
2.77850E+00 7.41004E-02 1.0000E+00
     7 4.07351E-01 4.24781E-01
        4.42212E-01 4.55167E-01
4.68122E-01 4.68814E-01
                                                     2.9413DE+00 4.07946E-03
                                                    2.9500E+00 1.1698E-02
2.9748E+00 1.1796E-02
    10 4.67507E-01 4.71481E-01
        4.73/5/E-01 4.75/31E-01
4.77/05E-01 4.7809E-01
                                                                                       n
                                                     2.99962E+00 4.16023E-03
                                                                                       ۵
    13 4.78790E-01 4.83159E-01
                                                     3.0835+00 2.6524E-02 1.0000E+00
    14 4.87521E-01 4.97787E-01
15 5.1243E-01 5.24703E-01
16 5.37362E-01 5.41731E-01
                                                     3.06323E+00 7.82768E-02
                                                                                  1,0000E+00
                                                     3.21979E+00 8.21777E-02
                                                                                  1.0000E+00
                                                     3.37634E+00 2.974Z7E-02 1.0000E+00
                                                     3,43125e+00 5,15631e-02 1,0000E+00
    17 5.46100E-01 5.53513E-01
                                                                                  1.0000E+00
        5,60926E-01 5,70900E-01
                                                     3.5240E+00 7.15548E-02
    19 5,80874E-01 5,96175E-01
                                                    3.64774E+00 1.14629E-01 3.84201E+00 2.78169E-01
                                                                                 1,0000E+00
        6.11479E-01 6.45757E-01
6.8034E-01 7.14319E-01
                                                                                 1.0000E+00
    20
                                                     4.27278E+00 3.07702E-01 1.0000E+00
                                                     4.7054E+00 1.4687SE-01 1.0000E+00
        7.489XE-01 7.638XE-01
                                                    4,89582E+00 9.89116E-02 1,0000E+00
    25 7.79195E-01 7.89167E-01
    24 7.99141E-01 8.0554E-01
                                                     5.02115E+00 7.51357E-02 1.0000E+00
                                                     5.11431E+00
    25 8.1396E-01
  elapsed time .00 min.
1 outer irrer 1 - balance eigenvalue 1 - source 1 - scatter 1 - upscat
                                                                                             scenda
                                                                                           parameter
                                                                                                              (min)
                                                  ratio
                                                                ratio
    iter iters
          134 1.1743/E-05 1.07271E+00 -8.01027E-02 1.0000E+00 -2.70213E-02
                                                                                           .0000E+00
           209 -9.5205/E-05 1.08075E-00 -1.4410EE-03 -8.4285EE-03 -3.60598E-03
                                                                                            .0000E+00
                                                                                                              2000
          29 1,26/95E-05 1,0815ZE-00 -2,119ZEE-04 -1,04/95E-05 -7,905ZE-04
                                                                                                              0000.
                                                                                           .0000E+00
           314 3.15025E-06 1.08185E+00 -4.38725E-06 -2.3586E-04 -1.6/822E-04
                                                                                            .0000E+00
                                                                                                              _0167
          3/3 -1,4/5/7E-05 1,08211E+00 -9,7/33/4E-05 -4,976/5E-05 -3,28620E-05
                                                                                           .0000E+00
                                                                                                              .0167
                                                                                                            mak. flux insf mak. scale coarse
                                                                                grp to grp inner ⊯id
                                                                                             iters int.
                                                                                                            difference int.
                                                                                                                                    factor
                                                                                                           1.8000E-08
1.97450E-08
1.7026E-08
                                                                                                                                1.0000E+00
                                                                                                                                 1,000000=00
                                                                                                                                 1.0000E+00
                                                                                                           1.477-8E-08
                                                                                                                                1.0000E+00
                                                                                                           8.77265-09
                                                                                                                                 1.0000E+00
                                                                                                           3.09274E-09
                                                                                                                                 1.00000E+00
                                                                                                           1.8/98/E-09
                                                                                                                                 1.0000E+00
                                                                                                                                 1.0000E+00
                                                                                                           1.01951E-09
                                                                                                                                 1.0000E+00
                                                                                                            1.968/Œ-09
                                                                                                                            %
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                                                                                          10
                                                                                                            1.750B/E-09
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                                                                                          11
                                                                                                           1.783335-09
                                                                                                                            24
                                                                                                                                 1.0000E+00
                                                                                                                            24
                                                                                                                                 1.0000E+00
                                                                                                       24 3.284 E-09
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24 4.40522E-09
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                                                                                                                                                                                                                                                                                         24 1.0000E+00
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                                                                                                                                                                                                                                                  3.7911歪-05
                                                                                                                                                                                                                                                                                         24 9.99977E-01
                                                                                                                                                                                                                                                                                         24 9.99982E-01
                                                                                                                                                                                                                                                  4.698EE-05
                                                                                                                                                                                                                                                                                        24 9.99989E-01
24 9.99999E-01
24 9.99984E-01
                                                                                                                                                                                                                                        24 6.01809E-05
                                                                                                                                                                                                                                       18 2.16487E-05
24 5.91300E-05
                                                                                                                                                                                         1987888888
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                                                                                                                                                                                                                                                                                        24 9.99967E-01
                                                                                                                                                                                                         2222242
                                                                                                                                                                                                                                                                                         24 9.99X5E-01
                                                                                                                                                                                                                                        18 2.49877E-05
                                                                                                                                                                                                                                        24 4.22500E-05
                                                                                                                                                                                                                                                                                         24 9,999B9E-01
                                                                                                                                                                                                                                        24 1.98220E-06
                                                                                                                                                                                                                                                                                                   1,0000E+00
                                                                                                                                                                                                                                                   9.31992E-06
                                                                                                                                                                                                                                                                                         24 1.00001E+00
                                                                                                                                                                                                                                                                                         24 1,0000E+00
                                                                                                                                                                                                                                        24 1.63619E-05
1 1.06731E-05
                                                                                                                                                                                                                                                                                        24 9.9999XE-01
                                                                                                                                                                                         27
                                                                                                                                                                                                                                                                                        24 1.0000E+00
                                                                                                                                                                                                                                           2 4.91808E-06
                 6 370 -3.35889E-07 1.08199E+00 -2.18378E-06 -9.78602E-06 -6.6057E-05 .00000E+00
                                   final monitor
                                                     lantola 1.08199E+00
                                                                                                                             production/absorption 1.08199E+00
                                                                                                                                                                                                                                           angular flux on 16
                                                  .02 min.
         elapsed time
                                                    560 d, seeth; betook vilox 15x15, 3,00x1x, 20pd/mu burn hir redius int. midpoint area volum prod density 2,5700E-02 1,275E-02 ,0000E+00 1,275E-02 3,1653E-03 1,653E-03                                                               560 d, see2h; beboook wilcox 15x15, 3.00x15, 20pd/mtu burn high temp
   0 int. zone rurber
            ARGRANDED A
                                                       4.77405E-01 4.78008E-01 2.99962E+00 4.1602E-08
                                                                                                                                                                                             .0000E+00
                                                      4.76700-01 4.85159-01 3.08539-00 2.65265-02 4.87526-01 4.97827-01 3.08539-00 7.82746-02 5.12466-01 5.24703-01 3.21978-00 8.217776-02
                                                                                                                                                                                             .00000E+00
                                                                                                                                                                                             .000000=+00
                                                                                                                                                                                             .0000E+00
                                                       5.37362E-01 5.41737E-01 3.3763/E+00 2.97427E-02
                                                                                                                                                                                             .00000E+00
                                                      5.46100E-01 5.55613E-01 3.43125E+00 5.5661E-02 5.6092E-01 5.70900E-01 3.52440E+00 7.5543E-02
                                                                                                                                                                                             .00000E+00
                                                                                                                                                                                             .0000E+00
                                                       5.80874E-01 5.96179E-01 3.64774E+00 1.14629E-01
                                                                                                                                                                                             .0000E+00
                                                       6.1475E-01 6.4575SE-01 3.84201E+00 2.76169E-01 6.80054E-01 7.1431SE-01 4.27278E+00 3.07702E-01
                                                                                                                                                                                              .0000E+00
            82222X
                                                                                                                                                                                             -0000E+00
                                                      7.4550E-01 7.6550E-01 4.70554E-00 1.4657E-01 7.75155E-01 7.85167E-01 4.8556E-00 9.8514E-02 7.59141E-01 8.0654E-01 5.0215E-00 7.51557E-02 8.1356E-01 5.1431E-00
                                                                                                                                                                                             _00000E+00
                                                                                                                                                                                             .00000E+00
                                                              560 d. ses2h; bebook wilcox 15x15, 3,00x42, 20p-d/mtu burn high temp
  0 total flux
0 int. 10k
0 int. 10k
1 1.77256-01 1.38156-00 1.60596-00 1.041726-00 1.575976-00 3.05146-00 2.90546-00 2.08056-00
2 1.773196-01 1.38546-00 1.68426-00 1.041726-00 1.57596-00 3.05146-00 2.90516-00 2.08056-00
3 1.77256-01 1.38846-00 1.68426-00 1.041726-00 1.57596-00 3.05356-00 2.90516-00 2.08056-00
4 1.76856-01 1.32966-00 1.65786-00 1.68426-00 1.57586-00 3.05356-00 2.90516-00 2.08056-00
5 1.75836-01 1.32960-00 1.65786-00 1.69056-00 1.57586-00 2.90536-00 2.85526-00 2.07576-00
6 1.76436-01 1.30046-00 1.65786-00 1.00066-00 1.54756-00 2.90586-00 2.85526-00 2.07576-00
7 1.75686-01 1.20066-00 1.65786-00 1.00066-00 1.54756-00 2.90586-00 2.85526-00 2.07576-00
7 1.75686-01 1.20066-00 1.65786-00 1.00066-00 1.54756-00 2.90586-00 2.85526-00 2.07576-00
             8 1.72753E-01
                                                       1,281 DE+00 1,62217E+00 1,0067/E+00 1,52110E+00 2,92562E+00 2,8426/E+00
                                                                                                                                                                                                                                                           2.059735+00
                    1.7238E-01 1.27597E-00 1.61597E-00 1.00515E-00 1.51567E-00 2.91563E-00 2.85681E-00
                                                                                                                                                                                                                                                           2.059555+00
                                                       1.27499=100 1.61479=100 1.00246=100 1.51467=100 2.90394=100 2.803926=100
                                                                                                                                                                                                                                                           2.0<del>(B</del>(<del>(E+0</del>0)
                     1.72BE-01
                     1,71973-01 1,273/2+00 1,61273+00 1,01476+00 1,51328+00 2,911300+00 2,834/2+00 2,08176+00
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12 1.71870E-01 1.2783E-00 1.61178E-00 1.0008E-00 1.5123E-00 2.9097E-00 2.83353E-00 2.0079EE-00
                                        13 1,7167E-01 1,2709E+00 1,6096E+00 9,999EE-01 1,5105E+00 2,9062E+00 2,8096E+00 2,0076CE+00 1,7155E-01 1,2609E+00 1,6090E+00 9,99751E-01 1,5047E+00 2,8976E+00 2,8517E+00 2,0066E+00 1,7064E-01 1,2697E+00 1,5946E+00 9,9043E-01 1,4663E+00 2,8789E+00 2,8156E+00 2,0064E+00 1,9946E+00 1,9946
1.7152-01 1.2653-00 1.6002-00 9.95712-01 1.9672-00 2.8958-00 2.8558-00 2.0856-00 15 1.7652-01 1.2556-00 1.5962-00 9.86625-01 1.4656-00 2.8558-00 2.8558-00 2.0856-00 17 1.7002-01 1.2556-00 1.5962-00 9.86625-01 1.4656-00 2.85638-00 2.8558-00 2.08576-00 2.0856-00 17 1.7002-01 1.2556-00 1.59628-00 9.86625-01 1.4656-00 2.85638-00 2.85638-00 2.08576-00 17 1.7002-01 1.2556-00 1.59628-00 9.86625-01 1.4656-00 2.85638-00 2.85638-00 2.08576-00 17 1.7002-01 1.2556-00 1.59628-00 9.86625-01 1.4656-00 2.85638-00 2.85638-00 2.08576-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.08568-00 2.0
                                         1 8.45374-02 4.4058-02 1.2638-01 4.3123-01 1.11256-01 1.89182-01 6.9536-01 5.0536-01 3.4323-01 1.11256-01 1.89182-01 6.9536-01 5.0536-01 3.4323-01 1.11436-01 1.8973-01 6.9536-01 5.0536-01 4.84397-02 4.24376-02 1.26306-01 4.35126-01 1.11436-01 1.9806-01 6.9536-01 5.0536-01 4.84397-02 4.51976-02 1.26006-01 4.35126-01 1.12446-01 1.9806-01 6.9536-01 5.11670-01 5.854636-02 4.751976-02 1.28186-01 4.35126-01 1.15018-01 2.00427-01 7.13726-01 5.24536-01 6.86316-02 5.02506-02 1.2936-01 4.35126-01 1.17898-01 2.00427-01 7.24006-01 5.397276-01 7.846516-02 5.24536-02 1.35026-01 4.35126-01 1.20098-01 2.05026-01 7.24006-01 5.397276-01 7.8406-01 1.30098-01 2.05026-01 7.4406-01 5.05026-01 6.40008-01 1.20098-01 2.05026-01 7.4408-01 5.05026-01 6.40008-01 1.20098-01 2.75086-01 7.4408-01 5.05026-01 6.40008-01 1.20098-01 2.75086-01 7.4408-01 5.05026-01 6.40008-01 1.20098-01 2.75086-01 7.4408-01 5.05026-01 6.40008-01 1.20098-01 2.75086-01 7.4408-01 5.05026-01 6.40008-01 1.20098-01 2.75086-01 7.4408-01 5.05026-01 6.40008-01 1.20098-01 2.75086-01 7.4408-01 5.05026-01 6.40008-01 1.20098-01 2.75086-01 7.4408-01 5.75086-01 6.40008-01 1.20098-01 2.75086-01 7.4408-01 5.75086-01 6.40008-01 1.20098-01 2.75086-01 7.4408-01 5.75086-01 6.40008-01 1.20098-01 2.75086-01 7.4408-01 5.75086-01 6.40008-01 2.0508-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.75086-01 2.7
                                    7 8.855-02 5.256-02 1.31528-01 4.4008-01 1.2078-01 2.7568-01 7.5758-01 5.5088-01 9 8.78778-02 5.55185-02 1.31528-01 4.43028-01 1.25078-01 2.251852-01 7.5256-01 5.6088-01 10 8.77267-02 5.55185-02 1.31998-01 4.44178-01 1.2508-01 2.25189-01 7.59028-01 5.67208-01 18.77578-02 5.56788-02 1.32088-01 4.44578-01 1.2508-01 2.2568-01 7.60788-01 5.67208-01 12.87398-02 5.60788-02 1.32888-01 4.44578-01 1.2508-01 2.26688-01 7.60788-01 5.67208-01 12.87398-02 5.60788-02 1.32588-01 4.44578-01 1.2508-01 2.26688-01 7.60788-01 5.67208-01 13.87398-02 5.60788-02 1.32088-01 4.44578-01 1.2508-01 2.26688-01 7.60788-01 5.67208-01 13.87398-02 5.60788-02 1.3208-01 4.45088-01 1.25088-01 2.27588-01 7.60788-01 5.60788-01 13.87388-02 5.60788-02 1.32088-01 4.45088-01 1.25088-01 2.27588-01 7.60788-01 5.76588-01
                                    14 8.8066-02 5.7588-02 1.3386-01 4.4666-01 1.2676-01 5 8.6676-02 5.8266-02 1.33276-01 4.4766-01 1.2626-01 16 8.8336-02 5.9266-02 1.33276-01 4.48576-01 1.27266-01 17 8.9046-02 5.9266-02 1.34236-01 4.48576-01 1.27736-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2.308 KE-01 7.6772/E-01 5.75269E-01 2.3404/E-01 7.74681E-01 5.81469E-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2.3640/E-01 7.7907/E-01 5.8530/E-01 2.3526/E-01 7.8267/E-01 5.8536/E-01
                                         18 8.9259E-02 6.03X51E-02 1.3X665E-01 4.50175E-01 1.28527E-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2,40875E-01 7,88086E-01 5,94347E-01
                                         19 8.95419E-02 6.12874E-02 1.35141E-01 4.5125E-01 1.2967/E-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2,43936E-01 7,94526E-01 6,01029E-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2,4780E-01 8,08007E-01 6,10031E-01
                                         20 8.5501/E-02 6.26211E-02 1.35747E-01 4.52592E-01 1.31050E-01
                                         21 9.0755E-02 6.3756E-02 1.36172E-01 4.5353E-01 1.3200E-01 2.50746E-01 8.0756E-01 6.1767E-01
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22 · 9.0174/E-02 6.33219E-02 1.36197E-01 4.5356/E-01 1.32119E-01 2.51057E-01 8.1053/E-01 6.18391E-01 25 9.01057E-02 6.31279E-02 1.36079E-01 4.53270E-01 1.3189/E-01 2.5089E-01 8.0925/E-01 6.17274/E-01 24 9.00219E-02 6.28331E-02 1.35927E-01 4.52920E-01 1.31598E-01 2.47540E-01 8.0752/E-01 6.1568/E-01
 0 int. grp. 25 grp. 26 grp. 27
1 2.0917/E-01 1.25/65E-01 1.64760E-02
                      2 2.09027E-01 1.26407E-01 1.64770E-02
                      3 2.09545E-01 1.26908E-01 1.66308E-02 4 2.12277E-01 1.29414E-01 1.7526E-02
                     5 2.1907E-01 1.35560E-01 1.5055E-02 6 2.2657E-01 1.42760E-01 2.1162E-02 7 2.3240E-01 1.43165E-01 2.26270E-02 8 2.3777E-01 1.5552E-01 2.44812E-02
                 9 2.40573E-01 1.56030E-01 2.53651E-02 10 2.40380E-01 1.56393E-01 2.54678E-02 11 2.41557E-01 1.56913E-01 2.56125E-02
                   12 2.41980E-01 1.57247E-01 2.57058E-02
                  13 2.4269E-01 1.5793/E-01 2.585/SE-02
14 2.4489E-01 1.5996/E-01 2.645//E-02
                   15 2.47983E-01 1,62583E-01 2.7146/E-02
                   16 2.47775E-01 1.64114E-01 2.75324E-02
                  17 2.5157æ-01 1.65943æ-01 2.8131æ-02
18 2.54543æ-01 1.69133æ-01 2.92247æ-02
                   19 2.58174E-01 1.73011E-01 3.05063E-02
                  20 2.631295-01 1.782965-01 3.219295-02
                  21 2.67081E-01 1.82611E-01 3.35798E-02
                  22 2.679/2E-01 1.8571/E-01 3.39921E-02
                 25 2.67/2/E-01 1.8333/E-01 3.39/4/E-02 24 2.6663/E-01 1.8263/E-01 3.3789/E-02
     - elapsed time .02 min.
  1 fire group survery for zone 1 by group including sum for all groups in line 28
0 gp. fix source fiss source in scatter all scatter at scatter absorption leakage balance
1 .0000000 2.25466-02 .0000000 1.25985-02 1.05280-02 3.20816-03 1.00528-02 9.98346-01
2 .0000000 1.92638-01 2.75676-03 1.60328-04 6.68988-02 1.36156-02 1.46888-01 1.0000000
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3	1.58841E+00	1.31790E-01	1.611/8E+00		.0000E+00	.0000E+00	.0000E+00	3.46502E-01
4	9.85054E-01	8.72391E-02	1.0006	8.76517E-02	.00000E+00	,00000E+00	.00000E+00	2.15206E-01
5	1.4890/E+00	1.39112E-01	1.51210E+00	1.33369E-01	.0000E+00	,0000E+00	.00000E+00	3.25150E-01
6	2.853616+00	2.66161E-01	2.9092 (E+ 00	2.51218E-01	.00000E+00	.00000E+00	.000 0E+ 00	6.25499E-01
7	2.80702E+00	1,533BRE-01	2.833316+00	1.42590E-01	.000000	.0000E+00	.000 0E+ 00	6.11180E-01
8	2.05/825+00	1,49519E-02	2.0579/E+00	2.07218E-02	.0000E+00	.0000E+00	.0000E+00	4. <i>4775</i> 9E-01
9	1.6028YE+00	-1,53377E-02	1.59971E+00	-2.10199E-02	.0000E+00	.0000E+00	.0000E+00	3.4710/E-01
10		-2.65200E-02	1.45997E+00	-2.57133E-02	.0000E+00	_00000E+00	_0000E+00	3.16875E-01
11	1.3/468=+00	-5.70106E-02	1.335/dE+00	-5.565ZZE-02	.0000E+00	.00000E+00	.000 001	2.9067E-01
12		-6.52188E-02		-6.51767E-02	.00000E+00	.0000E+00	.00000E+00	1.81412E-01
13	7.1071Æ-01	-5.57682E-02		-5.5772E-02	.00000E+00	.0000E+00	.00000=+00	1.5309/E-01
14		-8.34894E-02		-8.35227E-02	.00000E+00	_0000E+00	.0000E+00	1.38653E-01
15		-8.40173E-03		-8.1964/E-03	.0000E+00	.0000E+00	.00000E+00	8.1383E-02
16		-5.5782ZE-0B		-5.5349E-0B	.0000E+00	.000E+00	.0000E+00	4.50935E-02
ĩ,		-6.47107E-03		-6.4673E-IB	.0000E+00	.0000E+00	.00000E+00	1.91592E-02
18		-1.96079E-02		-1.98332E-02	.0000E+00	.0000E+00	.0000E+00	1.217E-02
19		-1.10963E-02		-1.09213E-02	.0000E+00	.0000E+00	-0000E+00	2.88992E-02
		-2.5369XE-02		-2.53119E-02	.000E+00	.000	-0000E+00	9.6802E-02
20								
21		-2.Z/0ZZE-02		-2.258XE-02	.000E+00	.000000	.00000	2.72195E-02
22		-6.50481E-02		-6.5033E-02	.00000=+00	.00000	.000000	5.03294E-02
25	7.8UT/4E-UT	-1,2780XE-01		-1.2646E-01	.0000€+000	.000E+00	.‱.	1.67159E-01
24		-1.18573E-01		-1.1773Œ-01	.0000E+00	.000E+00	.0000E+00	1.25360E-01
25		-5.9 2032 -02		-5.9614 2E -02	.00000E+000	.00 0000E+ 00	.00000E+00	5.3/22 1 -02
26		-5.48584E-02		-5.4927EE-02	.00000E+00	.0000E+00	.000 0.	3.495Z7E-02
27		-1 <i>,499</i> /5E-02		-1.5188E-02	.0000E+00	.000 0E+ 00	.0000E+00	5,80739E-05
28	2.33241E+01	5.A5300E-02		6.20716E-02	1.0144Œ-04	.0000E+00	.0000E+00	5.05778E+00
1fine g	roup sussery	for zone 4	by group incl	uding sum for	all groups i	n line 28		
0 grp.	fix source	fiss source	in scatter	alf scatter	out scatter	absorption	leskage	balance
~ ` 1	.00000E+00	_0000E+00	.0000E+00	5.98\5\cup{E-03}	7.92109E-0B	4.22157F-CL	-8.34281E-03	9.99951E-01
Ž	.0000E+00	.0000E+00	4.5//9Œ-0B	7.631996-02	1.0303 01	1.07467E-08	-9.65289E-02	9.99961E-01
2			4.5449E-03 4.7587E-02			1.07467E-08		
2 3 4	.0000E+00	.00000E+00	4.54475E-08 4.75877E-02 7.02393E-02	7.63199E-02	1.00303:-01	1.07467E-05 5.418EE-06	-9.65289E-02	9.99961E-01
3 4	.0000E+00	.0000E+00 .00+30000, .00+30000,	4.54475E-08 4.75877E-02 7.02393E-02	7.63192E-02 6.89332E-02	1.00001E-01	1.07467E-05 5.418EE-06 3.22950E-06	-9.65289E-02 -1.31740E-01	9.99961E-01 9.99977E-01
3 4 5	.0000E+00 .0000E+00 .0000E+00	.0000E+00 .00+20000. .00+20000.	4.54495E-03 4.75877E-02 7.02395E-02 1.20849E-01	7.63158E-02 6.85432E-02 4.58325E-02 1.48457E-01	1.00303E-01 1.7557/E-01 1.5747/E-01	1.07467E-05 5.41855E-06 3.22950E-06 3.77411E-06	-9.65289E-02 -1.3179CE-01 -8.7239TE-02 -1.39112E-01	9.99961E-01 9.99977E-01 9.99987E-01
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3 4 5 6 7	00+20000. 00+20000. 00+20000. 00+20000. 00+20000.	00+30000, 00+30000, 00+30000, 00+30000, 00+30000,	4.54/7E-08 4.758/7E-02 7.025/7E-02 1.258/7E-01 2.748/7E-01 5.526/7E-01	7.63192E-02 6.87432E-02 4.5852E-02 1.48457E-01 4.55219E-01 7.95099E-01	1,00003E-01 1,7557E-01 1,5747E-01 2,6960E-01 5,41027E-01 7,05985E-01	1.07467E-05 5.41885E-06 3.22950E-06 3.77411E-06 1.14751E-05 2.53491E-05	-9.6529E-02 -1.317/0E-01 -8.725/1E-02 -1.35/12E-01 -2.66/6/E-01 -1.5356/E-01	9.9996/E-01 9.9997/E-01 9.9998/E-01 9.9999/E-01 9.9998/E-01 9.9998/E-01
3 4 5 6 7 8	00+20000. 00+20000. 00+20000. 00+20000. 00+20000.	00+2000, 00+2000, 00+2000, 00+2000, 00+2000, 00+2000,	4.54/95-08 4.758/76-02 7.023/95-02 1.298/96-01 2.748/96-01 5.526/76-01 7.354/96-01	7.63158E-02 6.89432E-02 4.58529E-02 1.48457E-01 4.55215E-01 7.95099E-01 1.00075E+00	1.0332E-01 1.7877E-01 1.57477E-01 2.6980E-01 5.41027E-01 7.05983E-01 7.50386E-01	1.07467E-05 5.41885E-06 3.22950E-06 3.77411E-06 1.14751E-05 2.53491E-05 4.70041E-05	-9.65285E-02 -1.31790E-01 -8.72391E-02 -1.39112E-01 -2.66161E-01 -1.53359E-01 -1.46520E-02	9.9996/E-01 9.9997/E-01 9.9998/E-01 9.9999/E-01 9.9998/E-01 9.9998/E-01
3 4 5 6 7 8 9	00+2000. 00+2000. 00+2000. 00+2000. 00+2000. 00+2000.	00+2000, 00+2000, 00+2000, 00+2000, 00+2000, 00+2000,	4.5449E-08 4.7587E-02 7.0239E-02 1.2584E-01 2.7487E-01 7.3541E-01 7.4066E-01	7.63158E-02 6.89432E-02 4.58529E-02 1.48457E-01 4.55215E-01 7.95099E-01 1.00075E+00 9.19908E-01	1.0308-01 1.7877-01 1.57477-01 2.6980E-01 5.41027-01 7.0388-01 7.5088E-01 7.2534E-01	1.07467E-05 5.41855E-05 3.22950E-05 3.77411E-05 1.14751E-05 2.53491E-05 4.70041E-05 9.5800E-05	-9,6588E-02 -1,3179E-01 -8,7297E-02 -1,39112E-01 -2,6616E-01 -1,5359E-01 -1,6920E-02 1,5337E-02	9.59961E-01 9.59977E-01 9.59987E-01 9.59998E-01 9.5998E-01 9.5998E-01 9.5988E-01
345678910	00+2000. 00+2000. 00+2000. 00+2000. 00+2000. 00+2000. 00+2000.	00+2000, 00+2000, 00+2000, 00+2000, 00+2000, 00+2000, 00+2000,	4.5449E-08 4.7567E-02 7.0239E-02 1.2384E-01 2.7487E-01 5.5244E-01 7.3541E-01 7.4046E-01 7.22087E-01	7.63158E-02 6.8943E-02 4.5852E-02 1.48457E-01 4.55215E-01 7.5507E-01 1.0007E+00 9.1500E-01 8.6627E-01	1.00308-01 1.7877E-01 1.5747E-01 2.68960-01 5.41027E-01 7.05988E-01 7.5098E-01 7.25314E-01 6.95380E-01	1.07467E-08 5.41885E-06 3.22950E-06 3.7741E-06 1.14751E-05 4.70041E-05 9.5800E-05 2.11426E-04	-9.6589E-02 -1.317AE-01 -8.7239E-02 -1.39112E-01 -2.616E-01 -1.5357E-02 -1.5337E-02 2.6519E-02	9.99361E-01 9.9977E-01 9.9938E-01 9.9993E-01 9.9993E-01 9.9993E-01 9.9938E-01 9.9938E-01
3 4 5 6 7 8 9 10 11	00+2000. 00+2000. 00+2000. 00+2000. 00+2000. 00+2000. 00+2000.	00-2000, 00-2000, 00-2000, 00-2000, 00-2000, 00-2000, 00-2000, 00-2000,	4.5449E-08 4.7597E-02 7.0299E-01 1.2854E-01 2.7487E-01 7.3541E-01 7.4056E-01 7.0056E-01	7.63158E-02 6.89432E-02 4.5852E-01 4.5852E-01 7.5909E-01 1.00075E-00 9.1590E-01 8.6527E-01 8.05312E-01	1.0000E-01 1.787/E-01 1.5747/E-01 2.6880E-01 5.4102/E-01 7.0080E-01 7.5008(E-01 6.9530(E-01 6.4280E-01	1.07467E-05 5.41855E-05 3.22950E-05 3.7741E-05 1.14751E-05 4.7004E-05 9.5800E-05 9.5800E-05 4.57316E-04	-9.65282E-02 -1.317ACE-01 -8.7239TE-02 -1.35112E-01 -2.6616TE-01 -1.55357E-02 1.5537E-02 2.66197E-02 5.70103E-02	9.99961E-01 9.9997E-01 9.9999E-01 9.9999E-01 9.9997E-01 9.9997E-01 9.9985E-01 9.9986E-01 9.9996E-01
3 4 5 6 7 8 9 10 11 12	00+2000. 00+2000. 00+2000. 00+2000. 00+2000. 00+2000. 00+2000. 00+2000.	00-2000, 00-2000, 00-2000, 00-2000, 00-2000, 00-2000, 00-2000, 00-2000, 00-2000, 00-2000, 00-2000,	4.5447E-08 4.7587E-02 7.0257E-02 1.25847E-01 5.52647E-01 7.35619E-01 7.4066E-01 7.4066E-01 7.4066E-01 5.59706E-01	7.63198E-02 6.89432E-02 4.5852E-02 1.48657E-01 7.95099E-01 1.00078E-01 8.65278E-01 8.05378E-01 4.19760E-01	1.0000E-01 1.787/E-01 1.574/7E-01 2.6980E-01 7.0988E-01 7.5000E-01 6.9530E-01 6.4280E-01 4.9889E-01	1.07467E-05 5.4185E-05 3.22950E-05 3.77411E-05 1.14751E-05 2.53491E-05 9.58500E-05 2.1142E-04 4.5734E-04 5.97270E-04	-9.6689E-02 -1.317AC-01 -8.7297E-02 -1.39112E-01 -2.6616E-01 -1.5359E-01 -1.4920E-02 1.5359E-02 2.65199E-02 6.52186E-02	9.99761E-01 9.9997E-01 9.9998E-01 9.9998E-01 9.9998E-01 9.9998E-01 9.9998E-01 9.9998E-01 9.9997E-01
3 4 5 6 7 8 9 10 11 12 13	0+2000. 0+2000. 0+2000. 0+2000. 0+2000. 0+2000. 0+2000. 0+2000. 0+2000.	00-5000. 00-5000. 00-5000. 00-5000. 00-5000. 00-5000. 00-5000. 00-5000. 00-5000.	4.54/7E-03 4.758/7E-02 7.029/2E-01 1.288/2E-01 5.526/7E-01 7.356/2E-01 7.406/2E-01 7.406/2E-01 5.59/70/2E-01 5.59/70/2E-01	7.6315E-02 6.8545E-02 4.5855E-01 7.9509E-01 1.0075E-01 8.6527E-01 8.6527E-01 4.1976E-01 3.3776E-01	1,000±01 1,787/E-01 1,574/T-01 2,6600-01 7,0600-01 7,0600-01 7,5000-01 6,5200-01 6,5200-01 6,5200-01 6,5200-01 6,5200-01 6,5200-01 6,5200-01	1.07467E-05 5.41805E-06 3.72870E-06 3.77411E-05 2.53471E-05 4.7004E-05 9.5800E-05 2.11426E-04 4.57516E-04 8.57720E-04 8.97720E-04	-9.6688E-02 -1.317AC-01 -8.7297E-01 -2.616E-01 -1.5558E-01 -1.4720E-02 1.5557E-02 2.6178E-02 5.700E-02 6.5788E-02	9.99361E-01 9.9997E-01 9.9997E-01 9.9999E-01 9.9997E-01 9.9997E-01 9.9997E-01 9.9997E-01 9.9997E-01 9.9997E-01
3456789101121314	0+2002. 0+2002. 0+2002. 0+2002. 0+2002. 0+2002. 0+2002. 0+2002. 0+2002. 0+2002. 0+2002.		4.54/9E-03 4.78/7E-02 7.02/9E-02 1.28/6E-01 2.78/9E-01 7.36/12-01 7.20/7E-01 7.20/7E-01 5.59/6E-01 4.70/4E-01 4.70/4E-01	7.53150E-02 6.8652E-02 4.5852E-02 1.4855E-01 7.5305E-01 1.0007E-00 8.6527E-01 8.6527E-01 8.6527E-01 8.750E-01 3.3776E-01 3.3776E-01	1,000E-01 1,787/E-01 1,574/E-01 1,574/E-01 5,4102/E-01 7,500E-01 7,500E-01 6,530E-01 6,530E-01 4,039E-01 4,330/E-01 3,5504-01	1,07467E-05 5,4195E-06 3,2295E-05 3,7631E-05 1,14751E-05 2,55471E-05 4,7004E-05 2,5142E-04 4,5733E-04 4,5733E-04 1,49367E-05	9.6686-02 •1.31700-01 •1.3712-01 •2.6660-01 •1.5556-01 •1.5556-01 •1.5556-02 •2.66790-02 •5.7600-02 •5.7600-02 •5.7600-02 •5.7600-02 •5.7600-02	9.99361E-01 9.9997E-01 9.9997E-01 9.9999E-01 9.9997E-01 9.9997E-01 9.9986E-01 9.9997E-01 9.9997E-01 9.9997E-01 9.9998E-01
345678910112131415	0+100. 0+100. 0+100. 0+100. 0+100. 0+100. 0+100. 0+100. 0+100. 0+100. 0+100. 0+100. 0+100. 0+100.		4.54/92-02 4.75972-02 7.02992-02 1.258/32-01 7.56/32-01 7.40/45-01 7.20072-01 4.56/32-01 4.56/32-01 4.76/32-01 4.76/32-01 4.76/32-01 4.76/32-01	7.53158E-02 6.8653E-02 4.5853E-02 1.4855E-01 7.9509E-01 1.0007E-00 9.1592E-01 8.05312E-01 4.19763E-01 3.3763E-01 1.2806E-01	1,0005-01 1,787/6-01 1,574/76-01 2,69800-01 5,410276-01 7,00980-01 7,50086-01 6,53800-01 6,53800-01 4,33193-01 4,33193-01 2,415676-01	1,07467E-05 5,4195E-06 3,2295E-05 3,7241E-05 1,14751E-05 2,55491E-05 9,5590E-05 2,5720E-04 4,57316E-04 5,97270E-04 8,9720E-05 1,26478E-05 1,26478E-05	-9.6686-02 -1.31702-01 -2.66168-01 -1.5356-01 -1.53576-02 1.53376-02 1.53376-02 5.7008-02 6.52166-02 5.7008-02 8.34806-02 8.34806-02 8.34806-02	9.99361E-01 9.9997E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01
3456789111213141516	00-1000. 00-1000. 00-1000. 00-1000. 00-1000. 00-1000. 00-1000. 00-1000. 00-1000. 00-1000. 00-1000. 00-1000.		4.54/9E-03 4.78/7E-02 1.28/3E-01 2.78/3E-01 5.52/3E-01 7.40/4E-01 7.40/4E-01 7.40/4E-01 4.50/4E-01 4.50/4E-01 1.667/4E-01	7.53158E-02 6.88C52E-02 1.8857E-01 7.5509E-01 7.5509E-01 8.6527E-01 8.6527E-01 8.6527E-01 8.6527E-01 8.5312E-01 1.2505E-01 1.2505E-01 1.2505E-01	1.0005-01 1.7877-01 1.5747-01 2.6860-01 5.4407-01 7.0983-07 7.5086-01 6.5380-01 6.5380-01 6.4280-01 4.33172-01 3.6504-01 1.0008-01	1,07467E-08 5,4185E-06 3,7741E-06 1,14751E-06 2,53471E-06 9,5800E-06 2,11426E-04 4,57516E-04 8,9720E-04 1,2537E-03 1,26476E-05	-9.6686-02 -1.31700-01 -2.6616-01 -1.3506-01 -1.3506-01 -1.3506-02 1.35076-02 2.66196-02 5.7006-02 5.57686-02 8.4086-08	9.99361E-01 9.9997E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01
3456789101121314151617	00-2000. 00-2000. 00-2000. 00-2000. 00-2000. 00-2000. 00-2000. 00-2000. 00-2000. 00-2000. 00-2000. 00-2000. 00-2000. 00-2000. 00-2000. 00-2000. 00-2000. 00-2000. 00-2000.		4.54/9E-03 4.78/7E-02 7.02/9E-01 1.28/8E-01 5.52/8E-01 7.35/12-01 7.40/8E-01 7.20/8E-01 4.70/8E-01 4.70/8E-01 4.70/8E-01 4.70/8E-01 4.70/8E-01 8.596/8E-02	7.65158E-02 6.8652E-02 4.5853E-01 4.5525E-01 7.5505E-01 9.1550E-01 8.6527E-01 8.6527E-01 8.6527E-01 3.3778E-01 3.3778E-01 1.2856E-01 1.2856E-02 1.51618E-02	1.0005-01 1.7877-01 1.57476-01 1.57476-01 5.410276-01 7.05956-01 7.05956-01 6.95906-01 6.42806-01 6.42806-01 4.331956-01 2.415676-01 7.89066-02	1,07467E-08 5,4185E-06 3,7251E-06 1,14751E-06 4,7004E-06 9,5800E-06 2,1142E-04 4,57316E-04 4,57316E-04 1,5957E-08 1,2647E-08 8,8075E-04 4,2066E-04	9.6686-02 -1.3170-01 -2.6516-01 -1.5505-01 -1.5505-01 -1.5505-02 1.5507-02 2.65190-02 5.7605-02 5.7605-02 8.4628-03 8.4628-03 8.4753-03	9.99361E-01 9.99976E-01 9.99976E-01 9.99976E-01 9.99976E-01 9.99976E-01 9.99976E-01 9.99976E-01 9.99976E-01 9.99976E-01 9.99976E-01 9.99976E-01 9.99976E-01
3456789101112131415161718			4.54/92-02 4.78/92-02 1.28/92-01 2.78/92-01 2.78/92-01 7.36/92-01 7.28/72-01 7.28/72-01 7.28/72-01 4.70/42-01 4.70/42-01 4.70/42-01 1.66/762-01 1.66/762-01 7.61/92-02 7.61/92-02	7.53158E-02 6.8652E-02 4.5853E-01 7.5503E-01 7.5503E-01 1.0075E-00 1.0075E-01 8.66278E-01 8.66278E-01 8.66278E-01 3.2762E-01 3.2762E-01 5.44108E-02 1.5818E-02 1.5818E-02	1,000E-01 1,787/E-01 1,574/E-01 1,574/E-01 5,4102/E-01 7,000E-01 6,000E-01 6,000E-01 6,000E-01 4,000E-01 3,000E-01 1,000E-01 1,000E-02 1,000E-02 5,619/E-02	1,07467E-05 5,4180E-06 3,2250E-05 3,7631E-05 1,14751E-05 2,53471E-06 4,7004E-05 2,53720E-04 4,57330E-04 1,6587E-05 8,8075E-04 4,2400E-04 3,1469E-04	9.6686-02 •1.31700-01 •1.3712-01 •2.6616-01 •1.5557-01 •1.5557-01 •1.5557-02 •1.5557-02 •5.7800-02 •4.755-03 •4.755-03 •1.9008-02	9.99361E-01 9.99976E-01 9.99976E-01 9.99976E-01 9.99976E-01 9.99976E-01 9.99976E-01 9.99976E-01 9.99976E-01 9.99996E-01 9.99996E-01 9.99996E-01
345678910111213141516171819	0+100 0+100		4.54/92-03 4.78/72-02 1.28/92-01 2.748/92-01 5.52/47-01 7.40/48-01 7.40/48-01 4.70/48-01 4.70/48-01 4.70/48-01 4.70/48-01 1.66/768-01 8.56/768-01 8.56/768-01	7.53158E-02 6.88C5E-02 1.8857E-01 4.5825E-01 7.9509E-01 8.6527E-01 8.6527E-01 8.6532E-01 8.419760E-01 3.3778E-01 3.2782E-01 5.4410E-02 1.5818E-02 1.5818E-02 1.584E-02	1.0000E-01 1.7877E-01 1.5747E-01 2.6860E-01 5.4407E-01 7.0008E-01 7.5000E-01 4.0007E-01 4.0007E-01 4.0007E-01 1.6000E-01 7.6000E-01 1.6000E-01	1.07467E-08 5.4185E-06 3.2250E-06 3.7741E-06 1.14751E-06 2.5349E-06 9.5850E-06 4.5753E-04 4.5753E-04 8.97250E-04 1.45757E-08 8.80750E-04 4.2065E-04 4.2065E-04 7.45500E-04 7.4550E-04	-9.6688-02 -1.3170-01 -1.3712-01 -2.666-01 -1.359-01 -1.359-0 -1.359-02 -1.359-02 -1.359-02 -1.359-02 -1.359-02 -1.359-02 -1.359-02 -1.359-03 -1.359-03 -1.359-03 -1.359-03 -1.359-03 -1.359-03 -1.359-03 -1.359-03 -1.359-03	9.99361E-01 9.9997E-01
34567891011121314151617181920	0+100 0+100		4.54/92-03 4.78/92-02 1.28/92-01 2.78/92-01 5.58/92-01 7.36/92-01 7.20/92-01 7.20/92-01 4.80/92-01 4.80/92-01 4.80/92-01 4.80/92-01 4.80/92-01 4.80/92-01 4.80/92-01 1.80/92-01	7.53158E-02 6.88C52E-02 4.5855E-03 7.5909E-01 8.65278E-01 8.65278E-01 8.65278E-01 8.05312E-01 3.3778E-01 3.3778E-01 1.289SE-01 1.289SE-01 1.289SE-01 1.289SE-01 1.289SE-02 1.588SE-03 1.588	1.0005-01 1.7877-01 1.5747-01 2.6860-01 5.4407-01 7.0960-01 6.0580-01 6.0580-01 6.4280-01 4.33192-01 3.6504-01 1.6006-01 7.6905-02 7.6905-02 7.6905-01 2.76157-01	1,07467E-08 5,41805E-06 3,7741E-06 1,14751E-06 2,53741E-06 4,7004E-06 9,5800E-06 2,11426E-04 4,57516E-04 4,57516E-04 1,2877E-03 1,2877E-03 1,2877E-04 4,2004E-04 7,4540E-04 7,4540E-04	-9.6686-02 -1.31700-01 -1.3712-01 -2.6616-01 -1.5372-02 -1.5372-02 2.66178-02 5.7000-02 5.7000-02 8.4028-03 8.4028-03 8.4028-03 1.9008-02 1.10700-02 2.55676-02	9.99361E-01 9.9997E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01
3456789111111111111111111111111111111111111	09-1000. 09-1000. 09-1000. 09-1000. 09-1000. 09-1000. 09-1000. 09-1000. 09-1000. 09-1000. 09-1000. 09-1000. 09-1000.		4.54/92-03 4.78/92-02 1.28/92-01 5.52/92-01 7.54/92-01 7.40/62-01 7.40/62-01 7.40/62-01 4.76/92-01 1.65/52-01 1.66/52-01 1.66/52-01 1.66/52-01 1.66/52-01 1.66/52-01 1.66/52-01	7.65158E-02 6.8652E-02 4.5853E-01 1.8857E-01 4.5525E-01 7.9509E-01 9.1590E-01 8.6527E-01 8.6527E-01 3.3792E-01 1.2856E-01 1.2856E-02 1.2856E-02 1.2856E-02 1.2856E-02 1.2856E-02 1.5760E-02 4.5760E-02	1.0003E-01 1.7877E-01 1.5747E-01 1.5747E-01 1.5747E-01 5.41027E-01 7.0593E-01 6.9590E-01 6.4283E-01 6.4283E-01 4.33193E-01 2.41567E-01 1.6028E-01 7.8903E-02 1.1283E-01 1.1283E-01	1,07467E-08 5,4185E-06 3,7251E-06 1,14751E-06 4,7001E-06 9,5500E-06 2,1142E-04 4,57316E-04 4,57316E-04 4,57316E-04 1,5957E-08 8,8075E-04 1,2647E-06 3,1445E-04 7,4540E-04 1,1335E-08	-9.6688E-Q: -1.317QE-Q: -1.357E-Q: -1.357E-Q: -1.557E-Q:	9.9986:01 9.9997:01 9.9997:01 9.9997:01 9.9997:01 9.9997:01 9.9997:01 9.9997:01 9.9997:01 9.9997:01 9.9997:01 9.9997:01 9.9997:01 9.9997:01 9.9997:01 9.9997:01 9.9997:01 1.0000:00 1.0000:00
3456789101112131415161718192012			4.54/92-02 4.76/92-02 1.26/92-01 2.76/92-01 2.76/92-01 7.26/72-01	7.53158E-02 6.8652E-02 4.5853E-03 1.4855E-01 7.5503E-01 1.00075E-03 1.00075E-03 8.66278E-01 8.66278E-01 8.66278E-01 3.2762E-01 3.2762E-01 5.44108E-02 1.5264E-02 3.40075E-02 2.44278E-02 1.3005E-01	1.0005-01 1.787/7-01 1.574/7-01 1.574/7-01 5.41027-01 7.5085-01 7.5085-01 6.5385-01 6.4285-01 6.4285-01 6.43875-01 1.6085-01 1.6085-01 2.41567-01 1.2085-01 2.78157-01 1.1808-01 2.78157-01	1,07467E-05 5,4180E-06 3,2250E-05 3,7741E-05 1,14751E-05 2,53471E-06 4,7004E-05 2,53720E-04 4,57310E-04 4,57310E-04 1,5957E-05 1,2947E-05 1,2947E-05 3,1445E-04 3,1445E-04 1,1535E-05 1,1535E-05 1,1535E-06 1,1535E-06	7.6686-02 -1.3170-01 -1.3712-01 -2.6616-01 -1.5552-01 -1.5552-01 -1.5552-02 -	9.99961E-01 9.99976E-01 1.0000E+00 9.99996E-01
3456789101112131415161718142121212			4.54/92-03 4.78/72-02 1.28/92-01 2.78/92-01 5.52/82-01 7.40/62-01 7.40/62-01 7.40/62-01 4.59/82-01 4.59/82-01 4.59/82-01 1.26/72-01 3.46/92-01 1.26/92-01 1.26/92-01	7.5355E-Q2 6.8652E-Q2 1.8657E-Q1 4.5552E-Q1 7.5509E-Q1 8.6527E-Q1 8.6527E-Q1 8.6527E-Q1 8.6527E-Q1 8.6527E-Q1 8.6527E-Q1 1.265	1.000E-01 1.7877E-01 2.6880E-01 5.4427E-01 7.0088E-01 6.5380E-01 6.5380E-01 6.4280E-01 6.4280E-01 1.008E-01 7.890E-02 5.64567E-01 1.1268E-01 2.76157E-01 1.1268E-01 2.76157E-01 1.1268E-01 2.06157E-01 4.9774E-01	1,07467E-08 5,4185E-06 3,7741E-06 1,14751E-06 2,53471E-06 9,5800E-06 2,11426E-04 4,57514E-04 8,9750E-04 1,59757E-04 1,2647E-06 3,1465E-04 4,2405E-06 3,1465E-04 3,1465E-04 1,1575E-08 1,1575E-08 1,1575E-08	-9.6688-02 -1.3170-01 -1.378-01 -1.359-01 -1.359-01 -1.359-02 -1.4520-02	9.99361E-01 9.9997E-01 1.000E+00 1.000E+00 1.000E+00
3456789111111111111111111111111111111111111			4.54/95-08 4.75/76-02 1.26/76-01 2.76/76-01 5.526/76-01 7.35/15-01 7.35/15-01 7.35/15-01 4.56/76-01 4.56/76-01 8.56/76-01 1.42/76-01 1.42/76-01 1.42/76-01 1.42/76-01 1.42/76-01 1.42/76-01 1.42/76-01 1.42/76-01 1.42/76-01	7.53158E-02 6.8652E-02 4.5852E-03 7.5505E-03 9.1500E-03 8.6577E-03 8.6577E-03 3.2762E-03 1.2876E-03 1.2876E-02 1.5161E-02 1.5161E-02 1.5762E-03	1.0005-01 1.7877-01 1.5747-01 1.5747-01 1.5747-01 1.5747-01 5.4407-01 5.4407-01 6.5390-01 6.5390-01 6.4280-01 3.6504-01 2.41567-01 1.40280-01 7.8908-02 1.12080-01 1.1904-01 2.6157-01 1.1904-01 2.6157-01 1.1904-01 5.6190-01	1,07467E-08 5,41805E-06 3,7741E-06 1,14751E-06 4,7001E-06 9,58008E-06 2,11426E-04 4,57516E-04 4,57516E-04 1,2877E-03 1,2877E-03 1,1355E-08 1,135E-08 1,1355E-08 1,135	-9.6686-02 -1.3170-01 -1.3576-01 -1.3576-01 -1.3576-02 1.3576-02 2.6578-02 5.7006-02 5.7006-02 5.7006-02 1.7576-02 1.10706-02 1.10706-01 1.25676-02 2.26576-02 2.26576-02 1.2606-01 1.2506-01	9.99361E-01 9.9997E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 9.9999E-01 1.000E+00 9.9999E-01 1.000E+00 9.9999E-01
34567890112545461892122348	094000 09400 09400 09400 094000 094000 094000 094000 094000 094000 094000 09400		4.54/92-03 4.78/92-02 1.28/92-01 2.78/92-01 2.78/92-01 7.34/92-01 7.34/92-01 7.34/92-01 4.59/62-01 4.59/62-01 4.59/62-01 4.59/62-01 4.59/62-01 4.59/62-01 4.59/62-01 4.59/62-01 4.59/62-01 4.59/62-01 4.59/62-01 4.59/62-01 4.59/62-01 4.59/62-01 4.59/62-01 4.59/62-01 4.59/62-01 4.59/62-01	7.53158E-02 6.85C52E-02 4.55C5E-01 7.5505E-01 9.1550E-01 9.1550E-01 8.65C7E-01 8.65C7E-01 8.65C7E-01 3.25C5E-01 1.285CE-01 1.285CE-02 1.556EE-0	1.0005-01 1.787/E-01 1.578/E-01 1.578/E-01 5.4102/E-01 7.0595E-01 6.5595E-01 6.5595E-01 6.4289E-01 6.4289E-01 6.4289E-01 1.6289E-01 1.628E-01	1.07467E-05 5.41805E-06 3.2250E-06 3.2250E-06 1.14751E-06 4.7004E-06 9.5500E-06 2.11426E-04 4.57316E-04 4.57316E-04 1.5757E-05 4.2005E-06 3.1465E-06 3.1465E-06 7.45400E-06 3.1465E-06 1.1535E-08 1.15	-9.6686-02 -1.3170-01 -1.3170-01 -1.3576-01 -1.3576-02	9.99361E-01 9.9997E-01 1.000E-00 9.9997E-01 1.000E-00 9.9997E-01
3456789011121341516171819812181818888			4.54/92-03 4.78/72-02 1.28/92-01 1.28/92-01 5.52/92-01 7.40/92-01 7.40/92-01 7.40/92-01 4.89/92-01 4.89/92-01 1.42/92-01	7.5158E-02 6.8652E-03 4.5525E-01 7.5509E-01 8.6527E-01 8.750E-02 1.2626E-01 8.750E-02 2.425E-01 6.750E-01 2.750E-01 2.750E-01	1.000E-01 1.7877E-01 2.6880E-01 5.4427E-01 7.0088E-01 7.5088E-01 6.5380E-01 6.5380E-01 6.5380E-01 1.608E-01 1.608E-01 1.608E-01 1.7898E-01 1.7898E-01 1.7898E-01 1.7898E-01 1.7898E-01 1.7898E-01 1.7898E-01 1.7898E-01 1.7898E-01 1.7898E-01 2.7898E-01 2.7898E-01 2.7898E-01 2.7898E-01 2.7898E-01 2.7898E-01 2.7898E-01 2.7898E-01 2.7898E-01 2.7898E-01 2.7898E-01 2.7898E-01 2.7898E-01 2.7898E-01 2.7898E-01 2.7898E-01 2.7898E-01 2.7898E-01 2.7898E-01	1.07467E-08 5.4185E-06 3.7741E-06 3.7741E-06 2.5349E-06 4.7034E-06 9.5800E-06 2.11426E-04 4.5754E-06 8.9720E-04 4.5754E-06 8.80754E-04 3.1445E-04	-9.6688-02 -1.3170-01 -1.3770-02 -1.3710-01 -1.359-01 -1.359-01 -1.359-02 -1.359-02 -1.359-02 -1.359-02 -1.359-02 -1.359-02 -1.359-02 -1.359-02 -1.359-02 -1.359-02 -1.359-02 -1.359-02 -1.359-02 -1.359-02 -1.359-02 -1.359-02 -1.359-02 -1.359-02 -1.359-02 -1.359-03 -1	9.9986E-01 9.9997E-01 9.9998E-01 9.9998E-01 9.9998E-01 9.9988E-01 9.9988E-01 9.9998E-01 9.9998E-01 9.9998E-01 9.9998E-01 9.9998E-01 9.9998E-01 1.000E-00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00
3456789101112134151617181981212134828			4.54/92-03 4.78/72-02 1.28/72-01 1.28/72-01 1.28/72-01 7.40/62-01 7.40/62-01 7.40/62-01 4.50/62-01 4.50/62-01 4.50/62-01 1.46/72-01	7.53156-02 6.8625-02 4.5525-03 4.5525-03 7.5505-03 4.5525-03 8.65278-03 8.65278-03 8.65278-03 8.65278-03 8.7526-03 8	1.0005-01 1.7877-01 1.5747-01 2.6860-01 5.4427-01 7.5985-01 6.5980-01 6.5980-01 6.5980-01 6.5980-01 6.5980-01 1.0005-01 7.8905-01 1.1005-01 1.1005-01 1.1005-01 1.1005-01 2.005-01 1.1005-01 2.0	1,07467E-08 5,4185E-06 3,7741E-06 3,7741E-06 1,14751E-06 2,53741E-06 4,7031E-06 4,7031E-	-9.6686-02 -1.3170-01 -1.3170-01 -1.3570-02 -1.3570-02 1.3570-02 1.5570-02 5.7686-02 5.7686-02 8.4753-03 6.4753-03 1.5008-02 1.5008-02 1.5008-02 1.5008-01 1.5008-01 1.5008-01 1.5008-01 1.5008-01 1.5008-01 1.5008-01 1.5008-01 1.5008-01 1.5008-01 1.5008-01 1.5008-01 1.5008-01 1.5008-01 1.5008-01 1.5008-01 1.5008-01 1.5008-01	9.99361E-01 9.9997E-01 9.9998E-01 9.9998E-01 9.9998E-01 9.9988E-01 9.9988E-01 9.9998E-01 9.9998E-01 9.9998E-01 9.9998E-01 9.9998E-01 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 9.9999E-01
34567890112040401848488888888888888888888888888			4.54/95-08 4.75/76-02 1.26/96-01 2.76/96-01 5.526/76-01 7.35/15-01 7.35/15-01 7.35/15-01 7.35/15-01 4.36/36-01 4.36/36-01 1.26/76-01	7.53158E-02 6.8652E-02 4.5855E-03 4.5855E-03 7.5505E-03 8.6577E-03 8.6577E-03 8.6577E-03 3.2762E-03 1.2876E-02 1.5161E-02 1.5161E-02 1.5161E-03	1.0005-01 1.7877-01 1.5747-01 1.5747-01 1.5747-01 1.5747-01 1.5747-01 1.5747-01 1.5747-01 1.5747-01 1.5342-01	1,07467E-08 5,4805E-06 3,7631E-06 1,14751E-06 2,5376E-06 4,7031E-06 4,7031E-06 4,7031E-06 4,7031E-06 4,7031E-06 1,2877E-08 1,1338E-06 7,4540E-06 1,1338E-08 1,1338E-08 1,1338E-08 1,1338E-08 1,1338E-08 1,1338E-08 1,1338E-08 1,1338E-08 2,4777E-08 1,1338E-08 2,4777E-08 1,1338E-08 2,4777E-08 1,1338E-08 2,4777E-08 1,2768E-08 2,4777E-08 1,2768E-08 2,3736E-08 5,4842E-08	-9.6688-02 -1.3170-01 -1.3578-01 -1.3578-01 -1.3578-02 -1.357	9.9936E-01 9.9997E-01 9.9997E-01 9.9998E-01 9.9998E-01 9.9998E-01 9.9998E-01 9.9998E-01 9.9998E-01 9.9998E-01 9.9998E-01 9.9998E-01 1.000E-00 1.000E-00 1.000E-00 1.000E-00 1.000E-00 1.000E-00 1.000E-00 1.000E-00 1.000E-00
3456789101112134151617181981212134828			4.54/92-02 4.78/92-02 1.28/92-01 2.78/92-01 2.78/92-01 7.26/92-01 7.26/92-01 7.26/92-01 7.26/92-01 4.86/92-01	7.53158E-02 6.8652E-02 4.5853E-02 4.5853E-03 4.5525E-01 7.5505E-01 9.1550E-01 8.6527E-01 8.7585E-01	1.0005-01 1.7877-01 1.7877-01 1.5777-01 1.5777-01 1.5777-01 5.41027-01 7.0595-01 7.0595-01 6.5950-01 6.5950-01 6.5950-01 6.5950-01 6.5950-01 1.505	1.07467E-05 5.4805E-06 3.2250E-06 3.2250E-06 1.14751E-06 4.7001E-06 9.5500E-06 2.1142E-04 4.57316E-04 4.57316E-04 1.5757E-05 4.2005E-06 3.1465E-06 3.1465E-06 3.1465E-06 1.2765E-06 6.7276E-08 6.7276E	-9.6686-02 -1.3170-01 -1.3170-01 -1.3270-02 -1.3370-01 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-03	9.999612-01 9.999762-01 9.999762-01 9.999762-01 9.999762-01 9.999762-01 9.999762-01 9.999762-01 9.999762-01 9.999762-01 9.999762-01 9.999762-01 1.00002-00 1.00002-00 1.00002-00 1.00002-00 1.00002-00 1.00002-00 1.00002-00 1.00002-00 1.00002-00 9.9999762-01 1.00002-00 1.00002-00 9.9999762-01 1.00002-00 1.00002-00 9.9999762-01
3456789011121341514151818881888888888888888888888888			4.54/92-03 4.75/72-02 1.26/92-01	7.53158E-02 6.8652E-02 1.4857E-01 4.5527E-01 4.5527E-01 8.6527E-01 8.6527E-01 8.6527E-01 8.6527E-01 8.6527E-01 8.6527E-01 8.6527E-01 8.772E-01 8.772E-01 8.772E-01 8.772E-01 8.772E-01 8.772E-01 6.772E-02 8.772E-01 6.772E-02 8.772E-01 6.772E-02 8.772E-03 6.772E-03 6.7	1.0005-01 1.7877-01 1.7877-01 2.6880-01 5.4427-01 7.5985-01 7.5985-01 6.5980-01 6.5980-01 6.5980-01 6.5980-01 1.0005-01 1.0005-01 1.1005-01	1.07467E-08 5.4105E-06 3.7251E-06 3.7741E-06 2.53476E-06 9.5800E-06 2.11426E-04 4.5751E-06 8.57530E-04 4.5751E-04 8.57530E-04 4.5751E-04 8.57530E-04 4.5751E-04 1.5555E-03 1.1555E-03 1.155	-7.6686-02 -1.3170-01 -1.376-01 -1.356-01 -1.356-01 -1.356-02 -1.3576-02 -1.3	9.9986E-01 9.9997E-01 9.9998E-01 9.9998E-01 9.9998E-01 9.9988E-01 9.9988E-01 9.9988E-01 9.9998E-01 9.9998E-01 9.9998E-01 9.9998E-01 1.000E-00
34567890112040401848488888888888888888888888888			4.54/92-02 4.78/92-02 1.28/92-01 2.78/92-01 2.78/92-01 7.26/92-01 7.26/92-01 7.26/92-01 7.26/92-01 4.86/92-01	7.53158E-02 6.8652E-02 4.5853E-02 4.5853E-03 4.5525E-01 7.5505E-01 9.1550E-01 8.6527E-01 8.7585E-01	1.0005-01 1.7877-01 1.7877-01 1.5777-01 1.5777-01 1.5777-01 5.41027-01 7.0595-01 7.0595-01 6.5950-01 6.5950-01 6.5950-01 6.5950-01 6.5950-01 1.505	1.07467E-05 5.4805E-06 3.2250E-06 3.2250E-06 1.14751E-06 4.7001E-06 9.5500E-06 2.1142E-04 4.57316E-04 4.57316E-04 1.5757E-05 8.8075E-06 8.8075E-06 3.1426E-03 1.1536E-03 1.1536E-03 1.2746E-08 2.4774E-08 1.2765E-02 6.7246E-03	-9.6686-02 -1.3170-01 -1.3170-01 -1.3270-02 -1.3370-01 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-02 -1.3370-03	9.999612-01 9.999762-01 9.999762-01 9.999762-01 9.999762-01 9.999762-01 9.999762-01 9.999762-01 9.999762-01 9.999762-01 9.999762-01 9.999762-01 1.00002-00 1.00002-00 1.00002-00 1.00002-00 1.00002-00 1.00002-00 1.00002-00 1.00002-00 1.00002-00 9.9999762-01 1.00002-00 1.00002-00 9.9999762-01 1.00002-00 1.00002-00 9.9999762-01

4	9.7290E-01	-1.06299E-08	9.8605/E-01	8.72391E-02	.0000Œ+00	.000 01	.0000E+00	1,11467E+00
5	1.46663E+00	-4.7166E-08	1.4890/E+00	1.391125-01	.000000	.00000E+00	.0000E+00	1,680715+00
6	2.81963E+00	4.1137ZE-08	2.85361E+00	2.66161E-01	.00000E+00	.0000E+00	.0000E+00	3.23127E+00
7	2.78169E+00	1.78510E-08	2.80702E+00	1.53359E-01	.0000E+00	.00000E+00	.0000E+00	3.185 00E+ 00
8	2.054885+00	-1.2876/E-07	2.06482E+00	1,49519E-02	.000000=+00	.00000E+00	.00000E+00	2.362KOE+O)
9	1.60/95E+00	-4.49942E-0B	1.6028/E+00	-1.5337/E-02	.00000=+00	_0000E+00	.0000E+00	1.83679E+00
10	1.4690BE+00	-6.20540E-0B	1.46429E+00	-2.6520E-02	.0000E+00	.0000E+00	.0000E+00	1.68097E+00
11		-7.11370E-0B		-5.70105E-02	.00000=+00	_0000E+00	.0000E+00	1.5/774E+00
12		-1.05150E-08		-6.5218BE-02	.00000=+00	_000E+00	.0000E+00	9.75749E-01
ī		-1.0998E-08		-5.576EDE-02	.0000E+00	.0000E+00	.0000E+00	8.23374E-01
· 14		-1.69050E-09		-8.34894E-02	.00000=+00	.000E+00	.0000E+00	7.557SE-01
15	3.76753E-01	6.476Z/E-07	3.762175-01	-8.40179E-05	.0000E+00	.0000E+00	.00000E+00	4.31476E-01
16	2.0886E-01	6.7545E-07		-5.57822E-03	.0000E+00	.0000E+00	.0000E+00	2.39135E-01
17	8.99783E-02	4.58511E-07		-6.47107E-03	.00000	.000E+00	.0000E+00	1.02910E-01
18		-3.11249E-06		-1.907XE-02	.00000=+00	.000E+00	.00000=+00	7.1511 6E- 02
ñ	1.3585 E-01	6.4978E-07		-1.109692-02	.0000E+00	.0000E+00	.0000E+00	1.55387E-01
žó	4-52750E-01	1.84102E-05		·2.53650E-02	.0000E+00	.0000E+00	.0000E+00	5.18034E-01
žĭ		-7.1058/E-06		-2.27022E-02	.0000E+00	.000E+00	.0000E+00	1.50057E-01
22	2.49090E-01	2.05832E-06		-6.50'81E-02	.0000E+00	.000E+00	.0000E+00	2.83981E-01
ź	P OCCOCE-OI	-3.8%XE-07		-1.27809E-01	.0000E+00	.000E+00	.0000E+00	9.20089E-01
2	6.14815E-01	3.47787E-05		-1.1868E-01	.00000	.0000E+00	.0000E+00	6.99487E-01
ž		-7.20197E-07		5.9833E-02	.00000	.000E+00	.000E+00	3.01994E-01
ž		-2.2975E-05		5.4858/E-02	.000E+00	.0000E+00	.0000E+00	2.05116E-01
27	3.36952E-02	1.04078E-07		-1.49×5E-02	.00000	.0000E+00	.0000E+00	3.72151E-02
28				5.45300E-02	4.38057E-10	.0000E+00	.0000=+00	2.67300E+01
	COOCETUI PREMINS CLOT	-3.956/AE-06	2.330(1670)	JADDUE-UZ	4.3000/E-10	,uutuenu	·	انجسدس
		fiss source	in acatter	slf scatter	cut scatter	absorption	Leekzae	balance
0 ab	fix source .0000E+00	2.25/4/E-02	.00000E+00	2.243126-02	2.12892E-02	3.6451E-03		9.98829E-01
	.00000=+00	1.9263E-01	7.344/E-03	2.6906/E-01	1.6529E-01	1.47418E-02		1.00002E+00
3	.0000E+00	2.15639E-01	7.648E-02	2.8006E-01	2.76410E-01		1.33280E-08	9.99987E-01
3	.000	1.23985E-01	1.14325-01	1.925E-01	2.30762E-01	7.52:00E-05		1.00000E+00
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1.66616E-01	2.086/E-01	4.89620E-01	3.4999E-01	4.5859E-05		9.99989E-01
5	.00000		4.2805E-01	1.340 E+00	5.98630E-01		4.1137ZE-08	1.00001E+00
6 7	.0000E+00	1.77501E-01	6.639Œ-01	1.7752E+00	7.4350/E-01		1.78510E-08	9.999B9E-01
	.0000E+00	8.80271E-02 1.35691E-02	7.80152E-01	1.750195+00	7.77518E-01	1.42670E-02		9.99920E-01
8 9			7.705Æ-01	1.556/25+00	7.468E-01	2.42569E-02		9.99893E-01
	.00000	9.8911E-04			7.06920E-01	3.4838E-02		9.9930E-01
10	.0000	7.31557E-05 5.75541E-05	7.43610E-01 7.11896E-01	1,41137E+00 1,30439E+00	6.51941E-01	6.0002E-02		9.99922-01
11	.00000=+00					6.A5XZ/E-02		9.99974E-01
12 13	.0000	4.030E-07 6.4204E-08	5.65715E-01	7.05317E-01	5.04137E-01 4.40153E-01	5.9XXE-02		9.99971E-01
ູນ	.000E+00		5.000E-01	5,5475XE-01	3.0550E-01	8.38137E-02		9.99990E-01
ĸ	.0000	1.2728E-08 1.45787E-09	4.7710E-01	5.10535E-01 2.3435E-01	2.51307E-01		6.476Z/E-07	1.00017E+00
15	.000E+00		2.5X7XE-01	1.081625-01		5.87333E-05	6.75/85E-07	1.00017E+00
16	.00000	4.22100E-10	1.7676/E-01 9.46/5/E-02	3.3080/E-02	1.7059E-01 8.75039E-02		4.5251E-07	1.00013E+00
17	.0000E+00	1.35967E-10			0./3UDE-UZ	2.2523/E-02		1.00010E+00
18	.00000	9.73/836-11	8.43419E-02	2.209895-02	6.1814ZE-02			1.00010E+00
19	.00000=+00	1.37630E-10	1.3258/E-01	6.50477E-02	1.228165-01	9.75470E-03	6.47765E-07 1.84102E-06	1.00015E+00
20	.0000€+00	2.2300E-10	3.1605/E-01	3.718/8E-01	2.86725E-01 1.2063E-01	2,90898E-02 2,45239E-02		1.00013E+00
21	.00000E+00	3.27571E-11	1.53399E-01	7.328/GE-02				1.00008E+00
22	.00000		2.831Æ-01	1.85310E-01	2.1415/E-01	7.01380E-02 1.34280E-01	Z.0002:700	1.00013E+00
25 24	.0000E+00	3.6337/E-11	6.5567E-01	9.708308-01	5.2120E-01	1.30272E-01		1.0009E+00
<i>₫</i>	.000000	9.8906/E-12	6.7580E-01	8.1746E-01	5.45259E-01		3.47787E-06 -7.20197E-07	1.00005E+00
25	.00000=+00	2.87533E-12	4,41622-01	3.2002E-01	3.69770E-01 2.76524E-01	6.49583E-02		1.00005E+00
<u>ಹ</u>	.00000	2.03022E-12	3.4147XE-01	3.29782E-01			1.04078E-07	1.00002E+00
27	.0000E+00		1.1227/E-01	6.68603E-02	9.37302E-02	1,85447E-02	1.000 & TO	1.00001E+00
28	.00000		9.778/55+00	1.581/25+01	9.778/5E+00		fluction2	total flux
0 ab	rt boy flux		lft bdy flux	ift leakage	USU LEGE	fies rate		
1		-4.00000E-00	1.77993-01	.000000	2.350000-05	2.62977E-0B	.0000E+00	3.57072E-01
2		-1.05055E-08	1.32751E+00	.000E+00	1.7185/E-05	1.1850E-02	.000000	2.6372£E+00 3.33563£+00
3	1.57075±00	1.33250E-08	1.67785-00	.000000	.00000	1.4552ZE-02	.000000	
4	9.72UE-01	-1.05299E-08	1.04121100	.0000€+00	.0000E+00	6,27267E-03	.000000E+000	2.06791E+00

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.0000E+00 1.82507E-08
.0000E+00 1.58570E-08
                      5 1.44463E+00 -4.71465E-08 1.57523E+00 .0000E+00
                                                                                                                                                                                                                                                                                                                                                               .0000E+00 3.12155E+00
                                                                                                                                                                                                                                                                                                                                                               .0000E+00 6.00220E+00
                      6 2.81963E+00 4.11372E-08 3.02978E+00
                                                                                                                                                                                                  .00000E+00
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                      7 2.78167E+00 1.78610E-08 2.90479E+00
                                                                                                                                                                                                  .0000E+00
                                                                                                                                                                                                                                                                                                                                                               .0000E+00 5.85680E+00
                  8 2.06/28:400 -1.2876/E-07 2.0853E+00
9 1.60/72:400 -4.4/79/2E-08 1.5871E+00
10 1.46/0E:400 -6.20540E-08 1.4651E+00
                                                                                                                                                                                                                                                                                                                                                               .0000E+00 4.30491E+00
                                                                                                                                                                                                   .00000E+00
                                                                                                                                                                                                                                                      .0000E+00 2.13181E-08
.0000E+00 4.54090E-08
.0000E+00 9.5987EE-08
.0000E+00 1.25419E-02
                                                                                                                                                                                                                                                                                                                                                               .0000E+00 3.33057E+00
.0000E+00 3.0362E+00
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                 11 1.35476-00 -7.113706-08 1.3535-00
12 8.52578-01 -1.057566-08 7.95806-01
13 7.198726-01 -1.09756-08 6.714/06-01
14 6.61576-01 -1.69506-09 5.87876-01
                                                                                                                                                                                                                                                                                                                                                               .0000E+00 2.7879E+00
                                                                                                                                                                                                                                                                                                                                                                .0000E+00 1.7412E+00
                                                                                                                                                                                                   .0000E+00
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.00002+00 1.354832-02
.00002+00 2.97252-03
.00002+00 1.641782-03
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.0000E+00 1,33192E+00
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                15 3.765E-01 6.762E-07 3.7050E-01 16 2.085E-01 6.755E-07 2.04.11E-01 17 8.978E-02 4.5611E-07 8.4542E-02 18 6.2756E-01 6.468E-07 1.2530E-01 1.2530E-01
                                                                                                                                                                                                                                                                                                                                                               .0000E+00 7.80EEE-01
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.000E-00
                                                                                                                                                                                                                                                                                                                                                               .0000E+00 1.19880E-01
                                                                                                                                                                                                                                                                                                                                                                .0000E+00 2.7710'E-01
                 20 4.52750E-01 1.84102E-06 4.3134/E-01 21 1.314/0E-01 -7.10894E-06 1.11369E-01 22 2.44000E-01 2.05632E-06 1.8539E-01 25 8.0440E-01 -3.8454E-07 4.9459E-01
                                                                                                                                                                                                                                                                                                                                                                .0000E+00 9.2966E-01
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.000E+00 4.8212E-01
.000E+00 1.6074E+00
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                  24 6.14819E-01 3.47787E-05 5.05153E-01
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                                                                                                                                                                                                                                                      .0000E+00 4.2692E-02
.0000E+00 3.92310E-02
                                                                                                                                                                                                                                                                                                                                                               .00000E+00 5,16205E-01
                                                                                                                                                                                                    .00000E+00
                   25 2,661975-01 -7,201976-07 2,07365E-01
                  26 1.82258-01 -2.24758-06 1.24648-01 .00000400 .00000400 3.923108-02 27 3.345528-02 1.040788-07 1.660598-02 .00000840 .00000840 1.108488-02
                                                                                                                                                                                                                                                                                                                                                               .0000E+00 3.4059E-01
                                                                                                                                                                                                                                                                                                                                                               .00000E+00 5.76549E-02
                   28 2.33652+01 -3.956/9E-06 2.33257E+01
                                                                                                                                                                                                 .0000E+00 2.3770E-03 4.19530E-01
                                                                                                                                                                                                                                                                                                                                                               .0000E+00 4.85970E+01
           elapsed time .02 min.
   Odinect access unit 9 requires 516 blocks of length 1456 for cross section weighting.
   1 transcort cross section weighting function
 1 2.57800E-05 2.4785E-02 3.5170E-02 1.5078E-02 2.9485E-02 5.5785E-02 3.1744E-02 4.6307E-05 2.3.7277E-03 3.865E-02 4.8785E-02 2.9485E-02 4.4835E-02 6.47830E-02 4.7830E-02 6.9581E-05 3 3.8505E-03 3.2767E-02 4.3075E-02 2.7776E-02 4.2500E-02 6.0276E-02 4.5783E-02 6.9581E-05 4 1.0469E-03 3.2767E-02 4.3075E-02 2.7776E-02 4.2500E-02 6.0276E-02 4.5783E-02 5.5663E-03 4.10469E-03 1.2734E-02 1.6507E-02 1.0874E-02 1.3747E-02 1.3747E-02 1.7789E-03 1.2734E-02 1.7789E-03 1.2734E-02 1.7789E-03 1.2734E-02 1.7789E-03 1.2734E-02 1.7789E-03 1.2734E-02 1.7789E-03 1.2734E-03 1
                      5 1,75/27E-03 1,85097E-02 2,47319E-02 1,59761E-02 2,43107E-02 4,6409/E-02 2,6611/E-02 3,316//E-03
 2 7.060E-05 5.769E-05 1.878E-02 1.570E-02 1.570E-02 1.878E-02 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.570E-05 1.57
5 3.2016CE-CB 4.6973SE-CB 1.0126EE-CB 1.17166E-CB 1.0053EE-CB 1.5422EE-CB 1.5422EE-CB 1.0132EE-CB 1.01
                     4 7.4820E-03 6.8088E-03 1.71927E-03 2.18567E-01 5 1.0670E-02 9.7140E-03 2.54374E-03 3.1251E-01
                                                                                                                560 d. sm2h: beboock wilcox 15x15, 3.00x24, 20px/stu burn high temp
   Ocell averaged fluxes

        Come
        grp. 1
        grp. 2
        grp. 3
        grp. 4
        grp. 5
        grp. 6
        grp. 7
        grp. 8

        1
        1.75276-01
        1.3078-00
        1.6526-00
        1.2586-00
        1.5086-00
        2.9226-00
        2.87076-00
        2.07576-00

        2
        1.72626-01
        1.27476-00
        1.61386-00
        1.01976-00
        1.51386-00
        2.91256-00
        2.65516-00
        2.06356-00

        3
        1.70876-01
        1.26276-00
        1.59826-00
        9.93986-01
        1.5086-00
        2.66566-00
        2.60006-00
        2.60006-00

                      4 1.69/25E-01 1.2036/EHO 1.57/8/EHO 9.79/05E-01 1.468/EHOO 2.82520EHO 2.70357EHOO 2.06/2/EHOO
                      5 1.7150E-01 1.250VE+00 1.6025E+00 9.95/FFE-01 1.4777E+00 2.885/E+00 2.885/E+00 2.082/E+00
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0zre - grp. 9 grp. 10 grp. 11 grp. 12 grp. 13 grp. 14 grp. 15 grp. 16 1 1.59205±00 1.45175±00 1.31751±00 8.10131±-01 6.83542±-01 6.06130±-01 3.7252±-01 2.07850±-01 2.159783±-00 1.45963±+00 1.33472±+00 8.30578±-01 7.0825±-01 6.40287±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 2.07850±-01 3.7650±-01 3.7650±-01 2.07850±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.7650±-01 3.76
                                          4 1,60835+00 1,46505+00 1,35005+00 8.52525-01 7.19394-01 6,60346-01 3,76865-01 2,00935-01 5 1,600175+00 1,462275+00 1,34025+00 8,36555-01 7,05895-01 6,39324-01 3,751465-01 2,007855-01
 5 1.800/E-00 1,4522/E-00 1,5402/E-00 8,5655/E-01 7,085/E-01 6,5402/E-01 2,085/E-01 2,085/E-01 2,085/E-01 2,085/E-01 2,085/E-01 2,085/E-01 2,085/E-01 1,8509/E-02 4,8777/E-02 1,877/E-01 4,367/E-01 1,850/E-01 2,085/E-01 7,005/E-01 5,5787/E-01 2,877/E-02 1,577/E-02 1,577/E-01 4,44/5/E-01 1,257/E-01 2,257/E-01 7,772/E-01 5,787/E-01 4,877/E-02 6,2487/E-01 4,526/E-01 1,3110/E-01 2,481/E-01 8,085/E-01 6,1115/E-01 5,877/E-02 1,375/E-01 4,44/5/E-01 1,255/E-01 2,316/G-01 7,772/E-01 5,877/E-01 5,877/E-01
 0cme gp. 25 gp. 26 gp. 27
1 2.22430E-01 1.39861E-01 2.0077E-02
2 2.41267E-01 1.5665E-01 2.5537E-02
3 2.4647E-01 1.5127E-01 2.6785E-02
4 2.6866E-01 1.7721E-01 3.255E-02
5 2.4600E-01 1.6366E-01 2.7897E-02
       Offlux disadventage factors (zone average/cell average-flux)
 0mm grp. 1 grp. 2 grp. 3 grp. 4 grp. 5 grp. 6 grp. 7 grp. 8
1 1.021705+00 1.031695+00 1.03265+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.03255+00 1.
 Oxore grp. 25 grp. 26 grp. 27
1 8.56805-01 8.48498-01 7.248176-01
2 9.72836-01 9.572106-01 9.22036-01
                                          3 9.9557E-01 9.85475E-01 9.67391E-01
                                          4 1.0377E+00 1.07507E+00 1.17386E+00 5 1.0000E+00 1.0000E+00 1.0000E+00
     Opell averaged currents
 0ene grp. 1 grp. 2 grp. 3 grp. 4 grp. 5 grp. 6 grp. 7 grp. 8 1 2.5780E-03 2.4858E-02 3.5170E-02 1.5785E-02 2.5785E-02 5.5785E-02 3.174VE-02 4.6307E-08 2 3.7277E-03 3.6858E-02 4.6785E-02 2.9468E-02 4.4303E-02 6.9585E-03 3.5065E-03 3.2976E-02 4.3035E-02 2.7774SE-02 4.2310E-02 8.0254E-02 4.7850E-02 6.9585E-03 4 1.045E-03 1.2134E-02 1.6510E-02 1.024E-02 1.744E-02 3.3325E-02 1.9274E-02 1.9980E-03 5 1.732E-03 1.8097E-02 2.4757E-02 1.5980E-03 2.4510E-02 4.609E-02 2.6614E-02 3.3366E-03 3.250E-02 2.6614E-02 3.3366E-03 3.250E-02 3.2614E-02 3.3366E-03 3.260E-03 5 1.7%ZE-03 1.809XE-02 2.4755E-02 1.595E-02 2.451KE-02 4.600XE-02 3.500XE-02 3.500XE-02 3.500XE-03 3.500XE-03 3.500XE-03 3.500XE-03 1.255XE-03 1.575XE-03 ```

| 2 2.1752E-03 6.6669E-0 3 2.008E-03 6.1275E-0 4 8.08EE-04 2.41976E-0 5 1.623E-03 3.4605E-0 0zore grp. 25 grp. 26 2 2.0002E-02 1.8864E-0 2 2.0002E-02 1.8664E-0 3 1.8678E-02 1.7657E-02 5 1.0657E-02 9.7140E-0 0zore volume vol. fr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3.4262±03 7.8731/E-<br>1.3085E-03 3.2177/E-<br>1.9752±03 4.59231E-<br>grp. 27<br>3.12127E-03<br>5.10756E-03<br>4.69107E-03<br>1.7792E-03<br>2.54374E-03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | OB 7.03047E-03 2.0<br>OB 2.82514E-03 8.0                       | 218/E-02 3,9499E-02<br>9754E-08 1,62190E-02                                                                                                                                                                                 | 3,95780E-02<br>3,67274E-02<br>1,5082E-02<br>2,12492E-02 |
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| 1 6.884% -01 3.307 2 3.1752 -02 1.524 3 2.16724 -01 1.041 4 1.1424 -00 5.498 5 2.0814 -00 1.000 - elapsed time .03 min. Oraclested permital this siture pass 4, esc halts after pass 1 thittititib coccoccoccoccoccoccoccoccoccoccoccoccoc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 22-02 22-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 23-01 | 80000000<br>80000000<br>80<br>80<br>80<br>800000000<br>80<br>8 | ATTAR CHATA BEED ACTOR BEED ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR ACTOR |                                                         |
| Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Company   Comp |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                | 2688<br>26<br>263<br>2696<br>26<br>26<br>26<br>26<br>26<br>26<br>26                                                                                                                                                         |                                                         |
| 000000 77777777<br>0000000 7777777777<br>00 00 2 2<br>00 00 2<br>00 00 2<br>00 00 2<br>00 00 2<br>00 00 2<br>00 00 2<br>00 00 2<br>00 00 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | // 1<br>// 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 111                                                            |                                                                                                                                                                                                                             | ######################################                  |

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|---|---------------------------------------------------------------------------|-----------------------------------------------------------------------------|------------------------------|-----------------------------------------|----------------------------------------|--------------------------|-----------------------------------------|----------------------------------------|
|   | 11<br>111<br>1113<br>1113<br>11<br>11<br>11<br>11<br>11<br>11<br>11<br>11 | 888<br>8 8 8<br>8 8 8 | :::<br>:::<br>:::<br>:::     | 888 88 88 88 88 88 88 88 88 88 88 88 88 | 88 88 88 88 88 88 88 88 88 88 88 88 88 | :::<br>:::<br>:::<br>::: |                                         | ###################################### |
| ó |                                                                           |                                                                             | \$259555556<br>\$25055556555 | CCCCCCCCCCC                             | 800000000<br>8000000000                | tt<br>tt                 | 90000000000                             |                                        |
|   |                                                                           |                                                                             | 25 26                        | œ œ                                     | 86 86                                  | ii                       | ee                                      |                                        |
|   |                                                                           |                                                                             | 22                           | œ · w                                   | aa aa                                  | ii                       | 68                                      |                                        |
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|   |                                                                           |                                                                             | 883636363636                 | œ                                       | 80000000000000                         | u                        | 866666666                               |                                        |
|   |                                                                           |                                                                             | <b>S</b> 6                   | œ                                       | 88. BB                                 | ļļ.                      | 86                                      |                                        |
|   |                                                                           |                                                                             | <b>38</b>                    | œ                                       | 88. 88.                                | u                        | 66                                      |                                        |
|   |                                                                           |                                                                             | 8S 96                        | α α                                     | <b>86 86</b>                           | Ц                        | 66                                      |                                        |
|   |                                                                           |                                                                             | 89699999999                  | occorrection .                          | <b>88</b>                              | ummuni                   | 000000000000000000000000000000000000000 |                                        |
|   | •                                                                         |                                                                             | 222222222                    | COCCOCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC  | AR AR                                  | 1111111111111            | 666666666666                            |                                        |

| ***             |                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ***             | •                                                 | thá chiếu các các các các các các các các các cá                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| ***             | program verification information                  | 164.644                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Antoholis       |                                                   | ****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                 | code system scale version: 4.2                    | ***                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                 |                                                   | ***                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| ***             | <u> </u>                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                 |                                                   | ****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| -               |                                                   | ***                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                 |                                                   | ****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| ***             | ргоргаж с0с008                                    | ***                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| ***             | ,                                                 | ****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                 | creation date: 04/27/95                           | think the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of |
|                 |                                                   | the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s |
| and the last    | library: /ns.tronics/scale/eve                    | ***                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| ***             | v                                                 | ***                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| -               |                                                   | ****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                 | this is not a scale configuration controlled code | ****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| ***             |                                                   | thirties.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| ***             | jabr <del>ane:</del> davis .                      | tidaha.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| ***             | <b>7</b>                                          | 44444                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Addition</b> | date of execution: 02/16/96                       | ****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| ***             | the or constitute and indire                      | ***                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| the state of    | time of execution: 10:00:48                       | white A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                 |                                                   | ****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                 |                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

```
-1q array has
 1 entries.
 Oci array has
 4 entries.
 6 entries.
 1c array has
 20 array has
 2 entries.
1 logical assignments
Onester library 12
 urking library 17 screen file 18
 new Library
Oproblem description
Digr-gometry (0/1/2/3--inf mod/slab/cyl/sphere
Dizm-rupher of zones or material regions
Ons-mixing table length
 χÒ
Oibl--shielded cross section edit option (Q/1--my/es)
 Õ
Oibr-bondarenko factor edit option (O/1--no/yes)
Discopt-denooff factor option
 ٥
 0
Occinemence criterion 1.0000E-03
Operating correction factor for wigner rational approximation 1.2505+00
 3q array has
4q array has
 70 etries.
 70 extries.
 70 entries.
 50 array has
 60 array has
 4 entries.
 4 entries.
 70 array has
 80 array has
 4 entries.
 90 array has
100 array has
 4 entries.
 70 estries.
 11q array has
 4 entries.
Onixing table
 number density new identifier
2,09710E-02 201
 mixture (sotope
OUTLY
 8016
 RRAK
 1001
 4.19420E-02
 5010
 3.81515E-06
 1.5488/E-05
4,2515/E-02
 5011
 40B02
 9225
9234
 20005
20007
 1,62152E-04
 1.60993E-06
 92236
 Z000B
 1.31718E-05
 200009
200010
 ş
 92238
 7.2496ZE-03
 80%
80%
 1,50511E-02
 200011
 1.153152-02
 20012
20013
 36083
 3.2319XE-07
 34085
38090
 1.55770E-07
 200014
 3.51229E-06
 200015
200016
200017
 39089
 2.61349E-06
 42075
40075
 3.2017E-05
 2.71690E-06
 400%
400%
 200018
200019
 4.228/SE-06
 6.8629E-07
 41094
 200020
 1.8576E-12
 43079
 4.11687E-06
 200021
 2.14179E-05
6.24105E-09
 4510B
 200022
 45105
 200025
 44101
44105
 200024
200025
 3.66029E-06
 5.4576E-07
 200026
 46105
 1,26197E-06
 4610B
 3.0770EE-07
 20027
```

```
2.21053E-07
5.35940E-11
 200028
200029
 51124
 54131
 1.90924E-06
 200030
 5/15/
5/15
 3.32/9E-06
 200031
 2.20090E-09
 200032
 54136
 6.96021E-05
 200033
 55134
 1.3998E-07
 200134
 55135
 2.1955E-06
 200035
 55137
 200086
 4.36275E-05
 56136
 2,69601E-08
 20037
 200EB
 57139
 4.3352E-05
 20039
 59141
 3.6337XE-06
 2000x0
2000x1
 1.273/8E-07
 59143
 58144
 1.94150E-05
 2000/2
 60143
 3.5X85E-06
 2.53772E-06
 20003
 60145
 61147
61148
 1.0390BE-06
 200044
 2000/5
 2.92578E-09
 60147
62147
 2000/6
2000/7
 4.35262E-0B
 2.20863E-07
 200048
 62149
 2.6527ZE-08
 62150
 8.4149E-07
 200049
 62151
62152
 1.09812E-07
 200050
 20051
 4.1KEE-07
 20052
20053
 64155
 3.95 DE-10
 ଷୀସ
 2.08SEE-07
 815
815
815
 200054
 3.15201E-0B
 2.4187XE-08
 200055
 200056
 4,42681E-05
2,30630E-02
 40302
 20057
 1001
 5010
 2.09787E-05
 20005B
 200059
 5011
 8.51673E-06
 4.50801E-06
 200050
200051
 25133
 9237
 6.54722E-07
5.8683E-08
 200062
 94238
 9259
9230
9231
 200053
200064
 2.73412E-05
 3.82999E-06
 20005
 1.67187E-05
 9232
9241
9233
 200066
200067
 1.12810E-07
 3.196ZE-08
 200068
 6.10B(SE-09
 96244
 3,460256-10
 200089
 69
 200070
 3.30753E-21
 Operatry and material description
 7.9056/E-01
 type (0/1--fuel/mod)
 Ozone mixture outer dimension
 tenperature
 6.32X6Œ-01
 6.07600E+02
 1.23052±01
3.54852±00
2.52832±01
 6.73100E-01
 6.5000E+02
 8.1400E-01
2.96100E-00
 6.07600E+02
9.7500E+02
1 2,9$1005-00 9,750005-02 2,52835-01 0

BOST locations of 20000 secilable are required to make a new master containing the self-shielded values.

On nuclides in your problem have borderente factor data forms will copy from logical 12 to logical 1

Occpy 999 1/v cross sectio from log 12 to log 1 borderente trigger 0

Occpy 1001 hydrogen from log 12 to log 18 borderente trigger 0

Occpy 1001 hydrogen from log 18 to log 1 borderente trigger 0

Occpy 1001 hydrogen from log 18 to log 1 borderente trigger 0

Occpy 5010 b-10 1273 218rgp from log 18 to log 1 borderente trigger 0

Occpy 5010 b-10 1273 218rgp from log 18 to log 1 borderente trigger 0

Occpy 5010 b-10 1273 218rgp from log 18 to log 1 borderente trigger 0

Occpy 5010 b-10 1273 218rgp from log 18 to log 1 borderente trigger 0

Occpy 5010 b-10 1273 218rgp from log 18 to log 1 borderente trigger 0
 from log 12 to log 18 borderatio trigger 0 from log 18 to log 1 borderatio trigger 0
 5011
5011
 baran-11
 Occipy
 boran-11
```

| Solid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                   |                  |      |            |      |          |        |                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------|------------------|------|------------|------|----------|--------|----------------------|
| Depty                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 00007             | 5011              | baran-11         | from | læ         | 18   | to (     | cg 1   | bandererko trigger 0 |
| Copy         8016         copysit 16         from leg 18 to leg 1         bothsterion trigger 0           Copy         8016         copysit 6         from leg 18 to leg 1         bothsterion trigger 0           Copy         8016         copysit 6         from leg 12 to leg 1         bothsterion trigger 0           Copy         3603         k-65         from leg 12 to leg 1         bothsterion trigger 0           Copy         3609         y-89         from leg 12 to leg 1         bothsterion trigger 0           Copy         4603         x-25         from leg 12 to leg 1         bothsterion trigger 0           Copy         4603         x-24         from leg 12 to leg 1         bothsterion trigger 0           Copy         4604         x-25         from leg 12 to leg 1         bothsterion trigger 0           Copy         4602         xircalloy         from leg 12 to leg 1         bothsterion trigger 0           Copy         4604         xircalloy         from leg 12 to leg 1         bothsterion trigger 0           Copy         4602         xircalloy         from leg 12 to leg 1         bothsterion trigger 0           Copy         4604         xircalloy         from leg 12 to leg 1         bothsterion trigger 0           Copy         4605 <td< td=""><td></td><td></td><td></td><td>from</td><td>læ</td><td>12 (</td><td>to I</td><td>ca 18</td><td></td></td<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                   |                   |                  | from | læ         | 12 ( | to I     | ca 18  |                      |
| 80% cogn-16 from log 18 to log 1 bordereto trigger 0 copy 300% k-45 from log 12 to log 1 bordereto trigger 0 copy 300% k-45 from log 12 to log 1 bordereto trigger 0 copy 300% k-45 from log 12 to log 1 bordereto trigger 0 copy 300% k-45 from log 12 to log 1 bordereto trigger 0 copy 300% k-45 from log 12 to log 1 bordereto trigger 0 copy 400% k-4% from log 12 to log 1 bordereto trigger 0 copy 400% k-4% from log 12 to log 1 bordereto trigger 0 copy 400% k-4% from log 12 to log 1 bordereto trigger 0 copy 400% k-4% from log 12 to log 1 bordereto trigger 0 copy 400% k-4% from log 12 to log 1 bordereto trigger 0 copy 400% k-4% from log 12 to log 1 bordereto trigger 0 copy 400% k-4% from log 12 to log 1 bordereto trigger 0 copy 400% k-4% from log 12 to log 1 bordereto trigger 0 copy 400% k-4% from log 12 to log 1 bordereto trigger 0 copy 400% k-4% from log 12 to log 1 bordereto trigger 0 copy 400% k-4% from log 12 to log 1 bordereto trigger 0 copy 400% k-4% from log 12 to log 1 bordereto trigger 0 copy 400% k-5% from log 12 to log 1 bordereto trigger 0 copy 400% k-5% from log 12 to log 1 bordereto trigger 0 copy 400% k-5% from log 12 to log 1 bordereto trigger 0 copy 400% k-5% from log 12 to log 1 bordereto trigger 0 copy 400% k-5% from log 12 to log 1 bordereto trigger 0 copy 400% k-5% from log 12 to log 1 bordereto trigger 0 copy 400% k-5% from log 12 to log 1 bordereto trigger 0 copy 400% k-5% from log 12 to log 1 bordereto trigger 0 copy 400% k-1% k-10% from log 12 to log 1 bordereto trigger 0 copy 500% k-10% from log 12 to log 1 bordereto trigger 0 copy 500% k-10% from log 12 to log 1 bordereto trigger 0 copy 500% k-10% from log 12 to log 1 bordereto trigger 0 copy 500% k-10% from log 12 to log 1 bordereto trigger 0 copy 500% k-10% from log 12 to log 1 bordereto trigger 0 copy 500% k-10% from log 12 to log 1 bordereto trigger 0 copy 500% k-10% from log 12 to log 1 bordereto trigger 0 copy 500% k-10% from log 12 to log 1 bordereto trigger 0 copy 500% k-10% from log 12 to log 1 bordereto trigger 0 copy 500% k-10% fr | ODDOV             |                   |                  | from | læ         | 18   | to i     | ca 1   |                      |
| Comp   3606   criss   from log 12 to log 1   bordereto trigger 0   comp   3606   kr-65   from log 12 to log 1   bordereto trigger 0   comp   3606   kr-65   from log 12 to log 1   bordereto trigger 0   comp   3606   kr-65   from log 12 to log 1   bordereto trigger 0   comp   3606   kr-65   from log 12 to log 1   bordereto trigger 0   comp   3606   kr-65   from log 12 to log 1   bordereto trigger 0   comp   4005   kr-65   from log 12 to log 1   bordereto trigger 0   comp   4005   kr-65   from log 12 to log 1   bordereto trigger 0   comp   4005   kr-65   from log 12 to log 1   bordereto trigger 0   comp   4005   kr-65   from log 12 to log 1   bordereto trigger 0   comp   4005   kr-65   from log 18 to log 1   bordereto trigger 0   comp   4005   kr-65   from log 18 to log 1   bordereto trigger 0   comp   4005   kr-65   from log 18 to log 1   bordereto trigger 0   comp   4005   kr-65   from log 18 to log 1   bordereto trigger 0   comp   4005   kr-65   from log 12 to log 1   bordereto trigger 0   comp   4005   kr-105   from log 12 to log 1   bordereto trigger 0   comp   4005   kr-105   from log 12 to log 1   bordereto trigger 0   comp   4005   kr-105   from log 12 to log 1   bordereto trigger 0   comp   4005   kr-105   from log 12 to log 1   bordereto trigger 0   comp   4005   kr-105   from log 12 to log 1   bordereto trigger 0   comp   4005   kr-105   from log 12 to log 1   bordereto trigger 0   comp   4005   kr-105   from log 12 to log 1   bordereto trigger 0   comp   4005   kr-105   from log 12 to log 1   bordereto trigger 0   comp   4005   kr-105   from log 12 to log 1   bordereto trigger 0   comp   4005   kr-105   from log 12 to log 1   bordereto trigger 0   comp   4005   kr-105   from log 12 to log 1   bordereto trigger 0   comp   4005   kr-105   from log 12 to log 1   bordereto trigger 0   comp   4005   kr-105   from log 12 to log 1   bordereto trigger 0   comp   4005   kr-105   from log 12 to log 1   bordereto trigger 0   comp   4005   kr-105   from log 12 to log 1   bordereto trigger 0   comp   4005   kr-10   |                   |                   |                  |      |            |      |          |        |                      |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                   |                  |      |            |      |          |        |                      |
| 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ODDY              |                   |                  | from | lœ         | 12 . | to I     | loci 1 |                      |
| 2009   3009   y-89   from log 12 to log 1   bothereto trigger 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Outs.             |                   |                  | from | im         | ij.  | i m      |        |                      |
| Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   Supple   S   | DALLA<br>Artha    |                   |                  | from | im         | ٠    | mi       | m 1    |                      |
| Copy         4003         17-35         from log 12 to log 1         bordwerke trigger 0           Copy         4005         17-56         from log 12 to log 1         bordwerke trigger 0           Copy         4002         2 irrealloy         from log 12 to log 1         bordwerke trigger 0           Copy         4002         2 irrealloy         from log 12 to log 1         bordwerke trigger 0           Copy         4002         2 irrealloy         from log 12 to log 1         bordwerke trigger 0           Copy         4002         2 irrealloy         from log 12 to log 1         bordwerke trigger 0           Copy         4003         10-99         from log 12 to log 1         bordwerke trigger 0           Copy         4004         10-106         from log 12 to log 1         bordwerke trigger 0           Copy         4005         10-106         from log 12 to log 1         bordwerke trigger 0           Copy         45105         from log 12 to log 1         bordwerke trigger 0           Copy         45105         from log 12 to log 1         bordwerke trigger 0           Copy         45105         from log 12 to log 1         bordwerke trigger 0           Copy         45105         from log 12 to log 1         bordwerke trigger 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Urath.            |                   |                  |      |            |      |          |        |                      |
| Copy   400%   17-96   from log 12 to log 1   bordsreto trigger 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Corre             |                   | 7-03             |      |            |      |          |        |                      |
| Octy         4005         27-55         from log 12 to log 1         bordwerke trigger 0           Octy         4002         zircalley         from log 12 to log 1         bordwerke trigger 0           Octy         4002         zircalley         from log 18 to log 1         bordwerke trigger 0           Octy         4002         zircalley         from log 12 to log 1         bordwerke trigger 0           Octy         4005         no-95         from log 12 to log 1         bordwerke trigger 0           Octy         4007         no-95         from log 12 to log 1         bordwerke trigger 0           Octy         4007         no-100         from log 12 to log 1         bordwerke trigger 0           Octy         4505         no-105         from log 12 to log 1         bordwerke trigger 0           Octy         4506         no-106         from log 12 to log 1         bordwerke trigger 0           Octy         4506         ph-106         from log 12 to log 1         bordwerke trigger 0           Octy         4506         ph-106         from log 12 to log 1         bordwerke trigger 0           Octy         5102         se-134         from log 12 to log 1         bordwerke trigger 0           Octy         5102         se-134         from                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | DALLA<br>GAMAS    |                   |                  | from | im         | 줘.   | ~ i      | m      |                      |
| Octy         4802         zircalloy         from log 12 to log 18         bordwerto trigger 0           Octy         4802         zircalloy         from log 18 to log 1         bordwerto trigger 0           Octy         4802         zircalloy         from log 18 to log 1         bordwerto trigger 0           Octy         4805         no-54         from log 12 to log 1         bordwerto trigger 0           Octy         4807         no-59         from log 12 to log 1         bordwerto trigger 0           Octy         4401         nu-101         from log 12 to log 1         bordwerto trigger 0           Octy         4503         rh-105         from log 12 to log 1         bordwerto trigger 0           Octy         45103         rh-105         from log 12 to log 1         bordwerto trigger 0           Octy         45105         rh-105         from log 12 to log 1         bordwerto trigger 0           Octy         45105         rh-105         from log 12 to log 1         bordwerto trigger 0           Octy         45105         rh-105         from log 12 to log 1         bordwerto trigger 0           Octy         45105         rh-105         from log 12 to log 1         bordwerto trigger 0           Octy         5112         x=13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Over V            |                   |                  | free | im         | ij.  | mi       | m 1    |                      |
| Compy   4000   zircalloy   from log 18 to log 1   bortherio trigger 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                   |                  | from | im         | ñ,   | ۳ i      | m 18   |                      |
| Copy   4004   zirosloy   from log 18 to log 1   borderero trigger 0   Copy   4104   rb-%   from log 12 to log 1   borderero trigger 0   Copy   4205   m-95   from log 12 to log 1   borderero trigger 0   Copy   4205   m-95   from log 12 to log 1   borderero trigger 0   Copy   4206   rt-100   from log 12 to log 1   borderero trigger 0   Copy   44101   rt-100   from log 12 to log 1   borderero trigger 0   Copy   44101   rt-100   from log 12 to log 1   borderero trigger 0   Copy   45105   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45105   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45105   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45105   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45105   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45105   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45105   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45102   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45102   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45105   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45105   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45105   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45105   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45105   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45105   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45105   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45105   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45105   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45105   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45105   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45105   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45105   rt-105   from log 12 to log 1   borderero trigger 0   Copy   45105   rt-105   from log 12 to log 1   borde   |                   |                   |                  | free | im         | 頂.   | m i      | m 1    |                      |
| Octy/<br>Octy/<br>ADMS         rb-94/<br>rb-95/<br>rbm log 12 to log 1         bordereto trigger 0           Octy/<br>Octy/<br>ADMS         rb-95/<br>rbm log 12 to log 1         bordereto trigger 0           Octy/<br>ADMS         rb-96/<br>rbm log 12 to log 1         bordereto trigger 0           Octy/<br>ADMS         rb-106/<br>rbm log 12 to log 1         bordereto trigger 0           Octy/<br>ADMS         rb-106/<br>rbm log 12 to log 1         bordereto trigger 0           Octy/<br>ADMS         rb-105/<br>rbm log 12 to log 1         bordereto trigger 0           Octy/<br>ADMS         rb-105/<br>rbm log 12 to log 1         bordereto trigger 0           Octy/<br>ADMS         rb-105/<br>rbm log 12 to log 1         bordereto trigger 0           Octy/<br>ADMS         rb-105/<br>rbm log 12 to log 1         bordereto trigger 0           Octy/<br>ADMS         rb-105/<br>rbm log 12 to log 1         bordereto trigger 0           Octy/<br>ADMS         rb-105/<br>rbm log 12 to log 1         bordereto trigger 0           Octy/<br>ADMS         rb-105/<br>rbm log 12 to log 1         bordereto trigger 0           Octy/<br>ADMS         rb-105/<br>rbm log 12 to log 1         bordereto trigger 0           Octy/<br>ADMS         rb-105/<br>rbm log 12 to log 1         bordereto trigger 0           Octy/<br>ADMS         rb-105/<br>rbm log 12 to log 1         bordereto trigger 0           Octy/<br>ADMS         rb-105/<br>rbm log 12 to log 1 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                   |                  |      |            |      |          |        |                      |
| Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared   Compared    |                   |                   |                  | from | im         | ĩŽ : | mi       | 00 1   |                      |
| Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy   Copy      | CALA.             |                   |                  |      |            |      |          |        |                      |
| Copy         4101         ru-101         from log 12 to log 1         bordarento trigger 0           Copy         4105         ru-106         from log 12 to log 1         bordarento trigger 0           Copy         45105         ru-106         from log 12 to log 1         bordarento trigger 0           Copy         45105         ru-106         from log 12 to log 1         bordarento trigger 0           Copy         45105         pi-106         from log 12 to log 1         bordarento trigger 0           Copy         45108         pi-108         from log 12 to log 1         bordarento trigger 0           Copy         45103         pi-108         from log 12 to log 1         bordarento trigger 0           Copy         5124         sp-124         from log 12 to log 1         bordarento trigger 0           Copy         5134         se-134         from log 12 to log 1         bordarento trigger 0           Copy         5135         se-135         from log 12 to log 1         bordarento trigger 0           Copy         5136         se-137         from log 12 to log 1         bordarento trigger 0           Copy         5136         se-137         from log 12 to log 1         bordarento trigger 0           Copy         5137         se-138                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                   |                  |      |            |      |          |        |                      |
| Octy         4105         ru-105         from log 12 to log 1         bordsreno trigger 0           Octy         45105         rh-105         from log 12 to log 1         bordsreno trigger 0           Octy         45105         rh-105         from log 12 to log 1         bordsreno trigger 0           Octy         45105         ph-105         from log 12 to log 1         bordsreno trigger 0           Octy         45105         ph-108         from log 12 to log 1         bordsreno trigger 0           Octy         45105         sh-134         from log 12 to log 1         bordsreno trigger 0           Octy         45105         ser-134         from log 12 to log 1         bordsreno trigger 0           Octy         51124         sh-134         from log 12 to log 1         bordsreno trigger 0           Octy         5105         ser-135         from log 12 to log 1         bordsreno trigger 0           Octy         5105         ser-135         from log 12 to log 1         bordsreno trigger 0           Octy         5105         cs-135         from log 12 to log 1         bordsreno trigger 0           Octy         5105         cs-135         from log 12 to log 1         bordsreno trigger 0           Octy         5105         brids         fr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |                   |                  |      |            |      |          |        |                      |
| Octopy         45 105         rh-105         from log 12 to log 1         bordsreto trigger 0           Octopy         45 105         rh-105         from log 12 to log 1         bordsreto trigger 0           Octopy         45 105         pd-108         from log 12 to log 1         bordsreto trigger 0           Octopy         45 105         pd-108         from log 12 to log 1         bordsreto trigger 0           Octopy         51 124         sh-124         from log 12 to log 1         bordsreto trigger 0           Octopy         51 124         sh-132         from log 12 to log 1         bordsreto trigger 0           Octopy         54 132         sh-132         from log 12 to log 1         bordsreto trigger 0           Octopy         54 135         sero-135         from log 12 to log 1         bordsreto trigger 0           Octopy         54 135         sero-135         from log 12 to log 1         bordsreto trigger 0           Octopy         54 135         sero-135         from log 12 to log 1         bordsreto trigger 0           Octopy         54 135         sero-135         from log 12 to log 1         bordsreto trigger 0           Octopy         54 135         sero-135         from log 12 to log 1         bordsreto trigger 0           Octopy         <                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                   |                  |      |            |      |          |        |                      |
| Octopy 45105 rft-105 from log 12 to log 1 borderedo trigger 0 locpy 45105 pd-105 from log 12 to log 1 borderedo trigger 0 locpy 45105 pd-108 from log 12 to log 1 borderedo trigger 0 locpy 45108 pd-108 from log 12 to log 1 borderedo trigger 0 locpy 51124 sb-124 from log 12 to log 1 borderedo trigger 0 locpy 54134 pe-135 from log 12 to log 1 borderedo trigger 0 locpy 54135 pe-135 from log 12 to log 1 borderedo trigger 0 locpy 54135 pe-135 from log 12 to log 1 borderedo trigger 0 locpy 54135 pe-136 from log 12 to log 1 borderedo trigger 0 locpy 54135 pe-136 from log 12 to log 1 borderedo trigger 0 locpy 54136 pe-136 from log 12 to log 1 borderedo trigger 0 locpy 55136 ce-135 from log 12 to log 1 borderedo trigger 0 locpy 55136 ce-135 from log 12 to log 1 borderedo trigger 0 locpy 55136 ce-135 from log 12 to log 1 borderedo trigger 0 locpy 55136 ce-135 from log 12 to log 1 borderedo trigger 0 locpy 55136 loc-136 from log 12 to log 1 borderedo trigger 0 locpy 55137 ce-137 from log 12 to log 1 borderedo trigger 0 locpy 55136 loc-136 from log 12 to log 1 borderedo trigger 0 locpy 57139 le-139 from log 12 to log 1 borderedo trigger 0 locpy 57131 pr-143 from log 12 to log 1 borderedo trigger 0 locpy 57143 pr-143 from log 12 to log 1 borderedo trigger 0 locpy 57143 pr-143 from log 12 to log 1 borderedo trigger 0 locpy 57143 pr-143 from log 12 to log 1 borderedo trigger 0 locpy 57143 pr-143 from log 12 to log 1 borderedo trigger 0 locpy 57143 pr-143 from log 12 to log 1 borderedo trigger 0 locpy 57143 pr-147 from log 12 to log 1 borderedo trigger 0 locpy 5715 sr-151 from log 12 to log 1 borderedo trigger 0 locpy 5715 sr-151 from log 12 to log 1 borderedo trigger 0 locpy 5715 sr-151 from log 12 to log 1 borderedo trigger 0 locpy 5715 sr-151 from log 12 to log 1 borderedo trigger 0 locpy 5715 sr-151 from log 12 to log 1 borderedo trigger 0 locpy 5725 sr-152 from log 12 to log 1 borderedo trigger 0 locpy 5725 sr-155 from log 12 to log 1 borderedo trigger 0 locpy 5725 u-256 1153 signs from log 12 to log 1 borderedo trigger 0  |                   |                   |                  |      |            |      |          |        |                      |
| Octopy 45/05 pd-105 from log 12 to log 1 bordere to trigger 0 octopy 45/08 pd-108 from log 12 to log 1 bordere to trigger 0 octopy 51/124 sb-124 from log 12 to log 1 bordere to trigger 0 octopy 51/124 sb-124 from log 12 to log 1 bordere to trigger 0 octopy 54/134 sc-131 from log 12 to log 1 bordere to trigger 0 octopy 54/132 sc-132 from log 12 to log 1 bordere to trigger 0 octopy 54/135 sc-1336 from log 12 to log 1 bordere to trigger 0 octopy 54/135 sc-1336 from log 12 to log 1 bordere to trigger 0 octopy 55/134 cc-1336 from log 12 to log 1 bordere to trigger 0 octopy 55/134 cc-1336 from log 12 to log 1 bordere to trigger 0 octopy 55/134 cc-1336 from log 12 to log 1 bordere to trigger 0 octopy 55/134 cc-1336 from log 12 to log 1 bordere to trigger 0 octopy 55/135 cc-1356 from log 12 to log 1 bordere to trigger 0 octopy 55/136 bc-1356 from log 12 to log 1 bordere to trigger 0 octopy 55/136 bc-1356 from log 12 to log 1 bordere to trigger 0 octopy 55/136 bc-1356 from log 12 to log 1 bordere to trigger 0 octopy 55/137 cc-1377 from log 12 to log 1 bordere to trigger 0 octopy 57/137 pc-143 from log 12 to log 1 bordere to trigger 0 octopy 57/137 pc-143 from log 12 to log 1 bordere to trigger 0 octopy 57/137 pc-143 from log 12 to log 1 bordere to trigger 0 octopy 57/137 pc-143 from log 12 to log 1 bordere to trigger 0 octopy 57/137 pc-143 from log 12 to log 1 bordere to trigger 0 octopy 57/137 pc-143 from log 12 to log 1 bordere to trigger 0 octopy 57/137 pc-143 from log 12 to log 1 bordere to trigger 0 octopy 67/137 pc-1477 from log 12 to log 1 bordere to trigger 0 octopy 67/137 pc-143 from log 12 to log 1 bordere to trigger 0 octopy 67/138 pc-143 from log 12 to log 1 bordere to trigger 0 octopy 67/138 pc-143 from log 12 to log 1 bordere to trigger 0 octopy 67/138 pc-143 from log 12 to log 1 bordere to trigger 0 octopy 67/138 pc-153 from log 12 to log 1 bordere to trigger 0 octopy 67/138 pc-153 from log 12 to log 1 bordere to trigger 0 octopy 67/138 pc-153 from log 12 to log 1 bordere to trigger 0 octopy 67/138 pc-153 |                   |                   |                  | from | im         | íž : | m i      |        |                      |
| Copy 4709 silver-109 from log 12 to log 1 borderedo trigger 0 Copy 4709 silver-109 from log 12 to log 1 borderedo trigger 0 Copy 51124 sh-124 from log 12 to log 1 borderedo trigger 0 Copy 5413 xe-131 from log 12 to log 1 borderedo trigger 0 Copy 5413 xe-135 from log 12 to log 1 borderedo trigger 0 Copy 5413 xe-136 from log 12 to log 1 borderedo trigger 0 Copy 5413 xe-136 from log 12 to log 1 borderedo trigger 0 Copy 5413 ce-134 from log 12 to log 1 borderedo trigger 0 Copy 5513 ce-135 from log 12 to log 1 borderedo trigger 0 Copy 5513 ce-135 from log 12 to log 1 borderedo trigger 0 Copy 5513 ce-135 from log 12 to log 1 borderedo trigger 0 Copy 5513 ce-135 from log 12 to log 1 borderedo trigger 0 Copy 5513 ce-135 from log 12 to log 1 borderedo trigger 0 Copy 5513 ce-135 from log 12 to log 1 borderedo trigger 0 Copy 57139 le-139 from log 12 to log 1 borderedo trigger 0 Copy 5713 pr-143 from log 12 to log 1 borderedo trigger 0 Copy 5714 ce-144 from log 12 to log 1 borderedo trigger 0 Copy 5714 pr-141 from log 12 to log 1 borderedo trigger 0 Copy 5714 pr-141 from log 12 to log 1 borderedo trigger 0 Copy 5714 pr-144 from log 12 to log 1 borderedo trigger 0 Copy 5714 pr-147 from log 12 to log 1 borderedo trigger 0 Copy 5714 pr-147 from log 12 to log 1 borderedo trigger 0 Copy 5714 pr-147 from log 12 to log 1 borderedo trigger 0 Copy 6714 pr-147 from log 12 to log 1 borderedo trigger 0 Copy 6714 pr-147 from log 12 to log 1 borderedo trigger 0 Copy 6715 sr-151 from log 12 to log 1 borderedo trigger 0 Copy 6715 sr-151 from log 12 to log 1 borderedo trigger 0 Copy 6725 sr-152 from log 12 to log 1 borderedo trigger 0 Copy 6725 sr-153 from log 12 to log 1 borderedo trigger 0 Copy 6725 sr-153 from log 12 to log 1 borderedo trigger 0 Copy 6725 sr-153 from log 12 to log 1 borderedo trigger 0 Copy 6725 sr-153 from log 12 to log 1 borderedo trigger 0 Copy 6725 sr-153 from log 12 to log 1 borderedo trigger 0 Copy 6725 sr-155 from log 12 to log 1 borderedo trigger 0 Copy 6725 u-256 1163 signs from log 12 to log 1 borderedo trigge | Date.             |                   |                  |      |            |      |          |        |                      |
| Octy 4709 silve-109 from log 12 to log 1 bordere to trigger 0 octy 5124 sh-124 from log 12 to log 1 bordere to trigger 0 octy 5432 se-132 from log 12 to log 1 bordere to trigger 0 octy 5432 se-132 from log 12 to log 1 bordere to trigger 0 octy 5432 se-135 from log 12 to log 1 bordere to trigger 0 octy 5433 seson-135 from log 12 to log 1 bordere to trigger 0 octy 5433 cesium-133 from log 12 to log 1 bordere to trigger 0 octy 5533 cesium-133 from log 12 to log 1 bordere to trigger 0 octy 5534 ce-135 from log 12 to log 1 bordere to trigger 0 octy 5535 ce-135 from log 12 to log 1 bordere to trigger 0 octy 5537 ce-135 from log 12 to log 1 bordere to trigger 0 octy 5535 ce-135 from log 12 to log 1 bordere to trigger 0 octy 5535 ce-135 from log 12 to log 1 bordere to trigger 0 octy 5535 ce-135 from log 12 to log 1 bordere to trigger 0 octy 5535 ce-135 from log 12 to log 1 bordere to trigger 0 octy 5739 la-139 from log 12 to log 1 bordere to trigger 0 octy 5739 la-139 from log 12 to log 1 bordere to trigger 0 octy 5741 pr-143 from log 12 to log 1 bordere to trigger 0 octy 5743 pr-143 from log 12 to log 1 bordere to trigger 0 octy 6043 rd-143 from log 12 to log 1 bordere to trigger 0 octy 6043 rd-143 from log 12 to log 1 bordere to trigger 0 octy 6044 pr-1447 from log 12 to log 1 bordere to trigger 0 octy 6045 rd-145 from log 12 to log 1 bordere to trigger 0 octy 6148 pr-148 from log 12 to log 1 bordere to trigger 0 octy 6148 pr-148 from log 12 to log 1 bordere to trigger 0 octy 6247 sr-151 from log 12 to log 1 bordere to trigger 0 octy 6252 sr-153 from log 12 to log 1 bordere to trigger 0 octy 6253 sr-153 from log 12 to log 1 bordere to trigger 0 octy 6253 sr-153 from log 12 to log 1 bordere to trigger 0 octy 6253 sr-153 from log 12 to log 1 bordere to trigger 0 octy 6253 sr-153 from log 12 to log 1 bordere to trigger 0 octy 6253 sr-154 for log 12 to log 1 bordere to trigger 0 octy 6253 sr-155 from log 12 to log 1 bordere to trigger 0 octy 6253 sr-154 for log 12 to log 1 bordere to trigger 0 octy 6254 resulting 235 fro | COTTO             |                   |                  | from | 8          | iž : | i a      |        |                      |
| Octopy 51124 str-1324 from log 12 to log 1 borderedo trigger 0 locopy 54131 ser-1331 from log 12 to log 1 borderedo trigger 0 locopy 54132 ser-1325 from log 12 to log 1 borderedo trigger 0 locopy 54132 ser-1326 from log 12 to log 1 borderedo trigger 0 locopy 54132 ser-1326 from log 12 to log 1 borderedo trigger 0 locopy 55133 ces-1334 from log 12 to log 1 borderedo trigger 0 locopy 55133 ces-1334 from log 12 to log 1 borderedo trigger 0 locopy 55134 ces-1334 from log 12 to log 1 borderedo trigger 0 locopy 55135 ces-1335 from log 12 to log 1 borderedo trigger 0 locopy 55137 ces-1337 from log 12 to log 1 borderedo trigger 0 locopy 55136 bes-1336 from log 12 to log 1 borderedo trigger 0 locopy 55137 ces-1337 from log 12 to log 1 borderedo trigger 0 locopy 57139 les-1339 from log 12 to log 1 borderedo trigger 0 locopy 57134 prs-143 from log 12 to log 1 borderedo trigger 0 locopy 57143 prs-143 from log 12 to log 1 borderedo trigger 0 locopy 57143 prs-143 from log 12 to log 1 borderedo trigger 0 locopy 57143 prs-143 from log 12 to log 1 borderedo trigger 0 locopy 57143 prs-143 from log 12 to log 1 borderedo trigger 0 locopy 57147 prs-147 from log 12 to log 1 borderedo trigger 0 locopy 57147 prs-147 from log 12 to log 1 borderedo trigger 0 locopy 57148 prs-148 from log 12 to log 1 borderedo trigger 0 locopy 57148 prs-148 from log 12 to log 1 borderedo trigger 0 locopy 5715 ses-153 from log 12 to log 1 borderedo trigger 0 locopy 5715 ses-153 from log 12 to log 1 borderedo trigger 0 locopy 5715 ses-153 from log 12 to log 1 borderedo trigger 0 locopy 5715 ses-153 from log 12 to log 1 borderedo trigger 0 locopy 5725 ses-153 from log 12 to log 1 borderedo trigger 0 locopy 5725 ses-153 from log 12 to log 1 borderedo trigger 0 locopy 5725 ses-153 from log 12 to log 1 borderedo trigger 0 locopy 5725 ses-153 from log 12 to log 1 borderedo trigger 0 locopy 5725 ses-153 from log 12 to log 1 borderedo trigger 0 locopy 5725 ses-153 from log 12 to log 1 borderedo trigger 0 locopy 5725 ses-153 from log 12 to log 1 borderedo trigger  |                   |                   |                  |      |            |      |          |        |                      |
| Copy 5413 x=131 from log 12 to log 1 bordere to trigger 0 copy 5415 x=125 from log 12 to log 1 bordere to trigger 0 copy 5415 x=136 from log 12 to log 1 bordere to trigger 0 copy 5415 x=136 from log 12 to log 1 bordere to trigger 0 copy 5513 cestur-133 from log 12 to log 1 bordere to trigger 0 copy 5513 cestur-133 from log 12 to log 1 bordere to trigger 0 copy 5515 cesture from log 12 to log 1 bordere to trigger 0 copy 5515 cesture from log 12 to log 1 bordere to trigger 0 copy 5515 cesture from log 12 to log 1 bordere to trigger 0 copy 5515 cesture from log 12 to log 1 bordere to trigger 0 copy 5719 lesture from log 12 to log 1 bordere to trigger 0 copy 5719 lesture from log 12 to log 1 bordere to trigger 0 copy 5714 cesture from log 12 to log 1 bordere to trigger 0 copy 5714 pesture from log 12 to log 1 bordere to trigger 0 copy 5714 pesture from log 12 to log 1 bordere to trigger 0 copy 5714 pesture from log 12 to log 1 bordere to trigger 0 copy 6714 pesture from log 12 to log 1 bordere to trigger 0 copy 6714 pesture from log 12 to log 1 bordere to trigger 0 copy 6714 pesture from log 12 to log 1 bordere to trigger 0 copy 6714 pesture from log 12 to log 1 bordere to trigger 0 copy 6714 pesture from log 12 to log 1 bordere to trigger 0 copy 6714 pesture from log 12 to log 1 bordere to trigger 0 copy 6714 pesture from log 12 to log 1 bordere to trigger 0 copy 6715 pesture from log 12 to log 1 bordere to trigger 0 copy 6715 pesture from log 12 to log 1 bordere to trigger 0 copy 6715 pesture from log 12 to log 1 bordere to trigger 0 copy 6725 pesture from log 12 to log 1 bordere to trigger 0 copy 6725 pesture from log 12 to log 1 bordere to trigger 0 copy 6725 pesture from log 12 to log 1 bordere to trigger 0 copy 6725 pesture from log 12 to log 1 bordere to trigger 0 copy 6725 pesture from log 12 to log 1 bordere to trigger 0 copy 6725 pesture from log 12 to log 1 bordere to trigger 0 copy 6725 pesture from log 12 to log 1 bordere to trigger 0 copy 6726 pesture from log 12 to log 1 bordere to trigger 0 copy 672 | OTTO              |                   |                  |      |            |      |          |        |                      |
| Octoby         54132         from log 12 to log 1         borderic trigger 0           Octoby         54135         seror 135         from log 12 to log 1         borderic trigger 0           Octoby         54136         seror 135         from log 12 to log 1         borderic trigger 0           Octoby         55134         cesium 133         from log 12 to log 1         borderic trigger 0           Octoby         55136         ces-135         from log 12 to log 1         borderic trigger 0           Octoby         55137         ce-135         from log 12 to log 1         borderic trigger 0           Octoby         55136         be-136         from log 12 to log 1         borderic trigger 0           Octoby         55136         be-136         from log 12 to log 1         borderic trigger 0           Octoby         55136         be-136         from log 12 to log 1         borderic trigger 0           Octoby         55137         ce-137         from log 12 to log 1         borderic trigger 0           Octoby         57137         la-139         from log 12 to log 1         borderic trigger 0           Octoby         57143         pr-143         from log 12 to log 1         borderic trigger 0           Octoby         57143         pr-143         <                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | COLIN             |                   |                  |      |            |      |          |        |                      |
| Copy 5415 xeror-155 from log 12 to log 1 bordere to trigger 0 copy 5415 xe-136 from log 12 to log 1 bordere to trigger 0 copy 5513 ce-134 from log 12 to log 1 bordere to trigger 0 copy 5515 ce-135 from log 12 to log 1 bordere to trigger 0 copy 5515 ce-135 from log 12 to log 1 bordere to trigger 0 copy 5515 ce-137 from log 12 to log 1 bordere to trigger 0 copy 5513 ce-137 from log 12 to log 1 bordere to trigger 0 copy 5513 ce-137 from log 12 to log 1 bordere to trigger 0 copy 5513 la-139 from log 12 to log 1 bordere to trigger 0 copy 57139 la-139 from log 12 to log 1 bordere to trigger 0 copy 57139 la-139 from log 12 to log 1 bordere to trigger 0 copy 5714 pr-141 from log 12 to log 1 bordere to trigger 0 copy 57143 pr-143 from log 12 to log 1 bordere to trigger 0 copy 57143 pr-143 from log 12 to log 1 bordere to trigger 0 copy 67143 pr-143 from log 12 to log 1 bordere to trigger 0 copy 67147 pr-147 from log 12 to log 1 bordere to trigger 0 copy 67147 pr-148 from log 12 to log 1 bordere to trigger 0 copy 67147 pr-148 from log 12 to log 1 bordere to trigger 0 copy 67148 pr-148 from log 12 to log 1 bordere to trigger 0 copy 67148 pr-148 from log 12 to log 1 bordere to trigger 0 copy 67148 pr-148 from log 12 to log 1 bordere to trigger 0 copy 6715 sr-151 from log 12 to log 1 bordere to trigger 0 copy 6715 sr-151 from log 12 to log 1 bordere to trigger 0 copy 6715 sr-151 from log 12 to log 1 bordere to trigger 0 copy 6715 sr-151 from log 12 to log 1 bordere to trigger 0 copy 6715 sr-151 from log 12 to log 1 bordere to trigger 0 copy 6725 sr-152 from log 12 to log 1 bordere to trigger 0 copy 6725 uranium-275 from log 12 to log 1 bordere to trigger 0 copy 6725 uranium-275 from log 12 to log 1 bordere to trigger 0 copy 6725 uranium-275 from log 12 to log 1 bordere to trigger 0 copy 6725 uranium-275 from log 12 to log 1 bordere to trigger 0 copy 6725 uranium-275 from log 12 to log 1 bordere to trigger 0 copy 6726 uranium-275 from log 12 to log 1 bordere to trigger 0 copy 6726 uranium-275 from log 12 to log 1 bordere to t |                   |                   |                  |      |            |      |          |        |                      |
| Depty   5436   xe-136   from log 12 to log 1   borderelo trigger 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                   | 54155             |                  | from | læi        | 12   | to i     | ca 1   |                      |
| Copy 5134 cs-134 from log 12 to log 1 bordsreto trigger 0 copy 5134 cs-134 from log 12 to log 1 bordsreto trigger 0 copy 5137 cs-137 from log 12 to log 1 bordsreto trigger 0 copy 5137 cs-137 from log 12 to log 1 bordsreto trigger 0 copy 5137 cs-137 from log 12 to log 1 bordsreto trigger 0 copy 5739 la-139 from log 12 to log 1 bordsreto trigger 0 copy 5739 la-139 from log 12 to log 1 bordsreto trigger 0 copy 5734 cs-144 from log 12 to log 1 bordsreto trigger 0 copy 5743 pr-143 from log 12 to log 1 bordsreto trigger 0 copy 5743 pr-143 from log 12 to log 1 bordsreto trigger 0 copy 6045 rd-145 from log 12 to log 1 bordsreto trigger 0 copy 6047 rd-147 from log 12 to log 1 bordsreto trigger 0 copy 6047 rd-147 from log 12 to log 1 bordsreto trigger 0 copy 6047 rd-147 from log 12 to log 1 bordsreto trigger 0 copy 6148 pr-148 from log 12 to log 1 bordsreto trigger 0 copy 6148 pr-148 from log 12 to log 1 bordsreto trigger 0 copy 6148 pr-148 from log 12 to log 1 bordsreto trigger 0 copy 6247 sr-147 from log 12 to log 1 bordsreto trigger 0 copy 6250 sr-150 from log 12 to log 1 bordsreto trigger 0 copy 6251 sr-151 from log 12 to log 1 bordsreto trigger 0 copy 6252 sr-152 from log 12 to log 1 bordsreto trigger 0 copy 6353 cs-155 from log 12 to log 1 bordsreto trigger 0 copy 6354 cs-154 from log 12 to log 1 bordsreto trigger 0 copy 6355 cs-155 from log 12 to log 1 bordsreto trigger 0 copy 6354 cs-155 from log 12 to log 1 bordsreto trigger 0 copy 6254 u-236 163 signs from log 12 to log 1 bordsreto trigger 0 copy 6255 u-356 from log 12 to log 1 bordsreto trigger 0 copy 6256 u-356 163 signs from log 12 to log 1 bordsreto trigger 0 copy 6256 u-356 163 signs from log 12 to log 1 bordsreto trigger 0 copy 6256 u-356 163 signs from log 12 to log 1 bordsreto trigger 0 copy 6256 u-356 163 signs from log 12 to log 1 bordsreto trigger 0 copy 6258 u-356 163 signs from log 12 to log 1 bordsreto trigger 0 copy 6258 u-358 160 cs signs from log 12 to log 1 bordsreto trigger 0 copy 6258 u-358 160 cs signs from log 12 to log 1 bordsreto trigger |                   |                   |                  |      |            |      |          |        |                      |
| Copy 5515 cs-135 from log 12 to log 1 bordere to trigger 0 copy 5515 cs-135 from log 12 to log 1 bordere to trigger 0 copy 5515 cs-135 from log 12 to log 1 bordere to trigger 0 copy 5515 cs-136 from log 12 to log 1 bordere to trigger 0 copy 5515 cs-136 from log 12 to log 1 bordere to trigger 0 copy 5715 la-139 from log 12 to log 1 bordere to trigger 0 copy 5715 pr-141 from log 12 to log 1 bordere to trigger 0 copy 5714 pr-143 from log 12 to log 1 bordere to trigger 0 copy 57143 pr-143 from log 12 to log 1 bordere to trigger 0 copy 67143 rd-143 from log 12 to log 1 bordere to trigger 0 copy 67145 rd-1443 from log 12 to log 1 bordere to trigger 0 copy 67145 rd-1447 from log 12 to log 1 bordere to trigger 0 copy 67145 pr-1467 from log 12 to log 1 bordere to trigger 0 copy 67147 pr-147 from log 12 to log 1 bordere to trigger 0 copy 67147 pr-147 from log 12 to log 1 bordere to trigger 0 copy 67147 pr-147 from log 12 to log 1 bordere to trigger 0 copy 67147 sr-147 from log 12 to log 1 bordere to trigger 0 copy 67145 sr-151 from log 12 to log 1 bordere to trigger 0 copy 6715 sr-151 from log 12 to log 1 bordere to trigger 0 copy 6715 sr-151 from log 12 to log 1 bordere to trigger 0 copy 6715 sr-155 from log 12 to log 1 bordere to trigger 0 copy 6715 sr-155 from log 12 to log 1 bordere to trigger 0 copy 6725 u-256 163 signs from log 12 to log 1 bordere to trigger 0 copy 6725 u-256 163 signs from log 12 to log 1 bordere to trigger 0 copy 6725 u-256 163 signs from log 12 to log 1 bordere to trigger 0 copy 6725 u-256 163 signs from log 12 to log 1 bordere to trigger 0 copy 6725 u-256 163 signs from log 12 to log 1 bordere to trigger 0 copy 6725 u-256 163 signs from log 12 to log 1 bordere to trigger 0 copy 6725 u-256 163 signs from log 12 to log 1 bordere to trigger 0 copy 6725 u-256 163 signs from log 12 to log 1 bordere to trigger 0 copy 6725 u-256 163 signs from log 12 to log 1 bordere to trigger 0 copy 6725 u-256 163 signs from log 12 to log 1 bordere to trigger 0 copy 6725 u-256 163 signs from log 12 to log 1 bordere  | Omby              |                   |                  | from | lœ         | 12   | to I     | looi 1 |                      |
| Copy 5515 cs-135 from log 12 to log 1 bordereto trigger 0 copy 5513 cs-137 from log 12 to log 1 bordereto trigger 0 copy 55136 bs-136 from log 12 to log 1 bordereto trigger 0 copy 57139 ls-139 from log 12 to log 1 bordereto trigger 0 copy 5714 cs-144 from log 12 to log 1 bordereto trigger 0 copy 5714 pr-141 from log 12 to log 1 bordereto trigger 0 copy 57143 pr-143 from log 12 to log 1 bordereto trigger 0 copy 60143 nd-143 from log 12 to log 1 bordereto trigger 0 copy 60143 nd-143 from log 12 to log 1 bordereto trigger 0 copy 60147 pr-147 from log 12 to log 1 bordereto trigger 0 copy 60147 pr-148 from log 12 to log 1 bordereto trigger 0 copy 60147 pr-148 from log 12 to log 1 bordereto trigger 0 copy 60148 pr-148 from log 12 to log 1 bordereto trigger 0 copy 60148 pr-148 from log 12 to log 1 bordereto trigger 0 copy 60148 pr-148 from log 12 to log 1 bordereto trigger 0 copy 60148 pr-148 from log 12 to log 1 bordereto trigger 0 copy 60148 pr-148 from log 12 to log 1 bordereto trigger 0 copy 60153 sr-151 from log 12 to log 1 bordereto trigger 0 copy 60153 sr-151 from log 12 to log 1 bordereto trigger 0 copy 60153 sr-153 from log 12 to log 1 bordereto trigger 0 copy 60154 sr-154 from log 12 to log 1 bordereto trigger 0 copy 60155 sr-155 from log 12 to log 1 bordereto trigger 0 copy 60155 sr-155 from log 12 to log 1 bordereto trigger 0 copy 60155 sr-155 from log 12 to log 1 bordereto trigger 0 copy 60156 sr-155 from log 12 to log 1 bordereto trigger 0 copy 60156 sr-155 from log 12 to log 1 bordereto trigger 0 copy 60156 sr-155 from log 12 to log 1 bordereto trigger 0 copy 60156 sr-155 from log 12 to log 1 bordereto trigger 0 copy 60156 sr-155 from log 12 to log 1 bordereto trigger 0 copy 60156 sr-155 from log 12 to log 1 bordereto trigger 0 copy 60156 sr-155 from log 12 to log 1 bordereto trigger 0 copy 60156 sr-155 from log 12 to log 1 bordereto trigger 0 copy 60156 sr-155 from log 12 to log 1 bordereto trigger 0 copy 60156 sr-155 from log 12 to log 1 bordereto trigger 0 copy 60156 sr-155 from log 12 to log 1 borde | Occopy            | 55134             | cs-134           | from | læ         | 12 . | to (     | og 1   | bonderario trigger 0 |
| Depy 5513 ca-134 from log 12 to log 1 tordarents trigger 0 capy 55136 be-135 from log 12 to log 1 tordarents trigger 0 capy 57039 la-139 from log 12 to log 1 tordarents trigger 0 capy 5714 pr-141 from log 12 to log 1 tordarents trigger 0 capy 5714 pr-143 from log 12 to log 1 tordarents trigger 0 capy 57143 pr-143 from log 12 to log 1 tordarents trigger 0 capy 60143 nd-143 from log 12 to log 1 tordarents trigger 0 capy 60147 nd-147 from log 12 to log 1 tordarents trigger 0 capy 60147 nd-147 from log 12 to log 1 tordarents trigger 0 capy 60147 pr-148 from log 12 to log 1 tordarents trigger 0 capy 60148 pr-148 from log 12 to log 1 tordarents trigger 0 capy 60148 pr-148 from log 12 to log 1 tordarents trigger 0 capy 60148 pr-148 from log 12 to log 1 tordarents trigger 0 capy 60148 pr-148 from log 12 to log 1 tordarents trigger 0 capy 60148 pr-148 from log 12 to log 1 tordarents trigger 0 capy 60149 sr-149 from log 12 to log 1 tordarents trigger 0 capy 6015 sr-151 from log 12 to log 1 tordarents trigger 0 capy 6015 sr-151 from log 12 to log 1 tordarents trigger 0 capy 6015 sr-153 from log 12 to log 1 tordarents trigger 0 capy 6015 sr-155 from log 12 to log 1 tordarents trigger 0 capy 6015 sr-155 from log 12 to log 1 tordarents trigger 0 capy 6015 sr-155 from log 12 to log 1 tordarents trigger 0 capy 6025 uranium-235 from log 12 to log 1 tordarents trigger 0 capy 6025 uranium-235 from log 12 to log 1 tordarents trigger 0 capy 6025 uranium-235 from log 12 to log 1 tordarents trigger 0 capy 6025 uranium-235 from log 12 to log 1 tordarents trigger 0 capy 6023 uranium-235 from log 12 to log 1 tordarents trigger 0 capy 6023 uranium-235 from log 12 to log 1 tordarents trigger 0 capy 6023 uranium-235 from log 12 to log 1 tordarents trigger 0 capy 6023 uranium-235 from log 12 to log 1 tordarents trigger 0 capy 6023 uranium-235 from log 12 to log 1 tordarents trigger 0 capy 6023 uranium-235 from log 12 to log 1 tordarents trigger 0 capy 6023 uranium-235 from log 12 to log 1 tordarents trigger 0 capy 6023 uranium-235 from log  | Occipy            | 35135             |                  | from | lag        | 12 . | to I     | log 1  | bonderenko trigger 0 |
| Octy 5719 le-139 from log 12 to log 1 borderedo trigger 0 Octy 5719 le-139 from log 12 to log 1 borderedo trigger 0 Octy 5714 ce-144 from log 12 to log 1 borderedo trigger 0 Octy 5714 pr-141 from log 12 to log 1 borderedo trigger 0 Octy 57143 pr-143 from log 12 to log 1 borderedo trigger 0 Octy 60143 rd-145 from log 12 to log 1 borderedo trigger 0 Octy 60145 rd-145 from log 12 to log 1 borderedo trigger 0 Octy 60147 rd-147 from log 12 to log 1 borderedo trigger 0 Octy 60147 pr-147 from log 12 to log 1 borderedo trigger 0 Octy 60148 pr-148 from log 12 to log 1 borderedo trigger 0 Octy 60148 pr-148 from log 12 to log 1 borderedo trigger 0 Octy 60148 pr-148 from log 12 to log 1 borderedo trigger 0 Octy 60148 pr-149 from log 12 to log 1 borderedo trigger 0 Octy 60148 pr-149 from log 12 to log 1 borderedo trigger 0 Octy 6015 sr-151 from log 12 to log 1 borderedo trigger 0 Octy 6015 sr-153 from log 12 to log 1 borderedo trigger 0 Octy 6015 sr-153 from log 12 to log 1 borderedo trigger 0 Octy 6015 sr-155 from log 12 to log 1 borderedo trigger 0 Octy 6015 sr-155 from log 12 to log 1 borderedo trigger 0 Octy 6015 sr-155 from log 12 to log 1 borderedo trigger 0 Octy 6015 sr-155 from log 12 to log 1 borderedo trigger 0 Octy 6015 sr-155 from log 12 to log 1 borderedo trigger 0 Octy 6015 sr-155 from log 12 to log 1 borderedo trigger 0 Octy 6015 sr-155 from log 12 to log 1 borderedo trigger 0 Octy 6015 sr-155 from log 12 to log 1 borderedo trigger 0 Octy 6015 sr-155 from log 12 to log 1 borderedo trigger 0 Octy 6015 sr-155 from log 12 to log 1 borderedo trigger 0 Octy 6015 sr-155 from log 12 to log 1 borderedo trigger 0 Octy 6015 sr-155 from log 12 to log 1 borderedo trigger 0 Octy 6015 sr-155 from log 12 to log 1 borderedo trigger 0 Octy 6015 sr-155 from log 12 to log 1 borderedo trigger 0 Octy 6015 sr-156 from log 12 to log 1 borderedo trigger 0 Octy 6015 sr-156 from log 12 to log 1 borderedo trigger 0 Octy 6015 sr-156 from log 12 to log 1 borderedo trigger 0 Octy 6015 sr-156 from log 12 to log 1 borderedo trigger 0 Octy 6 | Осфу              | ऋछ                | cs-137           |      |            |      |          |        | bonderenko trigger 0 |
| Octy 5713 la-137 from log 12 to log 1 borderedo trigger 0 locy 5814 ce-144 from log 12 to log 1 borderedo trigger 0 locy 5913 pr-143 from log 12 to log 1 borderedo trigger 0 locy 69143 nd-143 from log 12 to log 1 borderedo trigger 0 locy 69143 nd-143 from log 12 to log 1 borderedo trigger 0 locy 69145 nd-145 from log 12 to log 1 borderedo trigger 0 locy 69147 nd-147 from log 12 to log 1 borderedo trigger 0 locy 69148 pr-148 from log 12 to log 1 borderedo trigger 0 locy 69148 pr-148 from log 12 to log 1 borderedo trigger 0 locy 69148 pr-148 from log 12 to log 1 borderedo trigger 0 locy 69148 pr-148 from log 12 to log 1 borderedo trigger 0 locy 69148 pr-148 from log 12 to log 1 borderedo trigger 0 locy 69148 pr-148 from log 12 to log 1 borderedo trigger 0 locy 69158 sr-150 from log 12 to log 1 borderedo trigger 0 locy 69153 sr-151 from log 12 to log 1 borderedo trigger 0 locy 69153 sr-153 from log 12 to log 1 borderedo trigger 0 locy 69153 ex-154 from log 12 to log 1 borderedo trigger 0 locy 69154 ex-154 from log 12 to log 1 borderedo trigger 0 locy 69155 ex-155 from log 12 to log 1 borderedo trigger 0 locy 69155 ex-155 from log 12 to log 1 borderedo trigger 0 locy 69155 ex-155 from log 12 to log 1 borderedo trigger 0 locy 69254 u-234 103 sigos from log 12 to log 1 borderedo trigger 0 locy 69256 u-236 1135 sigos from log 12 to log 1 borderedo trigger 0 locy 69256 u-236 1135 sigos from log 12 to log 1 borderedo trigger 0 locy 69256 u-236 1135 sigos from log 12 to log 1 borderedo trigger 0 locy 69256 u-236 1135 sigos from log 12 to log 1 borderedo trigger 0 locy 69256 u-236 1135 sigos from log 12 to log 1 borderedo trigger 0 locy 69256 u-236 1135 sigos from log 12 to log 1 borderedo trigger 0 locy 69256 u-236 1135 sigos from log 12 to log 1 borderedo trigger 0 locy 69256 u-236 1135 sigos from log 12 to log 1 borderedo trigger 0 locy 69256 u-236 1135 sigos from log 12 to log 1 borderedo trigger 0 locy 69256 u-236 1135 sigos from log 12 to log 1 borderedo trigger 0 locy 69256 u-236 1135 sigos from log 12 to log 1 bor | 0cqpy             |                   | ba-136           |      |            |      |          |        |                      |
| Dopy 57141 pr-141 from log 12 to log 1 bordere to trigger 0 topy 57143 pr-143 from log 12 to log 1 bordere to trigger 0 topy 57143 pr-143 from log 12 to log 1 bordere to trigger 0 topy 60145 rd-145 from log 12 to log 1 bordere to trigger 0 topy 60147 rd-147 from log 12 to log 1 bordere to trigger 0 topy 60147 pr-147 from log 12 to log 1 bordere to trigger 0 topy 60148 pr-148 from log 12 to log 1 bordere to trigger 0 topy 60148 pr-148 from log 12 to log 1 bordere to trigger 0 topy 60148 pr-149 from log 12 to log 1 bordere to trigger 0 topy 60148 pr-149 from log 12 to log 1 bordere to trigger 0 topy 60148 pr-149 from log 12 to log 1 bordere to trigger 0 topy 6015 sr-150 from log 12 to log 1 bordere to trigger 0 topy 6015 sr-153 from log 12 to log 1 bordere to trigger 0 topy 6015 er-153 from log 12 to log 1 bordere to trigger 0 topy 6015 er-153 from log 12 to log 1 bordere to trigger 0 topy 6015 er-155 from log 12 to log 1 bordere to trigger 0 topy 6015 er-155 from log 12 to log 1 bordere to trigger 0 topy 6015 er-155 from log 12 to log 1 bordere to trigger 0 topy 6015 er-155 from log 12 to log 1 bordere to trigger 0 topy 6015 er-155 from log 12 to log 1 bordere to trigger 0 topy 6015 er-155 from log 12 to log 1 bordere to trigger 0 topy 6015 er-155 from log 12 to log 1 bordere to trigger 0 topy 6015 er-155 from log 12 to log 1 bordere to trigger 0 topy 6015 er-156 from log 12 to log 1 bordere to trigger 0 topy 6015 er-156 from log 12 to log 1 bordere to trigger 0 topy 6015 er-156 from log 12 to log 1 bordere to trigger 0 topy 6015 er-156 from log 12 to log 1 bordere to trigger 0 topy 6015 er-156 from log 12 to log 1 bordere to trigger 0 topy 6015 er-156 from log 12 to log 1 bordere to trigger 0 topy 6015 er-156 from log 12 to log 1 bordere to trigger 0 topy 6015 er-156 from log 12 to log 1 bordere to trigger 0 topy 6015 er-156 from log 12 to log 1 bordere to trigger 0 topy 6015 er-156 from log 12 to log 1 bordere to trigger 0 topy 6015 er-156 from log 12 to log 1 bordere to trigger 0 topy 6015 er-156 from log 12  | Осфу              |                   |                  | from | lag        | 12 ' | po i     | log 1  |                      |
| Copy 6143 nd-43 from log 12 to log 1 bordere to trigger 0 copy 6143 nd-43 from log 12 to log 1 bordere to trigger 0 copy 6145 nd-445 from log 12 to log 1 bordere to trigger 0 copy 6147 nd-447 from log 12 to log 1 bordere to trigger 0 copy 6148 pm-48 from log 12 to log 1 bordere to trigger 0 copy 6148 pm-48 from log 12 to log 1 bordere to trigger 0 copy 6148 pm-48 from log 12 to log 1 bordere to trigger 0 copy 6247 sm-447 from log 12 to log 1 bordere to trigger 0 copy 6248 sm-190 from log 12 to log 1 bordere to trigger 0 copy 6250 sm-190 from log 12 to log 1 bordere to trigger 0 copy 6251 sm-151 from log 12 to log 1 bordere to trigger 0 copy 6252 sm-192 from log 12 to log 1 bordere to trigger 0 copy 6353 eu-153 from log 12 to log 1 bordere to trigger 0 copy 6353 eu-153 from log 12 to log 1 bordere to trigger 0 copy 6353 eu-154 from log 12 to log 1 bordere to trigger 0 copy 6355 eu-155 from log 12 to log 1 bordere to trigger 0 copy 6355 eu-155 from log 12 to log 1 bordere to trigger 0 copy 6355 eu-155 from log 12 to log 1 bordere to trigger 0 copy 6254 u-234 103 signs from log 12 to log 1 bordere to trigger 0 copy 9236 u-236 1163 signs from log 12 to log 1 bordere to trigger 0 copy 9236 u-236 1163 signs from log 12 to log 1 bordere to trigger 0 copy 9236 u-236 1163 signs from log 12 to log 1 bordere to trigger 0 copy 9236 u-236 1163 signs from log 12 to log 1 bordere to trigger 0 copy 9236 u-236 1163 signs from log 12 to log 1 bordere to trigger 0 copy 9236 u-236 1163 signs from log 12 to log 1 bordere to trigger 0 copy 9236 u-236 1163 signs from log 12 to log 1 bordere to trigger 0 copy 9236 u-236 1163 signs from log 12 to log 1 bordere to trigger 0 copy 9236 u-236 1163 signs from log 12 to log 1 bordere to trigger 0 copy 9238 u-236 100 signs from log 12 to log 1 bordere to trigger 0 copy 9238 u-236 100 signs from log 12 to log 1 bordere to trigger 0 copy 9238 u-236 100 signs from log 12 to log 1 bordere to trigger 0 copy 9238 u-236 100 signs from log 12 to log 1 bordere to trigger 0 copy 9238 u-236 100 signs fr | Осфу              |                   |                  | fron | ĺα         | 12   | to !     |        |                      |
| Octopy         60143         rid-143         from log 12 to log 1         bordered trigger 0           Octopy         60145         rid-145         from log 12 to log 1         bordered trigger 0           Octopy         60147         rid-147         from log 12 to log 1         bordered trigger 0           Octopy         61148         pa-148         from log 12 to log 1         bordered trigger 0           Octopy         62147         sa-147         from log 12 to log 1         bordered trigger 0           Octopy         62149         sa-149         from log 12 to log 1         bordered trigger 0           Octopy         62151         sa-151         from log 12 to log 1         bordered trigger 0           Octopy         62153         sa-152         from log 12 to log 1         bordered trigger 0           Octopy         63153         sa-153         from log 12 to log 1         bordered trigger 0           Octopy         63154         sa-155         from log 12 to log 1         bordered trigger 0           Octopy         63155         sa-155         from log 12 to log 1         bordered trigger 0           Octopy         63156         sa-155         from log 12 to log 1         bordered trigger 0           Octopy         63156         sa-15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                   |                   |                  |      |            |      |          |        |                      |
| Octopy 61145 rd-145 from log 12 to log 1 burdereto trigger 0 Octopy 61147 rd-147 from log 12 to log 1 burdereto trigger 0 Octopy 61147 per 147 from log 12 to log 1 burdereto trigger 0 Octopy 61148 per 148 from log 12 to log 1 burdereto trigger 0 Octopy 62149 ser 149 from log 12 to log 1 burdereto trigger 0 Octopy 62149 ser 149 from log 12 to log 1 burdereto trigger 0 Octopy 62149 ser 149 from log 12 to log 1 burdereto trigger 0 Octopy 62153 ser 150 from log 12 to log 1 burdereto trigger 0 Octopy 62153 ser 151 from log 12 to log 1 burdereto trigger 0 Octopy 62153 ser 153 from log 12 to log 1 burdereto trigger 0 Octopy 63154 ser 153 from log 12 to log 1 burdereto trigger 0 Octopy 63154 ser 155 from log 12 to log 1 burdereto trigger 0 Octopy 63155 ser 155 from log 12 to log 1 burdereto trigger 0 Octopy 63155 ser 155 from log 12 to log 1 burdereto trigger 0 Octopy 63155 ser 155 from log 12 to log 1 burdereto trigger 0 Octopy 63155 ser 155 from log 12 to log 1 burdereto trigger 0 Octopy 63254 u-234 103 signs from log 12 to log 1 burdereto trigger 0 Octopy 92255 u-sinium-225 from log 12 to log 1 burdereto trigger 0 Octopy 92256 u-3164 183 signs from log 12 to log 1 burdereto trigger 0 Octopy 92256 u-3164 183 signs from log 12 to log 1 burdereto trigger 0 Octopy 92256 u-3164 183 signs from log 12 to log 1 burdereto trigger 0 Octopy 92256 u-3164 183 signs from log 12 to log 1 burdereto trigger 0 Octopy 92256 u-3164 183 signs from log 12 to log 1 burdereto trigger 0 Octopy 92256 u-3164 183 signs from log 12 to log 1 burdereto trigger 0 Octopy 92256 u-3164 183 signs from log 12 to log 1 burdereto trigger 0 Octopy 92256 u-3164 183 signs from log 12 to log 1 burdereto trigger 0 Octopy 92256 u-3164 183 signs from log 12 to log 1 burdereto trigger 0 Octopy 92256 u-3164 183 signs from log 12 to log 1 burdereto trigger 0 Octopy 92256 u-3164 183 signs from log 12 to log 1 burdereto trigger 0 Octopy 92256 u-3164 183 signs from log 12 to log 1 burdereto trigger 0 Octopy 92256 u-3164 183 signs from log 12 to log 1 burdereto trigge | ()CODY            | <del>57</del> 743 |                  |      |            |      |          |        |                      |
| Octory 60147 nd-147 from log 12 to log 1 bordere to trigger 0 octory 61147 per 147 from log 12 to log 1 bordere to trigger 0 octory 61148 per 148 from log 12 to log 1 bordere to trigger 0 octory 62147 ser 147 from log 12 to log 1 bordere to trigger 0 octory 62147 ser 149 from log 12 to log 1 bordere to trigger 0 octory 62150 ser 150 from log 12 to log 1 bordere to trigger 0 octory 62152 ser 151 from log 12 to log 1 bordere to trigger 0 octory 62152 ser 152 from log 12 to log 1 bordere to trigger 0 octory 62152 ser 153 from log 12 to log 1 bordere to trigger 0 octory 63153 ser 153 from log 12 to log 1 bordere to trigger 0 octory 63154 ser 153 from log 12 to log 1 bordere to trigger 0 octory 63155 ser 155 from log 12 to log 1 bordere to trigger 0 octory 63155 ser 155 from log 12 to log 1 bordere to trigger 0 octory 63155 ser 155 from log 12 to log 1 bordere to trigger 0 octory 63154 ser 155 from log 12 to log 1 bordere to trigger 0 octory 62254 ser 154 signs from log 12 to log 1 bordere to trigger 0 octory 62255 ser 154 signs from log 12 to log 1 bordere to trigger 0 octory 62254 ser 154 signs from log 12 to log 1 bordere to trigger 0 octory 62256 ser 154 signs from log 12 to log 1 bordere to trigger 0 octory 62256 ser 154 signs from log 12 to log 1 bordere to trigger 0 octory 62256 ser 154 signs from log 12 to log 1 bordere to trigger 0 octory 62256 ser 154 signs from log 12 to log 1 bordere to trigger 0 octory 62256 ser 154 signs from log 12 to log 1 bordere to trigger 0 octory 62256 ser 154 signs from log 12 to log 1 bordere to trigger 0 octory 62256 ser 154 signs from log 12 to log 1 bordere to trigger 0 octory 62256 ser 154 signs from log 12 to log 1 bordere to trigger 0 octory 62256 ser 154 signs from log 12 to log 1 bordere to trigger 0 octory 62256 ser 154 signs from log 12 to log 1 bordere to trigger 0 octory 62256 ser 154 signs from log 12 to log 1 bordere to trigger 0 octory 62256 ser 154 signs from log 12 to log 1 bordere to trigger 0 octory 62256 ser 154 signs from log 12 to log 1 bordere to trigger  |                   |                   |                  |      |            |      |          |        |                      |
| Copy   61147   par147   from log 12 to log 1   bordersto trigger 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Oppy              |                   | m-140            | Trun | iæ         | 14   | <u>ب</u> | (C)    |                      |
| Octopy 611/8 pm-1/8 from log 12 to log 1 borderelo trigger 0 locpy 621/3 sm-1/47 from log 12 to log 1 borderelo trigger 0 locpy 621/3 sm-1/47 from log 12 to log 1 borderelo trigger 0 locpy 621/5 sm-1/50 from log 12 to log 1 borderelo trigger 0 locpy 621/5 sm-1/51 from log 12 to log 1 borderelo trigger 0 locpy 621/5 sm-1/52 from log 12 to log 1 borderelo trigger 0 locpy 631/53 ex-1/53 from log 12 to log 1 borderelo trigger 0 locpy 631/54 ex-1/54 from log 12 to log 1 borderelo trigger 0 locpy 631/54 ex-1/55 from log 12 to log 1 borderelo trigger 0 locpy 631/55 ex-1/55 from log 12 to log 1 borderelo trigger 0 locpy 631/55 ex-1/55 from log 12 to log 1 borderelo trigger 0 locpy 631/55 ex-1/55 from log 12 to log 1 borderelo trigger 0 locpy 922/64 u-23/6 11/63 sign= from log 12 to log 1 borderelo trigger 0 locpy 922/64 u-23/6 11/63 sign= from log 12 to log 1 borderelo trigger 0 locpy 922/64 u-23/6 11/63 sign= from log 12 to log 1 borderelo trigger 0 locpy 922/64 u-23/6 11/63 sign= from log 12 to log 1 borderelo trigger 0 locpy 922/64 u-23/6 11/63 sign= from log 12 to log 1 borderelo trigger 0 locpy 922/64 u-23/6 11/63 sign= from log 12 to log 1 borderelo trigger 0 locpy 922/64 u-23/6 11/63 sign= from log 12 to log 1 borderelo trigger 0 locpy 922/64 u-23/6 11/63 sign= from log 12 to log 1 borderelo trigger 0 locpy 922/64 u-23/6 11/63 sign= from log 12 to log 1 borderelo trigger 0 locpy 922/64 u-23/6 11/63 sign= from log 12 to log 1 borderelo trigger 0 locpy 922/64 u-23/6 11/63 sign= from log 12 to log 1 borderelo trigger 0 locpy 923/64 u-23/6 11/63 sign= from log 12 to log 1 borderelo trigger 0 locpy 923/64 u-23/6 11/63 sign= from log 12 to log 1 borderelo trigger 0 locpy 923/64 u-23/6 11/63 sign= from log 12 to log 1 borderelo trigger 0 locpy 923/64 u-23/6 11/63 sign= from log 12 to log 1 borderelo trigger 0 locpy 923/64 u-23/6 11/63 sign= from log 12 to log 1 borderelo trigger 0 locpy 923/64 u-23/6 11/64 u-23/6 11/64 u-23/64 u-23/ | uccpy             |                   |                  |      |            |      |          |        |                      |
| Octy 62147 sn-147 from log 12 to log 1 bordere to trigger 0 Octy 62149 sn-149 from log 12 to log 1 bordere to trigger 0 Octy 62150 sn-150 from log 12 to log 1 bordere to trigger 0 Octy 62151 sn-151 from log 12 to log 1 bordere to trigger 0 Octy 62152 sn-152 from log 12 to log 1 bordere to trigger 0 Octy 63153 ex-153 from log 12 to log 1 bordere to trigger 0 Octy 63154 ex-154 from log 12 to log 1 bordere to trigger 0 Octy 63155 ex-155 from log 12 to log 1 bordere to trigger 0 Octy 63155 ex-155 from log 12 to log 1 bordere to trigger 0 Octy 63155 ex-155 from log 12 to log 1 bordere to trigger 0 Octy 92254 u-224 103 signs from log 12 to log 1 bordere to trigger 0 Octy 92255 u-sniun-225 from log 12 to log 1 bordere to trigger 0 Octy 92250 u-236 1153 signs from log 12 to log 1 bordere to trigger 0 Octy 92250 u-236 1153 signs from log 12 to log 1 bordere to trigger 0 Octy 92250 u-sniun-225 from log 12 to log 1 bordere to trigger 0 Octy 92250 u-sniun-225 from log 12 to log 1 bordere to trigger 0 Octy 92250 u-sniun-225 from log 12 to log 1 bordere to trigger 0 Octy 92250 u-sniun-225 from log 12 to log 1 bordere to trigger 0 Octy 92250 u-sniun-225 from log 12 to log 1 bordere to trigger 0 Octy 92250 u-sniun-225 from log 12 to log 1 bordere to trigger 0 Octy 92250 u-sniun-225 from log 12 to log 1 bordere to trigger 0 Octy 92250 u-sniun-225 from log 12 to log 1 bordere to trigger 0 Octy 92250 u-sniun-225 from log 12 to log 1 bordere to trigger 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                   |                   | PET 144          |      |            |      |          |        |                      |
| Octopy 62150 sm-150 from log 12 to log 1 borderello trigger 0 logy 62151 sm-151 from log 12 to log 1 borderello trigger 0 logy 62151 sm-151 from log 12 to log 1 borderello trigger 0 logy 62153 sm-152 from log 12 to log 1 borderello trigger 0 logy 63153 sm-153 from log 12 to log 1 borderello trigger 0 logy 63154 sm-155 from log 12 to log 1 borderello trigger 0 logy 63154 sm-155 from log 12 to log 1 borderello trigger 0 logy 63155 sm-155 from log 12 to log 1 borderello trigger 0 logy 64155 gd-155 from log 12 to log 1 borderello trigger 0 logy 64155 gd-155 from log 12 to log 1 borderello trigger 0 logy 64256 urzivinzzo from log 12 to log 1 borderello trigger 0 logy 64256 urzivinzzo from log 12 to log 1 borderello trigger 0 logy 64256 urzivinzzo from log 12 to log 1 borderello trigger 0 logy 64256 urzivinzzo from log 12 to log 1 borderello trigger 0 logy 64256 urzivinzzo from log 12 to log 1 borderello trigger 0 logy 64256 urzivinzzo from log 12 to log 1 borderello trigger 0 logy 64256 urzivinzzo from log 12 to log 1 borderello trigger 0 logy 64256 urzivinzzo from log 12 to log 1 borderello trigger 0 logy 64256 urzivinzzo from log 12 to log 1 borderello trigger 0 logy 64256 urzivinzzo from log 12 to log 1 borderello trigger 0 logy 64256 urzivinzzo from log 12 to log 1 borderello trigger 0 logoy 64256 urzivinzzo from log 12 to log 1 borderello trigger 0 logoy 64256 urzivinzzo from log 12 to log 1 borderello trigger 0 logoy 64256 urzivinzzo from log 12 to log 1 borderello trigger 0 logoy 64256 urzivinzzo from log 12 to log 1 borderello trigger 0 logoy 64256 urzivinzzo from log 12 to log 1 borderello trigger 0 logoy 64256 urzivinzzo from log 12 to log 1 borderello trigger 0 logoy 64256 urzivinzzo from log 12 to log 1 borderello trigger 0 logoy 64256 urzivinzzo from log 12 to log 1 borderello trigger 0 logo from log 12 to log 1 borderello trigger 0 logo from log 12 to log 1 borderello trigger 0 logo from log 12 to log 1 borderello trigger 0 logo from log 12 to log 1 borderello trigger 0 logo from log 12 to log 1 border |                   |                   | PIT 140          |      |            |      |          |        |                      |
| Octopy         £250         sm-150         from log 12 to log 1         bonderelo trigger 0           Octopy         £251         sm-151         from log 12 to log 1         bonderelo trigger 0           Octopy         £353         sm-152         from log 12 to log 1         bonderelo trigger 0           Octopy         £353         su-153         from log 12 to log 1         bonderelo trigger 0           Octopy         £355         su-155         from log 12 to log 1         bonderelo trigger 0           Octopy         £355         su-155         from log 12 to log 1         bonderelo trigger 0           Octopy         £355         sigo= from log 12 to log 1         bonderelo trigger 0           Octopy         £354         u-234 103 sigo= from log 12 to log 1         bonderelo trigger 0           Octopy         £355         u-345 103 sigo= from log 12 to log 1         bonderelo trigger 0           Octopy         £356         u-236 1133 sigo= from log 12 to log 1         bonderelo trigger 0           Octopy         £356         u-356 1133 sigo= from log 12 to log 1         bonderelo trigger 0           Octopy         £357         repturilin-237         from log 12 to log 1         bonderelo trigger 0           Octopy         £358         u-358 1000 sigo from log 12 to log 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                   |                   |                  |      |            |      |          |        |                      |
| Dody 6251 sm-151 from log 12 to log 1 borderedo trigger 0 logy 6252 sm-152 from log 12 to log 1 borderedo trigger 0 logy 6353 eu-153 from log 12 to log 1 borderedo trigger 0 logy 6353 eu-153 from log 12 to log 1 borderedo trigger 0 logy 6355 eu-155 from log 12 to log 1 borderedo trigger 0 logy 6355 eu-155 from log 12 to log 1 borderedo trigger 0 logy 6455 gu-155 from log 12 to log 1 borderedo trigger 0 logy 6254 u-234 103 sigo= from log 12 to log 1 borderedo trigger 0 logy 6255 u-mium-235 from log 12 to log 1 borderedo trigger 0 logy 6256 u-236 1153 sigo= from log 12 to log 1 borderedo trigger 0 logy 6258 u-mium-235 from log 12 to log 1 borderedo trigger 0 logy 6257 nepturium-235 from log 12 to log 1 borderedo trigger 0 logy 6253 gu-238 1050 sigo from log 12 to log 1 borderedo trigger 0 logoy 6253 gu-238 1050 sigo from log 12 to log 1 borderedo trigger 0 logoy 6253 gu-238 1050 sigo from log 12 to log 1 borderedo trigger 0 logoy 6253 gu-238 1050 sigo from log 12 to log 1 borderedo trigger 0 logoy 6253 gu-238 1050 sigo from log 12 to log 1 borderedo trigger 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                   |                  | 100  | iw.        | 12   | ۳,       |        |                      |
| Octopy 6252 sm-152 from log 12 to log 1 borderwice trigger 0 octopy 6353 ex-153 from log 12 to log 1 borderwice trigger 0 octopy 6355 ex-155 from log 12 to log 1 borderwice trigger 0 octopy 6355 ex-155 from log 12 to log 1 borderwice trigger 0 octopy 6455 gx-155 from log 12 to log 1 borderwice trigger 0 octopy 9225 u-255 103 signs from log 12 to log 1 borderwice trigger 0 octopy 9225 u-255 1153 signs from log 12 to log 1 borderwice trigger 0 octopy 9225 u-255 1153 signs from log 12 to log 1 borderwice trigger 0 octopy 9225 u-255 1153 signs from log 12 to log 1 borderwice trigger 0 octopy 9225 u-255 1153 signs from log 12 to log 1 borderwice trigger 0 octopy 9225 u-255 1153 signs from log 12 to log 1 borderwice trigger 0 octopy 9225 u-255 1050 signs from log 12 to log 1 borderwice trigger 0 octopy 9225 u-255 1050 signs from log 12 to log 1 borderwice trigger 0 octopy 9225 u-255 1050 signs from log 12 to log 1 borderwice trigger 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | capy .            |                   |                  |      |            |      |          |        |                      |
| Copy 6353 e.r.153 from log 12 to log 1 borderer to trigger 0 copy 6354 e.r.154 from log 12 to log 1 borderer to trigger 0 copy 6355 e.r.155 from log 12 to log 1 borderer to trigger 0 copy 6455 g.r.155 from log 12 to log 1 borderer to trigger 0 copy 6455 g.r.155 from log 12 to log 1 borderer to trigger 0 copy 6455 g.r.155 from log 12 to log 1 borderer to trigger 0 copy 6455 uranium 255 from log 12 to log 1 borderer to trigger 0 copy 6456 uranium 255 from log 12 to log 1 borderer to trigger 0 copy 6458 uranium 258 from log 12 to log 1 borderer to trigger 0 copy 6458 uranium 258 from log 12 to log 1 borderer to trigger 0 copy 6458 uranium 258 from log 12 to log 1 borderer to trigger 0 copy 6458 uranium 258 from log 12 to log 1 borderer to trigger 0 copy 6458 uranium 258 from log 12 to log 1 borderer to trigger 0 copy 6458 uranium 258 from log 12 to log 1 borderer to trigger 0 copy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | topy              | 62(5)             |                  |      |            |      |          |        |                      |
| Octory 63154 et-154 from log 12 to log 1 borderento trigger 0 logy 63155 et-155 from log 12 to log 1 borderento trigger 0 logy 64155 gt-155 from log 12 to log 1 borderento trigger 0 logy 92254 u-234 1043 sign= from log 12 to log 1 borderento trigger 0 logy 92255 u-ranium-225 from log 12 to log 1 borderento trigger 0 logy 92256 u-236 1163 sign= from log 12 to log 1 borderento trigger 0 logy 92258 u-ranium-225 from log 12 to log 1 borderento trigger 0 logy 92258 u-ranium-225 from log 12 to log 1 borderento trigger 0 logy 92257 repturium-2257 from log 12 to log 1 borderento trigger 0 logoy 92258 u-238 1000 sign from log 12 to log 1 borderento trigger 0 logoy 92258 u-238 1000 sign from log 12 to log 1 borderento trigger 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | mpy.              |                   |                  |      |            |      |          |        |                      |
| Octory 63:55 et-155 from log 12 to log 1 borderwice trigger 0 locally 64:55 gd-155 from log 12 to log 1 borderwice trigger 0 locally 92:24 u-23/103 sign= from log 12 to log 1 borderwice trigger 0 locally 92:25 uranium-235 from log 12 to log 1 borderwice trigger 0 locally 92:26 u-23/5 1163 sign= from log 12 to log 1 borderwice trigger 0 locally 92:28 uranium-235 from log 12 to log 1 borderwice trigger 0 locally 92:28 uranium-235 from log 12 to log 1 borderwice trigger 0 locally 92:28 uranium-237 from log 12 to log 1 borderwice trigger 0 locally 92:28 u-23/5 1000 sign from log 12 to log 1 borderwice trigger 0 locally 92:38 u-23/5 1000 sign from log 12 to log 1 borderwice trigger 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | COOPY             |                   |                  | from | ion<br>Ion | 12   | ۳ i      | m 1    |                      |
| Octy 6455 gt-155 from log 12 to log 1 bandarento trigger 0 Octy 9224 u-234 103 signs from log 12 to log 1 bandarento trigger 0 Octy 9225 uranium-225 from log 12 to log 1 bandarento trigger 0 Octy 9226 u-236 1163 signs from log 12 to log 1 bandarento trigger 0 Octy 9228 uranium-228 from log 12 to log 1 bandarento trigger 0 Octy 9228 uranium-228 from log 12 to log 1 bandarento trigger 0 Octy 9228 uranium-237 from log 12 to log 1 bandarento trigger 0 Occy 9228 uranium-237 from log 12 to log 1 bandarento trigger 0 Occov 9228 uranium-238 1000 sign from log 12 to log 1 bandarento trigger 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | UMAN<br>TOTAL     |                   |                  |      |            |      |          |        |                      |
| Copy 9234 u-234 103 sign= from log 12 to log 1 bordererlo trigger 0 copy 9235 uranium-235 from log 12 to log 1 bordererlo trigger 0 copy 9236 u-236 1163 sign= from log 12 to log 1 bordererlo trigger 0 copy 9238 uranium-238 from log 12 to log 1 bordererlo trigger 0 copy 9237 reptunium-237 from log 12 to log 1 bordererlo trigger 0 copy 9238 uranium-237 from log 12 to log 1 bordererlo trigger 0 copy 9238 u-238 1030 sign from log 12 to log 1 bordererlo trigger 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | UALLA<br>Arriva   |                   |                  |      |            |      |          |        |                      |
| Octory 9225 uranium 255 from log 12 to log 1 bordererio trigger 0 Octory 9226 ur256 1163 signs from log 12 to log 1 bordererio trigger 0 Octory 9228 uranium 238 from log 12 to log 1 bordererio trigger 0 Octory 9229 respunium 237 from log 12 to log 1 bordererio trigger 0 Octory 9238 1228 1020 sign from log 12 to log 1 bordererio trigger 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | CODY              |                   |                  |      |            |      |          |        |                      |
| Occpy 9/236 urzhiorista frontog 12 to log 1 parteria trigger 0<br>Occpy 9/238 urshioriza frontog 12 to log 1 parteria trigger 0<br>Occpy 9/238 reptunioriza frontog 12 to log 1 parteria trigger 0<br>Occpy 9/238 purza 1000 sigo frontog 12 to log 1 parteria trigger 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | OCCIV<br>TOTAL    |                   |                  |      |            |      |          |        |                      |
| Octopy 9228 uranium-28 from log 12 to log 1 bondaranto trigger 0<br>Octopy 9227 naptunium-287 from log 12 to log 1 bondaranto trigger 0<br>Octopy 9228 pur-288 1050 algo from log 12 to log 1 bondaranto trigger 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Oppos             |                   | u-236 1163 signs | fron | la         | 12   | to i     | ca 1   |                      |
| Octory 95257 reptunius-257 from log 12 to log 1 bondererio trigger 0<br>Octory 94258 pu-258 1050 elgo from log 12 to log 1 bondererio trigger 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                   |                  | from | تما        | 12 . | to I     | con 1  |                      |
| Occupy 94238 pu-238 1050 slop from log 12 to log 1 borderenko trigger 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                   |                   |                  | fron | læ         | 12 · | to i     | logi İ |                      |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0 <del>xp</del> y | 9239              |                  |      |            |      |          |        | bordererko trigger 0 |

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 plutonium-240
 bandarerko trigger 0
(CODDA)
 94241
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 0222
 plutanium-242 from lag 12 to lag
Осфу
 bandanenko triager 0
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Occipy
 95243 an-243 1057 218 from log 12 to log 1 9624 curium-24 from log 12 to log 1
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 scale 4.2 - 27 group neutron burnup library
 based on endi-b version 4 data with endi-b version 5 fission products
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|   | pm-148                        | mt= 102                                  |                                        |                                              | id 2000\5                |              |
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|   | sm-149                        | nt=102,103,107                           | updated 10/                            |                                              | id 20048<br>id 200049    |              |
|   | sar-150<br>sar-151            | mt=102<br>mt=102,103,104,105,106,107     | updated 10/<br>updated 10/             |                                              | id 20050                 |              |
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| <del>****</del>                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 | ictrene: devis                                       | skriktisks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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date of execution: 02/16/96
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 1 entries.
 -1q array has
Õ
 Oc array has
 4 entries.
O 1q array has 12 entries.
Oselect 5 ruclides from the master library on logical 1
 65 nuclides from the working library on logical 3
0 nuclides from the working library on logical 0
to create the new working library on logical 4
 1 resonance calculations have been requested
 O output option for anox formatted cross section data
Othe storage allocated for this case is 200000 words
 2q array has 70 entries.
3q array has 15 entries.
 40 array has
 5 entries.
0 general information concerning cross section library tape identification number 43/9
 number of nuclides on tape
 65
 runber of neutron energy groups
 27
 first themal neutron energy group
 15
 uniber of game energy groups
O direct access unit number 9 requires 72 blocks of length 1484 words
- xed in tape 4321
 scale 4.2 - 27 group neutron burnup library
based on enti-b version 4 data with enti-b version 5 fission products
 compiled for mc
 1/27/89
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 Langetrie - arri

 work tape 4349

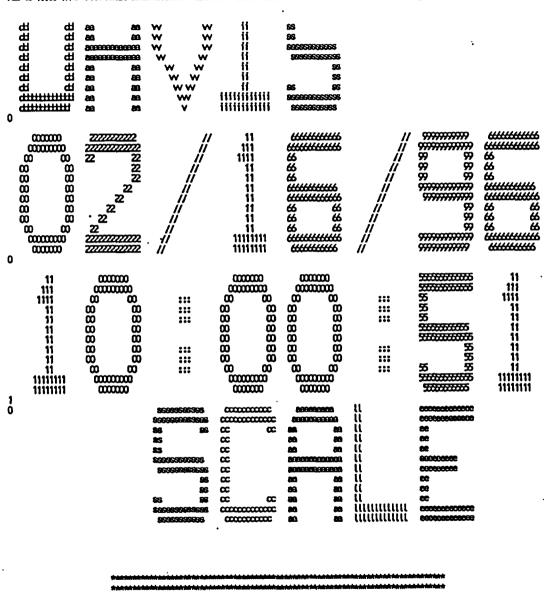
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| 15                                                     | Y-89                         | mt=102                          | undated             | 10/13/89              | 39089                |
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| 16                                                     | zr-95                        | nat = 102                       | •                   |                       | 40095                |
| 17                                                     | 27-94                        | st=102                          | urridad             | 10/13/89              | 40094                |
| 18                                                     | zr-95                        | st=102                          |                     | 10/13/89              | 40095                |
| <b>1</b> 0                                             | zircallov                    | endf/b-iv set 1284              |                     | 10/13/89              | 40502                |
| 20                                                     |                              |                                 |                     | 10/13/89              | 41094                |
| 2                                                      | nb-94                        | mt=102                          |                     |                       |                      |
| ٤١                                                     | m-75                         | at=102                          |                     | 10/13/89              | 42095                |
| 22                                                     | tc-99                        | st=102                          |                     | 10/13/89              | 43099                |
| 25                                                     | ru-101                       | st=102                          |                     | 10/13/89              | 44101                |
| 24                                                     | ru-106                       | at=102                          | Updated             | 1 10/13/89            | 44106                |
| 25                                                     | rh-103                       | st=102                          | Lindsted            | 1 10/13/89            | 4510B                |
| 26                                                     | rh-105                       | nt= 102                         | ,                   |                       | 45105                |
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| <b>2</b> 8                                             | <b>₩</b> 108                 | st=102                          |                     | 10/13/89              | 46108                |
| <b>~</b>                                               |                              | erof/b-iv set 1139              |                     | 10/13/89              | 47109                |
| 2                                                      | silver-109                   |                                 |                     |                       | 51124                |
| 30                                                     | sb-124                       | 0£=102                          |                     | 110/13/89             |                      |
| <u> 31</u>                                             | же- <u>131</u>               | at-102,103,104,105,106          |                     | 10/13/89              | 54131                |
| 32                                                     | xe-132                       | at-102,103,104,105,105          |                     | 10/13/89              | 54132                |
| 33                                                     | xeror-135                    | erof/b-iv net 1294              | updated             | 1 10/13/89            | 54135                |
| 34                                                     | xe-136                       | att= 102, 108, 104, 105, 10     | 7                   |                       | 54136                |
| 35                                                     | cesiun-133                   | endif/b-iv met 1141             | undated             | 10/13/89              | <b>55</b> 03         |
| 36                                                     | cs-134                       | mt=102                          |                     | 1 10/13/89            | 55134                |
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| <b>5</b> 6                                             |                              | mt=102                          | 1 miletari          | 10/13/89              | <b>55</b> 157        |
| ₹                                                      | be-136                       | et=102                          |                     | 10/13/89              | 56136                |
| -37<br>10                                              |                              |                                 |                     |                       | 57139                |
| 40                                                     | la-139                       | mt=102                          | quarte.             | 1 10/13/89            |                      |
| 41                                                     | C8-144                       | mt= 102                         |                     | 40.00                 | 58144                |
| . 42                                                   | pr-141                       | mt=102,103,104,105,106,107      |                     | 10/13/89              | 59141                |
| 43                                                     | pr-143                       | at=102                          |                     | 10/13/89              | 59143                |
| 44                                                     | nd-143                       | at=102                          | updated             | 10/13/89              | 60143                |
| 45                                                     | nd-145                       | ppt=102                         | updated             | 10/13/89              | 60145                |
| 46                                                     | nd-147                       | st=102                          | updated             | 10/13/89              | 60147                |
| 47                                                     | pm-147                       | nt=102                          |                     | 10/13/89              | 61147                |
| ŽŘ                                                     | pa-148                       | at= 102                         | 4                   |                       | 61148                |
| 75                                                     | sm-147                       |                                 | 1 sylphoni          | 10/13/89              | 62147                |
| <u> </u>                                               | 8D-149                       | mt=102,105,107                  |                     | 10/13/89              | 62149                |
| 젊                                                      |                              |                                 |                     |                       | 62150                |
| 걸                                                      | em 150                       | mt=102                          |                     | 10/13/89              |                      |
| ≃                                                      | sn-151                       | mt=102,105,104,105,106,107      |                     | 110/13/89             | 62151                |
| بخ                                                     | SR: 152                      | mt=102, 108, 104, 105, 106, 107 |                     | 10/13/89              | <i>⊗</i> 125         |
| <u>×</u>                                               | en-123                       | mt=102,105,104,105,106,107      |                     | 10/13/89              | ଭାୟ                  |
| 55                                                     | er 54                        | att=102,105,104,105,105,107     |                     | 10/13/89              | <u>ଷ୍ଟାଧ୍ୟ</u>       |
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| 61                                                     |                              | endit/b-iv mat 1262             | Leabor              | 10/13/89              | 92238                |
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 end /b-iv mat 1276
 201
 underted 10/13/89
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 zircallov
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 1/v cross sections normalized to 1.0 at 0.0253 ev
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 Indrogen end/b-fv met 1287/thms1002
b-10 1273 218rgp 042375 p-3 258k
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 updated 10/13/89
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 aygen-16
 end /b-iv mat 1276
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 80%
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kr-83
 endf/b-iv met 1276
 mt=102,105,105,105,105,107
mt= 102
 umbted 10/13/89
 34083
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 kr-85
 32000
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 mt=102
 updated 10/13/89
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 mt=102
 uzdeted 10/13/89
 at= 102
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 mt=102
 undeted 10/13/89
 mt=102
 updated 10/13/89
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 zircalloy
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 rb-94
 mt=102
 m-95
 mt=102
 undated 10/13/89
 42075
 tc-97
 mt=102
 updated 10/13/89
 43099
 mt=102
 updated 10/13/89
 44101
 ru-101
 ru-106
 undeted 10/13/89
 mt=102
 44106
 4510B
 rh-103
 mt=102
 undeted 10/13/89
 mt= 102
 45105
 rh-105
 pd-105
 mt=102
 updated 10/13/89
 46105
 4610B
 id-108
 ME=102
 updated 10/13/89
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. silver-109
 endf/b-iv mat 1139
 undeted 10/13/89
 47109
 undated 10/13/89
 51124
 sb-124
 nt=102
 mt=102,103,104,105,105
mt=102,103,104,105,105
 undated 10/13/89
 54131
 xe-131
 xe-132
 undated 10/13/89
 54132
 XETOT-135
 erchi/o iv met 1294
 undated 10/13/89
 54135
 mt= 102, 108, 104, 105, 107
end/b-iv mst 1141
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 x=-136
 cesiun-133
 updated 10/13/89
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 CS-134
 underted 10/13/89
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 mt=102
 CS-135
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 mt= 102
 cs-137
 nd=102
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 undeted 10/13/89
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57139
 updated 10/13/89
 ba-136
 nst=102
 undeted 10/13/89
 la-139
 mt=102
 mt= 102
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 58144
 ce-144
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59143
 p-141
 mt=102,108,104,105,106,107
 umbted 10/13/89
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 mt=102
 undeted 10/13/89
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 umbted 10/13/89
 mt=102
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 undeted 10/13/89
 nd-145
 mt=102
 nd-147
 updated 10/13/89
 nt=102
 60147
 pn-147
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 ucdated 10/13/89
 net=102
 m-148
 61148
 mt= 102
 62147
62149
 sn 147
 endf/b-v fission product
 undeted 10/13/89
 sn-149
 mt=102,105,107
 undated 10/13/89
 62150
 undsted 10/13/89
 an- 150
 mt=102
 m=102,105,104,105,105,107
nt=102,105,104,105,105,105,107
nt=102,105,104,105,105,105,107
nt=102,105,104,105,105,105,107
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 8123
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 악ਲ
 nt=102
 undated 10/13/89
 92234
 u-254 1043 sign-544 residence p-3 256k f-1/e-s(1.45)
 9225
 uranium-Z55 andf/b-iv mat 1261
 undeted 10/13/89
 u-256 1163 sigo-5+4 resklass p-3 25k f-1/e-m(1.45)
uranium-238 emif/b-iv mat 1262 updatec
reptunium-237 emif/b-iv mat 1263 updatec
 92236
 undeced 10/13/89
 9228
9227
 undsted 10/13/89
 pu-298 1050 sign-6-4 resulters p-3 29% f-1/e-m(1,+5)
plutonium-259 endi/o-iv met 1264 update
 updated 10/13/89
 plutorius-240 erdi/b-iv set 1265
plutorius-241 erdi/b-iv set 1265
 undeted 10/13/89
 updated 10/13/89
 plutonius-242 endi/b-iv set 1161
 updated 10/13/89
 an-241 1056 sign-544 resultes 210 gp p-3 250k
an-243 1057 218 gp st f-1/em 0905/6 p5 250k
 id
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 erdi/b-iv mat 1162
 undeted 10/13/89
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program verification information

```
code system:
 scale versions
 program c0c001
 creation date: 04/27/95
 library: /nautronics/scale/exe
 this is not a scale configuration controlled code
 ichneme: devis
 date of execution: 02/16/96
 time of execution: 10:00:51
 560 d, second part of sas2h pass to make library
 1 entries.
 -1q array has
 Og array has
 11 entries.
 1d array has
 To entries.
 2cj array has
 10 entries.
 3ci array has
 12 entries.
 40 array has
 9 entries.
 Sci array has
 12 entries.
Odirect access unit 9 requires 12 blocks of length 70% for cross section mixing.
 560 d. second part of ses2h pass to mike library
Ogeneral problem discription data block
 general problem data
 ige 1/2/3 = plane/cylinder/sphere
 ian quadrature order
 izm rusber of zones
 isct order of scattering
 iest 0/1/2/3/4/5/6-0/Welthe/c/z/r/h
itm inner iteration maximum
 im runber of special intervals
 28
 ibl 0/1/2/3 = vecum/refl/per/shite
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.thr right boundary condition mox runber of mixtures
 ion outer iteration asscinum
 icle -1/0/n-flat res/sr/qxt
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ms mixing table length
 ith Q/1 = fonerd/adjoint
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ion runber of energy groups
 If Itu not used always word
 iprt -2/-1/0/nanixture assc print
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me number of neutron groups
 idi 0/1/2/3-no/prt rd/psh n/both ipbt -1/0/1-none/fine/all bal. prt
rug number of games groups
ifty number of first thermal group
 15
 special options
 ifg Q/1 = more/weighting calculation
 ipn 0/1/2 diff. coef. parana
 idfa 0/1 = none/density factors 38*
 ign volumetric sources (Q/THTD/yes)
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isk broad group fluxes

| ibln activity data unit 0 jtkl Q/1/2 buckling geometry 0 weighting data                                                                                                                                                                                                                                                                                                            | ntrd bend rebeln pereseter<br>a (ifg=1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| icon -1/0/1=cell/zore/region seight -1 ignif runber of broad groups 3 itp 0/10/20/30/40 0/c/e/ac/a 0 itp -2/-1/0/magted seet print -2 isp -1/n anisn xsect print -1 0 floating point                                                                                                                                                                                               | intf total xect pan in brd go tables<br>rubif pan g-g or file rubber<br>rubif table length or max order<br>rubin extra 1-d x-soct positions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 3<br>4<br>6<br>0         |
| eps overall convergence 1.0000E-04 ptc point convergence 1.0000E-04 prf rormalization factor 1.0000E-00 ev eigenvalue guess .0000E+00 eva eigenvalue matifier .0000E+00 bf buckling factor=1.42092 1.4209E+00 this case will require 2611 locations this case has been allocated 20000 location 1 50 d, second part of ses 0 15q array has 70 entries. 0 15q array has 70 entries. | B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | +02<br>+00<br>+00<br>-03 |
| 0 detablock 7                                                                                                                                                                                                                                                                                                                                                                      | 2 (mixing table, etc.) mixture  3 201 2.097102-02  3 202 4.19420-02  3 203 3.85556-06  3 205 4.2556-05  2 205 4.2556-05  2 205 4.2556-05  1 9225 1.62152-04  1 9225 1.6255-06  1 9228 7.2962-08  1 9228 7.2962-08  1 8016 1.505112-02  1 8028 3.23192-07  1 3608 3.23192-07  1 3608 3.23192-07  1 3608 3.23192-07  1 4098 2.71660-06  1 4098 2.71660-06  1 4098 2.71660-06  1 4098 2.71660-06  1 4098 2.71660-06  1 4098 2.71660-06  1 4098 2.71660-06  1 4098 2.71660-06  1 4098 2.71660-06  1 4098 2.71660-06  1 4098 3.20762-06  1 4098 2.71660-06  1 4098 3.20762-06  1 4008 3.0702-07  1 45105 6.24102-09  1 45106 1.25192-06  1 45108 2.1178-06  1 45108 3.0702-07  1 51134 5.3590-11  55134 1.35532-07 | extra psect ici's        |

|        | <b>电影过程的存在存在存在的影响的</b>                  | 55154<br>55155<br>55155<br>55159<br>55159<br>55154<br>55155<br>55154<br>55155<br>55155<br>5515<br>551                          |                                                                                                                                                                       |                                                                                                                                             | 111111111111111111111111111111111111111 | 55157<br>551545<br>551541<br>551543<br>55154<br>65154<br>65154<br>65154<br>65154<br>65154<br>65154<br>65154 | 4.36275E-06<br>2.6960E-08<br>4.35528E-07<br>1.2734E-07<br>1.94158E-06<br>3.5248E-06<br>2.5599E-06<br>1.0908E-06<br>2.9537E-09<br>4.3565E-08 |                                                                                                                                                                           |        |
|--------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
|        | *************************************** | 61147<br>61148<br>62147<br>62150<br>62151<br>62152<br>63153<br>63154<br>63155                                                  |                                                                                                                                                                       |                                                                                                                                             | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 244<br>249<br>2751<br>2751<br>2752<br>2753<br>2754<br>2755<br>2755<br>2755<br>2755<br>2755<br>2755<br>2755  | 2.2083E-07<br>2.65272E-08<br>8.4449E-07<br>1.0842E-07<br>4.11452E-07<br>3.7515E-10<br>2.0855E-07<br>3.1520E-08<br>2.44248E-08               |                                                                                                                                                                           |        |
|        | SARRES SARRES                           | 64155<br>9224<br>9225<br>9225<br>9223<br>9223<br>9223<br>9423<br>9423<br>94240<br>94241                                        |                                                                                                                                                                       |                                                                                                                                             | 1                                       | 1001<br>5010<br>5011<br>55133<br>95257<br>94258<br>94259<br>94240<br>94242                                  | 2.30.53E-02<br>2.0987E-06<br>8.51673E-06<br>4.5001E-06<br>6.5472ZE-07<br>5.8683E-08<br>2.7341ZE-05<br>3.8299ZE-06<br>1.678810E-07           |                                                                                                                                                                           |        |
| ,00000 | 88 89 PO 188                            | 9/2/2<br>952/3<br>952/3<br>962/4<br>962 time<br>97 locations<br>35q array ha<br>35q array ha<br>35q array ha                   | s 29 entr<br>s 28 entr<br>s 4 entr                                                                                                                                    | es.<br>es.                                                                                                                                  | 1 1 1                                   | 95241<br>95243<br>96244<br>999                                                                              | 3.19625:-08<br>6.108/35:-09<br>3.46025:-10<br>3.30753:-21                                                                                   |                                                                                                                                                                           |        |
| 000    |                                         | 40q array ho<br>47q array ho<br>51q array ho                                                                                   | s 27 entr<br>s 27 entr<br>560 d, se                                                                                                                                   | ies.                                                                                                                                        | aceZh paes 1                            | to make libra                                                                                               | ıγ                                                                                                                                          |                                                                                                                                                                           |        |
| 0      | Ф                                       | energy<br>boundaries                                                                                                           | lethergy                                                                                                                                                              | weighted                                                                                                                                    | prosed &b                               | colc                                                                                                        | alorb                                                                                                                                       | right                                                                                                                                                                     | left   |
|        | 1234567891112                           | barderies<br>2,0000=05<br>3,0000=05<br>1,5000=05<br>1,6000=05<br>9,0000=05<br>1,0000=05<br>1,0000=05<br>1,0000=05<br>1,0000=02 | burdaries<br>-6,931/a-cn<br>4,40982-01<br>1,20978-00<br>1,96318-00<br>2,40998-00<br>2,40998-00<br>4,605178-00<br>6,37738-00<br>8,11173-00<br>9,20818-00<br>1,15128-01 | velocities 4,60816-07 2,085736-09 2,122016-09 1,766536-09 1,066536-09 1,066536-09 1,066536-09 1,135266-08 4,021266-07 1,00666-07 1,00666-07 | 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | \$ <del>2</del>                                                                                             | band<br>1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10<br>11<br>12                                                                         | # 1.0000 + 00 1.0000 + 00 1.0000 + 00 1.0000 + 00 1.0000 + 00 1.0000 + 00 1.0000 + 00 1.0000 + 00 1.0000 + 00 1.0000 + 00 1.0000 + 00 1.0000 + 00 1.0000 + 00 1.0000 + 00 | albedo |

| RAKKKKKKKKKAKAKAKA               | 3.0000000<br>1.0000000<br>1.000000<br>1.700000<br>1.200000<br>8.000000<br>4.0000000<br>4.000000<br>9.999900<br>9.999900<br>5.000000<br>9.99990000<br>9.999900000<br>9.999900000<br>9.999900000000 | 1.27/69E-01<br>1.38155E-01<br>1.5030E-01<br>1.5657/E-01<br>1.5657/E-01<br>1.5657/E-01<br>1.61(81E-01<br>1.7620E-01<br>1.7620E-01<br>1.7620E-01<br>1.9627E-01<br>1.9627E-01<br>2.07235E-01<br>2.07235E-01<br>2.07235E-01 | 5.6993±06<br>3.2057±06<br>2.10601±06<br>1.70522±06<br>1.52545±06<br>1.52052±06<br>9.0580±06<br>8.17974±06<br>4.8653±06<br>3.57766±05<br>2.7893±06<br>1.87233±06<br>8.88201±06 | 22222223333333              |                          | 13454788888888888888888888888888888888888 | 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 |                           |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| 0                                |                                                                                                                                                                                                   |                                                                                                                                                                                                                         | condigent of                                                                                                                                                                  |                             | JADRE LIGHT)             | ouedrature co                             | nctente                                                                                                                                     |                           |
| Ų                                | mixture                                                                                                                                                                                           | order p(l)                                                                                                                                                                                                              | activity                                                                                                                                                                      | reaction                    | weights                  | directions                                | reficinec                                                                                                                                   | Wt X COS                  |
| 1                                | by zone                                                                                                                                                                                           | by zone                                                                                                                                                                                                                 | metino.                                                                                                                                                                       | (executo)                   | weights<br>0             | -2.7500Æ-01                               | 3                                                                                                                                           | m à cos                   |
|                                  | 3                                                                                                                                                                                                 |                                                                                                                                                                                                                         |                                                                                                                                                                               |                             | 5.051/3E-02              |                                           | 3                                                                                                                                           | -9.98548E-03              |
| 23456789                         | 2<br>3                                                                                                                                                                                            | 3<br>3                                                                                                                                                                                                                  |                                                                                                                                                                               |                             |                          | 1.9728/E-01                               | Ž                                                                                                                                           | 9.98548E-03               |
| 4                                | Ĭ                                                                                                                                                                                                 | 3                                                                                                                                                                                                                       |                                                                                                                                                                               |                             | 0                        | -6.0419E-01                               | 8                                                                                                                                           | 0                         |
| 5                                | •                                                                                                                                                                                                 |                                                                                                                                                                                                                         |                                                                                                                                                                               |                             | 5.5995E-02               | -5.58410E-01                              | 8                                                                                                                                           | -3.10450E-02              |
| 6                                |                                                                                                                                                                                                   |                                                                                                                                                                                                                         |                                                                                                                                                                               |                             | 5.5575E-02               | -2.31301E-01                              | 7                                                                                                                                           | ·1.265736-02              |
| 7                                |                                                                                                                                                                                                   |                                                                                                                                                                                                                         |                                                                                                                                                                               |                             |                          | 2.31301E-01                               | 6                                                                                                                                           | 1,255756-02               |
| 8                                |                                                                                                                                                                                                   |                                                                                                                                                                                                                         |                                                                                                                                                                               |                             |                          | 5.58%10E-01                               | 5                                                                                                                                           | 3,10\50E-02<br>0          |
| 9                                |                                                                                                                                                                                                   | •                                                                                                                                                                                                                       |                                                                                                                                                                               |                             | E 708/15.00              | -8.50774E-01                              | 5                                                                                                                                           | -4.2966€-02               |
| 10<br>11                         |                                                                                                                                                                                                   |                                                                                                                                                                                                                         |                                                                                                                                                                               |                             |                          | -8.2178/E-01<br>-6.01589E-01              | ¥                                                                                                                                           | -3.14537E-02              |
| 11                               |                                                                                                                                                                                                   |                                                                                                                                                                                                                         |                                                                                                                                                                               |                             |                          | -2.20196E-01                              | ធិ                                                                                                                                          | -1.15128E-02              |
| 12<br>13<br>14<br>15<br>16<br>17 |                                                                                                                                                                                                   |                                                                                                                                                                                                                         |                                                                                                                                                                               |                             |                          | 2.2019SE-01                               | ž                                                                                                                                           | 1.15120€-02               |
| 14                               |                                                                                                                                                                                                   |                                                                                                                                                                                                                         |                                                                                                                                                                               |                             |                          | 6.01589E-01                               | 11                                                                                                                                          | 3.1/537E-02               |
| - 5                              |                                                                                                                                                                                                   |                                                                                                                                                                                                                         |                                                                                                                                                                               |                             |                          | 8.2178/E-01                               | 10                                                                                                                                          | 4.2966E-02                |
| 16                               |                                                                                                                                                                                                   | •                                                                                                                                                                                                                       |                                                                                                                                                                               |                             | C                        | -9.53032E-01                              | 24                                                                                                                                          | 0                         |
| 17                               |                                                                                                                                                                                                   |                                                                                                                                                                                                                         |                                                                                                                                                                               |                             |                          | -9.64143E-01                              | 24                                                                                                                                          | -4.37099E-02              |
| 18<br>19<br>20<br>21<br>22<br>23 |                                                                                                                                                                                                   |                                                                                                                                                                                                                         |                                                                                                                                                                               |                             |                          | -8.17361E-01                              | %<br>%<br>%<br>%                                                                                                                            | -3.70 <del>000</del> E-02 |
| 19                               |                                                                                                                                                                                                   |                                                                                                                                                                                                                         |                                                                                                                                                                               |                             |                          | -5.46143E-01                              | 22                                                                                                                                          | -2.47597E-02              |
| 20                               |                                                                                                                                                                                                   |                                                                                                                                                                                                                         |                                                                                                                                                                               |                             |                          | -1.91780E-01                              | 21<br>20                                                                                                                                    | -8.6944E-03<br>8.6944E-03 |
| 21                               |                                                                                                                                                                                                   |                                                                                                                                                                                                                         |                                                                                                                                                                               |                             | 4.5350E-02<br>4.5350E-02 | 1.9178DE-01<br>5.46143E-01                | 19                                                                                                                                          | 2.A7597E-02               |
| 74                               |                                                                                                                                                                                                   |                                                                                                                                                                                                                         |                                                                                                                                                                               |                             |                          | 8.17361E-01                               | 18                                                                                                                                          | 3.7055E-02                |
| ž                                |                                                                                                                                                                                                   |                                                                                                                                                                                                                         |                                                                                                                                                                               |                             |                          | 9.64143E-01                               | <b>17</b>                                                                                                                                   | 4.370 <del>77E</del> -02  |
|                                  | nts for p( 3)                                                                                                                                                                                     | acattering                                                                                                                                                                                                              |                                                                                                                                                                               |                             |                          |                                           |                                                                                                                                             |                           |
| Cangl                            | set 1                                                                                                                                                                                             | set 2                                                                                                                                                                                                                   | set 3                                                                                                                                                                         | set 4                       | set 5                    |                                           |                                                                                                                                             |                           |
| _ 1                              | -2.7900Æ-01                                                                                                                                                                                       | 8.6325E-01                                                                                                                                                                                                              |                                                                                                                                                                               | -6.16919E-01                |                          |                                           |                                                                                                                                             |                           |
| 2                                | -1.9728E-01                                                                                                                                                                                       |                                                                                                                                                                                                                         | .000000                                                                                                                                                                       | -4.3 <del>5220E</del> -01   | 1.2141 E-02              |                                           |                                                                                                                                             |                           |
| 3                                | 1.9728Œ-01                                                                                                                                                                                        | 8.83236E-01                                                                                                                                                                                                             |                                                                                                                                                                               | 4,36228E-01                 |                          |                                           |                                                                                                                                             |                           |
|                                  | -6.0X19E-01                                                                                                                                                                                       | 4.52014E-01                                                                                                                                                                                                             |                                                                                                                                                                               | -8.0435E-01<br>-7.43201E-01 |                          |                                           |                                                                                                                                             |                           |
|                                  | -5.58410E-01<br>-2.31301E-01                                                                                                                                                                      | 4.52016E-01                                                                                                                                                                                                             | -2.25/13E-01                                                                                                                                                                  |                             | 1.612765-01              |                                           |                                                                                                                                             |                           |
| 7                                | 2.31301E-01                                                                                                                                                                                       |                                                                                                                                                                                                                         | -2.27(E-0)                                                                                                                                                                    | 3.078//E-01                 |                          |                                           |                                                                                                                                             |                           |
| á                                | 5.58410E-01                                                                                                                                                                                       | 4.520KE-01                                                                                                                                                                                                              | 2.25713-01                                                                                                                                                                    | 7.43201E-01                 | 6.68029E-02              |                                           |                                                                                                                                             |                           |
|                                  | -8.50774E-01                                                                                                                                                                                      | -8.5725E-02                                                                                                                                                                                                             | 6.2583E-01                                                                                                                                                                    | -1.98454E-01                | -4.855E-01               |                                           |                                                                                                                                             |                           |
|                                  | -8.2178/E-01                                                                                                                                                                                      |                                                                                                                                                                                                                         |                                                                                                                                                                               | -1.91694E-01                |                          |                                           |                                                                                                                                             |                           |
| 11                               | -6.01555E-01                                                                                                                                                                                      | -8.5725E-02                                                                                                                                                                                                             |                                                                                                                                                                               | -1.40530E-01                | 3.4424/E-01              |                                           |                                                                                                                                             |                           |
|                                  | -2.2019Œ-01                                                                                                                                                                                       | 427 <u>725</u> E-02                                                                                                                                                                                                     | -5-YERSE-01                                                                                                                                                                   |                             | 3.44245E-01              |                                           |                                                                                                                                             |                           |
| ផ្ល                              | Z.ZJTXEE-UI                                                                                                                                                                                       | -8.5725E-02                                                                                                                                                                                                             | 7.44D4:47                                                                                                                                                                     | 5.13643E-02                 | -3.44.00E-01             |                                           |                                                                                                                                             |                           |
| 14                               |                                                                                                                                                                                                   | -8.5725E-02<br>-8.5725E-02                                                                                                                                                                                              | MEMORY<br>5 /2K/E-M                                                                                                                                                           | 1,40530E-01<br>1,91694E-01  | 3.425-01                 |                                           |                                                                                                                                             |                           |
| 5                                | OLCHOCTU                                                                                                                                                                                          | UJICUETI.                                                                                                                                                                                                               | 7TIE-01                                                                                                                                                                       | NAC-01                      | J. TEAL 101              |                                           |                                                                                                                                             |                           |

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16 -9.83032E-01 -4.49528E-01 8.34889E-01 5.00709E-01 -7.51005E-01
 17-9.64 K3E-01 -4.4952E-01 7.73181E-01 4.91083E-01 -6.2433E-01
 18 -8.17361E-01 -4.49528E-01 3.20262E-01 4.16320E-01 1.46514E-01
 19 -5.464/3E-01 -4.465/3E-01 -3.706/3E-01 2.7817/E-01 7.367/E-01 -20 -1.9176/E-01 -4.465/3E-01 -7.75181E-01 9.762/E-02 4.172/E-01 21 1.9176/2E-01 -4.465/3E-01 -7.75181E-01 -9.768/E-02 -4.172/E-01
 22 5.46143E-01 -4.49528E-01 -3.20262E-01 -2.78176E-01 -7.36575E-01
 23 8.17361E-01 -4.49528E-01 3.20262E-01 -4.16320E-01 -1.46514E-01
 24 9.64143E-01 -4.49528E-01 7.73181E-01 -4.91083E-01 6.2438E-01
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 2 3.95287E-02 5.98951E-02
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 3 7.90575E-02 1.18586E-01
 4 1.58115E-01 1.9764/E-01
 Ŏ
 2.37172E-01 2.76701E-01
 1,49020E+00 1,37447E-01
 6 3.16230E-01 3.55759E-01
 1,985/3E+00 1.76717E-01
 2.48544E+00 2.15989E-01
2.98040E+00 2.5556E-01
 7 3.952895-01 4.348146-01
8 4.743455-01 5.138746-01
 3.477($±\00 1.4256$±\01
3.7250±\00 1.5217$±\01
3.9738£±\00 8.2046$±\02
 5.53403E-01 5.73167E-01
 10 5.92931E-01 6.12696E-01
 11 6.32460E-01 6,42620E-01
 12 6.52780E-01 6.62940E-01
 4.1015/E+00 8.46/03E-02
 13 6.73100E-01 6.9583E-01
 4.23921E+00 2.05562E-01
 14 7.20067E-01 7.43650E-01
 4.53431E+00 2.19422E-01
 4,819416+00 2,33282E-01
 15 7.67083E-01 7.90517E-01
 16 8.14000E-01 8.62795E-01
 5.11451E+00 5.29051E-01
 5.72769E+00 5.88891E-01
6.3408E+00 1.36731E+00
 17 9.11991E-01 9.60886E-01
 18 1.00918E+00 1.10677E+00
 7.5678/EHOO 1.59667EHOO
8.7550EHOO 1.63603EHOO
 19 1.20/3/E+00 1.30193E+00
 1.3775E+00 1.47TVE+00
1.5747SE+00 1.6725ZE+00
 1.00200E+01 2.07540E+00
1.12463E+01 2.31476E+00
1.24727E+01 2.55412E+00
 1.789916+00 1.887506+00
 22
 23 1.9E507E+00 2.0824E+00
24 2.18027E+00 2.2778E+00
25 2.37545E+00 2.4730E+00
 1.36991E+01 2.79549E+00
 1,495/E+01 3,0525E+00
1,651E+01 3,2722E+00
 26
 2.5706/E+00 2.66823E+00
 1.75781E+01 1.7287E+00
1.7591E+01 1.78571E+00
 7
 2.76582E+00 2.81461E+00
 28 2.863416+00 2.912206+00
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 25 -3.9240E-05 1,0874E+00 -1.52578E-03 -1.09213E-02 -3.47812E-03
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 3 371 -1.3866E-06 1.0957E+00 -2.1128E-04 -1.3618/E-08 -7.658/7E-04
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 4 428 -3.55400E-06 1.0BB1E+00 -4.2553/E-05 -3.0277/E-04 -1.6547/E-04
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 5 463 2.75520E-06 1.00879E+00 -9.24429E-06 -6.60568E-05 -3.53097E-05
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 17 1.71501E-06
 28 1.0000E+00
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 1.15781E-06
 28 1.0000E+00
 6
 17 7.1349/E-07
 28 9.9999E-01
 1,3000E-07
 28 1.0000E+00
 ъ
 27 6.91892E-06
 28
 1.00001E+00
 1.5896E-06
 10
 10
 26
 28 9.9999E-01
 26 2.98/29E-06
 28 9.99997E-01
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26 1.287Æ-06

28 1.0000E+00

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INFORMATION ONLY
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28 9.9998E-01
28 9.9999E-01
 26 1.7433/E-06
 13
 13
 25 5.97179E-07
 15
 2 3.50579E-05
 28 9.99761E-01
 16
 2 4,30869E-05
 28 9.9996/E-01
 2 4.92700E-05
2 5.74201E-05
2 4.98027E-05
 17
 28 9.9984E-01
 28 9.9995ZE-01
 28 9.99902E-01
 2 3.8740E-05
2 5.9319E-05
 28 9.99925E-01
 20
 27 22 23
 28 9.9994E-01
 23 2.7017/E-05
 28 9.99771E-01
 1.82879E-05
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 6 490 -2.858345-06 1.089875+00 -1.88610E-06 -1.41942E-05 -7.87109E-06 .00000E+00
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 Lentida 1.0888/E+00
 production/absorption 1.108105+00
 elaced time
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 560 d, second part of sas2h pass to make library
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 3.95287E-02 5.92981E-02 2.48866E-01 1.4726/E-02 .00000E+00
 7.90575E-02 1.18589E-01 4.96735E-01 5.89057E-02
 .0000E+00
 1.5815E-01 1.9764E-01 9.9546E-01 9.8176ZE-02 2.3717ZE-01 2.7670E-01 1.4903E+00 1.3744ZE-01
 _0000E+00
 .00000E+00
 3.1620E-01 3.55759E-01 1.98592E+00 1.76717E-01
 .0000E+00
 3.95289E-01 4.34814E-01 2.48344E+00 2.15989E-01
 .0000E+00
 4.743/SE-01 5.1387/E-01 2.980/0E+00 2.5525E-01
 .00000E+00
 5,53/03E-01 5.73167E-01 3,47713E+00 1,4250E-01
 .000E+00
 9
 5.9231E-01 6.1299E-01 3.7250E+00 1.52173E-01 6.3260E-01 6.42620E-01 3.97396E+00 8.2060E-02
 .000E+00
 10
 11
 6.52780E-01 6.62940E-01 4.10154E+00 8.46405E-02
 ,00000E+00
 6.73100E-01 6.9680E-01 4.22821E+00 2.02562E-01 7.20057E-01 7.43550E-01 4.52831E+00 2.1942E-01
 .0000E+00
 13
 14
 .0000E+00
 7,67053E-01 7,90517E-01 4,81941E+00 2,33282E-01
 .00000E+00
 8.1400E-01 8.6275E-01 5.1751E-00 5.280E-01 2.4810E-02 9.1597E-01 9.6356E-01 5.7276E-00 5.285E-01 2.4810E-02 1.0076E-02 1.10576E-00 6.340EE-00 1.3573E-00 6.0990E-02 1.2036E-00 1.3019E-00 7.5574E-00 1.9867E-00 7.0258E-02 1.3975E-00 1.4974E-00 8.7860E-00 1.8860E-00 7.9676E-02
 16
 17
 19
 BUNDA
 1.59475E+00 1.6925ZE+00 1.00200E+01 2.07540E+00 8.91149E-02
 1.78991E+00 1.88750E+00 1.12463E+01
 2.314792+00 9.860876-02
 1,9507±400 2,05265±400 1,26777±401 2,55412±400 1,051665±01 2,1507±400 2,27785±400 1,3697±401 2,77547±400 1,17605±01
 2.37545E+00 2.47305E+00 1.49254E+01 3.05265E+00 1.27535E-01
 20
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 2.76582E+00 2.81461E+00 1.73781E+01 1.72587E+00 7.24434E-02
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1.267568-02 8.999408-02 1.12048-01 6.882348-02 1.025628-01 1.92604-01 1.92828-01 1.46388-01
0 int. grp. 1
 3 1.26762E-02 9.00069E-02 1.12070E-01 6.88415E-02 1.02597E-01
 1.92674E-01 1.93059E-01 1.46950E-01
 4 1,25825-02 9,00856-02 1.12182-01 6.89198-02 1.02726-01 1.92916-01 1.951916-01 1.46978-01
 5 1.2648E-02 9.0274E-02 1.1257E-01 6.9052FE-02 1.02543E-01 1.95346E-01 1.9535E-01
 1.47022E-01
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6 1.2711E-02 9.021E-02 1.1284E-01 6.9259E-02 1.05340E-01 1.9365E-01 1.9377E-01 1.4707E-01

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7 1.27518-02 9.066918-02 1.12978-01 6.54738-02 1.06628-01 1.9458-01 1.4748-01 8 1.27568-02 9.07784-02 1.13430-01 6.77810-02 1.04028-01 1.95518-01 1.94788-01 1.47251-01 9 1.27780-02 9.12508-02 1.13228-01 7.00628-02 1.04028-01 1.95388-01 1.9538-01 1.47308-01 - 10 1.27928-02 9.14508-02 1.47518-01 7.051928-02 1.04028-01 1.9528-01 1.47308-01 - 11 1.28048-02 9.146428-02 1.44580-01 7.051928-02 1.05378-01 1.9528-01 1.9528-01 1.47378-01 11 1.28048-02 9.17728-02 1.48580-01 7.051928-02 1.05378-01 1.9528-01 1.9528-01 1.47378-01 12 1.28178-02 9.17728-02 1.48580-01 7.051928-02 1.05378-01 1.95187-01 1.96448-01 1.47378-01 13 1.28448-02 9.20128-02 1.48580-01 7.00598-02 1.05738-01 1.98187-01 1.96448-01 1.47378-01 13 1.28448-02 9.20128-02 1.48580-01 7.00598-02 1.05738-01 1.98187-01 1.96448-01 1.47598-01 1.128188-02 9.20128-02 1.5528-01 7.00598-02 1.05738-01 1.98187-01 1.96448-01 1.47598-01 1.128188-02 9.20128-02 1.5528-01 7.00598-02 1.05738-01 1.98187-01 1.97048-01 1.47598-01 1.128188-02 9.20128-02 1.56580-01 7.00588-02 1.05738-01 1.05738-01 1.97048-01 1.47598-01 1.12908-02 9.20128-02 1.15938-01 7.00588-02 1.05738-01 1.05738-01 1.97048-01 1.47598-01 1.12908-02 9.445778-02 1.15958-01 7.00588-02 1.05738-01 1.05738-01 1.98188-01 1.47598-01 1.12908-01 1.129
 7 1,27319E-02 9,06691E-02 1.12991E-01 6,94739E-02 1,05629E-01 1,94582E-01 1,94744E-01
2 1.359E-0 9.651V-0 1.2075-0 7.4075-0 1.1076-0 2.0076-0 1.4650-0 2 1.455E-0 1.455E-0 1.1076-0 1.0076-0 1.4000-0 9p. 1 1.0026-0 1.0000-0
 7 7.00/10=-05 5.43/57=-05 1.0556=-02 3.595316-02 1.120/76=-02 2.30/46=-02 7.760/76=-02 6.29/76=-02 8 7.05/34=-03 5.38050=-06 1.074/50-02 3.582/36-02 1.112036-02 2.278/50-02 7.678/16-02 6.211786-02
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9 7.05017E-03 5.3247E-03 1.0750E-02 3.5730E-02 1.1056E-02 2.25437E-02 7.6037E-02 6.13317E-02 1.0750E-02 1.0757E-02 1.0757E-02 1.0757E-02 1.0757E-02 6.0657E-02
 11 6.995 E-03 5.254/8E-03 1.065/8E-02 3.55/35E-02 1.092/8E-02 2.2163/E-02 7.4/81/E-02 6.018/SE-02 12 6.995/2E-03 5.220/3E-03 1.068/8E-02 3.55/4/2E-02 1.090/2E-02 2.210/8E-02 7.4/87/E-02 6.005/8E-02
 12 6.992/E-03 5.220/2E-03 1.065/E-02 3.55/4/E-02 1.092/E-02 2.21078E-02 7.47670E-02 6.005/4F-02 13 6.990/4E-03 5.1949/E-03 1.065/E-02 3.55/5/E-02 1.092/E-02 2.20078E-02 7.45/5/E-02 5.9765/E-02 1.065/E-02 1.065/E-02 2.176/5E-02 7.595/E-02 5.905/E-02 15 6.95/2/E-03 5.0470E-03 1.065/E-02 3.55/5/E-02 1.065/E-02 2.176/5E-02 7.395/E-02 5.905/E-02 15 6.95/2/E-03 5.0470E-03 1.065/E-02 3.55/6/E-02 1.065/E-02 2.065/E-02 7.395/E-02 5.81/2/E-02 16 6.95/2/E-03 4.95/3/E-03 1.05/6/E-02 3.55/6/E-02 1.065/E-02 2.065/E-02 7.75/5/C-02 5.66/6/E-02 1.05/6/E-02 1.065/E-02 2.065/E-02 7.065/E-02 5.52/1/E-02 16 6.76/4/E-03 4.72/4/E-03 1.05/6/E-02 3.45/6/E-02 1.066/E-02 2.065/E-02 7.065/E-02 5.52/1/E-02 18 6.776/E-03 4.25/6/E-03 1.05/6/E-02 3.45/6/E-02 1.066/E-02 1.96/6/E-02 7.065/E-02 5.52/1/E-02 19 6.75/5/E-03 4.25/6/E-03 1.065/E-02 3.45/6/E-02 1.066/E-02 1.96/6/E-02 6.87/6/E-02 5.52/1/E-02 16.700/E-03 4.425/7/E-03 1.065/E-02 3.45/6/E-02 1.066/E-02 1.96/6/E-02 6.65/6/E-02 5.52/1/E-02 20 6.77/5/E-03 4.25/6/E-03 1.005/E-02 3.45/6/E-02 9.95/6/E-03 1.96/6/E-02 6.57/6/E-02 5.07/6/E-02 20 6.65/6/E-03 4.25/6/E-03 1.005/E-02 3.44/6/E-02 9.86/6/E-03 1.86/6/E-02 6.57/6/E-02 5.07/6/E-02 2.66/6/E-03 4.35/6/E-03 1.005/E-02 3.44/6/E-02 9.76/6/E-03 1.86/6/E-02 6.57/6/E-02 4.96/6/E-02 2.66/6/E-03 4.35/6/E-03 1.005/E-02 3.44/6/E-02 9.76/6/E-03 1.86/6/E-02 6.46/6/E-02 4.96/6/E-02 6.66/6/E-03 4.35/6/E-03 1.005/E-02 3.44/6/E-02 9.76/6/E-03 1.86/6/E-02 6.45/6/E-02 4.96/6/E-02 2.66/6/E-03 4.35/6/E-03 1.006/E-02 3.44/6/E-02 9.76/6/E-03 1.86/6/E-02 6.45/6/E-02 4.96/6/E-02 2.66/6/E-03 4.35/6/E
 0 int. gp. 5 gp. 26 gp. 27
1 2.9445-02 2.12126-02 4.02576-03
2 2.94616-02 2.11596-02 4.0256-03
3 2.9556-02 2.11596-02 4.01536-03
 4 2.9184E-02 2.1008Z-02 3.9864E-03 5 2.8869E-02 2.0814SE-02 3.9462E-03 6 2.8669E-02 2.0553E-02 3.8908'E-03
 6 2.8697E-02 2.0538E-02 3.8085E-03
7 2.8295E-02 2.0095E-02 3.8185E-03
8 2.76276E-02 1.97978E-02 3.76476E-03
9 2.76276E-02 1.97978E-02 3.56076-03
10 2.76577E-02 1.9603E-02 3.55078E-03
11 2.6628E-02 1.8693E-02 3.52078-03
12 2.6775E-02 1.8693E-02 3.52078-03
13 2.6628E-02 1.8693E-02 3.7878-03
14 2.6228E-02 1.8693E-02 3.7878-03
15 2.5685E-02 1.7672E-02 3.0052E-03
16 2.4773E-02 1.7672E-02 3.0052E-03
17 2.41537E-02 1.7672E-02 3.0052E-03
18 2.3334E-02 1.575978-02 2.8405E-03
19 2.27163E-02 1.573978-02 2.8405E-03
20 2.22110E-02 1.47278-02 2.47772E-03
21 2.1857E-02 1.47278-02 2.47772E-03
21 2.1857E-02 1.47278-02 2.4355E-03
21 2.1857E-02 1.47278-02 2.4355E-03
21 2.1857E-02 1.47278-02 2.4355E-03
 22 2.559/2-02 1.4218/2-02 2.37/32-03
25 2.353/2-02 1.406/1E-02 2.36692-03
24 2.1208/2-02 1.358/1E-02 2.36092-03
 25 2.11025E-02 1.38556E-02 2.33762E-03
 26 2.10/6/E-02 1.38/3/E-02 2.33/0/E-03
27 2.10/3/E-02 1.38/2/IE-02 2.52/6/E-03
28 2.10/0/E-02 1.38/2/E-02 2.52/4/E-03
 - elapsed time .02 min.
 If ire grap savery for zone 1 by grap including sun for all graps in line 28
0 gp. fix source fiss source in scatter all scatter out scatter absorption leakage balance
1 .0000000 .00000000 4.9500000 4.55000000 5.453400000000 7.05000000 9.99952-01
2 .0000000 .0000000 3.750970-04 6.112750-05 8.05415-05 1.74816-04 -7.85340-05 9.99952-01
3 .0000000 .0000000 3.81462-05 5.44656-05 1.41695-02 9.245660-05 -1.04460-02 9.999760-01
4 .0000000 .0000000 5.5442-05 3.95300-05 1.2442-02 4.15346-05 -6.82590-05 9.999760-01
 .0000E+00 1.0252E-02 1.1552E-02 2.0851E-02 4.9626E-05 -1.0678E-02 9.9997E-01 .0000E+00 2.14641E-02 3.44857E-02 4.0987E-02 8.4261E-05 -1.9678E-02 9.9999E-01
 ·.00000E+00
 6 .0000E+00
 .00000E+00 4.2206E-02 6.07580E-02 5.41262E-02 6.12070E-05 -1.17777E-02 9.97789E-01
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.00000e+00 5.77742e-02 7.25955e-02 5.74895e-02 2.92692e-05 2.62572e-04 9.99857e-01 °
 9 .0000E+00
 .00000=00 5,7089E-02 6,91447E-02 5,5540E-02 3,6048E-05 1,4705/E-03 9,9989E-01 ,00000E+00 5,5617E-02 6,5560/E-02 5,2540E-02 5,51286E-05 3,45910E-03 9,99940E-01
 .00000E+00
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.0000E+00 8.4870E+06 6.6344E+02
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.0000E+00 9.07197E+07 8.8850E+08
.0000E+00 6.8050E+07 6.8170E+08
.0000E+00 1.4250E+06 1.3650E+02
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21 1.05% E-02 1.5437 E-08 1.1356 E-02
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 21 1.09%E-02 1.5372E-03 1.19EG-02 .000E+00 .000E+00 1.28712E-05 1.4874E-02 22 2.201E-02 4.565E-03 2.369E-02 .000E+00 .000E+00 .000E+00 2.666E-05 2.8887E-02 23 7.5385E-02 1.1072E-02 6.5071E-02 .000E+00 .000E+00 .000E+00 2.666E-05 9.7384E-02 24.6073E-02 1.1072E-02 6.5071E-02 .000E+00 .000E+00 .000E+00 .000E+00 4.860RE-05 7.882E-02 25 2.6851E-02 5.1837E-03 2.740E-02 .000E+00 .000E+00 .000E+00 .000E+00 1.6782E-05 3.5457E-02 25 1.8978E-03 3.744E-03 2.720E-02 .000E+00 .000E+00 .000E+00 1.6782E-05 3.5457E-02 25 1.8978E-03 3.744E-03 2.720E-03 .000E+00 .000E+00 .000E+00 1.6782E-05 3.5457E-02 25 1.8978E-03 6.3754E-03 2.720E-03 .000E+00 .000E+00 1.6782E-05 3.5457E-02 25 1.8978E-03 6.3754E-03 2.720E-03 .000E+00 .000E+00 1.6782E-05 3.5457E-02 25 1.8978E-03 1.7479E-03 .000E+00 .000E+00 1.6782E-05 3.5457E-02 25 1.8978E-03 1.6978E-03 1.67782E-05 2.28578E-00 1.67782E-05 2.28578E-00 1.67782E-05 2.28578E-05 1.8978E-05
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 .0000E+00 6,7075E-04 1.2598E-12 6.3297E-05 2.6819E-05 5.8066E-04 9.5999E-01
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 11 .0000E+00
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 .0000e00 2.098e-02 1.4778e-02 2.1887e-02 3.1881e-05 2.2798e-05 9.9997e-01 .0000e00 2.098e-02 1.4778e-02 1.8877e-02 4.3990e-05 2.0426e-05 9.9997e-01 .0000e+00 2.0852e-02 1.425e-02 1.7877e-02 6.9982e-05 3.0859e-05 9.9997le-01 .0000e+00 1.11126e-02 5.6608e-08 1.0608e-02 5.8788e-05 4.5093e-04 1.0000e+00 .0000e+00 7.3477e-05 2.3989e-05 7.0425e-05 3.9853e-05 2.6788e-04 1.0000e+00 .0000e+00 3.78542e-05 6.7561e-04 3.51517e-05 1.99402e-05 2.5087e-04 1.0000e+00 .0000e+00 3.38608e-05 4.8608e-04 2.6608e-05 1.5789e-05 6.9587e-04 1.0000e+00 .0000e+00 3.38608e-05 4.8608e-04 2.6608e-05 1.5789e-05 6.9587e-04 1.0000e+00 .0000e+00 5.38608e-05 4.8608e-06 1.5789e-05 6.9587e-04 1.0000e+00 .0000e+00 5.8608e-05 6.9587e-05 4.8608e-06 1.5789e-05 6.9587e-04 1.0000e+00 .0000e+00 5.8608e-05 6.9587e-05 4.8608e-06 1.5789e-05 6.9587e-04 1.0000e+00 .0000e+00 5.8608e-05 6.9587e-05 6.
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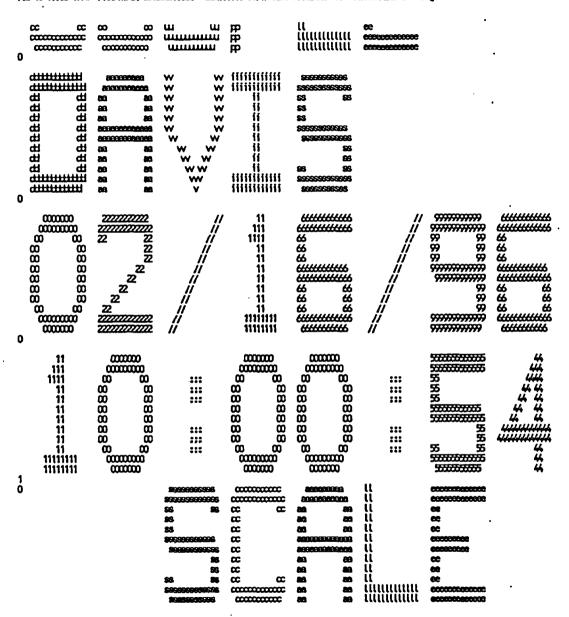
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25 .000000-00 .000000-00 6.85300-02 3.8794-05 3.8785-05 3.87800-05 5.8584-05 1.00000-00 28 .000000-00 .000000-00 4.85920-01 4.05100-01 4.05780-01 3.25020-05 3.95320-05 9.9978-01 1 1.25978-02 -1.25320-05 1.26230-02 -8.85820-05 1.91658-11 .00000-00 1.0578-05 8.48578-05 2 9.35620-02 -1.25320-05 1.26230-02 -8.85820-05 1.91658-01 1.25978-02 -1.25320-05 9.9978-01 1.25978-02 -1.25320-05 9.9978-01 1.25978-02 -1.25320-05 9.9978-01 1.25978-02 -1.25320-05 9.9978-01 1.25978-02 -1.25978-02 -1.25978-02 -1.25978-02 -1.25978-02 -1.25978-02 -1.25978-02 -1.25978-02 -1.25978-02 -1.25978-02 -1.25978-02 -1.25978-02 -1.25978-02 -1.25978-02 -1.25978-03 -1.25978-02 -1.25978-03 -1.2
 27 .0000E+00
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| 12             | .0000E+00   | 4.02740E-07                | 5.05519E-01 | 6.3450BE-01                | 4.53522E-01            | 5.83351E-02 | -6.3%VE-03                  | 9.99973E-01              |
|----------------|-------------|----------------------------|-------------|----------------------------|------------------------|-------------|-----------------------------|--------------------------|
| ថ              | .00000=+00  | 6.375 DE-08                | 4.48179E-01 | 5.08635E-01                | 3.9949E-01             |             | -5.65/E-03                  | 9.99979E-01              |
| 14             | .0000E+00   | 1.26735E-0B                | 4.3106Œ-01  | 4.7013E-01                 | 3.62302E-01            |             | -8.6143E-CB                 | 9.99989E-01              |
| <del>-</del> 5 | .0000E+00   | 1.4322/E-09                | 2.3790E-01  | 2.15883E-01                | 2.3149XE-01            |             | -1.665E-03                  | 1.000185+00              |
| 16             | .0000E+00   | 4.2056-10                  | 1.622BTE-01 | 9.98110E-02                | 1.57667E-01            |             | -8.9542E-04                 | 1.000185+00              |
| 17             | .0000E+00   | 1.35440E-10                | 8.7076Œ-02  | 3.14683E-02                | 8.11539E-02            |             | -7.27074E-04                | 1.00018E+00              |
| 18             | .0000E+00   | 9.69709E-11                | 7.77200E-02 | 2.08377E-02                | 5.8287 E-02            |             | -1.8217/E-05                | 1.00008=+00              |
| 19             | .00000      | 1.3709E-10                 | 1.2254ZE-01 | 6.07375E-02                | 1.14678E-01            |             | -1.29221-03                 | 1.00019E+00              |
| 20             | .000000=+00 | 2.22932E-10                | 2.9520E-01  | 3.4857E-01                 | 2.6908 E-01            |             | -3.278SE-05                 | 1.000185+00              |
| 21             | .0000E+00   | 3.26301E-11                | 1.4484E-01  | 7.05752E-02                | 1.274 E 01             |             | -2.4019ZE-0B                | 1.00010E+00              |
| 21<br>22       | .00000=+00  | 3.7858/E-11                | 2.755935-01 | 1.8/239E-01                | 2.12917E-01            | 4 07813E-10 | -7.8160E-08                 | 1.00009E+00              |
| ~              |             | 3.61969E-11                | 6.6189Æ-01  | 1.006525+00                | 5.40511E-01            |             | -1.81174E-02                | 1.00012E+00              |
| <b>3</b> 3     | .000000     |                            | 7.012572-01 | 8.6795ZE-01                | 5.7898/E-01            |             | -1.667E-02                  | 1.00010E+00              |
| <i>♣</i>       | .00000      | 9.85225E-12<br>2.88411E-12 |             |                            | 3.75641Œ-01            |             | -7.79860E-08                | 1.0000£+00               |
| 25             | .0000E+00   |                            | 4.64370E-01 | 3.51869E-01<br>3.53346E-01 |                        |             |                             | 1.0005E+00               |
| <u>a</u>       | .00000E+00  | 2.02258-12                 | 3.5774/E-01 |                            | 2.962835-01            |             | -5,9312E-03<br>-1,20721E-03 | 1.00025+00               |
| 27             | .00000      | 4.81937E-13                | 1.18737E-01 | 7.1/2/JE-02                | 1.00129E-01            |             |                             | 1.00001E+00              |
| 28             | .000000=+00 |                            | 9.10205-00  | 1,455 KE-01                | 9.102030               | 9.919166-01 | 1.02111E-02<br>fluctd=2     | total flux               |
| 0 ab           | nt boy flux |                            | lft by flux | lft leskage                | n2n rate               | fiss rate   |                             | 3.3695E-01               |
| 1              |             | ન્હ.9222E-02               |             |                            | 2.22679E-03            | 2.4814E-03  | 2.9X5E-04                   |                          |
| 2              |             | -6.52760E-0B               |             | -1.3000F-02                | 1.596192-05            | 1.1006E-02  | 1.5556E-05                  | 2.44X8E+00               |
| 3              |             | -9.2660E-08                |             | -1.67779E-02               | .0000                  | 1.33450E-02 | 1.8255E-05                  | 3.03115.00               |
| 4              |             | -7.1448/E-08               |             | -1.05079E-02               | .00000                 | 5.7319XE-03 | 8.8562E-04                  | 1.8506/E+00              |
| 5              |             | -9.8170E-08                |             | -1.61017E-02               | .00000                 | 1.654296-05 | 1.0517Æ-05                  | 2.8327.0                 |
| 6              |             | -1.33089E-07               |             | -2.93056E-02               | .000E+00               | 1,405396-05 | 1.73132E-05                 | 5.3188/E+00              |
| 7              |             | -5.84 <b>223E-07</b>       |             | -1.75662E-02               | .00000E+00             | 1.37205E-03 | 1.22622E-08                 | 5.169435+00              |
| 8              |             | -7.25270E-08               | 1.47752E-01 | -3.66025E-05               | .00000E+00             | 1.3985/E-05 | 6.97878E-04                 | 3.78551E+00              |
| 9              |             | 4.32250E-06                | 1.15593E-01 | 9.07712E-04                | .00000E+00             | 1.87880E-05 | 4.71089E-04                 | 2.935391+00              |
| 10             |             | -9,69711E-07               | 1.06351E-01 | 2.28720E-03                | .00000E+00             | 4.0128XE-03 | 4.28496E-04                 | 2.68968E+00              |
| 11             |             | -1,77639E-06               | 9.91819E-02 | 5.33222E-08                | .000 <del>000</del>    | 8.54482E-03 | 3.8577Œ-04                  | 2.48525E+00              |
| 12             |             | 4.14981E-07                | 6.3460E-02  | 6.3355E-05                 | .00000E+00             | 1.12827E-02 | 2.27619E-04                 | 1.56643E+00              |
| ซ              |             | -5.7270Œ-07                | 5.4477E-02  | 5.833XE-05                 | .00000E+00             | 1,213205-02 | 1.95190E-04                 | 1.33341E+00              |
| 14             |             | -1.98471E-07               | 5.08119E-02 | 8.641E-03                  | .0000000               | 7.8056E-05  | 1.75561E-04                 | 1.2259 <del>7E+</del> 00 |
| 15             |             | -4.5702KE-05               | 2.87193E-02 | 1.6319E-05                 | .000 <del>00</del>     | 1.927428-03 | .1.11247E-04                | 7.1935E-01               |
| 16             |             | -3.1050E-06                | 1.59224E-02 | 8.9252E-04                 | .000 <del>000</del>    | 1.33047E-05 | 5.78501E-05                 | 3.9850/E-01              |
| 17             |             | -3,992 <del>26E</del> -06  | 6.9146ZE-CB | 7.23082E-0%                | .00000E+00             | 1,692902-03 | 2.2211Æ-05                  | 1.70583E-01              |
| 13             | 4.36092E-05 | -1.69247E-05               | 4,99250E-05 | 1.8200Æ-05                 | .0000E+00              | 1.505622-05 | 1.1257E-05                  | 1.1250E-01               |
| 19             |             | 4.6875ZE-05                | 1.05553E-02 | 1.29056E-05                | .000 <del>0</del>      | 2.70100E-05 | 3,43877E-05                 | 2.58742E-01              |
| 20             | 3,41030E-02 | -9.1353ZE-05               | 3.5254E-02  | 3.26920E-05                | .000 <del>000</del>    | 1,501216-02 | 1.2575EE-04                 | 8.7770EE-01              |
| 21             | 9.75682E-03 | -3.5556E-05                | 1.05201E-02 | 2.39837E-05                | .000 <del>000</del>    | 1,396/EE-02 | 2,76321E-05                 | 2.50869E-01              |
| 22             | 1.8515Œ-02  | -3.216EE-06                | 2.1219E-02  | 7.12839E-05                | .000 <del>0E+</del> 00 | 4.12870E-02 | 4.88083E-05                 | 4.7833E-01               |
| 25             |             | 3.40032E-06                | 7,26599E-02 | 1,8120EE-02                | .000 <del>0</del>      | 8.03394E-02 | 1.72789E-04                 | 1.66725+00               |
| <b>2</b> 4     |             | -5.812/dE-07               | 5.75/85E-02 | 1.6465E-02                 | .00000E+00             | 7.92781E-02 | 1.0569EE-04                 | 1.25337E+00              |
| 25             |             | -1.10/19E-05               | 2.5380Æ-02  | 7.73739E-05                | .00000E+00             | 4.5653/E-02 | 3.5404ZE-05                 | 5.5199Œ-01               |
| 26             | 1.38363E-02 | -1.7X25E-07                | 1.万%走-62    | 5.9330E-05                 | .000 <del>1</del>      | 4.20542E-02 | 1.7425 E-05                 | 3.64778E-01              |
| . 27           | 2.32651E-03 | -1.97389E-0B               | 3.1375 E-05 | 1,20719E-05                | .000E+00               | 1.1790DE-02 | 1.78722E-06                 | 6.15910E-02              |
| 28             | 1.73620E+00 | -3.257Æ-05                 | 1.7475E+00  | -1.03/3/E-02               | 2.24272E-05            | 4.22563E-01 | 1.1930Œ-02                  | 4.AZ743E+01              |
| 1fine s        | rup sumary  | for system                 |             |                            |                        |             |                             |                          |
| 0 grp.         |             | fiss source                |             | alf scatter                | out scatter            | absorption  | leekage                     | balance                  |
| 1              | .0000E+00   | 2.281 VE-02                | .0000E+00   | 2.21/0E-02                 | 2,12524-02             | 3,8190E-08  | -6.522E-09                  | 9.98900E-01              |
| Ż              | .0000000    | 1.95451E-01                | 7.5559E-03  | 2.60725E-01                | 1.85458E-01            | 1,55595E-02 | -6.52760E-08                | 1.00025+00               |
| 3              | .0000E+00   | 2.1577SE-01                | 7.705Æ-02   | 2.68320E-01                | 2.7644E-01             |             | -9.2600E-08                 | 9.99987E-01              |
| 4              | .00000E+00  | 1.2300E-01                 | 1.14093E-01 | 1.8/395E-01                | 2.301/1E-01            |             | -7.1448/E-08                | 9.9999E-01               |
| 5              | .00000E+00  | 1.64335E-01                | 2,08014E-01 | 4.66396E-01                | 3.67067E-01            |             | -9,81703E-08                | 9.99991E-01              |
| . 6            | .0000E+00   | 1.77430E-01                | 4.24561E-01 | 1.256/0E+00                | 5.95600E-01            | 8.37900E-05 | -1.3308E-07                 | 1.000016+00              |
| Ť              | .0000E+00   | 8.77250E-02                | 6.58667E-01 | 1.67020E+00                | 7.3807E-01             | 8.3293E-05  | -5.8/22E-07                 | 9.99991E-01              |
| 8              | .0000E+00   | 1.35181E-02                | 7.7579Œ-01  | 1,70414E+00                | 7.76047E-01            | 1,333116-02 | -7.29270E-08                | 9.99919E-01              |
| 9              | .000E+00    | 9,81112-04                 | 7.66750E-01 | 1.4895/E+00                | 7,458(3E-01            | 2.1970Æ-02  | 4.325E-06                   | 9.99857E-01              |
| 1Ó             | .00000E+00  | 7,28725E-05                | 7.42281E-01 | 1.3574£+00                 | 7.09552E-01            | 3.309/EE-02 | -9.67711E-07                | 9.99901E-01              |
| ñ              | .0000E+00   | 5.73310E-06                | 7.13853E-01 | 1.2522E+00                 | 6.57720E-01            |             | -1.77639E-06                | 9.9994E-01               |
| 12             | .0000E+00   | 4,02740E-07                |             | 6.90\31E-01                | 5.16131E-01            | 5.8/33/E-02 | 4.14981E-07                 | 9.9974E-01               |
| _              |             |                            |             |                            |                        |             |                             |                          |

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13 .0000E+00 6.37515E-08 5.0772E-01 5.4728E-01 4.55014E-01 5.4728E-02 -5.77270E-07 9.9977SE-01
 .00000E+00 1.2675E-08 4.9092E-01 5.15035E-01 4.1335/E-01 7.75980E-02 -1.98/7/E-07 9.5559E-01
 5 ,0000E-00 1,4322E-09 2,70EEE-01 2,3342E-01 2,254E-01 7,7782E-05 -4,5703E-05 1,0000E+00 16 ,0000E-00 4,2054E-10 1,834E-01 1,0744E-01 1,7834E-01 5,400E-05 3,1000E-05 1,0000E+00 17 ,0000E-00 1,5540E-10 9,8536E-01 3,3703E-02 9,547E-02 6,5839E-05 -3,9526E-05 1,0000E+00 18 ,0000E-00 9,6970E-11 8,7603E-06 2,22760E-02 6,5807E-02 2,1279E-02 -1,6937E-05 1,0000E+00 1,0000E+00 1,3703E-10 1,3865E-01 6,5653E-02 1,2703E-01 9,2489E-05 -4,6937E-05 1,0000E+00 2,2235E-03 3,3353E-01 3,8323E-01 3,8323E-01 3,8323E-01 3,8323E-01 1,6337E-01 3,8323E-01 2,3733E-02 -3,5336E-05 1,0000E+00 21 ,0000E+00 3,7658E-11 3,4078E-01 2,0002E+00 2,3733E-02 -3,5336E-05 1,0000E+00 2,0000E+00 3,7658E-11 3,4078E-01 2,0002E+00 2,3733E-02 -3,5336E-05 1,0000E+00 2,0000E+00 3,6196E-11 7,61278E-01 1,1000E+00 1,1000E+00 1,0000E+00 9,8523E-12 8,0500E-01 9,8331E-01 6,6997E-01 1,4025E-01 3,4033E-05 1,0000E+00 2,8331E-12 5,3505E-01 4,0000E+01 4,5714E-01 7,77967E-02 -1,1001E-05 1,0000E+00 2,0000E+00 2,8331E-12 5,3505E-01 4,0000E-01 4,5714E-01 7,77967E-02 -1,1001E-05 1,0000E+00 2,0000E+00 2,8331E-12 5,3505E-01 4,0000E-01 4,5714E-01 7,77967E-02 -1,1001E-05 1,0000E+00 2,0000E+00 4,8793E-13 1,3777E-01 8,2598E-02 1,1790E-01 2,0238E-02 -1,17938E-03 1,0000E+00 2,0000E+00 1,0000E+00
 .0000E+00 1.4523E-09 2.7056E-01 2.5548E-01 2.654/E-01 7.7765E-05 -4.5703/E-06 1.0004/E+00
5 2.885E-Q -4.5702E-06 2.9107E-Q .0000E-00 1.9772E-05 1.19760E-07 7.7552E-01 1.5537E-Q -3.1050E-06 1.6140E-Q .0000E-00 .0000E-00 1.3304E-05 6.2060E-05 4.3259E-01 17 6.6762E-03 -3.9928E-06 7.12217E-05 .0000E-00 .0000E-00 1.3304E-05 6.2060E-05 4.3259E-01 18 4.3507E-03 -3.4650E-06 1.000E-00 .0000E-00 1.5032E-03 1.2518E-05 1.6521E-01 1.3508E-03 1.2518E-05 1.3508E-05 1.000E-00 .0000E-00 1.5032E-03 1.2518E-05 1.3508E-01 1.2538E-01
 - elepsed time .02 min.
Odirect access unit 9 requires 556 blocks of length 216 for cross section weighting.
 1 transport cross section weighting function
 1 trasport cross section religiting function force on 1 grp. 2 grp. 3 grp. 4 grp. 5 grp. 6 grp. 7 grp. 8 1 1.15510E-05 5.8542E-05 5.2564E-05 3.8546E-05 5.2564E-05 5.
 3 1.12172E-03 1.0507E-03 1.2077E-03 1.22117E-03 1.11805E-03 1.5629ZE-03 3.78197E-04 1.98597E-04
 4 1.1950/E-05 1.00481E-05 1.0004E-03 6.77442E-04 6.01865E-04 6.4190/E-04 3.1125E-04 1.61528E-04
 5 1.13319E-03 1.03540E-03 1.03570E-03 7.05454E-04 6.27821E-04 6.87639E-04 3.14590E-04 1.63314E-04
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Ozore grp. 17 grp. 18 grp. 19 grp. 20 grp. 21 grp. 22 grp. 23 grp. 24 1 9.521596-05 1.06456-04 1.06596-04 4.715786-04 2.647406-04 7.66206-04 2.08206-05 1.06556-05 2.177456-04 2.95606-04 8.701726-04 4.26406-04 1.190726-05 3.308166-05 2.521466-05
 3 1.3/6/te-04 3.1305/te-04 2.376/te-04 6.4/1/4/te-04 4.2/50/te-04 3.4/2/te-05 3.5/2/te-05 2.5/2/de-05 4 7.0/4/de-05 7.5/5/0/te-04 3.4/2/te-04 1.3/4/2/te-04 3.4/2/te-04 1.0/1/2/te-04 8.4/5/te-04 3.4/2/te-04 1.0/1/2/te-05 8.4/5/te-04 5 7.3/5/te-05 8.7/5/1/te-05 1.2/5/te-04 3.9/7/te-04 3.4/5/te-04 3.4/5/te-05 1.5/5/te-04 1.5/5/te-04 3.4/5/te-04 1.5/5/te-04 zore grp. 25 grp. 26 grp. 27 grp. 28
1 8.64/9/E-04 6.1059E-04 9.30592-05 4.20/75E-02
2 1.335/9E-03 9.80592-04 1.69502-04 5.52/78/E-02
 1.37027E-03 1.02844E-03 1.92210E-04 5.19737E-02
 3.6000E-04 2.1800E-04 2.7143E-05 3.4538E-02 4.1327E-04 2.6072E-04 3.4950F-05 3.54241E-02
 forced group parameters
 uper energy mid energy
2,0000=407 2,6512=405
 velocity
 fiss spac
 1.9675E+09
9.884/E+06
 7.202E-01
 9.000E+05
 1.5116E+05
 2.777E-01
 3.6640E+05
 3
 4.0000E-01
 1.2602E-01
 1.2195E-10
 1.000E-05
 560 d, second part of sas2h pass to make library
Ocell averaged fluxes
Ozone grp. 1 grp. 2 grp. 3
1 3.8825E-01 1.13679E+00 2.26610E-01
 2 3.95069E-01 1.13809E+00 2.17225E-01
 3 3.98022E-01 1.13839E+00 2.13005E-01
 4 4.15189E-01 1.14066E+00 1.82970E-01
 5 4.13500E-01 1.14041E+00 1.85886E-01
 Offux disadventage factors (zone average/cell average-flux)
 gr. 1 gr. 2 gr. 3
9.42745E-01 9.9884E-01 1.2190E=00
 2 9.55420E-01 9.97966E-01 1.16859E+00
 3 9.62569E-01 9.98229E-01 1.14589E+00
 4 1.0000E+00 1.0002E+00 9.8/313E-01
5 1.0000E+00 1.0000E+00 1.0000E+00
 Ocell averaged currents
 grp. 1 grp. 2 grp. 3
1.71420E-02 1.8299E-02 6.6297E-03
1.91840E-02 2.57439E-02 1.0844E-02
 1,926/E-02 2,2257/E-02 1,04/27/E-02 1,528/E-02 1,628/0E-02 3,0217/E-03 1,536/E-02 1,657/E-02 3,407/E-03
 vol. fraction
 Ozone
 volume
 1.25652+00
 4,562565-02
 1.65687E-01
 6.0516DE-03
 6.5839E-01
 2.3898/E-02
 2.5463YE+01
 9.242E-01
 2.7540E+01
 1.0000E+00
 elapsed time .03 min.
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-1q array has
0q array has
0q array has
 1 entries.
 1 entries.
 1q array has
 1 entries.
 d susy jes
d susy jes
d susy jes
 1 extrics.
 1 entries.
 1 entries.
1 entries.
 liq array has
 20 array has
 1 entries.
 * core allocated to erray-data (by -155 or default) was 200000 words. *
* broad 3-group flux weighting factors *
 thems =
0 them = 3.02
0 res = 4194
0 fast = 3.225
0 user requested (see ject) that only the nuclide transitions presently included in 0 origen library be updated.
1cross sections, available from anox (normalized to themal flux), barns
 10010 to 10020 2,81074E-01 10010 tot-osp 2,81074E-01
 50100 to 40100 2.30587E-02
50100 to 10010 2.30587E-02
50100 to 40090 3.49785E-03
 50100 to 10020 3.49785E-05
```

```
50100 to 30070 3.25225065
50100 to 20040 3.252406405
 50100 to 10030 8.63863E-02
 50100 tot-cap 3.2525/£+05
50110 to 50100 1.005/1£-05
50110 to 50120 4.27805E-05
 50110 to 40110 1.280/5E-06
 50110 to 10010 1.25035E-05
50110 to 40090 1.14267E-05
 50110 to 10030 1.14257E-05
50110 to 30080 1.49170E-04
50110 to 20040 1.49170E-04
 50110 to 2000 1.59176-05
80160 to 80170 1.50153-04
80160 to 70160 8.77868-05
80160 to 10010 8.77868-05
 80160 to 70150 1,655835-05
80160 to 10020 1,655835-05
 80160 to 60130 2,46487E-02
80160 to 20040 2,46487E-02
 80160 to 80161 3.850/5E-05
80160 tot-cap 2.45052-02
360530 to 360520 1.9539E-02
 340830 to 340810 2.10453E-09
340830 to 340840 1.52183E+02
340830 to 350830 8.20840E-04
 360830 to 10010 8.21860E-06.
360830 to 350820 6.58364E-06.
360830 to 350810 2.30111E-06.
 360830 to 10080 2.301116-06
360830 to 360810 3.726156-08
30000 to 30000 3.73452-08
36000 to 30000 4.37452-08
36000 to 30000 4.37452-05
36000 tot-cap 1.52202-02
36000 to 36000 1.37560-00
 360E0 tot-cap 1.37560E+00
380900 to 380910 6.23767E-01
 380700 tot-cap 6.23767E-01
350850 to 350500 9.75850E-01
 390890 tot-cap 9.75890E-01
40090 to 400940 1.28827E+01
40090 to 400940 1.289276-01
40090 to 400900 1.78906-01
40090 to 400900 1.78906-01
40090 to 400900 2.139476-00
40090 to 400900 3.720186-01
410940 to 400900 3.720186-01
410940 to 400900 3.720186-01
410940 to 400900 3.720186-01
420990 to 420900 3.724186-01
420990 to 420900 3.724186-01
420990 to 420900 6.042286-03
430990 to 430000 8.699986-01
 43070 tot-cap 8.64056+01
441010 tot-cap 2.713076+01
441010 tot-cap 2.713076+01
441010 tot-cap 2.713076+01
441010 tot-cap 8.321216-01
 441060 tot-cap 8.32121E-01
451080 to 451020 2.1906E-08
```

```
451030 to 451040 3,49007E+02
451030 tot-cap 3,49011E+02
 451050 to 451050 8.094215403
451050 tot-cep 8.094215403
461050 to 461050 3.270975401
 461050 to 461050 3.270/FEV11
461050 to 461050 6.587/FEV11
461050 to 461050 6.587/FEV11
461050 to 471050 5.0/875E-08
471050 to 471050 5.0/875E-08
471050 to 471050 2.858/2
 471090 to 10010 2,898/3E-04
471090 to 10010 2.99933E-04
471090 to 451040 2.39972E-04
471090 to 20040 2.39972E-04
471090 to 471091 6.09542E-01
471090 tot-cap 3.59997E-02
511240 to 511250 1.16769E-01
541310 to 541300 6.17635E-02
541310 to 541300 6.17635E-02
541310 to 541300 3.72501E-05
541310 to 10010 3.72501E-05
 541310 to 10010 3.72501E-05
541310 to 531300 5.17547E-07
 $4130 to $31300 $.178/E-07 $41310 to $31200 $.178/E-07 $41310 to $31200 $.3110E-07 $41310 to $21220 $1.7433/E-05 $41310 to $-cap $2.513/E-05 $41320 to $4132
 541320 to 10010 7.62170E-05
541320 to 531310 3.21580E-07
 541320 to 10020 3.21580E-07
541320 to 531300 4.3300E-08
 $41300 to $11000 4,33008-08
$41300 to 10000 4,33008-08
$41300 to $21200 9,37728-07
$41300 to 2000 9,37728-07
$41300 to 2000 9,37728-07
$41300 to $41500 1,45938-05
$41300 to $41500 1,45938-05
$41300 to $41500 1,70572-08
$41300 to $41500 1,21628-01
$41300 to $41500 1,21628-01
$41300 to $41500 1,21628-01
$41300 to $41500 1,21628-01
$41300 to $41500 1,3151828-01
 541360 to 10010 3.15182-07
541360 to 10020 1.17332-07
541360 to 501360 2.66078-08
541360 to 501360 2.66078-08
 541360 to 10080 2,65076E-08
541360 to 521330 2,65371E-07
 541340 to 20040 2.64371E-07
541340 tot-cap 1,38047E-01
551330 to 551340 7.9923E-08
551330 to 551340 9.87234E-01
 551330 to 541330 8.6858E-04
 551330 to 10010 8.6865E-04
```

551330 to 531300 1,34559E-05 551330 to 20040 1,3659E-05 551330 tot-cap 9.87325+01 551340 to 551350 1.26885+02 551340 tot-cap 1,26585=02 551350 to 551350 2,06987=+01 551350 tot-cap 2,069876+01 551370 to 551380 2,222686-01 551370 tot-cap 2.22268E-01 561360 to 561370 8.71651E-01 561360 tot-cap 8.71651E-01 571390 to 571400 7.8225E+00 571390 to 1-rate 7,8225E+00 581440 to 581450 1,2075E+00 581440 tot-cap 1,2075E+00 591410 to 591400 5,7271E-05 591410 to 591400 5.72711E-05
591410 to 591300 1.46554E-05
591410 to 591300 2.46596E-05
591410 to 581400 1.7672E-05
591410 to 581400 1.7672E-05
591410 to 591420 1.16126E-01
591410 to 591420 1.16126E-01
591410 to 591420 4.46908E-05 591410 to 10020 591410 to 581390 1.45914E-05 1.530258-05 591410 to 10080 1.530252-06 591410 to 571350 591410 to 20080 1.47785E-08 1.4778E-08 591410 to 571380 4.84276E-05 591410 tot-cap 1.16182±01
591430 tot-cap 9.58512±01
591430 tot-cap 9.58512±01
601430 tot-cap 9.58512±01
601430 tot-601430 8.76411€-02
601430 tot-601440 8.9652±-06 601430 to 581390 1.94490E-05 601430 to 20040 5.43945E-04 601430 to 591420 3.7437SE-06 601430 to 10010 3.8549E-05 601430 to 601440 1.97699E-02 601430 to 591430 3.7039E-05 601430 to 10020 2.33330E-06 601430 to 591410 3.36227E-06 601430 to 10030 3.36227E-06 601430 to 581410 1.654/E-08 601430 to 20080 1.6154/E-08 601430 to 581400 5.244/8E-04 601430 tot-cap 1.97785E+02 601450 to 601440 1.12467E-01 601450 to 601430 1.14187E-04 601450 to 581410 8.09598E-05 601/50 to 200/0 2,02631E-04, 601/50 to 591/40 2,1448E-06 601450 to 10010 1.39538E-05 601/50 to 601/60 7.63322=01 601/50 to 591/50 1.30989=05 . 601/50 to 10020 1,25939E-06 601/50 to 591/30 2,0327/E-06 601450 to 10080 2.03274E-05 601450 to 581430 4.13866E-09 601450 to 20050 4.13866E-09

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601450 to 581420 1.94755E-04
601450 tot-cap 7.64450E+01
601470 to 601480 1.82157E+02
601470 to 601460 3.07652E-02
611470 to 601460 9.60014E-05
611470 to 611460 3.07822-02
611470 to 611460 8.526972-05
611470 to 591430 8.526972-05
611470 to 501460 1.178612-05
611470 to 601460 1.178612-05
611470 to 611460 2.587622-05
611470 to 601470 2.376512-05
611470 to 601470 3.37672-05
611470 to 10200 8.85432-05
611470 to 10200 3.345072-05
611470 to 10200 3.345072-05
611470 to 591460 5.085402-09
611470 to 591460 5.085402-09
611470 to 591460 5.085402-09
611470 to 591460 6.08572-02
611470 to 601470 1.78652-05
621470 to 601470 1.78652-05
621470 to 601470 1.38652-05
621470 to 601470 5.88652-05
 22470 to 10250 1.3003E-06
621470 to 601400 5.98551E-05
621470 to 601400 1.14410E-03
621470 to 621471 1.5924E-00
621470 to 621471 1.5924E-00
621470 to 621470 3.60249E-05
621470 to 621470 3.60249E-05
621470 to 621470 3.60249E-05
621470 to 621470 3.44400E-04
621470 to 601460 4.44400E-04
621470 to 20040 4.44400E-04
621470 to 20040 4.44400E-04
621470 to 20040 4.44400E-04
 621400 to 2000 4,6400E-04
621400 to 621500 1,3100E-02
621500 to 621500 1,3100E-02
621510 to 621500 1,5153E-01
621510 to 621400 1,5250E-04
621510 to 601470 1,5250E-04
 621510 to 20040 1.18783E-04
621510 to 611500 1.85620E-05
621510 to 621500 4.90133E-05
621510 to 621500 4.90133E-05
 621510 to 611510 1,33119E-05
 621510 to 10020 7.22131E-07
621510 to 611490 1.31243E-06
621510 to 10030 1.31243E-06
 621510 to 601490 1.35205E-09
621510 to 20080 1.35205E-09
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621510 to 601480 1.03633E-04 621510 tot-cap 4.501481-05 621520 to 621510 1.815282-02 621520 to 621500 1.226592-04 621520 to 601480 2.74438-06 621520 to 20040 1.13869E-05 621520 to 611510 7.86272E-07 621520 to 10010 2.32027E-06 621520 to 621530 7.15689E+02 621520 to 611520 2.06111E-06 621520 to 10020 5.27119E-07 621520 to 611500 1.37091E-07 621520 to 10080 1.37091E-07 621520 to 601500 4.1546/E-10 621520 to 20080 4.1546/E-10 621520 to 601490 8.64549E-06 621520 tot-cap 7.157025+02 631530 to 631520 1.763076-02 631530 to 631510 2.63281E-05 631530 to 611490 4.21162E-05 631530 to 20040 6.08376E-04 631530 to 621520 7.37617E-06 631530 to 10010 6.22535E-05 631530 to 631540 6.01907E+02 631530 to 621530 5.97147E-06 631530 to 621530 5.974/76-05
631530 to 10020 4.857576-05
631530 to 621510 1.088/66-05
631530 to 10030 1.088/66-05
631530 to 611510 2.488216-08
631530 to 611510 2.488216-08
631530 to 611530 5.662/06-04
631530 to 631530 2.588276-02
631540 to 631530 2.588276-02 631540 to 631520 1.012/5E-05 631540 to 611500 9.8430E-11 631540 to 20040 7.29194E-04 631540 to 621530 2.21619E-06 51540 to 10010 1.1842E-08 51540 to 51550 1.05702E-08 51540 to 521540 1.1842E-08 ST\$40 to \$21\$40 1.18422E-05
ST\$40 to \$1020 2.21482E-05
ST\$40 to \$21\$20 3.7520E-05
ST\$40 to \$11\$20 3.7520E-05
ST\$40 to \$11\$20 1.55074E-08
ST\$40 to \$11\$20 1.55074E-08
ST\$40 to \$11\$20 1.55074E-08
ST\$40 to \$11\$20 1.55074E-08
ST\$50 to \$11\$20 2.31407E-02
ST\$50 to \$11\$20 6.4792E-05
ST\$50 to \$11\$20 6.5792E-05
ST\$50 to \$21\$40 8.58504E-05
ST\$50 to \$12\$40 3.5333E-05
ST\$50 to \$21\$50 3.5333E-05
ST\$50 to \$21\$50 5.75092E-05 631550 to 621550 5.70099E-06 631550 to 10020 1,81455E-06 631550 to 621530 6.00547E-07 631550 to 10050 6.00547E-07 631550 to 611530 1.36117E-10 631550 to 20030 1.36117E-10

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 Othe reaction 50100 to 30070 was not used, because 50100 is not in library., (in subr pool)
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Othe reaction 80%0 to 80%1 has not used, because 80%1 is not in library., (in sub-pool)
Othe reaction 62%70 to 62%71 has not used, because 62%71 is not in library., (in sub-pool)
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Othe reaction 92%30 to 92%1 has not used, because 92%1 is not in library., (in sub-pool)
Othe final resolution 92%30 to 92%51 has not used, because 92%51 is not in library., (in sub-pool)
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 Othe fission product transitions for 952570 were not used. Library fissile ruclides are 92230 92280 92380 92280 92390
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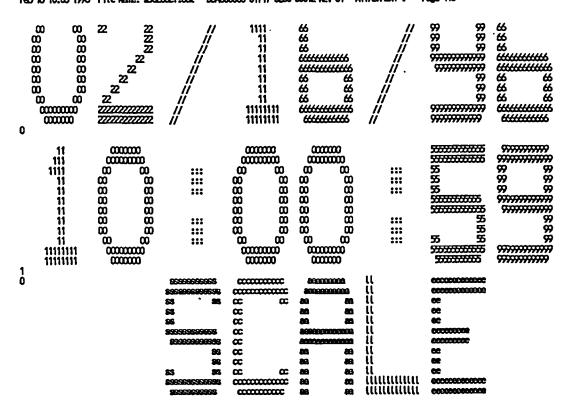
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|   | 125                | 5.19E-04 5.02E-04 4.90E-04                                      | 4,76E-04 4,67E-04 4.67E-04 4.50E-04 4,44E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |      |   |
|   | 4236               |                                                                 | 4.20E-05 4.40E-05 4.40E-05 4.60E-05 4.70E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |      |   |
|   | 4257               |                                                                 | 5.83E-08 6.03E-08 6.02E-08 6.23E-08 6.43E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |      |   |
|   | U238<br>U239       | 2.19E-02 2.19E-02 2.19E-02                                      | 2.19E-02 2.19E-02 2.19E-02 2.19E-02 2.19E<br>5.89E-09 5.89E-09 1.97E-09 5.89E-09 5.89E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                  |      |   |
|   | 1830               | 2.52E-09 5.8EE-09 5.8EE-09<br>.00E-00 7.72E-35 1.7EE-34         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                  |      |   |
|   | 1241               | .0E+00 .0E+00 .0E+00                                            | EQ. (04E0). (04E0). (04E0).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                  |      |   |
|   | m75                | 1.80F-14 2.17F-14 2.57F-14                                      | 2.00-14 3.49-14 3.49-14 3.00-14 4.46                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                  |      |   |
|   | noZXM              | 2.9E-14 3.49E-14 3.87E-14                                       | .4.27E-14 4.67E-14 4.59E-14 5.09E-14 5.52E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -14              |      |   |
|   | m756               | 1.5/E-12 1.89E-12 2.27E-12                                      | 2.6E-12 3.1E-12 3.1E-12 3.6E-12 4.2E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | - <u>12</u>      |      |   |
|   | rp237              | 1.60E-06 1.79E-06 1.90E-06                                      | 2.1XE-05 2.3XE-05 2.3XE-05 2.6XE-05 2.6XE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -06              |      |   |
|   | rp238              | 1.9Æ-09 2.21E-09 2.43E-09                                       | 2.70E-09 2.90E-09 2.90E-09 3.23E-09 3.50E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |      |   |
|   | 17239<br>1723/0a   |                                                                 | 8.4/E-07 8.4/E-07 8.4/E-07 8.4/E-07 8.4/E-3.0/E-36 6.0/E-36 6.0/E-36 1.1/E-36 2.0/E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                  |      |   |
|   | ubsequa<br>ubsequa |                                                                 | 1,47E-11 1,47E-11 9,84E-12 1,47E-11 1,47E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |      |   |
|   | rp241              | .00 <del>+</del> 00, 00+00, 00+00,                              | 300, 00+300, 00+300, 00+300, 00+300,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                  |      |   |
|   | pi236              | 1.8E-12 2.2E-12 2.7E-12                                         | 3,22-12 3,72-12 3,72-12 4,312-12 4,92E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | -12              |      |   |
|   | p.237              | 1.37E-13 1.52E-13 1.67E-13                                      | 1.81E-13 1.92E-13 1.92E-13 2.03E-13 2.23E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | · <del>-</del> _ |      |   |
|   | p.238              | 1.25-07 1.45-07 1.765-07                                        | 2.10E-07 2.46E-07 2.46E-07 2.86E-07 3.26E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |      |   |
|   | p.239              |                                                                 | 8.6E-05 9.0E-05 9.0E-05 9.4E-05 9.6E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | _                |      |   |
|   | p.240<br>p.241     | 9.39E-06 1.05E-05 1.17E-05 3.61E-06 4.22E-06 4.90E-06           | 1,23E-05 1.40E-05 1.40E-05 1.51E-05 1.62E<br>5,62E-06 6,40E-06 6,40E-06 7,22E-06 8,09E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                  |      |   |
|   | 12/2               |                                                                 | 4.17E-07 5.07E-07 5.07E-07 6.07E-07 7.2/E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |      |   |
|   | 0.23               | 2.52E-11 3.55E-11 4.47E-11                                      | 5.53E-11 6.74E-11 6.18E-11 8.10E-11 9.64E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  | •    |   |
|   | p.8%               | 1.6/E-24 3.8/E-24 8.4/E-24                                      | 1.7E-23 3.5E-23 3.5E-23 6.6E-23 1.2E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>·22</b>       |      |   |
|   | p.Ø5               |                                                                 | 1.ZE-20 2.5E-20 2.AE-20 4.7E-20 8.6E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | =                |      |   |
|   | p.g.s              | .00E+00 9.00E-33 2.10E-32                                       | 4.A.E32 8.99E-32 8.98E-32 1.73E-31 3.20E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                  |      |   |
|   | <b>an239</b>       |                                                                 | 1,895-18 2,275-18 2,195-18 2,716-18 3,205<br>8,135-16 9,835-16 9,755-16 1,175-15 1,385                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                  |      |   |
|   | an240<br>an241     |                                                                 | 1.12E-07 1,AZE-07 1,AZE-07 1.59E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                  |      |   |
|   |                    | 9.19E-10 1.24E-09 1.62E-09                                      | 2.0E-09 2.6E-09 2.6E-09 3.2E-09 3.90E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                  |      |   |
|   | ati242             |                                                                 | 1.33E-10 1.61E-10 1.56E-10 1.92E-10 2.26E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |      |   |
|   | <b>2003</b>        | 9.57E-09 1.3/E-08 1.8/E-08                                      | 2.49E-08 3.29E-08 3.29E-08 4.18E-08 5.29E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -08              |      |   |
|   | ang/m              | 00+300, 00+300, 00+300,_                                        | TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO TH |                  |      |   |
|   | an244              |                                                                 | 8.55E-12 1.12E-11 1.07E-11 1.44E-11 1.82E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | - <del></del>    |      |   |
|   | නවැරි<br>කාවැර     | 1,05E-28 2,48E-28 5,45E-28<br>.00E-00 2,25E-35 5,24E-35         | 1.13E-27 2.21E-27 2.21E-27 4.14E-27 7.47E<br>1.11E-34 2.22E-34 2.22E-34 4.33E-34 8.00E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                  |      |   |
|   | CE 241             | 2.5Œ-19 4.0Œ-19 6.0Œ-19                                         | 8.6E-19 1.ZE-18 1.19E-18 1.6ZE-18 2.14E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  |      |   |
|   | a1842              |                                                                 | 1,0E-08 1,37E-08 1,37E-08 1,70E-08 2,09E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                  |      |   |
|   | CIP/3              | 3.8/E-11 5.72E-11 8.22E-11                                      | 1.1/E-10 1.55E-10 1.55E-10 2.05E-10 2.65E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |      |   |
|   | car2¥4             | 4.5E-10 7.1Œ-10 1.0Œ-09                                         | 1.5/E-09 2.1/E-09 2.1/E-09 2.9/E-09 3.9/E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -09              |      |   |
|   | αΩ⁄2               | 5.42-12 9.12-12 1.47E-11                                        | 2.27E-11 3.39E-11 3.39E-11 4.9E-11 7.01E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | *]]              |      |   |
|   | CENT               | 1.182-15 2.152-15 3./3E-15                                      | 6.27E-13 1.00E-12 1.00E-12 1.50E-12 2.37E<br>2.94E-15 5.00E-15 5.00E-15 8.40E-15 1.30E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                  |      |   |
| ı | CH247              | ATTEND OFTEND POED                                              | E'SE'N NYE'N NYE'N OWEN INC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | · ••             |      |   |
| ' | sasZh:             | behoods willow 15x15, 3.00424                                   | 20pd/mu.bum.high.temp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | actinides        | page | 2 |
|   | pover              | = 8.46E-05m, burrup-2.0518E-                                    | Cond, flue 1.616+1.31/cm <sup>22-960</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                  | • -  |   |
| ) | •                  | - <del>-</del>                                                  | ruci ide concentrations, gram atoms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                  |      |   |
|   |                    |                                                                 | basis = converted to atoms/(Darn-on)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                  |      |   |

| tot<br>0 f<br>0 re<br>tit<br>0 re<br>tit<br>0 re | eults on logica<br>le: sas2h: babo<br>eults on logica<br>le: sas2h: babo | 1.01E-1<br>9.57E-1<br>2.28E-1<br>2.26E-1<br>1.60E+1<br>1 unit n<br>ock wilo<br>1 unit n<br>ock wilo<br>1 unit n | 17 3.46-17 22 2.06-22 27 2.13-26 28 5.06-34 28 2.26-02 13 1.60-13 0. 71, position fishes, 5.01 0x 15x15, 3.0 0x 15x15, 3.0 0x 15x15, 3.0 0x 17, position fishes, 5.0 0x 17 | 6.13E-17 1.13E<br>3.99E-22 7.39E | -16 1.13E-16<br>-22 4.96E-22<br>-23 4.6E-34<br>-33 4.6E-34<br>-02 2.25E-02<br>+13 .00E-00<br>step 7, s.box<br>burn high temp<br>step 4, s.box<br>burn high temp<br>td.<br>for meterial to | 2.0E-16 3<br>1.3E-21 2<br>1.3E-25 3<br>1.3E-25 3<br>2.2E-02 2<br>1.5E+13 1<br>39e 1. (run p | ,616+13<br>osition 1, ca<br>osition 1, ca | se position 1 | )           |             |
|--------------------------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-------------------------------------------|---------------|-------------|-------------|
| <b>.</b>                                         | _                                                                        |                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1                                |                                                                                                                                                                                           | 1                                                                                           |                                           |               |             | •           |
| Ondect                                           | : 33<br>5                                                                | 4                                                                                                               | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 27                               | 6                                                                                                                                                                                         | 0                                                                                           | 0                                         | 0             | 0           | 0           |
|                                                  | ő                                                                        | õ                                                                                                               | ò                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0                                | ő                                                                                                                                                                                         | ŏ                                                                                           | -1                                        | 1698          | <i>6</i> 90 | 13 <b>0</b> |
|                                                  | 880                                                                      | 7955                                                                                                            | _0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5                                | 99                                                                                                                                                                                        | 2                                                                                           | 16                                        | 96            | 18          | 18          |
| ^                                                | 18                                                                       | ٥,                                                                                                              | 77                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                  |                                                                                                                                                                                           |                                                                                             |                                           |               |             |             |
| 0                                                | 56q array has<br>56q array has                                           |                                                                                                                 | entries.<br>entries.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                  |                                                                                                                                                                                           |                                                                                             |                                           |               |             |             |
| Õ                                                | 560 array has                                                            |                                                                                                                 | entries.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                  |                                                                                                                                                                                           |                                                                                             |                                           |               |             |             |
| 0                                                | 560 array has                                                            |                                                                                                                 | ntries.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                  | •                                                                                                                                                                                         |                                                                                             |                                           |               |             |             |
| 0                                                | 56q array has                                                            |                                                                                                                 | ntries.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                  |                                                                                                                                                                                           |                                                                                             |                                           |               |             |             |
| Ö                                                | 56q array has<br>56q array has                                           |                                                                                                                 | entries.<br>entries.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                  |                                                                                                                                                                                           |                                                                                             |                                           |               |             |             |
| ŏ                                                | 57g array has                                                            |                                                                                                                 | entries.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                  |                                                                                                                                                                                           |                                                                                             |                                           |               |             |             |
| Ō                                                | 10 array has                                                             |                                                                                                                 | ntries.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                  |                                                                                                                                                                                           |                                                                                             |                                           |               |             |             |
| 0 .                                              | 1q array has                                                             | 10 (                                                                                                            | entries.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                  |                                                                                                                                                                                           |                                                                                             |                                           |               |             |             |
|                                                  | 90 97376<br>116 60826                                                    |                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                                                                                                                                                                                           |                                                                                             |                                           |               |             |             |
|                                                  |                                                                          | ta (Libr                                                                                                        | ary) storage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | aize                             |                                                                                                                                                                                           |                                                                                             |                                           |               |             |             |
|                                                  | 4 33734                                                                  | ,                                                                                                               | _,,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b></b>                          |                                                                                                                                                                                           |                                                                                             |                                           |               |             |             |
|                                                  | 103_75953                                                                |                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                                                                                                                                                                                           |                                                                                             |                                           |               |             |             |
| Ŏ                                                | 20d exteh pee                                                            |                                                                                                                 | entries.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                  |                                                                                                                                                                                           |                                                                                             |                                           |               |             |             |
| 0                                                | 60q array bas<br>58q array bas                                           |                                                                                                                 | entries.<br>entries.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                  |                                                                                                                                                                                           | •                                                                                           |                                           |               |             |             |
| ŏ                                                | 660 array has                                                            |                                                                                                                 | ntries.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                  |                                                                                                                                                                                           |                                                                                             |                                           |               |             |             |
| 0                                                | 73q array has                                                            |                                                                                                                 | ntries.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                  |                                                                                                                                                                                           |                                                                                             |                                           |               |             |             |
| 0                                                | 74q array has                                                            |                                                                                                                 | ntries.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                  |                                                                                                                                                                                           |                                                                                             |                                           |               |             |             |
| 0                                                | 75q errey has<br>140 <i>669</i> 71                                       | IOY/ (                                                                                                          | ntries.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                  |                                                                                                                                                                                           |                                                                                             |                                           |               |             |             |
|                                                  | sed 1010/4 in                                                            | size 2                                                                                                          | 200000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                  |                                                                                                                                                                                           |                                                                                             |                                           |               |             |             |
| 0jqpt                                            | 12                                                                       |                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                                                                                                                                                                                           |                                                                                             | _                                         | _             | _           |             |
| - •                                              | 0                                                                        | 0                                                                                                               | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | . 0                              | 0                                                                                                                                                                                         | 0                                                                                           | Q                                         | 0             | 0           | 0           |
| Otherm                                           | 0 ,                                                                      | 0                                                                                                               | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                  |                                                                                                                                                                                           |                                                                                             |                                           |               |             |             |
|                                                  | 2450E-01 4.1944                                                          | Œ-01 3.                                                                                                         | .25/92 <del>1</del> +00 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | .00000E-31                       |                                                                                                                                                                                           |                                                                                             |                                           |               |             |             |
| Oran                                             | 5                                                                        |                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                                                                                                                                                                                           |                                                                                             |                                           |               |             |             |
| _                                                | 795                                                                      | 20                                                                                                              | 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 18                               | 1697                                                                                                                                                                                      |                                                                                             |                                           |               |             |             |
| Cinta                                            | <b>7</b> 19                                                              | 7                                                                                                               | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0                                | 1                                                                                                                                                                                         | 1                                                                                           | •                                         | 0             | 0           | 0           |
|                                                  | 7<br>21                                                                  | 100                                                                                                             | 1697                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ž                                | 3                                                                                                                                                                                         | 74                                                                                          | Õ                                         | ĭ             | ŏ           | J           |
| Otcore:                                          |                                                                          |                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                                                                                                                                                                                           | ••                                                                                          | •                                         | •             | _           | •           |
|                                                  | 000E+04 4.80TS                                                           | 5E+02 .                                                                                                         | .00000E+00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | .00000E+00·1.00                  | 0000E-0B                                                                                                                                                                                  |                                                                                             |                                           |               |             |             |

| Onzero<br>O                            | 4 689                                                                           | 129                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 879                                    |                                          |                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | •         |                                        |
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| Ором                                   | 3                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | u,                                     |                                          |                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |           |                                        |
| .00000000 .0<br>0 linp                 | 9<br>9                                                                          | .00000E+00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |                                          |                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |           | •                                      |
| 6                                      | 0                                                                               | 51                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 26                                     | 2                                        |                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1697      | 94                                     |
| n-game, fission<br>start of interve    |                                                                                 | ev/f19610n =<br>1.60283E+13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                        | 6.1975E+00                               | 1.9583E+02                               | 2.02036+02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |                                        |
| n-genne, fission                       | and total an                                                                    | ev/fission =                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                        | 6.2896E+00                               | 1.9593E+02                               | 2.0222=+02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           | •                                      |
| start of interve                       |                                                                                 | 1.60309E+13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                        | / mm.m                                   | 1 000E-00                                | 2 00/15/03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |                                        |
| n-germa, fission<br>start of interve   |                                                                                 | 1.60378E+13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                        | 6.3902E+00                               | 1.9602E+02                               | 2.02416+02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |                                        |
| n-gunna, fission                       | and total an                                                                    | ev/fission =                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                        | 6.4 <del>90£+</del> 00                   | 1.9612=+02                               | 2.0261E+02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |                                        |
| start of interve                       |                                                                                 | 1,60502E+13<br>.0000E+00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                        |                                          |                                          | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |                                        |
| start of intervel<br>n-game, fission   |                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                        | 6.6029E+00                               | 1.9621E+02                               | 2.02816+02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |                                        |
| start of interve                       | lfluk≖ ়                                                                        | 1,606616+13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                        |                                          | 4.0000                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |           |                                        |
| h-genna, fission<br>start of interve   |                                                                                 | ex/f1851cn =<br>1,60891E+13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                        | 6.687XE+00                               | 1.96296+02                               | 2.02986+02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |                                        |
| 0 case or subcase                      | 1 ses2h:                                                                        | : beboock wilcox                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 15x15, 3                               | .00xX, 20px                              | d∕adu bum high t                         | esp (que                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |                                        |
| 0 5cq array                            | hes 200                                                                         | entries.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | •                                      | • -                                      | _                                        | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           | •                                      |
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|                                        | 20000000000000000000000000000000000000                                          | 000 mm 00 mm 00 m m 00 m m 00 m m 00 m m 00 m m 00 m m 00 m m 00 m m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 m 00 | ###################################### | () () () () () () () () () () () () () ( | ######################################   | ATTEN AMEN 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                                        |
|                                        | 60000000000000000000000000000000000000                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ###################################### |                                          | ######################################   | ATTEN AMEN 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                                        |
|                                        | 60000000000000000000000000000000000000                                          | 000 mm 00 ##################################### |                                          | ######################################   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |           |                                        |

| INFORMATION | OKILY |
|-------------|-------|
| IKFORMA     |       |



|         | program varification information | Saleshile<br>Saleshile |
|---------|----------------------------------|------------------------|
|         | code system: scale version: 4.2  | dalentete<br>dalentete |
|         |                                  |                        |
|         |                                  | ****                   |
|         |                                  | ****                   |
| Addat . | progress obcode                  |                        |
|         |                                  |                        |

```
this is not a scale configuration controlled code
 ichneme: devis
 date of executions 02/16/96
 time of execution: 10:00:59
 -1q array has
0q array has
 1 entries.
 4 entries.
 1q array has
 6 entries.
 Sci array has
 2 entries.
 1 logical assignments
 Omester Library 12
 working library 0 scratch file 18
 new Library
Oproblem description
Digr-geometry (Q/1/2/3-inf mod/slab/cyl/sphere
Diam-runber of zones or meterial regions
Unam-ruster of zones of agreement regions

One-mixing table length

Obs-mixing table length

Obs-mixing table length

Obs-mixing table length

Observation factor edit option (U/1--no/yes)

Observation factor option

Occurrence of the control of table factor for winger rational approximation

1.300E-00
 3q array has
4q array has
 66 entries.
 66 entries.
 50 array has
 66 entries.
 60 array has
 4 entries.
 7q array has
8q array has
 4 entries.
 4 entries.
 90 array has
 4 entries.
 100 array has
 66 entries.
 11g array has
 4 entries.
 Onixing table
 number density new identifier
4.44495-04 9225
4.66393-06 9224
Centry mixture isotope
 9225
9224
 23
 92236
 9236
 4,78935-05
 2.1873/E-02
 92238
 92253
 8076
 8016
 4,5539XE-02
 8016
 2.07710E-02
 6
 3685
3685
3685
3685
3685
4685
4685
4685
4685
 360E3
360E5
 1.21060E-06
 5.82772E-07
 89101121314151617
 38090
 1,32013E-05
 3000
 1,0200XE-05
 42095
 1.31680E-05
 400%
400%
 1.03725E-05
 1.6ZZZSE-05
 40075
 2.03583E-06
 41094
43099
 41094
 7.53797E-12
 43099
 1.5844E-05
```

45103

45103

8.51543E-06

```
2.07139E-08
 45105
 44101
 44101
 1,425096-05
 44105
46105
46108
 44106
 2.14911E-06
 46105
 5.27789E-06
 46108
 1.3934E-06
 47109
 9.8975XE-07
 47109
 51124
 2.30\39E-10
 51124
54131
 7.31080E-06
 54131
 XID
XID
 数区
 1.322596-05
 6.67573E-09
 54136
 54136
 2.70586E-05
 55134
 55134
 6.68775E-07
 55155
 55135
 8.57012E-06
 55137
 55137
 1.68757E-05
 56136
 56136
 1.31478E-07
 1.673625-05
 57139
 59141
 1,431332-05
 59143
 3.77677E-07
 58144
 6.377925-06
 60143
 1.33774E-05
 8045
6148
6148
8447
8447
8447
8447
 9.77101E-05
 60145
 61147
 3,64313E-06
 61148
60147
 1.0456E-08
 1.3068/E-07
 62147
62149
 1,01929E-06
 8,4098E-08
 62150
 62150
 3,35633E-06
 212
212
212
212
212
212
 62151
 3.68960E-07
 1.63140E-05
 62152
 64155
 1,63702E-09
 ଷୀୟ
 9.0327E-07
 63154
 1.6387XE-07
 63125
 ଷୀର
 9.91552E-0B
 40B02
 4.25156E-02
 40502
 1001
5010
5011
 1001
 4.19420E-02
 5010
 3.855E-06
 5011
 1.5488/E-05
 ऋाँ
 ठाँउ
 1.73735E-05
 2.81750E-05
 9525/
 94238
 3.2520E-07
 9259
9230
9231
 9.65273E-05
 1.6258E-05
 8.08737E-05
 922
 7.23719E-07
 95241
 1.9917E-07
 952/3
 5.2783/E-08
 9624
 3.99487E-09
 65
 999
 1,00000E-20
 1.0000E-20
Opponetry and material description
 extre as type (0/1--fuel/srcd)
9,058/4E-01 0
5,49010E-01 0
.0000E+00 0
Ozone mixture outer dimension temperature
 9.75000E+02
 4.68122E-01
 2.9300E+02
6.5000E+02
 4.7879Œ-01
 5.46100E-01
 8.1396E-01
 6.07600E+02
 .00000E+00
7711 locations of 20000 evaluable are required to make a reverseter containing the self-shielded values. One nuclides in your problem have borderwise factor data "borsel will copy from logical 12 to logical 1
 999 1/v cross sectio from lag 12 to lag 18 bandarerio trigger 0
0ccpy
Octy
Octy
 999 1/v cross sectio from log 18 to log 1
 bondererko trigger 0
 999 1/4 cross sectio from log 18 to log 1 burdererlo trigger 0
```

|                    |                 |                  | _    |     |    | _  |        |                       |
|--------------------|-----------------|------------------|------|-----|----|----|--------|-----------------------|
| 0сфу               | • 1001          | hydrogen         | from | ļœ  | 12 | to | lœ 1   | pandererko trigger () |
| Осфу               | 5010            | b-10 1273 212mp  | from | lag | 12 | to | lag 1  | poudarenko trigger 0  |
| Ocepy              | 5011            | boran-11         | fran | læ  | 12 | Ø  | log 1  | bondarenko trigger O  |
| Occipy             | 8016            | axygen-16        | fran | lag | 12 | to | lag 18 | bondarenko trigger 0  |
| Occipy             | 8016            | arygen-16        | fran | la  | 18 | b  | la 1   | bondarenko trigger 0  |
| Ocopy              | 8016            | avygen-16        | from | lœ  | 18 | æ  | loa 1  | banderenko trigger 0  |
| Осфу               | 36083           | kr-83            | from | lœ  | 12 | to | laa 1  | bandarenko triguer 0  |
| 0copy              | 36095           | kr-85            | from | la  | 12 | to | lai    | bandarenko triguer 0  |
| Осфу               | 32090           | ar-90            | frun |     |    |    |        | bordererko trigger 0  |
| 0 <del>00</del> by | 39089           | y-89             | fran |     |    |    |        | bondarenko trigger 0  |
| Осору              | 40093           | zr-93            | frun |     |    |    |        | bondarenko trigger 0  |
| Остру              | 40094           | <del>∡</del> -%  | from |     |    |    |        | bordarerko trigger 0  |
| Осфу               | 40095           | z-95             | from |     |    |    |        | banderenko trigger 0  |
| 0cepy              | 40302           | zircalloy        | from |     |    |    |        | bondarenko trigger 0  |
| 00dby              | 41094           | rb-%             | fran |     |    |    | -      | bandenerico tricaer 0 |
| OCTY               | 42075           | aD-95            | from | i.  | 12 | m  |        | burdarello triquer 0  |
| OCCEDA<br>OCCEDA   | 43099           | tc-99            | frua | im  | 12 | m  | laa i  | bordererio trigger 0  |
| 0ccpy              | 44101           | ru-101           | fran | im  | 12 | m  | iœ i   | bandarerko trigger 0  |
| 0ccpy              | 44106           | ru-106           | from |     |    |    |        | bondarerko trigger 0  |
| 0ccpy              | 45103           | rh-105           | fran |     |    |    |        | bandarerko trigger 0  |
| Осфу               | 45105           | rh-105           | from | im  | 12 | m  | ica i  | borderenko trioper 0  |
| 0ccpy              | 46105           | pd-105           | from | im  | 12 | m  | ia i   | populación priesas 0  |
| 0ccpy              | 46108           | <b>⊞</b> -108    | from |     |    |    |        | bandarerico trigger 0 |
| 0ccpy              | 47109           | silver-109       | frua |     |    |    |        | bonderenko trioger 0  |
| OCCEPY             | 51124           | sb-124           | from |     |    |    |        | bordererico triguer 0 |
| Octby<br>Octby     | 54131           | ж-131            | from |     |    |    |        | bordererlo trigger 0  |
| 000py              | 5/102           | xe-132           | from |     |    |    |        | bandarerico trigger 0 |
| Octoby<br>Octoby   | 54155           | xeron-135        | from |     |    |    |        | bandarenko triguer 0  |
| 0cdpy              | £156            | xe-136           | from |     |    |    |        | burderello trigger 0  |
| Осфу               | <b>202</b>      | cesium-133       | from |     |    |    |        | barabrerko trigger 0  |
| Осфу               | \$334           | cs-134           | from |     |    |    |        | burdereito trigger 0  |
| 0ccpy              | 55155           | CS-135           | from | im  | ñ  | Ē  | icai   | bandererico triccer O |
| 0ccby              | <b>53</b>       | G-137            | from | ì   | ū  | to | lag i  | bondererko trigger 0  |
| 0cepy              | 52055           | ba-136           | from |     |    |    |        | bordererico trigger 0 |
| 00dby              | 5709            | Ta-139           | from | im  | õ  | m  |        | bondanerico triguer 0 |
| 0ctby              | 2314            | œ-144            | from | ì   | 12 | m  | log i  | bondarenko trigger 0  |
| <u>0</u>           | 59141           | pr-141           | from |     |    |    |        | bardererico trigger 0 |
| <u>оф</u> у        | 59K3            | p-143            | fron |     |    |    |        | borderenio trigger 0  |
| 0cdby              | 60143           | nd-143           | from | iæ  | 12 | to | laa i  | bondarenko trigger 0  |
| Occide             | 60145           | nd-145           | from | ίœ  | 12 | Ē  | icai   | bondarenko trigger 0  |
| OCCEPY .           | 60147           | nd-147           | from |     |    |    |        | bondarerico trigger 0 |
| 0copy              | 61147           | pn-147           | from |     |    |    |        | bondarenko trigger 0  |
| Остру              | 61148           | pa-148           | from |     |    |    |        | bondarenko trigger 0  |
| 0ccpy              | 62147           | SR-147           | from |     |    |    |        | bordererico trigger 0 |
| Остру              | 62149           | <b>=</b> 149     | from |     |    |    |        | bondarenko trigger 0  |
| Осфу               | 62150           | sm-150           | from | la  | 12 | to | laa 1  | bordererko trigger 0  |
| 0 <del>000</del> y | <b>&amp;</b> 51 | sm-151           | from |     |    |    |        | bondarerico trigger 0 |
| <u>Оф</u> у        | 62152           | sar-152          | from | ĺœ  | 12 | b  | log 1  | borderenko trigger 0  |
| Ocepy              | 6353            | ar 153           | from | læ  | 12 | to | la 1   | bandarenko trigger O  |
| Офру               | 8154            | au-154           | from | lœ  | 12 | 8  | las 1  | bonderenko trigger 0  |
| Осфу               | 88              | eur 155          | from |     |    |    |        | bandererko trigger 0  |
| 000py              | 64155           | gd-155           | from |     |    |    |        | bordererko trigger 0  |
| Осфу               | 92234           | u-Z34 1043 sigo= |      |     |    |    |        | bondarerico trigger 0 |
| 0ccpy              | 9225            | uraniua 235      | from |     |    |    |        | bordsrerko trigger 0  |
| <u>Осфу</u>        | 922%            | u-236 1163 slgo= |      |     |    |    |        | bardererico trigger 0 |
| 0ccpy              | 92238           | uranius 258      | from | læ  | 12 | Ø  | log 1  | bardererico trigger 0 |
| 0ccpy              | 95257           | reptunka-27      | from | læ  | 12 | b  | lag 1  | bandererko trigger 0  |
| 0ccpy              | 94238           | pu-28 1050 sigo  | from | læ  | 12 | 8  | log i  | bandererico trigger 0 |
| Осфу               | 94239           | plutonium 239    | from |     |    |    |        | bandarerico trigger 0 |
| <u>00ф</u> у       | 94240           | plutonium 240    | from |     |    |    |        | bandererlas trigger 0 |
|                    | ,, <b>v</b>     |                  |      | _   |    |    | -      | <b>—</b>              |

| 0ccpy 94241 plu  | tanium-241 from log                      | 12 to log 1   | h         | anerko trigger 0     |            |               |
|------------------|------------------------------------------|---------------|-----------|----------------------|------------|---------------|
|                  |                                          | 12 to log 1   |           | brenko trigger O     |            |               |
|                  |                                          |               |           |                      |            |               |
|                  | X1 1056 sign from log                    |               |           | brenko trigger 0     |            |               |
|                  | % 3 1057 218 from log                    | 12 to (d)     | DUT       | tanenko trigger O    |            |               |
|                  | rium-244 from log                        | 12 to lag 1   | ban       | tanenko trigger O    |            |               |
| 1 scale 4.2 - 27 | Storb Usrptan prurb                      | library       |           |                      |            |               |
| besed on end     | tf-b version 4 data ivi                  | th endf-b ver | sion 5 1  | fission products     |            |               |
| ത്തില            |                                          |               |           | •                    |            |               |
|                  | pointed 9/16/98                          |               |           |                      |            |               |
|                  | petrie - oml                             |               |           |                      |            |               |
| tape id          |                                          | 4321          | ev #4     | er of nuclides       |            | 66            |
|                  | reutran graups                           | Z/            |           | set of dame atorbe   |            | ō             |
|                  |                                          | 16            |           |                      |            | ĭ             |
| first them       | ar auch                                  | <del></del>   |           | ical unit            |            | •             |
|                  |                                          | ble of conter |           |                      |            | ~             |
| 1/V CTOSS 880    | tions normalized to 1                    | m at nimo     | €7        |                      | id         | 977           |
| 1/y cross sec    | tions normalized to 1                    |               |           |                      | id         |               |
| hydrogen         | endf/b-iv met 1269                       | /them1002     | updated   | 10/13/89             | fd         | 1001          |
|                  | hgp 0/23/5 p-3 2/3k                      |               | •         |                      | id         | 5010          |
| baran-11         | endif/to ly met 1160                     | 1             | undated   | 10/13/89             | id         | 5011          |
| avgen-16         | endf/b-iv met 1276                       |               |           | 10/13/89             | id         | 8016          |
| aygen-16         | endif/to-IV mat 1276                     |               |           | 10/13/89             | iā         | -6            |
|                  |                                          | 106 407       |           |                      | id         | 36083         |
| kr-85            | mt=102,105,105,105                       | , ico, ici    | quates    | 10/13/89             | 1,1        | 34085         |
| kr-8 <u>5</u>    | int= 102                                 |               |           | 44.55.00             | id<br>id   |               |
| a~20             | nt=102                                   |               |           | 10/13/89             | NG.        | 38090         |
| ÿ- <u>89</u>     | mt=102                                   |               | updated   | 10/13/89             | id         | 37089         |
| zi~93            | mt= 102                                  |               | -         |                      | id         | 40095         |
| zr~94            | mt=102                                   |               | umbted    | 10/13/89             | id         | 40094         |
| x-95             | mt×102                                   |               |           | 10/13/89             | id         | 40095         |
| zircalloy        | erdf/b-iv met 1284                       |               |           | 10/13/89             | id         | 40502         |
| 10-%             | mt=102                                   |               |           | 10/13/89             | id         | 41094         |
| 10-95            | nt=102                                   |               |           | 10/13/89             | ជ          | 42075         |
|                  |                                          |               |           |                      | <b>1</b> d | 43099         |
| tc-99            | mt×102                                   |               |           | 10/13/89             | id         | 44101         |
| ru-101           | mt×102                                   |               |           | 10/13/89             |            |               |
| rv-106           | at=102                                   |               |           | 10/13/89             | id         | 44106         |
| rtr-103          | at=102                                   |               | фи        | 10/13/89             | id         | 45108         |
| rh-105           | mt= 102                                  |               |           |                      | id         | 45105         |
| pd-105           | nt=102                                   |               | updated   | 10/13/89             | id         | 46105         |
| jcd-108          | mt=102                                   |               | updated   | 10/13/89             | id         | 4610B         |
| silver-109       | erdf/b-iv mat 109                        | )             | undered   | 10/13/89             | id         | 47109         |
| sb-124           | n <b>t=102</b>                           |               |           | 10/13/89             | id         | 51124         |
| xe-131           | mt=102,105,104,105                       |               |           | 10/13/89             | id<br>id   | 54131         |
| xe-132           | ret = 102, 105, 104, 105                 | 106           |           | 10/13/89             | id         | 54132         |
| )EDT-135         | mt=102,103,104,105<br>endf/b-iv mat 1254 |               |           | 10/13/89             | id         | 54135         |
| xe-136           | mt= 102 105                              | 104 105 100   | ,,,,,,,,  | -4-4-                | id         | 54136         |
|                  | nt= 102, 105,<br>endf/b-iv net 1141      | w, w, w       | اسعاسا    | 10/13/89             | й          | 55133         |
| cesium 133       | ELIFOTIVE INT                            |               | upper l   |                      | 22         | <b>5513</b> 4 |
| cs- <u>134</u>   | mt=102                                   |               | quausu    | 10/13/89             |            |               |
| CS- <u>135</u>   | mt= 102                                  |               |           | 40.47.00             | 1d<br>1d   | <b>55</b> 155 |
| cs-137           | nt=102                                   |               |           | 10/13/89             | Nd.        | 55137         |
| ba-136           | nt=102                                   |               | updated   | 10/13/89             | id<br>id   | 56136         |
| la-139           | mt=102                                   |               | undeted   | 10/13/89             | id         | 57139         |
| ce-144           | mt= 102                                  |               | •         |                      | id         | 58144         |
| pr-141           | mt=102,108,104,105                       | ,105,107      | undsted   | 10/13/89             | id         | 59141         |
| pr-1/3           | sst=102                                  |               |           | 10/13/89             |            | 59143         |
| m-143            | mt=102                                   |               | undeted   | 10/13/89             | id<br>id   | 60143         |
| 12 VS            | nt=102                                   |               |           | 10/13/89             | й          | 60145         |
|                  | ##=102                                   |               |           |                      | ũ          | 60147         |
| m-147            |                                          |               |           | 10/13/89<br>10/13/80 | 냷          | 61147         |
| pr: 147          | mb=102                                   |               | drawer    | 10/13/89             | id         | 61148         |
| pn-148           | int= 102                                 |               |           | 40.47.60             |            |               |
| sn 147           | enut/b-v fission p                       | uceret .      |           | 10/13/89             | 널          | 62147         |
| sar 149          | nt=102,105,107                           | •             | rimenseq. | 10/13/89             | id         | 62149         |
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0
 -1a array has
 1 entries.
 9 entries.
 Oci array has
 lo array has
 12 entries.
Oselect 65 ruelides from the master library on logical 1
0 ruelides from the working library on logical 2
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 to create the new working Library on Logical 4
 61 resonance calculations have been requested
 O output option for anpx formatted cross section data
Othe storage allocated for this case is 20000 words
 20 array has 65 entries.
30 array has 95 entries.
 40 array has 65 entries.
O general information concerning cross section library
 tape identification number
 number of nuclides on table
 66
 number of neutron energy groups
 27
 first thermal neutron energy group
 Б
 number of censes energy proups
O direct access unit number 9 requires 117 blocks of length 1484 words
- xedm tabe 4321
 scale 4.2 - 27 group reutron burnup library
based on entif-b version 4 data with entif-b version 5 fission products
compiled for nrc 1/27/89
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mt=102,103,105,105,106,107
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 rh-105
 mt= 102
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 st=102
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 mt=102,103,104,105,105
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54132

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xe-132

mt=102,103,104,105,106

| 28                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | жетот-135        | endf/b-iv mat                    | 1204                             | undeted    | 10/13/89             |            | 54136                                       |
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| 20050000000000000000000000000000000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ж-136            | mt= 102 1                        | 03, 104, 105, 10                 | 7          | .4,                  |            | 54136                                       |
| 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | cesium-133       | endf/b-iv mat                    | 1141                             | undeted    | 10/13/89             |            | 55133                                       |
| 31                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | cs-134           | mt=102                           |                                  |            | 10/13/89             |            | 55134                                       |
| 32                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>ය-13</b> 5    | mt= 102                          |                                  | •          |                      |            | 55135                                       |
| .33                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | cs-137           | #£=102                           |                                  |            | 10/13/89             |            | 55137                                       |
| 34                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ba-136           | mt=102                           |                                  | updated    | 10/13/89             |            | 56136                                       |
| 35                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | la-139           | int=102                          |                                  | updated    | 10/13/89             |            | 57139                                       |
| <u>36</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | œ-144            | Int= 102                         |                                  |            |                      |            | 58144                                       |
| <u>37</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | pr-141           | mt=102,108,104                   | ,105,106,107                     |            | 10/13/89             |            | 59141                                       |
| 38                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | p-143            | mt=105                           |                                  |            | 10/13/89             |            | 591/3                                       |
| <i>39</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | nd-1/3           | mt=102                           |                                  |            | 10/13/89             |            | 601/3                                       |
| 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | n±145            | mt=102                           |                                  |            | 10/13/89             |            | 601/5                                       |
| 41                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | nd-147           | mt=102                           |                                  |            | 10/13/89             |            | 60147                                       |
| 2345478 <i>4</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <u>pr-147</u>    | int=102                          |                                  | rhosced    | 10/13/89             |            | 61147                                       |
| 49                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | pr-148           | nt= 102                          |                                  |            | 40.477.600           |            | 61148                                       |
| 44                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | sm-147           | endf/b-v fissi                   | an product                       |            | 10/13/89             |            | 62147<br>621/0                              |
| <b>40</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | sn-149<br>sn-150 | mt=102,105,107                   |                                  |            | 10/13/89             |            | 62149<br>62150                              |
| 40<br>47                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | sm-151           | mt=102                           | 105 106 107                      |            | 10/13/89<br>10/13/89 |            | £2151                                       |
| 78                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | sar-152          | mt=102,103,104                   | 105 105 107                      |            | 10/13/89             |            | 62152                                       |
| 70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | er. 122          | mt=102,105,104<br>mt=102,105,104 | 105 106 107                      |            | 10/13/89             |            | खाँड                                        |
| ξή                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | au-154           | mt=102,108,104                   |                                  |            | 10/13/89             |            | 6154                                        |
| 51                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | er 155           | mt-102,103,104                   | 105 105 107                      |            | 10/13/89             |            | ढाइ                                         |
| 89                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | BH 155           | #£=102                           | ,,,                              |            | 10/13/89             |            | 64195                                       |
| ទី                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | -254 1043 sign   | 544 neuclace o                   | -3 285k f-1/e-m                  | 1.+5)      | .4 .4.               |            | 9234                                        |
| <u> </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | uranium 25       | endi/b-iv sat                    | 1261                             | undeted    | 10/13/89             |            | 9225                                        |
| . 55 t                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                  |                                  | -3 255k f-1/e-st                 |            |                      |            | 9236                                        |
| 8518434588<br>8518434588<br>851845888<br>851845888<br>851845888<br>851845888<br>851845888<br>851845888<br>851845888<br>851845888<br>851845888<br>851845888<br>851845888<br>851845888<br>85184588<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>8518458<br>851846<br>8518458<br>8518458<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>851846<br>85186<br>851846<br>851846<br>85186<br>85186<br>85186<br>85186<br>85186<br>85186<br>85186<br>85186<br>851 |                  | endif/b-iv stat                  |                                  |            | 10/13/89             |            | 92238                                       |
| 57                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                  | erdf/b-iv stat                   |                                  |            | 10/13/89             |            | 95237                                       |
| <b>58</b> ;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                  |                                  | p-3 203k f-1/ <del>e s</del>     |            | •                    |            | 9238                                        |
| <b>59</b> '                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                  | endf/b-iv mat                    |                                  | upphted    | 10/13/89             |            | 94239                                       |
| 60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                  | endf/b-iv mat                    |                                  | updated    | 10/13/89             |            | 84340                                       |
| 61                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                  | endi/o-iv mat                    |                                  |            | 10/13/89             |            | 9/2/1                                       |
| 62                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                  | endi/o-iv mat                    |                                  | updated    | 10/13/89             |            | 9292                                        |
| ស៊ូ ៖                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | TRANS LOS SIG    | POM NEKLECE                      | 218ngp p-3 250k                  |            |                      |            | 9281                                        |
| 64 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                  | gout f-Ven                       |                                  |            | ****                 |            | 923                                         |
| <b>~ .6</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | arium 24         | endi/b-iv mat                    |                                  | rhomoto    | 10/13/89             | ~          | 9694                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  | lized to 1.0 at                  |                                  | 40.477.490 |                      |            | temperatures 975.00                         |
| 0 plychodau                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | a n/n-i          | v met 1269/thm                   |                                  |            | 2 ** * *****         | 1001       | temperature= 607,60<br>550,00 was selected. |
| 0~10 1275                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 218mp 04255 j    |                                  | attering autrix                  | inera.     | 2 at a tempe         | 5010       | terperatures 607,60                         |
| W 10 KJ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Em Sh orais      |                                  | attering metrix                  | n aber     | 2 at a tempe         |            | \$50.00 was selected.                       |
| 0 baran-11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | andf/b-is        | v mat 1160                       | updated                          |            |                      | 5011       | temperatures 607,60                         |
| •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | W-75.            |                                  | attering matrix                  |            | 2 at a terror        |            | 50.00 was selected.                         |
| 0 avygen-16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | s endf/b-i       | v met 1276                       | uccisted                         |            | ,                    | 8016       | temperature 975.00                          |
| 0 oxygen-k                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                  | v met 1276                       | updated                          |            |                      | 6          | temperatures 607.60                         |
| 0 kr-83                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                  | B, 10B, 105, 106,                |                                  |            |                      | 360B3      | texperatures 975,00                         |
| Oresonence                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | data for this i  |                                  | •                                |            |                      |            | •                                           |
| Omes runbs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | er (a)           | <b>=</b> 82,202                  | temp                             | ereture(k  | ælvin)               | = 975.00   | 0                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | scatter signa    | <b>7.00</b> 4                    |                                  |            | r density            | = 1.210500 |                                             |
| Ospin facto                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                  | = 4988.190                       |                                  |            | n (a-bar)            | = 4.681220 |                                             |
| िलामा क्यां                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                  | <b>■ .0000000E+0</b>             |                                  | off come   | ction (c)            | = 3.42003  | IE-UI                                       |
| Othe absorber will be treated by the northeim integral method.  Omes of moderator-1 = 15,995 signs(per absorber atom)= 1,41053776+05                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                  |                                  |                                  |            |                      |            |                                             |
| Onese of no                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                  |                                  |                                  |            | DEL SONS= 1          | AIDS/EHO   |                                             |
| UNIQUE BOX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | I MILL DE CLEM   | CET DA LUE LOLD                  | heim integral me                 | vice.      |                      | ENTROP A   | 2                                           |
| Oness of moderator-2 = 257.953 signs(per absorber atom)= 1.575720E+05<br>Onderator-2 will be treated by the nordnein integral method.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                  |                                  |                                  |            |                      |            |                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                                  |                                  |            | •                    |            |                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                                  | as a 2-dimension account for spa |            |                      | mm         |                                             |
| ANTONE III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | zaioi wp         | miver would                      | menter in Ma                     | *:er #2/1  | = HEWH W-1           | •          |                                             |

```
Ograp
11
 res abs
 res fiss
 res scat
 -2.23005/E-03
 -1.760477E-03
 .000000E+00
 12
 2.166073E-02
 .000TOF+00
 9.896840E-03
 13
 .000000E+00
 -1.20446E-01
 -3.971379E-01
 4.78277E-05
 .000000E+00
 -1.723045E-05
Ocices rescrence integrals
 resolved
 1.44817E+02
Osborption
 fission
 .0000E+00

 eleased time

 .00 min.
0 kr-85
 mt= 102
 36095
 temeratures
 975.00
 mt=102
0 er-90
 updated 10/13/89
 38090
 temperature:
 975.00
 temperature= 975.00
0 y-89
 mt=102
 updated 10/13/89
 370B9
Oresonance data for this nuclide
Crass runber (a)
 88,142
 tenperature(kelvin)
 = 975.000
Opotential scatter signs =
 3.44
 lumped nuclear density
 = 1.0200%/E-05
Oppin factor (a)
 2
 78.664
 lum disersion (a-bar)
 = 4.6812201E-01
 = 3.4260261E-01
Oimer radius
 = .000000E+00
 dencoff correction (c)
Othe absorber will be treated by the norcheim integral method.
Oness of anderator-1 = 15.995
 signs(per absorber atom)= 1.6737141E+04
Onoderator-1 will be treated by the northein integral method.
Oness of moderator-2 = Z37.933
 signs(per absorber aton)= 1.8673432E+04
Oncerator-2 will be treated by the northein integral nethod.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1,0000
(traus
 res ebs
 res fiss
 res scat
 -2.549601E-06
 .000000E+00
 -1.696828E-04
 10
 -6,17066E-05
 .00000E+00 -1.739975E-04
Osicess resonence integrals
 resolved
 1.46419E-01
Osbsorption
 fission
 .0000E+00
- elapsed time
 .00 min.
0 27-95
 40093
 terperature= 975.00
 mt= 102
᠐ᢧᢦᡐ
 mt=102
 undeted 10/13/89
 4000%
 tenderature: 975.00
Orescrence data for this nuclide
Oness runber (a)
 93,100
 = 975,000
 temperature(kelvin)
 =
 = 1.6222953E-05
Opotential scatter signs = 3.779
 lumped nuclear density
 = 180.853
 lunp diseasion (a-bar)
 = 4.6812201E-01
Ospin factor (g)
Oirmer radius
 = .000000E+00
 dencoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
Oness of anticratur-1 = 15,995 signstper et
Ontderator-1 will be treated by the northein integral method.
Oness of anticrator-2 = 257,983 signs(per et
 signs(per absorber aton)= 1.052867E+04
 signs(per absorber atom)= 1.1743585E+04
Oncorator-2 will be treated by the norcheim integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding=1,00000
 res fiss
Grand
 res abs
 res scat
 -9.432010E-07
 .000000E+00
 -8.95780E-04
 .000000E+00
 -2.775020E-0B
 -3.13599E-05
Ococces resonance integrals
 resolved
Osbearption
 3,43817E-02
fission
 -00000E+00
 .00 min.

 elacsed time

 undated 10/13/89
 40095
0 25-95
 mt=102
 tencerature 975.00
 endf/b-iv met 1284
 40302
 terperature: 650.00
0 zircalloy
 updated 10/13/89
Oresonence data for this nuclide
 90,436
 = 650,000
Omess number (a)
 =
 temperature(kelvin)
 6.355
 lumped nuclear density
 = 4.2515602E-02
Opotential scatter signa =
```

```
Ospin factor (g)
 1.079
 lump chimansion (a-bar) = 5.4610002E-01
Oimer radius
 =4.7878999E-01
 denooff correction (c)
 = 5.034/637E-01
Othe absorber will be treated by the norcheim integral method.
Othis resorance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding=1,00000
(Carona
 res abs
 res fiss
 nes acat
 -1.780596E-03
 .00000E+00
 -1.286907E+00
 8
 -5.88373E-02
 Õ
 .000000E+00
 -2.675297E+00
 10
 -6.99988E-02
 .000E+00
 -1.601321E+00
 -1_BE3987E-01
 -7.920912E-01
 11
 .000000E+00
Opices rescrence interrals
 resolved
Orberption
 2.28539E-01
 fission
 .000E+00
 .02 min.

 elapsed time

0 rb-94
 mt=102
 undated 10/13/89
 41094
 temperature: 975.00
Oresonence deta for this nuclide
Orass runber (a)
 93,101
 temperature(lectvin)
 = 975.000
Occupial scatter signs =
 3.779
 lumed nuclear density
 = 7.557974Æ-12
 = 43808.801
Ospin factor (g)
 lump dimension (a-bar)
 = 4,6812201E-01
Oimer ractius
 = .0000000E+00
 dencoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
Oress of accterator-1 = 15.995
 signs(per absorber aton)= 2.265250E+10
Onchrator-1 will be treated by the northeir integral method.
Orass of moderator-2 = 257.953
 signs(per absorber atum)= 2.5275973E+10
Onchrator-2 will be treeted by the norchein integral method.
Othis rescreme material will be treated as a 2-diagrational object.
Oxolume fraction of lump in cell used to account for scatial self-shielding-1,00000
 res abs
1.033223E-02
(prom
 res fiss
 res scat
 .000000E+00
 9.2530B0E-04
 9.8%71ZE-03
 .00000E+00
 -4.064849E-04
Descess rescrence integrals
 resolved
Orbearation
 9.15001E+01
fission
 .0000E+00

 elapsed time

 .02 min.
0 mg-95
 at=102
 updated 10/13/89
 420075
 temperature= 975.00
Oresonence data for this ructide
Omes runber (a)
 94.091
 = 975.000
 temperature(læ(vin)
Opotential scatter signs =
 3.806
 lumbed nuclear density
 = 1.31678E-05
 607.7%
Ospin factor (g)
 =
 lumb dissension (a-bar)
 = 4.6812201E-01
Oirmer radius
 = .000000E+00
 demosf correction (c)
 = 3,4259251E-01
Othe absorber will be treated by the northein integral method.
Organs of anoderator-1 = 15.995
 signatoer absorber atomi= 1,2967796E+04
Occidenator-1 will be treated by the northeim Integral method.
Omes of moderator-2 = 257.953
 signe(per absorber atom)= 1.4468017E+04
Onchrator-2 will be treated by the norcheim integral method.
Othis rescrence naterial will be treated as a 2-dimerpional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1,0000
Grap
 res abs
 res fiss
 res scat
 10
 -2.82705E-03
 *000000E+00
 -1,666167E-02
 11
 -5.15448XE-03
 .000000E+00
 -8.60429ZE-03
 -3.70708/E+00
 12
 00+3000000,
 -4.25554E+00
 ß
 1.583319E-04
 .000000E+00
 -2.254974E-05
Ocicess resonance integrals
 resolved
Osbeanstian
 9.8ST0E+01
 -00000E+00
fission
- elapsed time
 .02 min.
0 65-99
 mt=102
 updated 10/13/80
 43099
 tenperatures 975,00
```

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Oresonence data for this ruclide
 98,150
 temperature(kelvin)
 = 975.000
Omes number (a)
 6.000
 lumped nuclear density
 = 1.5844425E-05
Opotential scatter signa =
 = 4577.940
 (uno dimension (a-bar)
 = 4.6812201E-01
Ospin factor (g)
 denoff correction (c)
 = 3.4269261E-01
Oimer radius
 = .0000000E+00
Othe absorber will be treated by the northein integral method.
Oress of moderator-1 = 15.995
 signs(per absorber aton)= 1.0777272E+04
Onoderator-1 will be treated by the northeim integral method.
 signs(per absorber atom)= 1.2024076E+04
Ottess of moderator-2 = 257.953
Omderator-2 will be treated by the northern integral method.
Othis rescrence material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.00000
 res abs
Ograp
 res fiss
 res scat
 .00000E+00
 -9.611921E-03
 -2.033773E-02
 11
 -5.33800E-03
 .00000E+00
 -1.85397E-04
 12
 Ĭ
 .000000E+00
 -1.747611E-02
 -3.317793E-01
 ŭ
5
 -2.2748XE-01
 -7.128074E+00
 .00000E+00
 -5.3923985-04
 .000000E+00
 1.070/20E-02
 .000000E+00
 -2.802079E-04
 4,836007E-03
 16
 17
 2.073733E-04
 _00000E+00
 -1.19105/E-05
Opposs resorance integrals
 resolved
 3.25/62=102
Debsarption
 fission
 .0000E+00
 .OS min.
- elapsed time
 temperature: 975.00
 updated 10/13/89
 44101
0 ru-101
 at=102
Oresonence data for this ruclide
 = 975.000
 100.039
 temperature(kelvin)
Omes runber (a)
 = 1.4230770E-05
 lumped nuclear density
Opotential scatter signs =
 3.95
 lump dimension (a-bar)
 = 4_6812201E-01
 = 8785.200
Dispin factor (g)
 = 3.4269261E-01
 dinoff correction (c)
Oinner radius
Othe absorber will be treated by the northein integral method.
 signs(per absorber aton)= 1.199333E+04
Ones of moderator-1 = 15.995
Oxoderator-1 will be treated by the norchein integral method.
Oxes of anderator-2 = ZS7.933 signs(per al
 signs(per absorber aton)= 1,3387510E+04
Oncderator-2 will be treated by the northein integral nethod.
Othis resorance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.00000
 res fiss
 res scat
grap
 nos abs
 -3.67297 E-CB
 11
 -3.63/3/3E-02
 _000000E+00
 .00000E+00
 -2.812K58E-02
 -1.05/XXXE-01
 12
 .00000E+00
 -1_028591E-02
 13
 -3.81915Œ-01
 2.372863E-04
 .000000E+00
 -4.161137E-05
Occas resorance integrals
 resolved
Orbeanstian
 7.93820E+01
 .0000E+00
 fission
 - elapsed time
 .CS min.
 uzzktod 10/13/89
 44106
 temperatures 975.00
0 ru-105
 mt=102
 mt=102
 undeted 10/13/89
 45103
 temperatures 975.00
0 rtr-103
Orescrence data for this ruclide
 = 975.000
 = 102,021
 temperature(kelvin)
Omes (ruber (a)
 = 8,515/319E-06
 lunced nuclear density
Occupial scatter signs =
 5,408
 lump dimension (a-bar)
 = 4,6812201E-01
 .500
Ospin factor (g)
 derpoff correction (c)
 = 3.4269261E-01
Oimer radius
 = .00000E+00
Othe absorber will be treated by the northein integral method.
 signe(per absorber attm)= 2.0052971€+04
Oness of antierator-1 = 15.995
Omnierator-1 will be treated by the northeim integral method.
Oness of auderator-2 = 257.933
 signe(per absorber atun)= 2.23728516+04
Oncderator-2 will be treated by the norchain integral method.
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INFORMATION ONLY
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Othis rescretce material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for scatial self-shielding-1.0000
 res fiss
Caroas
 res abs
 res scat
 .000000
 1.2377/E-03
 1.9425/E-03
 -3.50902E-03
 .000000E+00
 -4.890561E-03
 10
 11
 -1.69751Æ-02
 _00000E+00
 -1.499881E-02
 -2.1598/Æ-05
 12
 -2.625307E-0%
 .00000E+00
 13
 .000000E+00
 .000000E+00
 _00000E+00
 00000E+00
 -000000E+00
 .000000=+00
 15
 2.28105E-01
 .000000E+00
 3.28402/E-03
 3.3297/DE+01
 -6.20861/E-02
 16
 -000000E+00
 17
 _000000E+00
 -1.574399:-01
 -1.852185E+02
 18
 8.714719E+01
 .000000E+00
 2.610259E-01
 19
 1.148543-101
 .00000E+00
 -1.472393E-03
 1.0870BE+00
 മ
 .000000E+00
 -2.47056E-0B
 21
 2.1658SE-01
 .00000E+00
 1.92500E-0B
 2.583939E-01
 .00000E+00
 2.92852/E-03
 .000000E+00
 1.798960E-03
 23
 -9.87989E-02
Descess resonance integrals
 resolved
Osbearption
 1.14672E+03
fission
 .0000E+00
- elapsed time
 .07 min.
 45105
 temperature= 975.00
0 rh-105
 mt= 102
0 pd-105
 46105
 temperature= 975.00
 nt=102
 undeted 10/13/89
Oresonence data for this ruclide
 = 975.000
Oness runber (a)
 = 104.004
 temperature(kelvin)
 lumed nuclear density
 = 5.2778959E-05
Ocotential scatter signs = 4.069
 = 15210,000
 = 4.6812201E-01
Opoin factor (g)
 lusp dimension (a-bar)
 = 3.4269261E-01
Oimer radius
 = .000000
 denself correction (c)
Othe absorber will be treated by the northein integral method.
 signs(per absorber atom)= 3.253792+04
Omes of moderator-1 = 15.995
Omotorator-1 will be treated by the northeim integral method.
Omes of ecclerator-2 - = 257,953 signs(per al
 signatoer absorber atomi= 3.609675/E+04
Oncderator 2 will be treated by the northein integral method.
Othis rescrence material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for scatial self-shielding-1.0000
 res fies
Orap
 res abs
 res acat
 12
 -5.613977E-02
 .000000E+00
 -1.339/37E-03
 -1.381487E-02
 ũ
 .000000E+00
 -6.985314E-04
 7.769155E-04
 .000000E+00
 -8.145498E-05
 14
Ocioces rescreme integrals
 resolved
Oabsorption
 6.12K33E+01
fission
 .0000E+00
- elapsed time
 .07 min.
 updated 10/13/89
 temperature: 975.00
0 pd-108
 mt=102
 4610B
Oresonance deta for this ruclide
 = 975.000
Chass runber (a)
 = 106.977
 temperature(kelvin)
Opotential scatter signs =
 4.146
 lurped nuclear density
 = 1.37557E-05
 = 21175.100
Ospin factor (g)
 lum dimension (a-bar)
 = 4.6812201E-01
 = .0000000
 dencoff correction (c)
 = 3.4259251E-01
Oimer radius
Othe absorber will be treated by the nurcheim integral method.
Oracs of moderator-1 = 15.995
 signs(per absorber atom)= 1.225271E+05
Oppderator-1 will be treated by the northern integral method.
Orace of anderstor-2 = 257.953
 signs(per absorber atunt)= 1.36/3061E+05
Omobrator 2 will be treated by the norcheim integral method.
Othis recommon material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.0000
Outroup
 res abs
 res fiss
 res scat
```

```
11
 1.170B02E-04
 _00000E+00
 3.5320295-04
 12
 -1.263694E+00
 .000000E+00
 -9.304958E-01
 Ī
 6.8/A//E-03
 .000000E+00
 1.84450E-03
 8.5612/CE-C2
 .000000=+00
 -3.207809E-05
 15
 -1_8/070/E-01
 .000000E+00
 8.083708E-05
 16
 2.94590E-04
 _000000E+00
 -9.2567XE-06
Opicess rescremce internals
 resolved
Osbeanstian
 2.12560E+02
 fission
 .00000E+01

 elassed time

 .07 min.
0 silver-109 endf/b-iv met 1139
 undated 10/13/89
 47109
 temperature= 975.00
Oresonance data for this ruclide
Omes runber (a)
 = 107,969
 temperature(kelvin)
 = 975.000
Opotential scatter signs =
 4.988
 = 9.89758976-07
 lumbed nuclear density
 = 1441.870
Ospin factor (g)
 lump dimension (a-bar)
 = 4.6812201E-01
Dirner radius
 * .000000=+00
 denoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
Oness of moderator-1 = 15.995
 signature absorber atoms 1.752651-05
Onodorator-1 will be treated by the norcheim integral method.
 signe(per absorber atom)= 1.98/8583E+05
Ownes of moderator-2 = 257.953
Omoderator-2 will be treated by the northein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for scatial self-shielding-1.00000
(caroup
 res abs
 res fiss
 res scat
 -9.78549E-05
-4.345754E-03
 .00000E+00 -9.22540BE-05
 10
 11
 .00000E+00
 -3.2239 E-03
 -3.34360E-02
 12
 -7.1988/E-01
 .00000E+00
 Ĩ
 7.67046E-01
 _000000E+00
 3.380743E-02
 -9.331539E+00
 .000000E+00
 -8.74114ZE-01
Cercess reconance integrals
 resolved
Osbsorption
 1.39101E+03
 fission
 .0000E+00
 .07 min.

 elaced time

 51124
0 sb-124
 undated 10/13/89
 mt=102
 tenperature= 975.00
0 xe-131
 mt=102, 103, 104, 105, 106
 uzdated 10/13/89
 54131
 temperature 975.00
Oresonence data for this ruclide
 = 975.000
Omes runber (a)
 = 129.781
 temperature(kelvin)
Occupial scatter signs =
 lurped nuclear density
 = 7.3108020E-06
 4.301
 lum dinersion (a-ber)
Ospin factor (g)
 = 26.825
 = 4.6812201E-01
Oimer natius
 .000000000
 dencoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northeirs integral method.
Orness of moderator-1 = 15.995
 signs(per absorber atom)= 2.3357174E+04
Oncderator-1 will be treated by the norchein integral method.

Oness of acclerator-2 = 257.93 signs(per al
 signs(per absorber atom)= 2,605/85//E+0%
Oxoderator-2 will be treated by the norcheira integral method.
Othis rescrence material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for scatial self-shielding-1.0000
 res fiss
Grap
 res abs
 res scat
 -2.15447Æ-05
 -2.310630E-06
 .000000E+00
 10
 -1.586759E-04
 .0000000
 -1.347479E-04
 11
 -1.953774E-03
 .00000E+00
 -1.45/92ZE-03
 12
 -3.751650E-02
 .000000E+00
 -3.49601 E-0B
 -6.002438E+01
 -1.407479E+02
 13
 .0000000E+00
 1.505/69E-02
 1.07374EE-02
 .000
Ocices resonance integrals
 resolved
Oabscription
 7.703395+02
 .0000E+00
fission
```

```
• elapsed time .08 min.
0 pe-12 mt=102,108
 mt=102,103,104,105,106
 ucdated 10/13/89
 54132
 temperature= 975.00
Oresonence deta for this nuclide
Oness runber (a)
 = 975,000
 = 130,771
 temperature(kelvin)
 = 1.32599E-05
Opotential scatter signa =
 4.301
 lumped nuclear density
 = 675.899
 = 4_6812201E-01
Ospin factor (g)
 lum dimension (a-ber)
Oirmer rectius
 = .00000E+00
 dencoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the norchein integral method.
Omes of moderator-1 = 15,995
 signs(per absorber aton)= 1.29109690+04
Oncolerator-1 will be treated by the norcheim integral method.
Oness of moderator-2 = 257.953
 signs(per absorber atom)= 1.4404619E+04
Oncderator-2 will be treated by the northeim integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1.00000
Oppose
 nes abs
 res fiss
 res acat
 -2.052219E-05
 .000000E+00
 -9.309781E-05
 10
 -6.25887E-03
 .00000E+00 +7.967991E-02
 11
 3.345203E-08
 .000000E+00
 -9.291076E-07
Opicess resonance integrals
 resolved
Osbsarption
 9.7372E-01
 fission
 .00000E+00
 .08 min.

 elapsed time

 54155
0 xeron-135
 endf/b-iv met 1294
 undated 10/13/89
 temperature:
 nt= 102, 103, 104, 105, 107
erati/to-iv met 1141
 54136
 temperature= 975.00
0 \times -136
 undeted 10/13/89
 55133
 temperature 975.00
0 cesium-133
Oreschence data for this ruclide
 = 975,000
 temperature(kelvin)
Omess number (a)
 = 131.764
 = 1.7573/61E-05
Ocotential scatter signs =
 7.100
 lurged nuclear density
Ospin factor (g)
 374,437
 lump dimension (a-bar)
 =4.6312201E-01
 = 3.4260261E-01
 = .000000E+00
Oimer radius
 dencoff correction (c)
Othe absorber will be treated by the norcheim integral method.
Owes of moderator-1 = 15,995
 signaturer absorber atom)= 9.8287666E+03
Onoderstor-1 will be treated by the northein integral method.
 signa(per absorber atom)= 1.0542541E+04
Omess of moderator-2 = 258.061
Onchretor-2 will be treated by the northeim integral method.

Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.00000
(Darroto
 resabs
 res fiss
 res acat
 .000000E+00
 -3.15250Æ-04
 4.87167E-05
 -2.382956E-08
 10
 .00000E+00
 -4.567832E-08
 11
 -8.9489EE-02
 .00000E+00
 -1.5661E-01
 12
 -1_386060E-01
 .000000E+00
 -1.9292972-02
 -2.3047Z/E-01
 13
 .000000=+00
 -1.75/5/E-02
 -4.436112E-01
 14 15
 -1.013023E+01
 .000#E+00
 _000000E+00
 -4.05074E-04
 5,625127E-03
 2.777900E-03
 16
 _000000E+00
 -2.25ZE-04
 17
 2.35220/E-03
 .000000E+00
 -1.830751E-04
 2.21505/E-03
 .000000E+00
 -1.67954E-04
 18
 1,317312E-05
 .00000E+00
 -9.676/53E-05
 19
Ocucess resonance integrals
 resolved
Osbsarption
 3.5385/E+02
 fission
 .0000E+00
 .10 min.

 elapsed time

 975,00
0 cs-134
 updated 10/13/89
 tenperature=
 mt=102
 35 (35
 975.00
 mt= 102
 temperatures
0 cs-135
 mt=102
 55137
 975.00
 updated 10/13/89
 DESCRIPTION OF THE PROPERTY OF
0 cs-137
 56136
 undeted 10/13/89
 tomograture=
 975.00
0 bar 136
 mt=102
Oresonence data for this ruclide
```

```
= 134.737
 = 975.000
 temperature(kelvin)
Omess runber (a)
 lumped nuclear density
 = 1.314782ZE-07
Opotential scatter signs =
 4.835
 = 4.6812201E-01
Oppin factor (g)
 = 1247.690
 lum diameion (a-bar)
 = .0000000
 dencoff correction (c)
 = 3.4269261E-01
Oimer radius
Othe absorber will be treated by the northeim integral method.
 signe(per absorber atom)= 1.287680E+06
Oness of moderator-1 = 15.995
Oxylerator-1 will be treated by the rorchein integral method.
Omes of moderator-2 = 257.953
 signe(per absorber atom)= 1.4490201E+06
Oncderator-2 will be treated by the norcheim integral method.
Othis rescrence material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.00000
 res fiss
 res scat
Oproup
 res abs
 5.099283E-07
 1.19525E-06
 .000000E+00
 10
 11
 4.140539E-07
 .00000E+00
 7.002787E-07
Descess resorance integrals
 resolved
Orbearction
 1.38473E+00
 .0000E+00
 fission
 .10 min.
- elapsed time
 updated 10/13/89
 5739
 temperatures 975.00
0 La-139
 nt=102
Oresonence data for this nuclide
 temperature(kelvin)
 = 975.000
Omnes runber (a)
 = 137.713
 = 1,6736218E-05
 lumped nuclear density
Contential acatter signs =
 4.906
 = 145.855
 lump dimension (a-bar)
 = 4.6812201E-01
Ospin factor (g)
Oimer radius
 dencoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northelm integral method.
 signs(per absorber atom)= 1.020500/E+04
Oness of nuclerator-1 = 15.995
Onoderator-1 will be treated by the norcheim integral method.
Omes of moderator-2 = 257.953
 signatoer absorber atomo= 1.1383371E+04
Occidenter-2 will be treated by the northein integral method.
Othis rescrence material will be treated as a 2-dimensional object.
Oxolune fraction of lump in cell used to account for spatial self-shielding=1.0000
Grap
 res abs
 res fiss
 res scat
 4671E-07
 1.283E-08
 -00000E+00
 -3.35573ZE-04
 -1.9895WE-02
 10
 -000000E+00
 11
 .00000E+00

 12
 -5.73988E-02
 -00000E+00
 -3.466246E-02
Opposes resonance integrals
Debearption
 8.08078E+00
 fission
 .000E+00
 .12 min.

 elected time

 nt= 102
 temperatures
0 ce-144
 nt=102, 108, 104, 105, 106, 107
 temperatures 975.00
0 pr-141
 updated 10/13/89
 59141
Oresonence deta for this nuclide
 temperature(kelvin)
 = 975.000
Omes runber (a)
 = 139.697
 lumped ruclear density
 = 1.431331ZE-05
Occupital scatter signs =
 4.953
 = 1026,500
 lump diamension (a-bar)
 = 4,6812201E-01
Ospin factor (g)
 = 3,4269261E-01
Oimer radius
 = .000000E+00
 dencoff correction (c)
Othe absorber will be treated by the northeim integral method.
 signs(per absorber aton)= 1.19301316+04
Oness of moderator-1 = 15.995
Onchrator-1 will be treated by the norcheim integral method.
 signs(per absorber atom)= 1.331030/E+04
Omess of moderator-2 = Z57.953
Oncderator-2 will be treated by the norcheim integral method.
Othis resonance material will be treated as a 2-dimensional object.
Occlure fraction of lump in cell used to account for spatial self-shielding-1.0000
Ograp
 res abs
 res fiss
 res scat
 -5.60910E-03
 .00000E+00
 -1.904915E-01
 10
 -1.226/89E+00
 11
 -9.22577Æ-02
 .000000E+00
 _0000E+00
 -2.041713E-04
 -2.091378E-03
```

```
Ocioces resonance integrals
 nesolved
Observation
 1.213532+01
 .00000E+00
 fission
- elapsed time
 .12 min.
0 pr-143
 mt=102
 undated 10/13/89
 temperatures 975.00
0 H-143
 mt=102
 ucdated 10/13/89
 60143
 temperature= 975.00
Oresonence data for this nuclide
Omesa number (a)
 = 141.682
 temperature(kelvin)
 = 975.000
 = 1.3377578E-05
Opotential scatter signs =
 5.000
 lumed nuclear density
Ospin factor (g)
 = 1964.860
 iumo disension (e-bar)
 = 4.6812201E-01
Dirner radius
 = .000000E+00
 dereoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northein integral method.
 signa/per absorber atom= 1.2764813E+04
Omes of moderator-1 = 15,995
Oxoderator-1 will be treated by the northein integral method.

Oxos of moderator-2 = 237.933 signe(per el
 signatoer absorber atomi= 1.4241551E+04
Ommerator-2 will be treated by the norcheim integral method.
Othis resonance material will be treated as a 2-diameteral object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1.0000
Group
 res fies
 res abs
 res acat
 -1.33262E-04
 .000000E+00
 -6.817683E-05
 10
 11
 -3.12253/E-01
 .00000E+00
 -3.6297XE+00
 -2.059/21E-01
 .000000E+00
 12
 -1.0B03E-01
Opicess resonance integrals
 resolved
 5.07073E+01
Ozbeanstian
 fission
 .000E+00
 .12 min.

 elapsed time

0 rd-145
 undated 10/13/89
 mt=102
 temperature 975.00
Oresonence data for this nuclide
 = 143,668
 = 975.000
Omes ruater (a)
 temperature(lectvin)
Opotential scatter signs =
 5.047
 = 9.7710117E-06
 lumbed nuclear density
Ospin factor (g)
 = 1007.250
 lum disersion (a-ber)
 = 4.6812201E-01
 # .00000F+00
 dencoff correction (c)
 = 3.4259261E-01
Oimer radius
Othe absorber will be treated by the northeim integral method.
Oness of moderator-1 = 15.995
 signs(per absorber atom)= 1.7476152E+04
Occurrator-1 will be treated by the northelm integral method.

Occurrator-2 = 257.953 signs(per elements)
 signs(per absorber atom)= 1,949758E+04
Occurator-2 will be treated by the norcheim integral method.
Othis resonence material will be treated as a 2-dimensional object.
Ording fraction of lump in cell used to account for spatial self-shielding 1.0000
 res fiss
 res scat
Ograp
 res abs
 -3.969052E-03
 .000000E+00
 -6.23050E-02
 10
 11
 .000000E+00
 -6.007329E-02
 -1.81761ZE-01
 12
 -1.457763E+00
 .000000E+00
 -9,188076E+00
 Ĩ
 9.59000E-05
 .000000E+00
 2.0°256E-04
 14
 .0000000
 -3,478257E-02
 -1_3228E+00
 15
 5,901529E-03
 .000000E+00
 4.614201E-04
 16
17
 1.326679E-03
 .000000E+00
 -1.451290E-04
 9.642597E-04
 -1.06874/E-04
 .0000000E+00
 18
 8.537752E-04
 .000000E+00
 -9.31430E-05
 19
 7.634157E-04
 .0000000
 -8.07000/E-05
 2.839149E-05
 .000000E+00
 -2.919262E-06
 20
Occase rescrence integrals
 resolved
 2.066752+02
Osbsorption
fission
 .00000E+00
 .nim 27.
 elepsed time
0 nd 147
 mt=102
 undsted 10/13/89
 975.00
 temperature-
0 pm-147
 mt=102
 updated 10/13/89
 temperatures 975.00
```

```
Oresonence data for this ruclide
 = 975.000
Omes runber (a)
 temperature(kelvin)
Ocotential scatter signs *
 = 3.643130/E-06
 5.073
 lumped nuclear density
Ospin factor (g)
 = 21589,500
 lump dimension (a-bar)
 = 4.6812200F-01
Oimer radius
 = .000000E+00
 dencoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
Oness of moderator-1 = 15.995
 signs(per absorber atom)= 4.68716750+04
Oroderator-1 will be treated by the northern integral method.
Omes of moderator-2 = 257.953
 signs(per absorber atom)= 5.2294199E+04
Omoderator-2 will be treated by the northern integral method.
Othis resonance auterial will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for scatial self-shielding-1.00000
 res fiss
apt0
 res abs
 res scat
 12
 -1_823/80E-01
 .00000E+00
 -5.E51357E-02
 -2.6887Z7E-08
 -4.676967E-02
 .00000000
 .000000E+00
 -3.5482/1E+01
 -8.233029E+01
 ö
 .000000E+00
 4.1256/E-02
 6.97866/E-03
 ĸ
 1.697942E-02
 .000000E+00
 1.746660E-03
 17
 1.36977Æ-02
 1.150/6/E-05
 CO+300000,
 18
 1,23757E-02
 .00000E+00
 9.640077E-04
 19
 6.9988E-04
 .000-1000
 5.070170E-05
Ocices resonence integrals
 resolved
Osissantian
 2.0152/2+03
fission
 -0000E+00
- elapsed time
 .13 min.
 61148
0 pm-148
 mt= 102
 tenceratures
 975.00
0 sm-147
 updated 10/13/89
 975.00
 endf/b-v fission product
 temperatures.
Orescrimos data for this ruclide
Ottages number (a)
 = 145.653
 temperature(kelvin)
 = 975.000
 5.073
Occupial scatter signs =
 lumped nuclear density
 = 1.0192879E-06
Ospin factor (g)
 .m
 lump dimension (a-bar)
 = 4.6812201E-01
 * .000000E+00
Oimer radius
 dencoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the norchelm integral method.
 signe(per absorber atom)= 1.6752842E+05
Oness of accierator-1 = 15.995
Omoderator-1 will be treated by the norderin integral method.
Omes of acclarator-2 = 257.953
 signe(per absorber atom)= 1,8590948E+05
Onoderator-2 will be treated by the norcheim integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1.0000
grap
 res aba
 res fiss
 res scat
 1.085160E+00
 . 11
 2.76702E-01
 _0001
 12
 9.978251E-01
 _000000E+00
 -1,4988(3E+00
 Ī
 -3.338374E+00
 .000000E+00
 -1.778746E+00
 145
 -3.34XAE-01
 -3.189418E-0B
 -1.91195Æ-03
 3.115590E-01
 .00000E+00
 .000000E+00
 16
 7.267758E-03
 -3.73XOZE-04
 17
 4.281449E-03
 .00000E+00
 -2.4015EE-04
 18
 3.510413E-03
 .000000E+00
 -1.997200E-04
 19
 2.91059E-03
 -1.647500E-04
 .0000000
 20
 8.434580E-04
 .0000000
 -4.62639/E-05
Occass resonance integrals
 resolved
Debsarption
 7.22673E+02
 .00000E+00
fission

 elapsed time

 . 75 min.
 thereal scattering matrix rusber 3 at a temperature of 900.05 was selected.
 mt=102, 103, 107
 updated 10/13/89
 62149
 temperatures 975.00
Orescrence data for this nuclide
Omes runber (a)
 temperature(los/vin)
 = 975.000
```

enformation only

```
Opotential scatter signs = 3.260
 = 8,4040255E-08
 lumed nuclear density
 = 10/07.900
 lup dimersion (e-ber)
 = 4_fB12201E-01
Oppin factor (a)
 = 3.4260XE-01
Oirmer rection
 = .000000E+00
 denote correction (c)
Othe absorber will be treated by the northein internal method.
 signs(per absorber atom)= 2.0816621E+06
Onese of moderator-1 = 15.995
Considerator-1 will be treated by the northein integral method.
Once of moderator-2 = 257.953 signafor shorter atom= 2.266/015E-06 Oncearator-2 will be treated by the northein integral method.

Other resonance material will be treated as a 2-dimensional object.
Oxolumn fraction of lump in cell used to account for scatial self-shielding-1.0000
 res abs
 res fies
(Data)
 res scot
 11
 8.5/4/OFE-03
 .00000E+00
 3.0711692-02
 -5.476413E-02
 .0000000
 -1,8105565-01
 12
 00000E+00
 2.8/0/07E-03
 2.3182532-02
 00000E+00
 -7.57228E-03
 5.7777KE-CB
Caucas resonance integrals
 resolved
Opportion
 BL0/3337E+02
 .0000=00
 fission
 . 15 min.

 elassed time

 temperatures 975.00
 62150
0 cm 150
 mt=102
 updated 10/13/89
Oresonence dista for this nuclide
 = 975.000
Cases ruster (a)
 VR.629
 temperature(belvin)
 lurged nuclear density
 = 3.35632BE-06
Ocotential scatter signs =
 5.162
 = 4376,420
Ospin factor (a)
 lup disesion (a-bar)
 = 4_6812201E-01
 = 3.429261E-01
 denorif correction (c)
Cirrer redice
 = .000000±000
Othe absorber will be treated by the northein integral method.
 signs(per shorter ston)= 5.0976/80E+04
Oness of moderator-1 = 15.975
Occurator 1 will be treated by the nurthele integral method.
Occurs of enderetor 2 = 257.953 signs(per et
 signs(per ebsorber atom)= 5.6762780E+04
Opposite to 2 will be treated by the northeim integral method.
Othis resumme enterial will be treated as a 2-discussional chiect.
Occlume fraction of lump in call used to account for spatial self-shielding-1.0000
Gran
 res ebs .
 res fice
 res ecat
 -1.140480E-03
 -1.081808E-02
 .000000E+00
 -2.52677E-02
 .00000E+00
 -2.863/82E-01
 11
 -2.48/979E-02
 12
 -8.22210EE-02
 .00000E+00
 .00000E+00
 -LATERIE-CO
 Ü
 -5.8500E+00
 1.05/50:-04
 1000000E+00
Ocuces resonence interrols
 resolved
 2.88271-02
Obscription
 .00000E+00
 fission
 .15 min.
 element time
 mt=102, 103, 104, 105, 106, 107
 undeted 10/13/80
 tesperature 975.00
0 -- 151
Oresonence data for this rucilide
 = 149.623
 temerature(belvin)
 = 975.000
Omes runber (a)
 lumed ructor density
 = 3.6996007E-07
Outantial acetter signs =
 lup diameion (a-bar)
 = 75574.703
 = 4.6812201E-01
Ospin factor (p)
 = .000000E+00
 direction (c)
 = 3.425061E-01
Crimer redicts
Othe shorter will be treated by the northeim integral method.
uness or moverecor-1 = 15.95 signs(per shorter ston)= 4.6288942405
Onoderstor-1 will be treated by the morchein integral method.
 signa(per absorber atom)= 5.16/9550E+05
Omes of moderator-2 = 257.933
Oxoderator 2 will be treated by the northein integral method.

Other resonance asterial will be treated as a 2-disensional object.
Oxcluse fraction of lusp in cell used to account for spatial self-shieldings1.0000
 res abs
 res fies
 res acat
Groro
 -2.1193BSE-01
 .00000E+00
 -2.09790/E-02
 15
 1.48742E+01
 .000000€+00
 7.52795E-02
```

```
16
 -2.180708E+01
 .00000E+00 -6.198250E-02
 17
 1.7367282+02
 .000000E+00
 8.278137E-01
 18
 -3.2053/0E+02
 .000000E+00
 -1.783263E+00
 19
 6.2545835+01
 .0000000
 3.867909E-01
 20
 1.1412BYE+00
 .0000000
 -1.40055E-04
 21
 -7.11770/E-02
 .000000E+00
 1.244100E-02
 22
 6.952549E-02
 .000000E+00
 3.838918E-03
 23
 -1.091917E-02
 .000000E+00
 3.37404E-04
Descess resonence interrals
 resolved
 2.0563(E+03
Debarotion
 .00000E+00
fission
- elapsed time .15 min.
0 sp 152
 mt=102, 103, 104, 105, 106, 107
 undated 10/13/89
 temperature= 975.00
Orescrence data for this ruclide
 = 150.615
 = 975,000
Omess number (a)
 temperature(kelvin)
Octential scatter signs = 5.208
 lumped nuclear density
 = 1.631/02/E-06
 = 853.574
Ospin factor (g)
 lum dimension (a-ber)
 = 4.6812201E-01
 = .0000000E+00
 = 3.4269261E-01
Oirmer ractius
 dercoff correction (c)
Othe absorber will be treated by the northeim integral method.
 signa(per absorber aton)= 1.0467042E+05
Oness of moderator-1 = 15.995
Oxoderator-1 will be treated by the norchein integral method.
Oness of accierator-2 = 237.933
 signe(per absorber aton)= 1.1677%(1E+05
Oroderator 2 will be treated by the northern integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spetial self-shielding-1.0000
 res fiss
Ottach
 nes abs
 res scat
 2.402817E-06
 .00000E+00
 1.15871Œ-04
 -2.03\39E-02
 10
 -1.29578/E-03
 .000000E+00
 ij
 -1,8544E-02
 .000000E+00
 -7.182702E-02
 12
 -1.270521E-01
 .000000E+00
 -4.0325/E-01
 ß
 4.204180E-02
 .000000E+00
 1.022/2E-01
 -1.129951E+02
 .000000E+00
 -2.182995E+02
Opices resonerce integrals
 resolved
Orbearotion
 2.76/91EHCS
fission
 .0000E+00
- elapsed time
 .17 min.
 mt=102, 103, 104, 105, 106, 107
0 au-153
 underted 10/13/89
 tencerature 975.00
Oresonence data for this rucilide
Omess number (a)
 = 975.000
 = 151.607
 temperature(kelvin)
 = 9.0525670E-07
Opotential scatter signs = 9.731
 lumed nuclear density
 = 1225.900
 =4,6812201E-01
Ospin factor (g)
 lusp dimension (a-bar)
Oimer radius
 = .0000000E+00
 dercoff correction (c)
 = 3.4259261E-01
Othe absorber will be treated by the northeim integral method.
Oness of auderator-1 = 15.995
 signe(per absorber atum)= 1.890/891E+05
Oncerator-1 will be treated by the northern integral method.

Ones of moderator-2 = 257.953 signe(per ab
 signe(per absorber atum)= 2,107196/E+05
Omderator 2 will be treated by the norchein integral method.
Othis rescrence material will be treated as a 2-diameteral object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1.00000
 res fiss
General
 res abs
 res scet
 -2.856052E-01
-1.361445E-01
 -5.57574E-02
-4.143751E-03
 .000000
 13
 .000000E+00
 -7.920873E-01
 .000000E+00
 -1,00/3/3E-06
 15
 1.863243E+00
 .000E+00
 -3.434VE-02
 16
 -3.29755/E+00
 .000000E+00
 8.156992E-03
 17
 1.5059E-01
 .00000E+00
 -3.437752E-03
 18
 7.726870E-02
 .00000E+00
 -2.231252E-03
 -1.541113E-03
 5.05447E-02
 .000000E+00
```

```
-1.25390/E-01
 .00000E+00 -1.275023E-05
Occess rescretce integrals
 resolved
Oabsorption
 1.35457E+0B
 .0000E+00
fission
- elapsed time
 .17 min.
 temperatures 975.00
 mt=102,103,104,105,106,107
 undeted 10/13/89
 63154
0 au-154
Oresonence data for this nuclide
 = 975.000
Oness number (a)
 = 152.601
 tencerature(kelvin)
 = 1.6887889E-07
Occupial scatter signs = 9.731
 lunged nuclear density
 = 19135,801
 = 4.6812201E-01
 lump dimension (a-bar)
Ospin factor (g)
Oimer rectius
 = .000000E+00
 dencoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northern integral method.
 signe(per absorber atum)= 1.0419873E+06
Oness of moderator-1 = 15.995
Omcerator-1 will be treated by the norche in integral method.

Omes of moderator-2 = 257.953 signs(per st
 signs(per absorber atun)= 1.1625330E+06
Oncerator-2 will be treated by the northern integral method.
Othis rescrerce material will be treated as a 2-dimensional object.
Oxcluse fraction of lusp in cell used to account for spatial self-shielding-1,00000
Ograp
 res abs
 res fiss
 res scat
 -3.904129E-01
 -6.094527E-02
 12
 .000000E+00
 Ü
 -3.13509EE-01
 .000000E+00
 -2.475858E-02
 14
 3.300923E-01
 .000000E+00
 1,465073E-02
 1.597103E-01
 .0000E+00
 2,077988:-02
 16
 7.2146YE+00
 000000E+00
 9,2339338-02
 17
 -1,440717E+02
 .000000E+00
 -1,896719E+00
 18
 1.135982=+02
 .000000E+00
 1,8582016+00
 19
 -1.014681E+02
 _000000E+00
 1.18730/2+00
Osicess resonance integrals
 resolved
Osbsorption
 2.1366/E+03
fission
 .0000E+00
 .18 min.

 elapsed time

 00.cive service statement
0 eu-155
 mt=102,108,104,105,106,107
 updated 10/13/89
 ക്ക
 temperatures 975.00
 mt=102
 updated 10/13/89
 64 ES
0 00+155
Orescrence data for this ruclide
 = 153,592
 temperature(icelvin)
 = 975.000
Omes ruther (a)
 luped nuclear density. = 1.6370191E-09
Opotential scatter signa = 5.277
Ospin factor (g)
 = 12700,100
 lum dimension (a-ber)
 = 4,6812201E-01
 = 3.4269261E-01
 # .000000E+00
 denicoff correction (c)
Cirner rectius
Othe absorber will be treated by the northein integral method.
Oress of acclerator-1 = 15.995
 signs(per absorber atom)= 1.0431136E+08
Oncorator 1 will be treated by the nurcheim integral method.
Omes of moderator 2 = 257.953 signa(per a
 signs(per absorber atom)= 1.163/895E+08
Oroclerator-2 will be treated by the northern integral method.
Othis rescrence enterial will be treated as a 2-dimensional object.
Oxclume fraction of lump in cell used to account for spatial self-shielding-1.0000
 res fiss
Grap
 res abs
 res acat
 -1.43930/E+00
 .0000000
 -1,83X7ZE-01
 ĭš
 1,5411650+00
 .000000E+00
 1.95090E-01
 14
 2.190007E-01
 .000000E+00
 9.80501/E-03
 -3.33455Æ-01
 .000000E+00
 -7.1971ZE-05
 16
 1,477585+00
 .000000E+00
 -4.148851E-03
 1,5686682-01
 _000000E+00
 -1.4791/ZE-03
 17
 9.605140E-02
 .000000E+00
 -1_078062E-08
 18
 19
 6.29532XE-02
 .000000E+00
 -8.025477E-04
 20
21
 1.670/80E-02
 .000000E+00
 1.626478E-04
 ,000000E+00
 _00000E+00
 -0000E+00
 22
 .000E+00
 _000000E+00
 .0000000
 .000000E+00
 .000000E+00
 .000000E+00
```

```
8
8
8
 .000000E+00
 .000000E+00
 .00000E+00
 .000000E+00
 -2.127812E+03
 -1.622019E+00
 -5.205677E+03
 .00000E+00
 1.961/83=100
 Ī
 -1.6599B/E+03
 .000000E+00
 7.3926E-01
Descess resonence interrals
 resolved
 3.97045E+04
Osbsorption
 .00000=+00
fission
- elepsed time .18 min.
0.234 1043 sign-54 resolacs p-3 28k f-1/e-m(1.+5)
 temerature: 975.00
Oresonence data for this nuclide
Orges runber (a)
 = Z52,029
 temperature(kelvin)
 = 975.000
Occupial scatter signs = 10.021
 lurped ructeer density
 = 4.656384 E-06
Ospin factor (g)
 = 6948.450
 lum diameion (a-ber)
 = 4.6812201E-01
Oimer radius
 ≈ .000000E+00
 denoif correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northein internal method.
Omes of receivator 1 = 15.995
 signs(per absorber aton)= 3.6672168E+04
Oroderator-1 will be treated by the porchaim integral method.
Orass of moderator-2 = 257.955
 signs(per absorber atom)= 4,0902176E+04
Onceretor-2 will be treated by the northein integral method.
Othis rescrence material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for scotial self-shielding=1,0000
Quorato
 res abs
 res fiss
 res scat
 .00000E+00 -6.494590E-02
 11
 -2.22/87XE-02
 12
 -1.8590E-01
 .00000E+00 -7.606152E-02
 13
 7.759999E-04
 .00000E+00
 -6.47183E-04
 -1.782052E+01
 .00000E+00 +2.918325E+00
Ocioces resonence interrals
 resolved
Omboarption
 5,82763=+02
fission
 .00000E+00

 elacsed time .20 min.

0 uranium 255 endi/to iv sect 1261
 updated 10/13/89
 temperature= 975.00
Oresonence data for this ruclide
Omes number (a)
 *
 四.四
 temperature(kelvin)
lumped nuclear density
 = 975,000
Ocotential scatter signs = 11.500
 = 4.4447549E-04
Ospin factor (g)
 = 15171.100
 lump disension (a-bar)
 = 4.6812201E-01
Oimer ractius
 = .0000000E+00
 dencoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northein integral method.
Ones of moderator-1 = 15.995
 signe(per absorber atom≥ 3.841669至+02
Omperator-1 will be treated by the northern integral method.
Omes of moderator-2 = 258.09 signs(per at
 signs(per absorber atom)= 4.122/542E+02
Oroderstor-2 will be treated by the northern integral method.
Othis resorance material will be treated as a 2-dimensional object.
Oxclume fraction of lump in cell used to account for spatial self-shielding-1.00000
Ograp)
 res abs
 res fiss
 res scat
 -1.85952E+00
 -4,360178E-02
 12
 -1.162127E+00
 13
 -6.545614E+00
 -3.257067E+00
 -1.416060E-01
 -5.261562E+00 -3.231865E+00
 -3.592915E-02
Oceans resorance integrals
 resolved
Oabsorption
 2,12116=102
fission
 1,262322+02
- elepsed time
 .22 min.
0.r236 1163 signos4 naklacs p-3 293k f-1/e-s(1.+5)
 92256
 terperature: 975.00
Oresonence data for this ruclide
 temperature(kelvin)
 = 975.000
Omess number (a)
 254.017
Opotential scatter signs =
 10,995
 lumed nuclear density
 = 4.7894300E-05
 = 6328,490
 lum dimension (a-ber)
 = 4.6812201E-01
Oscin factor (a)
Oirmer radius
 = .00000E+00
 dercoff correction (c)
 = 3.4269251E-01
```

```
Othe absorber will be treated by the norcheim integral method.
Omes of moderator-1 = 15,995
 signatuer absorber atunt 3.5653/47E+03
Omderator-1 will be treated by the northein integral method.
Oness of moderator-2 = 237.934
 signa(per absorber atom)= 3,9771189E+0B
Oraclerator-2 will be treated by the northein integral method.

Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding=1,00000
Otrato
 res abs
 res fiss
 res scot
 -2.324609E-01
 .00000E+00 -5.852797E-01
 11
 -1.251467E+00
-6.528463E+02
 12
 -8.535319E-01
 .000000E+00
 13
 .00000E+00
 -3.466214E-03
 -4.1557/UE+01
 .000000E+00
 -3.65741EHOO
Ocioces resonance integrals
 resolved
Orbearption
 2.8000£+02
 .00000E+00
 fission
 .22 min.

 elapsed time

 undsted 10/13/89
0 uranium 238 endf/b-iv mat 1262
 temerature 975.00
Oresonence data for this ruclide
Omess runber (a)
 temperature(kelvin)
 = 975.000
Occiential scatter signa =
 10.579
 lumped nuclear density
 = 2.1873/31E-02
Osoin factor (a)
 £6.527
 lumb dimension (a-bar)
 = 4.6812201E-01
 = .000000E+00
Oimer radius
 dencoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northern integral method.
Omes of audit atur-1 = 15.995
 signatoer absorber atom>= 7,8067169E+00
Oncobrator-1 will be treated by the northein integral method.
Orace of moderator-2 = 255.041
 signa(per absorber atom)= 3.3513515E-01
Oncorstor-2 will be treated by the northein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.0000
(paret)
 res abs
 res fiss
 res acat
 -4.03145E-01
 -3.95817E-02
 .000000E+00
 10
 -1.025240F+00
 -1.747810E-05
 -6.478/4E+00
 11
 -9.7052EE+00
 .000000E+00
 -2.689441E+01
 -4.30482E+01
 -4.998/57E+01
 12
 .000000E+00
 13
 -5.4010ESE+01
 .00000F+00
 -1.76905E+01
 -1.04943E+02
 .000000E+00
 -6.039(325+00)
Opices rescrence integrals
 resolved
Osbsanation
 1.80270E+01
 5.04017E-04
 fission
- elapsed time
 .25 min.
0 nextunium-257 endf/b-iv met 1263
 uzzlated 10/13/89
 temperatures 975.00
Orescrence data for this ruclide
Omes number (a)
 = 25.012
 temperature(kelvin)
 = 975.000
Occupation accepted aligner = 10.500
 lumed ruclear density
 = 2.8175818E-06
 = 10100.800
 lum dimension (a-bar)
 = 4,6812201E-01
Ospin factor (g)
Oimer radius
 = .00000000
 dencoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
Omes of moderator-1 = 15,995
 signs(per absorber aton)= 6.0505043E+04
Omnierator-1 will be treated by the northein integral method.
Oness of sectorator 2 = 28.051 signetper absorbe
Omoderator 2 will be treated by the northein integral method.
Othis resonance meterial will be treated as a 2-discussional object.
 signs(per absorber atom)= 6.500685E+04
Ovolume fraction of lump in cell used to account for spatial self-shielding-1,0000
(Darrado
 res fias
 res abs
 res scat
 11
 -6.35590E-02
 -2.085214E-05
 -7.44002E-03
 2.491776E-02
 12
 -1.071059E-04
 7.2572E-03
 13
 -2.751440E-02
 8.77901Œ-C5
 -1.433348E-03
 -7.3451/E-02
 -9.08930/E-05
 -1.443079E-03
```

```
Descess resonence integrals
 resolved
 2.98033-102
Osbsorption
 fission
 1.38557E-01
- elacsed time
 .27 min.
QurZ8 1050 sigo-544 resklacs p-3 295k f-1/e-n(1.+5)
 94238
 temperature= 975.00
Oresonence data for this ruclide
 = 236,167
 975.000
Omess number (a)
 tamperature(belyin)
Opotential scatter signa = 10.890
 lurped nuclear density
 = 3.262502ZE-07
Ospin factor (g)
 = 13130,600
 lump dimension (a-bar)
 = 4.6812201E-01
Oimer radius
 = .000000E+00
 direction (c)
 = 3.426926 E-01
Othe absorber will be treated by the northeim integral method.
Oness of moderator-1 = 15,995 signs(per al
Onoderator-1 will be treated by the nordheim integral method.
 signe(per absorber atom)= 5.234009/E+05
Orace of moderator-2 = 258.051
 signs(per absorber atom)= 5.6141619E+05
Oncderator-2 will be treated by the northeim integral method.
Othis rescrence material will be treated as a 2-dimensional object.
Oxclume fraction of lump in cell used to account for scatial self-shieldings 1,0000
Grap
 res fiss
 res abs
 res scat
 11
 -1.EEE/EE-03
 -2.820870E-04
 -1.799049E-0B
 12
 -1.25117E-03
 -1.3954/E-04
 -6.016181E-04
 Ĩ
 4.025279E-01 7.519357E-02
 -1.02616/E-02
 -3.82506/E-01 -6.992719E-02
 8.539043E-03
Coucess resonance integrals
 resolved
Osbacrotica
 8.2339E+01
 9.08/216+00
fission
- elapsed time
 .27 min.
0 plutonium 239 endf/b-iv met 1264
 updated 10/13/80
 94239
 temeratures 975.00
Orescrence data for this ruclide
Ommes number (a)
 255,999
 = 975.000
 tesperature(kelvin)
Opotential scatter signs =
 10,200
 lusped nuclear density
 = 9.6527292E-05
 = 6435,710
 = 4.6812201E-01
Ospin factor (g)
 lum disersion (a-bar)
 = .000000E+00
Cirner rectius
 dencoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northeirs integral method.
Omes of moderator-1 = 15.995
 signe(per absorber atom)= 1.7690500E+03
Occidentary 1 will be treated by the northern integral method.
 signe(per absorber atom)= 1.8975167E+03
Organs of moderator-2 = 258,051
Occurator 2 will be treated by the northein integral method.
Othis resonance material will be treated as a 2-diamaional object.
Ovolume fraction of lump in cell used to account for spatial self-shieldings 1,0000
 res scat
grap
 res abs
 res fiss
 -8.120B/E-02
 11
 -2.01708/E-01
 -6.177890E-02
 -1.791471E+00
 -6.72/600E-01
 12
 -2.35704ZE-01
 -3.A53878E+00
 -8.99907E-02
 13
 -5.89733E+00
 -1.871555E+00 -9.95855ZE-01
 -1.665/5/E-02
Douces rescrence integrals
 resolved
 3,08014E+02
Osbeorption
 1.7309/E+02
fission

 elapsed time

 .28 min.
0 plutonium-240 endi/to-iv met 1255
 updated 10/13/89
 2430
 temperature: 975.00
Orescrence data for this nuclide
 = 257.992
Omes rupter (a)
 temperature(kelvin)
 = 975.000
Opotential scatter signs = 10.599
 lumped nuclear density
 = 1.6230/PRE-05
Ospin factor (a)
 = 669.24
 lumo dimension (a-ber)
 = 4.6812201E-01
Dirmer radius
 = .000000E+00
 dinoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
Oteas of acceptor-1 = 15.995
 signature absorber atomic 1.0515730E+04
Oncderator-1 will be treated by the norcheim integral method.
```

```
Oness of explanator\sim2 = 238.051
 signs(per absorber atun)= 1.1279500E+04
Omoderator-2 will be treated by the northern integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1,00000
Carous
 res abs
 res fiss
 res scat
 4.579711E-05
 -1,254807E-06
 -1,638719E-04
 10
 -3.8599E-03
 -2.392602E-04
 -1.766385E-02
 11
 -1.29789E-01
 -7.19899E-04
 -1.64513E-01
 12
 -1.71E537E+00
 -9.3337/E-03
 -1.64960E+00
 ß
 -1.5428/9E-02
 -2.116805E-01
 -1,297953E-03
 14
 .000000=+00
 _00000E+00
 .0000E+00
 3.318474E-06
 1.738746E-02
 3.42983E-03
 3.69741E-01
 16
 2.951Z0E+00
 5,632511E-04
 17
 4,605201E+02
 8.785412E-02
 4.117713=+01
 18
 -7.40125XE+03
 -1.412571E+00
 -5.8447721402
 19
 1.28/373E-01
 6.729377E+02
 5.275318E+01
 20
 -9.357052+01 -1.78585E-02
 1.77807/E+00
Opicess rescrence integrals
 resolved
 4.96040E+03
Osbsantian
 fission
 1.95989E+00
- elapsed time _30 min_
0 plutonium 241 endf/b-iv met 1256
 updated 10/13/87
 94241
 temperature= 975.00
Oresonence data for this nuclide
Omesa number (a)
 = 258,978
 temperature(lexivin)
 = 975.000
Opotential scatter signs = 10.939
 = 8.083561E-06
 lumped nuclear density
Ospin factor (g)
 = 16402,100
 = 4,6812201E-01
 lump dimension (a-ber)
Oimer radius
 dercoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northeir integral method.
 signature absorber atoms 2.1109156E+04
Oness of moderator-1 = 15.975
Omogrator-1 will be treated by the norcheim integral method.
Omess of moderator-2 = 238.051 signs(per el
 signaturer absorber atomos 2.26/2338E+0%
Onoderator-2 will be treated by the norchelm integral method.
Othis resource material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.00000
 res fiss
 res acat
Gran
 res abs
 1.322121E-03
 6.005169E-04
 12
 8,43986E-04
 -5.46222SE-01
 -4,209879E-01
 -1.63596ZE-02
 13
 10-32/07 E-01
20-32/03 1
 -8.778508E-04
 -5,01236E-01
 15
 1.79042KE-02
 -4.657629E-04
alerges rescretce integrals
 resolved
 5.0805/E+02
Orbearption
 4.259816+02
 fission

 elapsed time

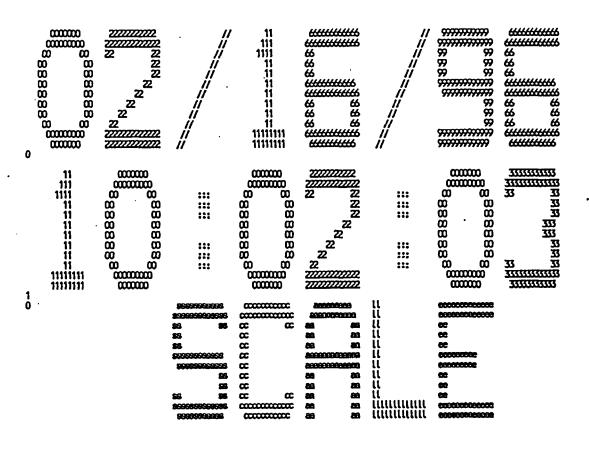
 .32 min.
0 plutonius-242 endf/b-iv set 1161
 undeted 10/13/89
 tesperature: 975.00
Orescrence data for this nuclide
Onese runber (a)
 = 240.145
 = 975.000
 tesperature(kelvin)
Opportunities scatter signa =
 10.694
 lumbed nuclear density
 = 7.257187EE-07
 = 6606,710
 = 4.6812201E-01
Ospin factor (g)
 lump dimension (a-ber)
 = 3.4269251E-01
Dirner redius
 = .000000E+00
 dencoff correction (c)
Othe absorber will be treated by the northeir integral method.
 signs(per absorber atom)= 2.35%/50E+05
Orace of sucterator-1 = 15.995
Onoderator-1 will be treated by the northein integral method.
Omes of anderstor-2 = 250.051 signs/per absorber atom;= 2.5300472=05
Omderstor-2 will be treated by the nordwise integral method.
Othis resorance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.0000
 res abs
 res fiss
 res scat
 .00000E+00 -5.15009EE-03
 -1.864130E-03
```

```
12
 -4.05266E-02
 .00000E+00
 -7.88620BE-02
 ซี
 -1.853779E-05
 .00000E+00
 3.53758/E-06
 145
 1.5255476-02
 8.13850E-02
 _00000E+00
 -1.42/625E+01
 .000000E+00
 -1.174394E+00
 4.031559E-02
 -00000E+00
 -3.45456E-03
 16
 -1.8×8172E-03
 17
 1.550592E-02
 .00000E+00
 18
 1.11257/E-02
 .000000E+00
 -1.43066 E-03
Ococess resonance integrals
 resolved
Orbeanstian
 1.10276E+03
 fission
 .0000E+00
- elapsed time
 .32 min.
Oan-241 1056 sigp-5+4 marklacs 210ngp p-3 295k
Oresonence data for this ruclide
 95241
 temperature: 975.00
 = 258,950
Oracs runber (a)
 = 975.000
 temperature(lection)
Oxtential scatter signs = 9.511
 lumbed nuclear density
 = 1.991750E-07
 = 82058,203
Oscin factor (g)
 lump dimension (a-bar)
 = 4.6812201E-01
Oimer radius
 = .000000E+00
 denoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
Omes of moderator-1 = 15.995
 signs(per absorber atom)= 8,573164/E+05
Oncerator-1 will be treated by the northern integral method.
Ones of moderator-2 = 238,051
 signs(per absorber atom)= 9.1958/31E+05
Omotivator 2 will be treated by the northern integral method.

Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1,0000
Ograp
 res fiss
 res abs
 res scat
 4,891248E-01
 1,210977E-02 4,768714E-08
 ัช
 -4.461041E-01 -1.120480E-02 -4.801333E-08
Occess resonance integrals
 resolved
Outperption
 1.98/51E+02
fission
 1.07595E+00
- elapsed time .32 min.
Outs-243 1057 218 gp let f-1/e-m 090576 p3 255k
 95343
 temperature= 975.00
Oresonence data for this ruclide
 = 30.00
Oness number (a)
 temperature(kelvin)
 = 975.000
Quotential scatter signa = 9.511
 lunced ruclear density
 = 5.2783381E-08
 = 82052,602
Ospin factor (g)
 luno dimension (a-ber)
 = 4.6812201E-01
 # .0000000E+00
Oimer radius
 dencoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the norcheim integral method.
Omes of moderator-1 = 15.995
 signs(per absorber aton)= 3.251033=05
Oxoderator-1 will be treated by the northein integral method.
Oness of moderator-2 = 258.051
 signs(per absorber atom)= 3.4700725E+06
Oxoderator-2 will be treated by the northein internal method.
Othis rescreme material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1,0000
 res acat
Operato
 res abs
 res fiss
 -7.18983/E-03
 4.218793E-04
 T
 .0000000E+00
 1.99712E-02
 .000000E+00
 1.945697E-04
Occass resorance integrals
 resolved
Osboarotian
 1.601/8E+02
fission
 .000E+00
- elapsed time
 .32 min.
0 curium 8/4 endf/b-iv met 1162
 undated 10/13/89
 95374
 temperature 975.00
Oresonence data for this ruclide
Omes runber (a)
 = 975.000
 tesperature(kelvin)
 10.320
Quotential scatter signa =
 lumbed nuclear density
 = 3.9348742E-09
 = 5251.150
 = 4.6812201E-01
Dispin factor (g)
 lump dimension (a-bar)
Oirner rectius
 = .00000E+00
 denoif correction (c)
 = 3.4269261E-01
```

```
Othe absorber will be treated by the northeim integral method.
 signs(per absorber atun)= 4.274/690E+07
Omes of moderator-1 = 15.995
Onoderator-1 will be treated by the norcheim integral method.
Owes of moderator-2 = 258.051
 signs(per absorber atom)= 4.5847292E+07
Omobrator-2 will be treated by the norcheim integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.0000
 res abs
 res fiss
 res scat
 6.73660Œ-06
 2.889803E-04
 2,461100E-04
 11
 12
 6.5446BE-04
 3.101118E-05
 1.23980E-04
 7.1045895-04
 13
 2.65496E-05
 1.309499E-04
 6.526409E-02
 3.90489E-03
 1.058714E-02
Opicess resonance integrals
 resolved
Orbeanption
 6.13880E+02
 3.542076+01
fission
- elapsed time
 .33 min.
 elapsed time
 .33 min.
 this xschn working tape was created 02/16/96 at 10:01:00
 the title of the parent case is as follows
 scale 4.2 - 27 grap neutron turnup library
 based on endi-b version 4 data with endi-b version 5 fission products
 compiled for nrc 1/27/89
 tace id
 number of nuclides
 number of neutron groups
 number of gamma groups
 15
 first thermal group
 logical unit
 table of contents
 999
 1/v cross sections romalized to 1.0 at 0.0253 ev
 hydrogen endf/b-ly met 1299/thrm1002
b-10 1273 218rgp 0/2375 p-3 293k
 1001
 undeted 10/13/89
 5010
 5011
 baran-11
 endf/b-iv ant 1160
 ucdated 10/13/89
 2016
 endf/b-iv mat 1276
 updated 10/13/89
 00/sen-16
 04/987-16
kr-83
 endif/b-iv mat 1276
 uzzistad 10/13/89
 6
 mt=102,105,105,105,105,107
mt= 102
 34083
 undated 10/13/89
 36065
38070
 k~85
 ST-90
 nt=102
 undated 10/13/89
 39089
 Y-80
 nt=102
 undered 10/13/89
 40095
 27° 75
 at= 102
 27-94
 mt=102
 undered 10/13/89
 40094
 40055
40802
 undeted 10/13/89
 27-95
 nt=102
 uzdeted 10/13/89
 zircalloy
 endf/b-iv met 1284
 41094
 rb-94
 mt=102
 updated 10/13/89
 updated 10/13/89
 42095
 ₩-22
 mt=102
 updated 10/13/89
 tc-99
 mt=102
 43099
 44101
 ru-101
 mt=102
 undeted 10/13/89
 44105
 unisted 10/13/89
 ru-106
 mt=102
 rh-103
 mt=102
 undeted 10/13/89
 4510B
 45105
 rtr-105
 mt= 102
 46105
46108
 pd 105
 mt×102
 upphoted 10/13/89
 undated 10/13/89
 pd-108
 mt=102
 47109
 silver-109
 endf/b-iv set 1139
 undeted 10/13/89
 updated 10/13/89
 51124
 sb-124
 mt=102
 undetect 10/13/89
 xe-131
 nt=102,105,104,105,106
 54131
 mc=102,105,104,105,106
endf/b-iv met 1254
 54132
 x=132
 undeted 10/13/89
 $(5)
$(8)
 updated 10/13/89
 xenon-135
 mt= 102, 108, 104, 105, 107
eraf/o-iv mat 1141
 227-230
 25133
 cesium:133
 undeted 10/13/89
 55134
 cs-134
 RE=102
 updated 10/13/89
 55135
 CET-120
 mt= 102
 53
 cs-137
 at=102
 uzdated 10/13/89
```

|              | ba-136                                  | at=102                                  |                                       | updated 10                 | /13/89             | id 50      | S136            |
|--------------|-----------------------------------------|-----------------------------------------|---------------------------------------|----------------------------|--------------------|------------|-----------------|
|              | la-139                                  | nt=102                                  |                                       | updated 10                 |                    |            | 139             |
|              | c <del>e 144</del>                      |                                         | 02<br>Tanana ara-ara-ara              |                            | 455.50             |            | 3144            |
|              | p-141                                   |                                         | B,104, <b>1</b> 05,106,10             |                            |                    | 17. 21     | 7141<br>7143    |
|              | 12-12<br>121-121                        | mt=102<br>mt=102                        |                                       | updated 10<br>updated 10   |                    |            | 743             |
|              | nd-145                                  | nt=102                                  |                                       | undated 10                 |                    |            | 1145            |
|              | nd-147                                  | RE=102                                  |                                       | updated 10                 |                    |            | 7147            |
|              | pm 147                                  | mt=102                                  |                                       | updated 10                 |                    | id 61      | 147             |
|              | pn-148                                  | at= 1                                   |                                       | •                          |                    |            | 148             |
|              | sm 147                                  |                                         | fission product                       | updated 10                 |                    |            | 214.7           |
|              | sm 149                                  | nt=102,10                               | B,107                                 | upphted 10                 |                    |            | 2149<br>MCO     |
|              | an 50                                   | mt=102                                  | R 40% 405 406 40                      | updated 10<br>7 updated 10 |                    |            | 2150<br>2151    |
|              | an-151<br>an-152                        | ###ATD 10                               | 8,104,105,106,10<br>8,104,105,106,10  | 7 updated 10               |                    |            | 2152            |
|              | er-123                                  | mt=102,10                               | 8,104,105,106,10                      | 7 uzdeted 10               |                    |            | 153             |
|              | eu- 154                                 | mt=102.10                               | B,104,105,106,10                      | 7 updated 10               |                    |            | 3154            |
|              | er-122                                  | mt=102,10                               | 8,104,105,106,10                      | 7 updated 10               |                    |            | N55             |
|              | gd-155                                  | mt=102                                  |                                       | updated 10                 | /13/89             |            | 155             |
|              |                                         |                                         | acs p-3 255k f-1                      | /eπ(1.+5)                  | ·                  |            | 234             |
|              | Uranium 2                               |                                         | anst 1261<br>acs p-3 285k f-1         | updated 10                 | א נטעטא            |            | 235<br>236      |
|              | uranium 2                               |                                         |                                       | updated 10                 | /11/80             |            | 238<br>238      |
|              |                                         | r257 endf/b-iv                          |                                       | updated 10                 |                    |            | 237             |
|              | DJ-238 10                               | 0 sign=5+4 nav                          | lacs p-3 285k f-                      |                            |                    |            | 238             |
|              |                                         | r239 endf/b-iv                          |                                       | updated 10                 |                    |            | 239             |
|              |                                         | r20 endf∕b-iv                           |                                       | updated 10                 |                    |            | 20              |
|              | plutoniu                                |                                         |                                       | updated 10                 |                    |            | 1241<br>1242    |
|              | putaniu                                 | n 242 endf/b-iv                         | (1810 1161)                           | anno updatad 10            | 10/0 <del>/</del>  |            | 242<br>241      |
|              | #F241 NC                                | 27 218 co ut 6-1                        | lacs 218 pp p-3 /<br>/e-m 0903/6 p3 2 | CTUR.<br>CTR               |                    |            | 243             |
|              | ariun2                                  |                                         |                                       | updated 10                 | /13/89             |            | <del>2</del> 44 |
| 0            | tape cor                                |                                         | /o's, and took                        | .00 seconds                |                    |            |                 |
| 1 20         |                                         |                                         | <del>quiiiiiiiii</del>                | manna                      | m m                | THITTIES I | (100) 800       |
| >            | x x                                     | 8283636363636                           | <del>dimmini</del>                    | ummunit                    | m n                |            |                 |
|              | XX XX                                   | 88 86                                   | स स                                   | <u> </u>                   | um u               |            |                 |
|              | ж ж<br>жж                               | 88<br>88                                | E E                                   | m m                        | וחוח ות            | **         |                 |
|              | XXX                                     | 805363898998                            | E E                                   |                            | m m m              |            |                 |
|              | 2000                                    | 90000000000                             | <b>H H</b>                            | mmmm                       | m m m              |            |                 |
|              | XX XX                                   | 96                                      | क्षं क्ष                              | п п                        | m m m              |            | an an           |
|              | XX XX                                   | 25                                      | क्ष क्ष                               | u u                        | m mm               | ì pip      |                 |
|              | xx xx                                   | SS <b>9</b> 6                           | <u> </u>                              | u u                        | ம் ய               |            |                 |
|              | х х                                     | \$26262600000                           | <del>4111111111</del>                 | <u> </u>                   |                    |            |                 |
| 0 20         | , xx                                    | 28969999998                             |                                       | u u                        | . w . u            | ı bb       | am am           |
| U            |                                         |                                         |                                       |                            |                    |            |                 |
| d            | HHHHH                                   | 80000000                                | w w                                   | * ***********              | 8696969696         |            |                 |
|              | *************************************** | 80000000000                             | W W                                   | 11111111111                | 900303030303       |            |                 |
| æ            |                                         | 86 85                                   | W W                                   |                            | 25 25              |            |                 |
| d:           |                                         | 80 60                                   | w w                                   |                            | 95                 | •          |                 |
| d:           |                                         | <b>20</b>                               | w w                                   |                            | 28                 |            |                 |
| d:           |                                         | 800000000000000000000000000000000000000 | w w                                   | ' {i                       | \$0000000000       |            |                 |
| d:<br>d:     |                                         | 80000000000000000000000000000000000000  | w w                                   | 13                         | 995599999966<br>25 |            |                 |
| d.           |                                         | 86 85<br>86 85                          | ~ ~ ~                                 | ij                         | 25<br>26           |            |                 |
| 4            |                                         | = =                                     | ww                                    | ii                         | 88 98              |            |                 |
| <del>d</del> | шшшш                                    | <u> </u>                                | w                                     | 111111111111               | 89999598086968     |            |                 |
| đ            | *************************************** | 26 25                                   | ٧                                     | 111111111111               | 9868664B698        |            |                 |
|              |                                         |                                         |                                       |                            |                    |            |                 |



| ****         |                                         |              |
|--------------|-----------------------------------------|--------------|
|              |                                         | ***          |
| Andreada .   | progress verification information       | ***          |
| <b>AAAAA</b> | , , , , , , , , , , , , , , , , , , , , | philippine ( |
|              | code system: scale version: 4.2         | ***          |
| ***          | <b>VIII 0,000</b>                       | shirther.    |
| ****         |                                         |              |
| ****         |                                         |              |
|              |                                         | ***          |
| A Autobale   |                                         | ***          |
|              | program: c0x001                         | ***          |
| A-Automotiv  | • -                                     | plate de de  |
| ****         | creation date: 04/27/95                 | <b>WARK</b>  |

floating point parameters

```
eos overall convergence
 1.0000E-04
 cyl/pla ht for buckling
 .0000E+00
 ď
 plane depth for buckling
 .0000E+00
 1.0000E-04
ptc point convergence
 void streaming correction .0000E+00
and romalization factor
 1.0000E+00
 VSC
 1.0000E+00
 pv ipvt=1/2--k/sighs 1.000000=00
eqt ev charge eps for search 1.00000E-03
arps new paress soci for search 7.50000E-01
 iovt=1/2--k/alcha
 eigenvalue guess
 .000E+00
en eigenvalue audifier
 .000000
 buckling factor=1.42092 1.4209E+00 xrps now
this case will require 255 locations for mixing
this case has been allocated 20000 locations
 720 d, sasch: beboock wilcox 15x15, 3.00x124, 20p.c/mtu burn high temp
65 entries.
 13q array has
 & entries.
 14cj array hos
 65 entries.
 15q array has
 chta block 2 (mixing table, etc.)
 mixing table
 extra
 ruclides
 ccc
identification
 xsect id's
 on tape
999
1001
 mixture.
 CURCUTETE
 atox density
 4.44475E-04
 9225
 92234
 4.65639E-06
 23
 5010
 92756
 4.78943E-05
 2.187¥E-02
 92238
 9011
 4.55357E-02
 8016
 80%
 2.09710E-02
 36083
 1.21060E-06
 36083
 36055
 5.8277Æ-07
 36085
 38090
 1.32013E-05
 PHILD TREADURANT AND THE PROPERTY OF THE PROPE
 38090
 33089
 1,0202/E-05
 39089
40093
 42075
 1.31680E-05
 400%
400%
 400%
400%
400%
 1.0372E-05
 1.62229E-05
 40075
 2.03583E-06
 410%
420%
430%
 41094
 7,53797E-12
 1.58//E-05
 43099
 8.51543E-05
 45105
 44101
44105
45105
45105
 2.07137E-0B
 45105
 44101
 1,4250E-05
 44105
 2,14911E-06
 46105
 5,27789E-05
 46105
46108
 4610B
 1.37834E-06
 47100
 9.89759E-07
 2.30/3/E-10
 STATES OF THE ST
 51124
 7.31080E-06
 54131
 级
 1,32259E-05
 6,67573E-09
 54136
 2.7058E-05
 6.68993E-07
 55134
 55135
 8.57012E-06
 55137
 1.68757E-05
 56136
 1.3147EE-07
 57139
 1.6736ZE-05
 59141
 1.43133E-05
 57143
 3.77677E-07
 58144
59141
 58144
 6.3977XE-06
 60143
 1.33774E-05
 59143
 60145
 9.77101E-06
 3.63DE-06
 61147
 60143
 61148
60147
 1.0466E-08
 1.3058/E-07
 62147
62149
 1,01929E-05
 8,40495E-08
 62190
 3.35633E-06
 62151
 3.689(0E-07
```

William Old The

```
1.63140E-06
 62152
 64155
 1.63702E-09
$49552535555559668
 62152
 ख123
 9_03257E-07
 छ।ऽ
 63154
 1.63879E-07
 9.9155ZE-0B
 63154
 63155
 හාන
 4CBOP
 4.2515/E-02
 4.19420E-02
 64155
 1001
 5010
 3.81515E-06
 92234
 9225
 5011
 1.5488 E-05
1.7575 E-05
 25133
 93237
 2.8175E-06
 92238
 9238
9239
 93237
 3.26250E-07
 9238
9239
9230
9231
 9.65273E-05
 94240
 1,625856-05
 9241
9242
 8.0887E-06
 7.23719E-07
 9232
9231
 95241
 1.99179E-07
 95243
 5.2783/E-08
<u>~</u>
 952/3
 962%
 3.99487E-09
 1,0000E-20
65
 96244
elapsed time
21649 locations will be used
 35q army has
 Z entries.
 36q array has
 24 entries.
 24 entries.
 30g array has
 39g array has
 4 entries.
 400 array has
470 array has
 4 entries.
 27 entries.
 51a array has
 27 entries.
 720 d. ses2h; belcock willow 15k15, 3.00k1X, 20pud/tetu burn high temp
 neutron group parameters
argy keighted bross
 energy letherpy
burdenies burdenies
 right
 broad gp
 albedo
 type
 albado
 velocities
 numbers
 2,00000E+07 -6,93147E-01 4,60581E+09
 1.0000F+00
 6.GX/0E+05 4./095E+01 2.8873F+09
3.0000E+06 1.2897F+00 2.1220TE+09
1.8500E+06 1.6874E+00 1.7567E+09
1.4000E+05 1.9661E+00 1.4655E+09
9.0000E+05 2.4079E+00 1.0660E+09
 1.0000E+00
 1.0000E+00
 0
 1.0000E+00
 1.0000E+00
 1.00000E+00
 4,0000E+05 3,2188E+00 6.07557E+08
 1.0000E+00
 1.0000E+00
 1,0000E+05 4,60517E+00
 2.724192+08
 1.0000E+00
 1,70000E+04 6.37713E+00
 1.1352/E+08
 3.0000E+03 8.11179E+00
5.5000E+02 9.80818E+00
 4.821265+07
 10
11
 1.00000E+00
 10
 2.059445+07
 11
 1.00000E+00
 11
 12131415
 1.0000E+00
 1.15129E+01
 1.010B&E+07
 12
 1.0000E+02
 12131415
 1.27169E+01
 5.6777E+05
 3,00000E+01
 0
 1.0000E+00
 13
 1.38155E+01
 3.20757E+06
 1.0000Œ+00
 1.0000E+01
 1.00000+00
 15
 3.0////E+00
 1,50030E+01
 2.10601E+05
 1.55471E+01
1.58557E+01
1.59959E+01
 16
17
 16
17
 1.0000E+00
 1.7700E+00
1.2999E+00
 1.705222+06
 1.0000E+00
 1.52545E+06
 1,42857E+05
 18
19
 18
 1.0000E+00
 1,12577E+00
 19
 1,0000E+00
 1,61181E+01
 1.31002E+05
 1.0000E+00
 1.63/12E+01
1.705//E+01
1.73/20E+01
 1.0000E+00
 ä
 8.0000E-01
 9.05800=+05
 20
 8222345A7
 8.17974E+05
6.90070E+05
 1.0000E+00
 4.0000Œ-01
22
 3,2500E-01
 222222
 1.0000E+00
 1.0000E+00
 3
 1.760785+01
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|            | 28       | 1.00000E-05                  |                              | والمستطيعا والأد          | عدية بحداث                  | 3 M et 20-                 | ıd∤atu bum hi            | ch term         |                                      |
|------------|----------|------------------------------|------------------------------|---------------------------|-----------------------------|----------------------------|--------------------------|-----------------|--------------------------------------|
| 1          |          | mixture                      |                              |                           |                             |                            | decistric cu             |                 | ,                                    |
| v          | _        | py zone                      | order b(f)                   | activity<br>matl no.      | reaction                    | weights                    | directions               | refl direc      | Mt X cos                             |
|            | 1        |                              | 3                            |                           |                             | 5.06143E-02                | -2.79004E-01             | 3               | 0<br>-9.98648E-08                    |
|            | 23456789 | 1                            | 3                            |                           |                             | 5.06143E-02                |                          | 2               | 9.98548E-03                          |
|            | 7        | 2<br>3                       | 3<br>3                       |                           |                             |                            | -6.0%19E-01              | 8               | ,,,,,                                |
|            | Š        | •                            | _                            |                           | •                           | 5.5575E-02                 | -5.58X10E-01             | 8               | -3.10450E-02                         |
|            | 6        |                              |                              |                           |                             | 5.555E-02                  |                          | 7               | -1.25575E-02                         |
|            | 7        |                              |                              |                           |                             | 5.55953E-02<br>5.55953E-02 | 2.31301E-01              | 6<br>5          | 1.26573E-02<br>3.10450E-02           |
|            | 8        |                              |                              |                           |                             |                            | -8.50774E-01             | ซึ่             | 0                                    |
|            | 10       |                              |                              |                           |                             | 5.2284E-02                 |                          | ž               | -4.29 <del>65E</del> -02             |
|            | 11       |                              |                              |                           |                             | 5.ZZB//E-02                |                          | 14              | -3.14537E-02                         |
|            | 12       |                              |                              |                           |                             | 5.228//E-02                |                          | ß               | -1.151205-02                         |
|            | 13       |                              |                              |                           |                             | 5.2284E-02<br>5.2284E-02   |                          | 12<br>11        | 1.15128E-02<br>3.14537E-02           |
|            | 14       |                              |                              |                           |                             | 5.2284E-02                 |                          | 10              | 4.2066E-02                           |
|            | 16       |                              | •                            |                           |                             |                            | -9.83032E-01             | 24              | 0                                    |
|            | 17       |                              |                              |                           |                             | 4.5350E-02                 |                          | 24<br>23        | -4.37099E-02                         |
|            | 18       |                              |                              |                           |                             | 4.53362-02                 |                          | 22              | -3.7088E-02                          |
|            | 20 20 Z  |                              |                              |                           |                             | 4.5350E-02                 |                          | 21              | -2,47597E-02<br>-8, <i>6944E</i> -03 |
|            | ส        |                              |                              |                           |                             | 4.53502-02                 | 1.91780E-01              | 20              | 8.6944E-03                           |
|            | 22       | •                            |                              |                           |                             |                            | 5,46143E-01              | 19              | 2.47597E-02                          |
|            | 23       |                              |                              |                           |                             | 4.53500=-02                |                          | 18              | 3.70 <del>000E</del> -02             |
| •          | 24       |                              |                              |                           |                             | 4.535 <del>55</del> E-02   | 9.6414E-UI               | 17              | 4.37099E-02                          |
| Oer<br>Oer |          | nts for p(3)<br>set 1        | set 2                        | set 3                     | set 4                       | set 5                      |                          |                 |                                      |
| -          |          | -2.7900Æ-01                  |                              | 6.74XXE-02                | -6.16919E-01                |                            |                          |                 |                                      |
|            |          | -1.972 <del>0E</del> -01     | 8.8275E-01                   |                           |                             | 1.2141 E-02                |                          |                 |                                      |
|            | Ş        | 1.97286E-01                  | 8.8325E-01                   |                           | 4.36220E-01                 |                            |                          |                 |                                      |
|            |          | -6.0419E-01<br>-5.58410E-01  | 4.52016E-01<br>4.52016E-01   |                           | -8.0435E-01<br>-7.43201E-01 |                            |                          |                 |                                      |
|            |          | -2.31301E-01                 |                              | -2.271E-01                |                             | 1.61276-01                 |                          |                 |                                      |
|            | 7        | 2.31301E-01                  | 4.52016E-01                  |                           | 3.0784E-01                  | -1.61Z/Œ-01                |                          |                 |                                      |
|            | 8        | 5.5841Œ-01                   |                              | 2.22713E-01               |                             | 6.68020E-02                |                          |                 |                                      |
|            |          | -8.50774E-01<br>-8.2178/E-01 |                              | 6.2683E-01<br>5.42862E-01 |                             |                            |                          |                 |                                      |
|            |          | -6.01589E-01                 |                              | .0000=00                  | -1.40530E-01                | 3.4/24/E-01                |                          |                 |                                      |
|            |          |                              | -8.5725E-02                  | -5.4286ZE-01              | -5.136XE-02                 | 3.44245E-01                |                          |                 |                                      |
|            | 13       |                              | -8.5725E-02                  |                           |                             |                            | •                        |                 |                                      |
|            | ¥        |                              | -8.57250E-02<br>-8.57250E-02 |                           | 1,40830E-01<br>1,91694E-01  | 3.442635-01                |                          | •               |                                      |
|            | 15<br>16 | -9.ESEE-01                   |                              | 8.368EE-01                | 5.00705E-01                 |                            |                          |                 |                                      |
|            |          | -9.64XE-01                   |                              |                           | 4.91083E-01                 |                            |                          |                 |                                      |
|            | 18       | -8.17361E-01                 | -4,4952EE-01                 | 3.20262E-01               | 4.1652DE-01                 | 1.46514E-01                |                          |                 |                                      |
|            |          |                              | 4.4952E-01                   |                           | 2.781765-01                 | 7.36579E-01                |                          |                 |                                      |
|            | =:       |                              | -4,49525E-01                 |                           |                             | 4.1724E-01                 |                          |                 |                                      |
|            | 21       |                              | 4.4952E-01                   |                           |                             |                            |                          |                 |                                      |
|            | z        | 8,17361E-01                  | -4,49520E-01                 | 3.2026ZE-01               | -4.16320E-01                | -1.46514E-01               |                          |                 |                                      |
| _          | 24       |                              |                              | 7.73181E-01               |                             |                            | <i>8</i>                 |                 |                                      |
| · 1        | int      | radii<br>O                   | mid pts<br>1,29551E-02       | zone no.                  | *******                     | Volumes<br>2.10909E-03     | dens fact<br>1,00000E+00 | radius and<br>O | spec(int)                            |
|            | 2        | 2.59102E-02                  | 4.33409E-02                  | j                         | 1.627985-01                 | 9.49518E-05                | 1.0000E+00               | ŏ               |                                      |
|            | 3        | 6.07710E-02                  | 8.75100E-02                  | i                         | 3.818352-01                 | 2.9405E-02                 | 1,00000E+00              | Õ               |                                      |
|            | 4        | 1.14249E-01                  | 1.7415E-01                   | 1                         | 7.178/85-01                 | 1.3110/E-01                | 1.0000E+00               | 0               |                                      |
|            | 5        | 2.34061E-01                  | 2.93967E-01                  | 1                         | 1.4705E+00                  | 2.2129E-01                 | 1.0000E+00               |                 |                                      |

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2.77850E+00 7.4104E-02 1.0000E+00
 4.07351E-01 4.24781E-01
 8 4,42212E-01 4,55167E-01
 2.94130E+00 4.0794E-05
 9 4.68122E-01 4.68814E-01
 2.95000E+00 1.16989E-02
 10 4.69507E-01 4.71481E-01
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 11 4.73/5/E-01 4.75/31E-01
 2.97481E+00 1.17968E-02
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 3.00335+00 2.65265-02 1.00006+00
 14 4.8752E-01 4.99987E-01
 3,06525E+00 7,82769E-02 1,0000E+00
 15 5.12445E-01 5.2490BE-01
 3.21979E+00 8.21777E-02 1.0000E+00
 16 5.37362E-01 5.41731E-01
 3.37634E+00 2.97427E-02 1.0000E+00
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 17 5,46100E-01 5,53613E-01
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 21 6.800B/E-01 7.1/31BE-01
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 22 7.48592E-01 7.63895E-01
 4,89582E+00 9.89116E-02 1.0000E+00
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 24 7.99141E-01 8.0554E-01
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 production/absorption 1.05693E+00
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- elapsed time

.02 min.

information only

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720 d., see2h: beboock wilcox 15x15, 3.00x15, 20pxd/wtu burn high temp
 radius int. midpoint area Volume prod density .00000E+00 1.29551E-02 .00000E+00 2.10506E-05 3.09008E-05
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 2.5910E-02 4.3340E-02 1.4278E-01 9.4651E-03 1.3702E-02 6.0710E-02 8.7610E-02 3.8165E-01 2.5400E-02 4.3143E-02 1.1424E-01 1.7610E-03 1.3110E-03 1.5403E-02 2.34061E-03 2.5567E-03 3.8061E-03 2.2254E-03 1.2780E-03 1.5919E-03
 3.53879E-01 3.80512E-01 2.2257EE+00 1.2789E-01 1.7918E-01 4.0751E-01 4.2787E-01 2.5977EE+00 9.3023E-02 1.7785E-01 4.7785E-01 4.2787E-01 4.5818E-01 2.7850E+00 7.4100E-02 1.7818E-01 4.68182E-01 4.7848E-01 2.9810E+00 1.1787EE-02 .0000E+00 4.7785E-01 4.7783E-01 2.9980E+00 1.1787EE-02 .0000E+00 4.7785E-01 4.7783E-01 2.9980E+00 1.1787EE-02 .0000E+00 4.7785CE-01 4.7809E-01 2.9980E+00 1.1787EE-02 .0000E+00 4.7785CE-01 4.7809E-01 3.000E+00 2.6827E-02 .0000E+00 4.8752E-01 4.9987E-01 3.000E+00 2.6827E-02 .0000E+00 5.1242E-01 5.2809E-01 3.2787E-00 8.2777E-02 .0000E+00 5.3753CE-01 5.2809E-01 3.2787E-00 8.2777E-02 .0000E+00 5.48100E-01 5.5351E-01 3.3787E-00 8.2787E-02 .0000E+00 5.6072E-01 5.8000E-01 3.5877E-01 3.8477E-00 2.9827E-02 .0000E+00 5.6072E-01 5.9817E-01 3.8477E-00 1.1828E-01 .0000E+00 6.8039E-01 7.831E-01 4.2727E-00 3.070E-01 .0000E-00 6.8039E-01 7.831E-01 4.2727E-00 3.070E-01 .0000E-00 6.8039E-01 7.831E-01 4.2727E-00 3.070E-01 .0000E-00 6.8039E-01 7.831E-01 4.2727E-00 3.070E-01 3.000E-00 6.8039
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6 1.9560-00 1.45770-00 1.3200-00 8.15507-01 6.87630-01 6.17600-01 3.75580-01 2.05700-01 8 1.9580-00 1.95700-00 1.33000-00 8.25580-01 6.95700-01 6.25970-01 3.75500-01 2.05750-01 10 1.95950-00 1.45050-00 1.33500-00 8.30500-01 6.95950-01 6.25950-01 11 1.00000-00 1.46050-00 1.33500-00 8.30500-01 7.00500-01 6.25950-01 11 1.00000-00 1.46050-00 1.33500-00 8.30500-01 7.00500-01 6.25950-01 11 1.00000-00 1.46050-00 1.33500-00 8.30500-01 7.00500-01 6.25950-01 3.75500-01 2.00000-01 11 1.00000-00 1.46050-00 1.33500-00 8.30500-01 7.00300-01 6.30500-01 3.75500-01 2.00000-01 13.10000-00 1.46050-00 1.33500-00 8.30500-01 7.00300-01 6.30500-01 3.75500-01 2.00000-01 13.00000-01 1.33500-00 8.30500-01 7.00500-01 6.30500-01 3.75500-01 2.00000-01 13.00000-01 1.46050-00 1.35500-00 8.35000-01 7.00500-01 6.460500-01 3.75500-01 2.00000-01 11 1.00000-01 1.46050-00 1.35500-00 8.35000-01 7.00500-01 6.460500-01 3.75500-01 2.00000-01 11 1.00000-01 1.46050-00 1.35500-00 8.45000-01 7.15500-01 6.460500-01 3.75500-01 2.00000-01 11 1.00000-01 1.46050-00 1.35700-00 8.45000-01 7.15500-01 6.46050-01 3.75500-01 2.00000-01 1.46050-00 1.35700-00 8.45000-01 7.15500-01 6.46050-01 3.75500-01 2.00000-01 1.46050-00 1.35700-00 8.45000-01 7.15500-01 6.46050-01 3.75500-01 2.00000-01 1.46050-00 1.35700-00 8.45000-01 7.15500-01 6.55500-01 3.75500-01 2.00000-01 1.46050-00 1.35700-00 8.45000-01 7.15500-01 6.55500-01 3.75500-01 2.00000-01 1.46050-00 1.35700-00 8.45000-01 7.15500-01 6.55500-01 3.75500-01 2.00000-01 1.46050-00 1.35700-00 8.45000-01 7.15500-01 6.45500-01 3.75500-01 2.00000-01 1.46050-00 1.35700-00 8.45000-01 7.15500-01 6.45500-01 3.75500-01 2.00000-01 1.46050-00 1.35700-00 8.45000-01 1.35700-00 8.45000-01 1.35700-00 8.45000-01 1.35700-00 8.45000-01 1.35700-00 8.45000-01 1.35700-00 8.45000-01 1.35700-00 8.45000-01 1.35700-00 8.45000-01 1.35700-00 8.45000-01 1.35700-00 8.45000-01 1.35700-00 8.45000-01 1.35700-00 8.45000-01 1.35700-00 8.45000-01 1.35700-00 8.45000-01 1.35700-00 8.45000-01 1.35700-00 8.45000-01 1.35700-00 8.45000-01 1.35700-00 8.45000-01 1.
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 5 2.35/4E-01 1.35/3E-01 2.076/3E-02 7 2.25/3E-01 1.45/7E-01 2.35/3E-02 8 2.316/3E-01 1.45/70E-01 2.35/3E-02 9 2.343/3E-01 1.525/3E-01 2.45/3E-02 11 2.35/3E-01 1.35/3E-01 2.53/3E-02 11 2.53/3E-01 1.35/3E-01 2.53/3E-02 11 2.53/3E-01 1.35/3E-01 2.53/3E-01 1.35/3E-01 2.53/3E-01 2.53/3E-01 1.35/3E-01 2.53/3E-01 2.
 12 2.3565/E-01 1.53/59E-01 2.5125/E-02
 13 2.36363E-01 1,54110E-01 2.53081E-02
 2.36576E-01 1.56072E-01 2.5846E-02
```

15 2.41/67E-01 1.58587E-01 2.65125E-02

```
16 2.43181E-01 1.60059E-01 2.68841E-02
 17 2.44910E-01 1.61817E-01 2.74610E-02
 18 2.47773E-01 1,64867E-01 2.85150E-02
 19 2.51269E-01 1.68619E-01 2.97503E-02
 20 2.5604ZE-01 1.7570EE-01 3.1376ZE-02
 21 2.59863E-01 1.77869E-01 3.27133E-02
 22 2.606%E-01 1.76527E-01 3.31107E-02 23 2.60187E-01 1.76562E-01 3.30548E-02
 24 2.5942/E-01 1.77890E-01 3.29769E-02
- elapsed time .02 min.
 If ine group summary for zone 1 by group including sum for all groups in line 28
 28 .0000E+00 1.0000E+00 6.226/2E-01 5.4/6EE+00 6.226/2E-01 9.41190E-01 6
0 gp. rt bdy flux rt leakage lft bdy flux lft leakage r2n rate flux rt leakage lft bdy flux lft leakage r2n rate flux rt leakage lft bdy flux lft leakage r2n rate flux rate flux rt leakage lft bdy flux lft leakage r2n rate flux rate flux rate leakage lft bdy flux lft leakage r2n rate flux rate flux rate flux rate leakage lft bdy flux lft leakage r2n rate flux r
 .0000E+00 9.0363/E-01
 .00000E+00 7.059TSE-01
 .0000E+00 1.0812E+00
.0000E+00 2.0534E+00
.0000E+00 1.9804E+00
 .0000E+00 1.4280E+00
.0000E+00 1.0965E+00
 .0000E+00 1.0002E+00
 .0000E+00 9.080B/E-01
.0000E+00 5.5820/E-01
 .0000E+00 4.7054E-01
 .00000E+00 2.55366E-01
 16 2,05002E-01 -5.95372E-05 2.08087E-01
 .00000E+00
 .0000E+00 1.38090E-0B
 .0000E+00 1,40633E-01
 17 8.60092E-02 -7.34180E-05 8.25378E-02
 .0000E+00 5.7742E-02
 .0000E+00
 _0000E+00 1.6600Æ-05
 .0000E+00 2.92610E-02
 18 5.06276E-02 -2.26560E-02 3.69961E-02
 .0000TE+00
 .0000E+00 1.25585E-05
 .00000E+00 8.56450E-02
 .00000E+00
 .0000E+00 2.6259/E-05
 19 1.28051E-01 -1.23063E-02 1.21697E-01
```

```
20 4_36258-01 -2.57754E-02 4.2536E-01 .0000E+00 .0000E+00 1.5500E-02 .0000E+00 2.95158E-01 21 1.1870E-01 -2.35258-02 1.0642E-01 .0000E+00 .0000E+00 1.4750E-02 .0000E+00 7.4810E-02
 .0000E+00 7.68105E-02
 .0000=00 /28108=02
.0000=00 1.3991E=01
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.0000E=00 3.55578E=01
.0000E=00 1.47520E=01
.0000E=00 1.35787E=02
.0000E=00 1.35787E=02
.00000-00 3.18242-02
.00000-00 4.2652-02
.00000-00 8.92652-02
.00000-00 6.56592-02
.00000-00 4.26652-02
.00000-00 4.26652-02
.00000-00 2.268552-02
 .0000E+00
 .0000E+00
 .0000E+00
 .000E+00
.000E+00
 .0000E+00
 .0000E+00 2.2255E-02
.0000E+00 1.9994E-02
 .00000E+00
 .00000E+00
 .0000=00 1.18562E-02
.0000E-00 6.53952E-08
.0000E-00 2.7329E-05
 .0000E+00
.0000E+00
 .0000E+00
 .000E+00
 -0000E+00
 .0000E+00
 .0000E+00 1.61760E-05
 19 1.2536-01 -1.2503-02 1.2651-01 -1.2503-02 .00000-00 20 4.3694-01 -2.57754-02 4.36231-01 -2.57754-02 .00000-00
 .00000E+00
 .0000E+00 4.0666E-08
.0000E+00 1.3853/E-02
 _00000E+00
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21 1.1755E-01 -2.3528E-02 1.18705E-01 -2.3528E-02 .0000E+00 .0000E+00 .0000E+00 3.7778E-05
22 2.531E-01 -6.77078E-02 2.1567E-01 -6.77078E-02 .0000E+00 .0000
2 1.1535-01 1.1507-01 5.5014-0 1.1545-0 1.0001-0 1.0001-0 1.1507-0 2.5014-0 1.1507-0 2.5014-0 1.1507-0 2.5014-0 1.1507-0 2.5014-0 1.1507-0 2.5014-0 1.1507-0 2.5014-0 1.1507-0 2.5014-0 1.1507-0 2.5014-0 1.1507-0 2.5014-0 1.1507-0 2.5014-0 1.1507-0 2.5014-0 1.1507-0 2.5014-0 1.1507-0 2.5014-0 1.1507-0 2.5014-0 1.1507-0 2.5004-0 1.0001-0 1.0001-0 1.1507-0 2.5014-0 2.5004-0 1.0001-0 1.0001-0 1.0001-0 1.1507-0 2.5014-0 1.1507-0 2.5004-0 1.0001-0 1.0001-0 1.0001-0 1.1507-0 2.5014-0 1.1507-0 2.5004-0 1.0001-0 1.0001-0 1.0001-0 1.0001-0 1.0001-0 1.5001-0 2.5014-0 1.5004-0 1.0001-0
 20 4.4109/E-01 -2.58/2/E-02 4.3/6/9/E-01 -2.57/5/E-02 21 1,2008(E-01 -2.36/5/E-02 1.1955(E-01 -2.35/20E-02
 .0000E+00 9.51558E-02
 .0000E+00
 _00000E+00
 .0000E+00
 _000E+00
 .0000E+00 2.62969E-02
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22 2.2605E-01 -6.760E-02 2.1543E-01 -6.7707E-02 25 7.5384TE-01 -1.26951E-01 7.3494E-01 -1.2665E-01
 .00000=00 _00000=00
 .0000E+00 4.7912/E-02
 .0000E+00 1.61471E-01
 .00000=+00
 _0000E+00
25 7.538/E-01 -1.1489E-01 7.346/E-01 -1.1917E-01 (0000E-00 0000E+00 0000E+00 1.2178E-01 2.4588E-01 -1.1489E-02 2.5676E-01 -5.7366E-02 (0000E+00 0000E+00 0000E+00 0000E+00 1.2178E-01 2.4588E-01 -5.7666E-02 2.5676E-01 -5.7366E-02 (0000E+00 0000E+00 0000E+00 3.4077E-02 2.4637E-01 -5.27478E-02 1.5353E-01 -5.2808E-02 (0000E+00 0000E+00 0000E+00 3.4077E-02 2.4637E-02 -1.4489E-02 2.5477E-02 -1.4639E-02 (0000E+00 0000E+00 0000E+00 3.4077E-02 2.4637E-03 5.3164E-02 2.3275E-01 6.0527E-02 1.000E+00 0000E+00 0000E+00 5.6782E-08 2.3276E-03 5.3164E-02 2.3275E-01 6.0527E-02 1.000E+00 0000E+00 0000E+00 5.6782E-08 2.3276E-03 5.3164E-02 2.3275E-01 6.0527E-02 1.000E+00 0000E+00 0000E+00 5.6782E-08 2.3276E-03 5.3164E-02 2.3275E-01 6.0527E-02 1.000E+00 0000E+00 5.6782E-08 2.3276E-03 1.000E+00 0000E+00 0000
 24 5.69481E-01 -1.14857E-01 5.53071E-01 -1.13917E-01
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 .0000E+00 1.21789E-01
 .0000E+00
 .0000000 3.025001 2.402500 2.71378-01 3.0708-03 2.57778-02 1.00016+00 .00000+00 1.40536-01 1.2806-01 1.9250-01 1.0986-03 2.5778-02 1.0005+00 .00000+00 1.40536-01 1.2806-01 1.9250-01 1.9250-01 2.3726-03 6.7078-02 1.00076+00 .00000+00 6.20536-01 7.357216-01 4.85576-01 1.0006-02 1.28746-01 1.0006+00 .00000+00 6.30506-01 6.527746-01 5.08076-01 1.8346-02 1.4856-01 1.0006+00 .00000+00 6.30506-01 6.527746-01 3.4206-01 1.8346-02 1.4856-01 1.0006+00 .00000+00 4.05736-01 2.40556-01 3.4206-01 6.7006-03 5.7006-02 1.00000+00 4.05736-01 2.40506-01 3.4206-01 6.7006-03 5.7006-03 1.00000+00 4.05736-01 2.40000-01 3.4206-01 6.7006-03 5.7006-03 1.00000-00 4.05736-01 2.40000-01 3.4206-01 6.7006-03 5.7006-03 1.00000-00 4.05736-01 2.40000-01 3.4206-01 6.7006-03 5.7006-03 1.00000-00 4.05736-01 2.40000-01 3.4206-01 6.7006-03 5.7006-03 1.00000-00 4.05736-01 2.40000-01 3.4206-01 6.7006-03 5.7006-03 1.00000-00 4.05736-01 2.40000-01 6.7006-03 6.7006-0
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 BENEVAN
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 2 1.3635400 2.50000400 1.25000400 9,7610040

3 1.57535400 3.107006-09 1.591276-00 1.319105-01

4 9.73906-01 1.00006-08 9,87056-01 8,723816-02

5 1.467406-00 -3,42536-08 1,488006-00 1,39036-01

6 2,82012400 1,26756-07 2,86406-00 2,689726-01

7 2,78206-00 5,122176-08 2,807406-00 1,50256-01

8 2,06546-00 3,865376-08 2,06536-00 1,50056-02
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.0000E+00 1,1581E+00
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 9 1.6561:00 3.639/5E-09 1.6052:00 -1.5209:-02
10 1.4705:00 -6.61256:08 1.4655:00 -2.65152:-02
11 1.5605:00 3.56052:08 1.34605:00 -5.65152:-02
12 8.5402:-01 5.04672:-08 8.42596:-01 -6.52902:-02
13 7.7985:-01 2.9909:-09 7.10635:-01 -5.27402:-02
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.0000E+00 7.5388E-01
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 14 6,5925/E-01 3.1581/E-08 6,4502/E-01 -8,474/E-02
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 5 3.7579E-01 -3.1966E-05 3.7625E-01 -8.6063E-08 16 2.0789E-01 -2.1889E-05 2.0751E-01 -6.0060E-08 17 8.8660E-02 -1.1853EE-05 8.7688E-02 -7.3688E-03
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 19 1.32432E-01 -1.74389E-05 1.30398E-01 -1.25086E-02
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 20 4.4497E-01 -4.5368E-05 4.4108/E-01 -2.58/26E-02
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 21 1.2739/E-01 5.5/601E-06 1.25089E-01 -2.3659/E-02
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 22 2.35580E-01 -2.27256E-05 2.26061E-01 -6.76401E-02
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23 7,80016E-01 -1,69719E-05 7,53847E-01 -1,26951E-01 .0000E+00 .0000E+00
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 24 5.97130E-01 -3.4952E-06 5.69481E-01 -1.14897E-01
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 25 2.58585E-01 -1,14040E-06 2.43582E-01 -5,70596E-02 26 1,77490E-01 1,18289E-06 1,60597E-01 -5,27419E-02
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If ine group summery for system
 25 .0000000 3.62136-11 6.37198-01 9.38028-01 5.06028-01 1.33046-01 -1.659198-05 1.000198-00 2.65666-12 6.556780-01 7.95028-01 5.2646-01 1.26278-01 3.46266-05 1.00058-00 2.6656-12 4.28368-01 3.2018-01 5.2646-01 1.26278-01 3.46266-05 1.00058-00 2.66268-12 3.31986-01 3.21366-01 2.6626-01 1.8636-02 1.86368-07 1.00058-00 2.00058-00 1
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.0000E+00 5.8575ZE+00
 7 2,7820±40 5,12217±08 2,900±40
8 2,00541±00 3,82657±08 2,00110±00
9 1,60561±00 3,6286±09 1,55780±00
10 1,4700±00 -6,61256±08 1,44731±00
11 1,3560±00 3,5506±08 1,3060±00
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 .0000E+00
 .0000E+00 4.3000E+00
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.0000E+00 3.0688E+00
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.0000E+00 1.46901E+00
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 11 1.50000-00 3.50000-00 1.50000-00 12 8.540120-01 5.04672-08 7.946710-01 13 7.98512-01 2.980912-09 4.71002-01 14 4.59262-01 3.158142-08 5.84812-01 15 3.5792-01 -3.192542-05 3.69026-01 16 2.078902-01 -2.18272-06 2.080372-01 17 8.854002-02 -1.18272-06 3.800372-01 17 8.854002-02 -1.18272-06 3.800372-01 17 8.854002-02 -1.18272-06 3.800372-01
 .0000E+00
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.00000400 1.98/07-18
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.00000400 1.260/6-18
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.00000400 1.265/6-18
.00000400 1.550/6-12
.00000400 1.750/6-12
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.0000E+00 7.7875E-01
 .000E+00
 .0000E+00 4.29911E-01
.0000E+00 1.80651E-01
.0000E+00 1.09629E-01
 .0000E+00
 .000E+00
 18 5.9039E-02 2.665FE-05 3.698E-02 19 1.3632E-01 -1.7638E-05 1.2167E-01 20 4.4697E-01 -4.5368E-05 4.2536E-01 21 1.2739/E-01 5.5650E-06 1.06/22E-01
 .00000E+00
 .0000E+00 2.6919E-01
.0000E+00 9.15249E-01
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 .0000E+00 2.5252E-01
 22 2.3E580E-01 -2.2756E-05 1.7653E-01
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 .0000E+00 4.27190E-02
 .00000E+00 4.58518E-01
 25 7.80016E-01 -1.69919E-05 6.6757Æ-01
 .000E+00
 .0000E+00 7.5370/E-02
 .0000E+00 1.55269E+00
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INFORMATION UNLI

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24 5.97(3CE-01 -3.4/82/EE-06 4.92(8CE-01
 .00000E+00
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 .0000E+00 1.1742E+00
 25 2.5888E-01 -1.14040E-06 2.04347E-01
 .0000E+00
 .0000E+00 4.01535E-02
 .0000E+00 5.02/54E+01
 26 1.77498E-01 1.18289E-06 1.24118E-01
 .00000E+00
 .0000E+00 3_68822E-02
 .0000E+00 3.32287E-01
 27 3.28258E-02 -1.16969E-07 1.62895E-02
 .00000E+00
 .0000E+00 1.040YE-02
 .0000E+00 5.63112E-02
 28 2.32882H01 -1,47938E-04 2.32468E+01
 .0000E+00 2.39811E-03 4.05807E-01
 .0000E+00 4.8440EE+01
 - elacosof time .02 min.
Odirect access unit 9 requires 516 blocks of length 1456 for cross section weighting.
1 transport cross section weighting function
Ozore grp. 1 grp. 2 grp. 3 grp. 4 grp. 5 grp. 6 grp. 7 grp. 8
1 2.40137E-03 2.4913EE-02 3.15261E-02 1.5064E-02 2.51252E-02 5.5667E-02 3.1699E-02 4.6409E-03
 2 3.767/E-03 3.88127E-02 4.8831SE-02 2.54637E-02 4.767/E-02 8.437/ZE-02 4.783/E-03 3.30631/E-03 3.3105/E-02 4.3112/E-02 2.717/ZE-02 4.2810E-02 8.0257/E-02 4.585/ZE-02 5.5817/E-03 4 1.057/E-03 1.21810E-02 1.625/E-02 1.026/E-02 1.740/E-02 3.3296/E-02 1.925/E-02 2.005/E-03
 5 1.752/0E-03 1.89769E-02 2.47479E-02 1.5991/E-02 2.4289E-02 4.636/0E-02 2.6683E-02 3.355/6E-03
Ozore gr. 9 gr. 10 gr. 11 gr. 12 gr. 13 gr. 14 gr. 15 gr. 16 1 4.6787E-03 5.7553E-03 1.2555E-02 1.525E-02 1.525E-02 1.526E-03 1.2525E-03
 2 7.0278E-03 8.5740E-03 1.8644E-02 2.1866E-02 1.8899E-02 2.8699E-02 2.825E-03 2.0018E-03 3 5.6856E-03 8.0478E-03 1.8356E-02 2.0690E-03 1.7886E-02 2.6502E-03 1.8566E-03
 4 1.8783E-03 3.2752E-03 7.0827E-03 8.14569E-03 7.0605E-03 1.0589E-02 1.5579E-03 7.76181E-04
 5 3.27072E-03 4.66002E-03 1.00944E-02 1.17300E-02 1.01250E-02 1.52052E-02 1.52075E-03 1.09141E-03
Ozne grp. 17 grp. 18 grp. 19 grp. 20 grp. 21 grp. 22 grp. 23 grp. 24
1 1.62874E-08 4.75050E-08 2.7754E-08 5.76858E-08 5.5525E-08 1.46018E-02 2.7756E-02 2.5085E-02
 2 2.4677E-03 7.6857E-03 4.13657E-03 8.6652/E-03 7.9062E-03 2.27590E-02 4.22397E-02 3.82570E-02
 3 2.28112E-03 7.06078E-03 3.85469E-03 8.01809E-03 7.32215E-03 2.10258E-02 3.92398E-02 3.55407E-02
 4 9.1763E-04 2.7862E-05 1.5778E-05 3.2895E-05 2.9627E-05 8.4206E-05 1.6110SE-02 1.4553E-02 5 1.3184E-05 3.9566E-05 2.36870E-05 4.8831E-05 4.2060E-05 1.1999E-02 2.27694E-02 2.06671E-02
Ozone grp. 25 grp. 26 grp. 27 grp. 28
1 1.24/16-02 1.13806-02 3.012506-05 3.65266-01
 2 1.9289E-02 1.77528E-02 4.92127E-05 5.89421E-01
 3 1.77819E-02 1.63991E-02 4.51963E-08 5.43224E-01
 4 7.21140E-03 6.54629E-03 1.65659E-03 2.18509E-01 5 1.02609E-02 9.34362E-03 2.45280E-08 3.13192E-01
 720 d. see2h: beboook wilcox 15x15, 3,00x24, 20xxd/mu burn high temp
Ocell averaged fluxes
0zore grp. 1 grp. 2 grp. 3 grp. 4 grp. 5 grp. 6 grp. 7 grp. 8 1 1.77150E-01 1.31256E-00 1.65719E-00 1.02578E-00 1.55150E-00 2.95254E-00 2.87525E-00 2.07513E-00 2 1.7390E-01 1.27546E-00 1.61673E-00 1.0257E-00 1.51471E-00 2.91301E-00 2.8554E-00 2.02697E-00
 1.7770E-01 1.2674E+00 1.6016E+00 9.9997E-01 1.5010E+00 2.8661E+00 2.8276E+00 2.0667E+00 1.7124'E-01 1.2487E+00 1.5746E+00 9.7470E-01 1.4692E+00 2.8256E+00 2.7657E+00 2.0647E+00
 1.7339E-01 1.27229E+00 1.60542E+00 9.9449E-01 1.5004E+00 2.88411E+00 2.81877E+00 2.0887E+00
Cerre grp. 9 grp. 10 grp. 11 grp. 12 grp. 13 grp. 14 grp. 15
1 1.59277=00 1.45299=00 1.31897=00 8.10821=-01 6.85214=-01 6.30364=-01 3.70528=-01
2 1.60004=00 1.46072=-00 1.33613==00 8.31298=-01 7.00668=-01 6.3037=-01 3.73597=-01
 1,6025E+00 1,4652E+00 1,3416E+00 8,3779E+01 7,06280E+01 6,38474E+01 3,74480E+01 2,0666E+01
 1.605/RE+00 1.46971E+00 1.35537E+00 8.55277E-01 7.1957/E-01 6.59417E-01 3.75990E-01 2.07900E-01
 5 1.60097E-00 1.4639/E-00 1.34161E-00 8.37289E-01 7.05767E-01 6.37701E-01 3.74127E-01 2.0569E-01
 grp. 17 grp. 18 grp. 19 grp. 20
8.38740E-02 4.28051E-02 1.34404E-01 4.28697E-01
 grp. 21 grp. 22
1.11571E-01 1.91724E-01
 6.9619E-01
Ozone grp. 17
 grp. 24
5.16695E-01
 8.615/E-02 5.07/6E-02 1.28207E-01 4.3652E-01 1.150/E-01 2.1469E-01 7.5356E-01 5.5169E-01 8.6357E-02 5.3275E-02 1.2822E-01 4.3906E-01 1.2337E-01 2.2107E-01 7.6352E-01 5.6192E-01 8.85567E-02 5.8715E-02 1.3231E-01 4.4484E-01 1.2707E-01 2.3756E-01 7.77576E-01 5.9531E-01
 8.6791E-02 5.2676E-02 1.2853E-01 4.3875E-01 1.2122E-01 2.2053E-01 7.49967E-01 5.6469E-01
 gra 25 gra 26 gra 27
2.16673E-01 1.5628E-01 1.97258E-02
Ozone grp. 25
 2.3499E-01 1.5200E-01 2.49661E-02
 2,40050E-01 1,57333E-01 2,61750E-02
 2.5674E-01 1.74592E-01 3.1687ZE-02
 2.4149E-01 1.596GE-01 2.7059E-02
Offlux disadventage factors (zone average/cell average-flux)
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70. 1 Gp. 2 Gp. 3 Gp. 4 Gp. 5 Gp. 6 Gp. 7 Gp. 8 1.025500 1.025500 1.025500 1.025500 1.025500 1.025500
 2 1.00290-00 1.00560-00 1.00706-00 1.00520-00 1.00500-00 1.00020-00 1.00060-00
 1.00052E+00 9.98936E-01
 3 9.9667E-01 9.96197E-01 9.97677E-01 9.9750/E-01 1.000/0E+00 1.00087E+00
 9.87616E-01 9.81520E-01 9.80851E-01 9.80300E-01 9.77174E-01 9.77051E-01
 9.87507E-01 9.98062E-01
 5 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00
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Ozore grp. 9 grp. 10 grp. 11 grp. 12 grp. 13 grp. 14
1 9.5/64E-01 9.52E5E-01 9.6352E-01 9.6650E-01 9.6655E-01
 9.51471E-01 9.85019E-01
 9,99480E-01 9,98210E-01 9,99919E-01 9,92847E-01 9,92761E-01 9,87982E-01
 9.9893E-01 9.97676E-01
 3 1,0035E+00 9,9995E-01 1,0003E+00 1,0051E+00 1,0072E+00 1,0032E+00 4 1,0039E+00 1,0032E+00 1,0102E+00 1,01910E+00 1,0192E+00 1,0192
 1.00075E+00 1.00057E+00
 1,00/9X=+00 1,005/E+00
 5 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00
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Ozore grp. 17 grp. 18 grp. 19 grp. 20 grp. 21 grp. 22
1 9.66390E-01 8.0700E-01 9.6189E-01 9.7706E-01 9.2056E-01 8.70141E-01
 9.3166E-01 9.1549E-01
 9.9009E-01 9.6779E-01 9.9130E-01 9.947E1E-01 9.82051E-01 9.7501E-01
 9.83094E-01 9.77871E-01
 3 1.000/F+00 1.0199E+00 1.000/F+00 1.000/F+00 1.000/F+00 1.003/F+00 9.987/E+01 9.9806/E+01 4 1.020/F+00 1.1147/E+00 1.0210/F+00 1.030/F+00 1.030/F+00 1.030/F+00 1.030/F+00 1.030/F+00 1.030/F+00 1.030/F+00 1.030/F+00 1.0000F+00 1.000F+00 1.0000F+00 1.0000F+00 1.0000F+00 1.0000F+00 1.0000F+00 1.000
Ozone grp. 25 grp. 26 grp. 27
1 8.781/3E-01 8.50826E-01 7.2905/E-01
 2 9.73073E-01 9.57669E-01 9.22829E-01
 3 9.99940E-01 9.85530E-01 9.67532E-01
 4 1.05316E+00 1.0756/E+00 1.17126E+00
 5 1.0000E+00 1.0000E+00 1.0000E+00
Ocell averaged currents
0zre gp. 1 gp. 2 gp. 3 gp. 4 gp. 5 gp. 6 gp. 7 gp. 8
1 2.603z-03 2.403z-02 3.55x-02 1.904z-02 2.912z-02 5.56x-02 3.16x-02 4.603z-03
2 3.7676z-03 3.602z-02 4.8535z-02 2.963z-02 4.4xxxz-02 8.4xxxz-02 4.768x-02 6.96x-03
3 3.0534z-03 3.303x-02 4.3312z-02 2.717zz-02 4.2810z-02 8.05x-02 4.768x-02 5.5817z-03
4 1.673z-03 1.280z-02 1.652z-02 1.90x2-02 1.74xx-02 3.35xx-02 1.92x-02 5.5817z-03
5 1.7520z-03 1.876z-02 2.47xxz-02 1.5871z-02 4.660z-02 2.668xz-02 3.35x-02 3.
Ozne grp. 9 grp. 10 grp. 11 grp. 12 grp. 13 grp. 14 grp. 15 grp. 16
1 4.6787E-05 5.7555E-05 1.2965E-02 1.4526E-02 1.2521E-02 1.5764E-02 1.8996E-03 1.33235E-05
2 7.0278E-05 8.5740E-05 1.8640E-02 2.1856E-02 1.8997E-02 2.8699E-02 2.825E-03 2.0018E-05
 3 5.6552-03 8.04726-03 1.76356-02 2.02506-02 1.7656-03 2.65076-03 1.65766-03 4 1.6766-03 3.27526-03 7.0526-03 8.16506-03 7.0508-03 1.05396-02 1.5576-03 7.76186-04
 5 3.27072-03 4.6002E-05 1.0094/E-02 1.17508E-02 1.01257E-02 1.5205E-02 1.52057E-03 1.09141E-03
Ozore grp. 17 grp. 18 grp. 19 grp. 20 grp. 21 grp. 22 grp. 23 grp. 24
1 1.626/4-03 4.7350c-06 2.775/4-03 5.7653c-03 5.553c-03 1.4603c-02 2.775/4c-02 2.5053c-02
2 2.4675c-03 7.4657c-03 4.1563c-03 8.4653/c-03 7.5083c-03 2.2750c-02 4.2253c-02 3.8657c-02
 3 2.28112E-03 7.0077E-03 3.8546E-03 8.0180E-03 7.3275E-03 2.1058E-02 3.9598E-02 3.55407E-02 4 9.1765E-04 2.7862E-03 1.5778E-03 3.2855E-03 2.9427E-03 8.42034E-03 1.61103E-02 1.45534E-02
 1.31842-03 3.9566E-08 2.24870E-08 4.68331E-08 4.20601E-08 1.19999E-02 2.27894E-02 2.05671E-02
 979. 25 979. 26 979. 27
1.25476-02 1.13856-02 3.012506-03
1.92896-02 1.77526-02 4.921276-03
 1.77819E-02 1.63991E-02 4.51963E-03
 7.21140E-03 6.54629E-08 1.65600E-08
 1.0200E-02 9.34362E-05 2.4520E-05
Ozone
 volume
 vol. fraction
 6.8843E-01
 3.307535-01
 1.5246E-02
 3.17552E-02
 1.0412XE-01
 2.1672/E-01
 1.145/E+00
 5.49878E-01
 2.0814/E+00
 1.00000E+00
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Orec ested pererhalt8, skipcellut, skipshipolsta
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| pass= 5, eec helts after pass   1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 8 m m m m mm m m m m m m m m m m m m m m                               | 2020202000, IMI                                                                                 |                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|----------------------------------------|
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| 00000 2777777<br>0000000 777777772<br>00 00 22 22<br>00 00 22<br>00 00 22<br>00 00 22<br>00 00 22<br>00 00 22<br>00 00 22<br>00 00 22<br>00 00 22<br>00 00 22<br>00 00 22<br>00 00 22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | # 11<br># 111<br># 111<br># 11<br># 11<br># 11<br># 11<br># 11<br># 11 |                                                                                                 | 97777777777777777777777777777777777777 |
| 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ### CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC                                 | 70000000000                                                                                     |                                        |

Feb 16 10:06 1996 File Name: s3020.cf,cut BBA000000-01717-0200-00012 REV 01 ATTACHENT 1 - Page 484

| 53<br>53535353535353 | œ<br>œ.                                 | 86, 86<br>8686968888888                 | ((<br>() | <b>66</b><br>666666666                  |
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| 2000000000           | CDCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC  | aa aa                                   |          | 666666666666                            |

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Operatory correction factor for wigner rational approximation 1.3500+00
 70 entries.
 3g array has
 70 entries.
 4q array has
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 5ci array has
 60 array has
 4 entries.
 7g array has
 4 entries.
 80 array has
 4 entries.
 4 entries.
 90 array has
 10g array has
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Omixing table
Centry mixture isotope
 runber density new identifier
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202
203
 8016
 4.19420E-02
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 3.81515E-06
 5010
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 5011
 1.5488/E-05
 4.2515Œ-02
1.47017E-04
 40B02
 205
 678
 9225
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 92234
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 1.54011E-05
 9236
 200008
 1.58412E-05
 92238
 7.23470E-05
 200009
 200010
 8016
 1.50511E-02
 1.15315E-02
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 200012
 36083
 4,00409E-07
 34055
 200013
 1.92753E-07
 38090
 200014
 4.36630E-06
 39089
 3.374/9E-05
 200015
 200016
 42095
 4.3553E-06
 40093
 3.4307ZE-06
 200017
 200018
 40094
 5.36576E-06
 40075
 200019
 6,73357E-07
 41094
 2,49521E-12
 200020
 200021
 43077
 5.2405XE-06
 45103
 2.81650E-05
 200022
 200023
 45105
 6.85117E-09
 2000B4
 44101
 4.70587E-05
 44106
 7.10823E-07
 200025
 46105
46108
 200026
 1.74569E-06
 200027
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 20002B
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 · 7.62183E-11
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 4.37452E-06
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 54136
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 8.9477ZE-06
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 2.21272E-07
 200084
 200035
 55135
 2.83459E-06
 55137
 5.58169E-06
 200036
 56136
 4.3486E-08
 20037
 200038
 57139
 5,53555E-06
 59141
 4.73417E-06
 20039
 20000
 59143
 1.20018E-07
 200041
 58144
 2.11613E-05
 60143
 4.42/60E-06
 200042
 2003
 60145
 3.23179E-06
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200045
 1,20/98E-06
 3,46153E-09
 61148
60147
 2000/6
 4.32241E-0B
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3.371325-07
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 2,77975E-08
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 1.11012E-05
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 62151
 1.22001E-07
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 200051
 5.39991E-07
 5.414AE-10
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 63153
 2.9975E-07
 5,42034E-08
 70054
 63154
 3,2/99XE-08
 20005
 63155
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 40802
 4.42681E-05
 200057
 1001
 2.30630E-02
 5010
 200058
 2.07787E-05
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 8.51673E-06
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 55133
 5.74632E-06
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 9,31929E-07
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 0279
 1,0790E-07
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 3.19267E-05
 920
 200054
 5,37075E-06
 92341
92342
95241
 20005
20004
 2,675501-05
 2.37572E-07
 200057
 6.58791E-08
 952/3
 200038
 1.74582E-08
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 96244
 1.32132E-09
 200070
 999
 70
 3.307535-21
 Changetry and meterial description
 type (0/1--fuel/mod)
 Ozone mixture outer dimension
 extra xs
7.9056/E-01
 temperature
 6.32X60E-01
 6.07600E+02
 6.5000E+02
 1.25052E+01
 6,73100E-01
 8.14000E-01
 6.07600E+02
 3.5482±400
2.5283±-01
 9.75000E+02
4 1 2,9510E+00 9.7500E+02 2.3289E-01 0
8057 locations of 20000 skellable are required to sake a new rester containing the self-shielded values. On nuclides in your problem have bordsrento factor data**borsent will copy from logical 12 to logical 1
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0cpy 1001 hydrogen from log 12 to log 18 bordsrento trigger 0
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0cpy 1001 hydrogen from log 18 to log 1 bordsrento trigger 0
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 40093
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from lag 12 to lag
Осфу
 41094
42095
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 from lag 12 to lag
 bandarerico trigger 0
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 from log 12 to log 1
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 pd-108
 bandarenko trigger 0
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 bondarerico trigger 0
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 51124
 sb-124
 bandarento trigger 0
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 54131
 xe-131
 from log 12 to log
 bondarento trigger 0
0ccpy
 54152
 xe-132
 from lag 12 to lag
 bandarenko trigger 0
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 54135
 from lag 12 to lag
 bandarenko trigger 0
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 from log 12 to log
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 from lag 12 to lag
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 from lag 12 to lag
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 15
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 202
 hydrogen
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 erclf/b-ly set 1269/thrm1002
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|                   | o 042375 p-3 283k               |                    | id  | 200058        |
| baran-11          | endi/b-iv mat 1160              | updated 10/13/89   | id  | 204           |
| boror-11          | endf/b-iv met 1160              | updated 10/13/89   | id  | 200059        |
| axygen-16         | endif/briv mat 1276             | updated 10/13/89   | id  | 201           |
| arygen-16         | endi/to-iv mat 1276             | updated 10/13/89   | id  | . 200010      |
| arygen-16         | endf/b-iv met 1276              | uzdated 10/13/89   | id  | 200011        |
| kr-83             | mt=102,105,105,105,105,107      | updated 10/13/89   | id  | 200012        |
| kr-85             | mt= 102                         | ••••               | id  | 200013        |
| sr~90             | mt=102                          | updated 10/13/89   | id  | 200014        |
| ~ <sub>8</sub> 89 | mt=102                          | Updated 10/13/89   | id  | 200015        |
| 21-93             | art= 102                        | 4-11-14-14-1       | id  | 200017        |
| 25-94<br>25-94    | at=102                          | undeted 10/13/89   | ŭ   | 200018        |
| 21-95             | nt=102                          | updated 10/13/89   | Ñ   | 200019        |
|                   |                                 | uzdeted 10/13/89   | ũ   | 205           |
| zircalloy         | eruif/b-iv ant 1284             |                    |     | 20056         |
| zircalloy         | endi/oriv mat 1284              | updated 10/13/89   | id  |               |
| rb- <u>%</u>      | nt=102                          | updated 10/13/89   | id  | 200020        |
| 800-95            | Rt=102                          | updated 10/13/89   | id  | 200016        |
| tc-99             | at=102                          | updated 10/13/89   | M   | 200021        |
| ru-101            | RE=102                          | updated 10/13/89   | id  | 200024        |
| ru-106            | nt=102                          | updated 10/13/89   | id  | 200025        |
| rh-103            | mt=102                          | uzdated 10/13/89   | id  | 200022        |
| rh-105            | mt= 102                         | •                  | id  | 200023        |
| ppl-105           | nt=102                          | undeted 10/13/89   | id  | 200026        |
| E-108             | nt=102                          | Updated 10/13/89   | id  | 200027        |
| silver-109        | endf/b-iv ast 1139              | underted 10/13/89  | id  | 200028        |
|                   | nt=102                          | updated 10/13/89   | ŭ   | 200029        |
| sb-124            |                                 |                    | ŭ   | 200030        |
| xe-131            | nt=102,103,104,105,105          | unisted 10/13/89   |     |               |
| xe-132            | mt=102,103,104,105,105          | updated 10/13/89   | id  | 200081        |
| xangn-135         | endf/b-iv mat 12%               | updated 10/13/89   | id  | 200052        |
| xe-136            | att= 102, 105, 104, 105, 10     |                    | id  | 200083        |
| cosium 133        | endf/o-iv sat 1141              | updated 10/13/89   | Id  | 200060        |
| cs-134            | mt=102                          | updated 10/13/89   | id  | 2000B4        |
| CS-135            | ent= 102                        | ·                  | id  | 20035         |
| cs-137            | mt=102                          | updated 10/13/69   | d   | 200036        |
| ba-136            | mt=102                          | undated 10/13/89   | id  | <b>2000B7</b> |
| la-139            | mt=102                          | uideted 10/13/89   | id  | <b>2000BB</b> |
| ce-144            | nt= 102                         | •                  | id  | 200041        |
| pr-141            | mt=102,103,104,105,106,107      | uxdated 10/13/89   | id  | 200039        |
| pr-143            | mt=102                          | undated 10/13/89   | (d  | 2000/0        |
| nd-143            | mt=102                          | Uzdated 10/13/89   | id  | 2000/2        |
| nd-145            | at=102                          | undeted 10/13/89   | id  | 20003         |
| nd-147            | mt=102                          | updated 10/13/89   | ũ   | 2000/6        |
|                   | at=102                          | uzdeteci 10/13/89  | ĩd  | 200044        |
| pn-147            |                                 | change of the      | ũ   | 2000/5        |
| pn-148            | nt= 102                         | l. 40.007.000      |     | 200047        |
| sm-147            | erdi/by fission product         | updated 10/13/89   | id  |               |
| <b>587-149</b>    | nt=102,105,107                  | updated 10/13/89   | id  | 200048        |
| <b>591-15</b> 0   | 献率(位                            | updated 10/13/89   | id  | 2000/9        |
| sm-151            | mt=102,108,104,105,106,107      | updated 10/13/89   | id  | 200050        |
| sor-152           | nt=102,103,104,105,105,107      |                    | id  | 200051        |
| లు మ              | nt=102,105,104,105,105,107      | updated 10/13/89   | id  | 200053        |
| eu-154            | nt=102,105,104,105,105,107      | updated 10/13/89   | id  | 200054        |
| eu-155            | nt=102,103,104,105,105,107      | umbbad 10/13/89    | id  | 200035        |
| gd-155            | at=102                          | uzdated 10/13/89   | id  | 200052        |
|                   | -544 residence p-3 200k f-1/end |                    | id  | 200007        |
| uranium Z35       | ercif/to-iv met 1261            | updated 10/13/89   | id  | 200006        |
| u-2% 1163 sign    | 514 nauklacs p-3 28% f-1/e-s(   | 1.45)              | id  | 20000B        |
| unaniun-238       | endif/to-ly met 1262            | uzdated 10/13/89   | id  | 200007        |
|                   | erdf/b-iv met 1263              | undertaid 10/13/89 | ũ   | 200061        |
| 7474 10K C        | 0-5-4 navidace p-3 200k f-1/e-m | (1.45)             | ũ   | 200062        |
| Price 100 818     | and being the same in the man   | updated 10/13/89   | ũ   | 200063        |
| prominustary      | endit/b-iv met 1254             | Avenue id Hiera.   | ~   |               |

| 0 | plutonius<br>plutonius<br>an-241 105                                                        | n-242 erdi/b-iv<br>ió sigp-544 naukl<br>57 218 gp ut f-1/<br>4 erdi/b-iv | mat 1266<br>mat 1161<br>.acs 218ngp p-3 2<br>/e-m 090376 p3 29 | updated 10,<br>updated 10,<br>updated 10,<br>95k<br>Sk<br>updated 10,<br>.00 seconds | /13/89<br>/13/89                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | id 2000<br>id 2000<br>id 2000<br>id 2000<br>id 2000<br>id 2000 | 65<br>66<br>67<br>68                   | ٠.                       |
|---|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------|--------------------------|
| Ĭ | <b></b>                                                                                     | m m<br>m m<br>mm m<br>mm m                                               | **************************************                         | titititititi<br>tititititititi<br>tt                                                 | 2500492156<br>200400432016<br>25 05<br>26 05                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                | !!<br>!!<br>!!                         |                          |
|   |                                                                                             |                                                                          | 11<br>11<br>11<br>11                                           | tt<br>tt<br>tt<br>tt                                                                 | 28 68 69 69 69 69 69 69 69 69 69 69 69 69 69                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 144 144 144<br>144 144 144<br>144 144 144 144<br>144 144       | ii<br>tt<br>tt<br>tt<br>tt             |                          |
| _ |                                                                                             | m m                                                                      | ii<br>iiiiiiiiiii<br>iiiiiiiiii                                | tt<br>tt<br>tt                                                                       | 86. 66<br>86. 66<br>86. 66                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | HA 144<br>1444 1444                                            |                                        |                          |
| 0 | <del></del>                                                                                 | <b>(100000000</b>                                                        | w w                                                            | *********                                                                            | 96959999666                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                |                                        |                          |
|   | 대<br>대<br>대<br>대<br>대<br>대<br>대<br>대<br>대<br>대<br>대<br>대<br>대<br>대<br>대<br>대<br>대<br>대<br>대 | 88 AS                                                                    | * *                                                            |                                                                                      | 9050000000000<br>96 96<br>96                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                |                                        |                          |
|   | RRBRI<br>BRBBI                                                                              | 88 88<br>8800000000000<br>8000000000000                                  | * *                                                            | ii<br>ii<br>ii                                                                       | \$8<br>899953999996<br>99999999998                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                |                                        |                          |
|   | #<br>#<br>#                                                                                 | 80 <b>80</b><br>88 <b>86</b>                                             | ``W. W                                                         | <b>!!</b>                                                                            | 86<br>86                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                |                                        |                          |
| _ | 41111111111111111111111111111111111111                                                      | 86 88<br>88 <b>88</b><br>88 88                                           | <b>~</b>                                                       | ii<br>1551551155155<br>151151515155                                                  | 95 95<br>99999999999<br>869999999                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                |                                        |                          |
| 0 | , , , , , , , , , , , , , , , , , , ,                                                       | mmm                                                                      | • "                                                            | .11                                                                                  | <i></i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <i>!!</i>                                                      | 9777777777                             | <del>!!!!!!!!!!</del>    |
|   | 8 8<br>8 8<br>8 8                                                                           | 7777777717<br>22 22<br>22 22<br>22 22                                    | #                                                              | 111<br>1111<br>11                                                                    | 62<br>62<br>64<br>64<br>64<br>64<br>64<br>64<br>64<br>64<br>64<br>64<br>64<br>64<br>64                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <i>  </i>                                                      | 97 97<br>98 99<br>99 99                | <b>6</b> 6               |
|   | 888                                                                                         | 22<br>22                                                                 | <i>#</i>                                                       | 11<br>11<br>11                                                                       | <del>(((((((((())))))))                    </del>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | #                                                              | 99 99<br>9333333333                    | eeeeeeee<br>eeeeeeeee    |
|   | 888                                                                                         | 2<br>2                                                                   | <i>#</i>                                                       | 11<br>11<br>11                                                                       | & & & & & & & & & & & & & & & & & & &                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <i>"</i>                                                       | 89<br>89<br>89                         | 8 8                      |
| 0 |                                                                                             |                                                                          | <i>  </i>                                                      | 11111111<br>11111111                                                                 | CHILLIAN CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CO | <i>  </i>                                                      | 97777777777777777777777777777777777777 |                          |
| v | 11<br>111                                                                                   | 000000                                                                   |                                                                | 000000                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                | 000000                                 |                          |
|   | 1111<br>11                                                                                  | <b>0 0 0</b>                                                             | ***                                                            | 8 8                                                                                  | 72 72<br>72<br>72                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | .:::                                                           | 8888888                                | 77 77<br>77<br>77        |
|   | 11<br>11<br>11                                                                              | 888                                                                      | :::                                                            | 88 88                                                                                | <b>2</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ***                                                            | 8 8                                    | 77                       |
|   | 11<br>11<br>11                                                                              | 888                                                                      | ***                                                            | 888<br>888                                                                           | 22<br>22<br>22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | :::                                                            | 8888                                   | . 77<br>77<br>7 <u>7</u> |
|   | 11111111                                                                                    | 0000000                                                                  |                                                                | 0000000                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                | 00000000                               | 77                       |

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| 11111111 | 0000000 |                  |            | 000    | 0000  |                 | <i>111111</i> 2 |          | 000000                                  |
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|          |         | \$500696         |            | 000000 |       | 80000<br>800000 |                 | ll<br>ll | 000000000000000000000000000000000000000 |
|          |         | 98               | 96         | œ      | œ     | 86              | 89              | ii       | 66                                      |
|          |         | 88               |            | œ      |       | <b>86</b>       | 86              | !!       | 60                                      |
|          |         | 22               |            | œ      |       | 86.             | 89              | ļļ.      | 66                                      |
|          |         | <b>6</b> 9396963 |            | œ      |       | 8000000         |                 | ļļ.      | 600000000                               |
|          |         | \$63666          |            | œ      |       | 8000000         |                 | ii       | 666666000                               |
|          |         |                  | <b>95</b>  | Œ      |       | 86              | 80              | ii .     | 66                                      |
|          |         |                  | <b>5</b> 5 | œ      |       | <b>86</b>       | 88              | ij       | 66                                      |
|          |         | <b>93</b>        | <b>8</b> 5 | Œ      | œ     | 86              | 88              | !!       | œ                                       |
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|          |         | 8696896          | 96996      | 200000 | XXXXX | 88              | 200             | mmmmm    | 666666660000000                         |
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<sup>1 -</sup>lq array has 1 entries.
0 cq array has 4 entries.
0 tq array has 12 entries.
0 tq array has 12 entries.
0 select 5 nuclides from the master library on logical 1 d5 nuclides from the working library on logical 3 0 nuclides from the working library on logical 0 to create the naw working library on logical 4

<sup>1</sup> rescretce calculations have been requested

```
O cutput option for anpx formatted cross section data
Othe storage allocated for this case is 200000 words
 2q array has
 70 entries.
 3q array has
 5 entries.
 5 entries.
 40 array has
O general information concerning cross section Library
 tape identification number
 8
 number of nuclides on tace
 7
 number of neutron energy groups
 first themal neutron energy group
 15
 runber of germa energy groups
 direct access unit number 9 requires 72 blocks of length 1484 words
- xsdm tape 4321
 scale 4.2 - 27 grap neutron burnup library
 based on endi-b version 4 data with endi-b version 5 fission products
 1/27/89
 compiled for mc
 last updated
 9/16/93
 Limpetrie
 - ami

 work tape 4349

xsdm weighted tape-parent case entitled- 720 d. sasian bebook wilcox 15x15,
 3.00xX, 20pd/mu burn high terp
0 nuclides from yearn tape
 超超级短短
 erdf/b-iv net 1269/thm4002
 updated 10/13/89
 hydrogen
 b-10 1273 218rgp 042375 p-3 293k
 baran-11
 endf/b-iv mat 1160
 undeted 10/13/89
 ends/b-iv set 1276
 ucclisted 10/13/89
 avygen-16
 erdif/b-iv met 1284
 umboad 10/13/89
 zircalloy
0 nuclides from work tape
 999
 1/v cross sections normalized to 1.0 at 0.0253 ev
 1001
 endf/b-ly sest 1269/thrmf002
 ucdated 10/13/89
 hydrogen
 5010
 b-10 1273 218 pp 042375 p-3 263k
 5011
 endf/b-iv sest 1160
 undeted 10/13/89
 boron-11
 8016
 10
 endf/b-iv set 1276
 undeted 10/13/89
 avgen 16
 and/b-iv set 1276
 updated 10/13/89
 6
 aygan ló
 36083
 kr 83
 mt=102,103,103,105,105,107
mt= 102
 uzzleted 10/13/89
 360E5
 kr-85
 38090
 mc=102
 umbted 10/13/89
 87-90
 39089
 y-89
 mt=102
 umbted 10/13/89
 400%
400%
 27-85
27-85
 pst= 102
 updated 10/13/89
 mt=102
 40075
 18
 27-95
 mt=102
 undeted 10/13/89
 40B02
 endf/b-iv set 1284
 undeted 10/13/89
 zircalloy
 41094
 mt=102
 updated 10/13/89
 rb-94
 42075
 mo-95
 mt=102
 umbered 10/13/89
 updated 10/13/89
 43099
44101
 st=102
 tc-99
 ##=102
 umbted 10/13/89
 ru-101
 44106
4510B
 ru-106
 at=102
 updated 10/13/89
 mt=102
 umstad 10/13/89
 rh-103
 45105
 mt= 102
 rh-105
 4610B
4610B
 pd-105
 ME=102
 updated 10/13/89
 pd-108
 mt=102
 uppleted 10/13/89
 47109
 silver-109
 andf/b-iv mat 1139
 uppleted 10/13/89
 5112.
54131
 at=102
 umbted 10/13/89
 sb-124
 mt=102,105,104,105,105
mt=102,105,104,105,105
erati/o-iv mat 1234
 xe-131
 undeted 10/13/89
 54132
 32
 xe-132
 undeted 10/13/89
 54135
 XETUTI- 135
 undated 10/13/89
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int= 102, 103, 104, 105, 107
 xe-136
 35373304
 cesium-133
 endf/b-iv mat 1141
 undeted 10/13/89
 ऋछ
 55134
 cs-134
 mt=102
 undeted 10/13/89
 55135
 aut= 102
 CS-135
 55137
 cs-137
 st=102
 undeted 10/13/89
 56136
 ba-136
 nt=102
 undered 10/13/89
 uzubted 10/13/89
 57139
 mt=102
 la-139
 58144
 ce-144
 mt= 102
 p-141
p-143
 59141
 undated 10/13/89
 mt=102,105,104,105,105,107
 updated 10/13/89
 591/3
 mt=102
 undeted 10/13/89
 60143
 nd-143
 mt=102
 nd-145
 updated 10/13/89
 60145
 mt=102
 60147
 nd-147
 mt=102
 updated 10/13/89
 61147
 ucdated 10/13/89
 pa-147
 at=102
 61148
62147
 pa 148
 mt= 102
 SR-147
 endf/b-v fission product
 undeted 10/13/89
 62149
 updated 10/13/89
 an 149
 mt=102,105,107
 updated 10/13/89
 62150
 STR-150
 art=102
 mt=102,103,104,105,104,107
mt=102,103,104,105,104,107
 62151
 umbted 10/13/89
 sn-151
 62152
 undeted 10/13/89
 an 152
 mt=102,103,104,105,104,107
mt=102,103,104,105,104,107
 ଷ୍ଟାୟ
ଷ୍ଟୀୟ
 undeted 10/13/89
 ar 153
 CL-154
 updated 10/13/89
 හාන
 ev-155
 mt=102,105,104,105,106,107
 uppleted 10/13/89
 mt=102
 updated 10/13/89
 64155
 gd-155
 1.+5)
 9234
 u-254 1043 sigo-5+4 maklacs p-3 255k f-1/e-n(
 92235
 uranium 235 endi/to-iv set 1261
 updated 10/13/89
 92236
 u-236 1163 sigo-544 resklace p-3 280k f-1/e-x(1.+5)
 92238
 61
 uranium 238 ercli / for iv met 1262
reptunium 237 ercli / for iv met 1263
 updated 10/13/89
 95237
 82
 umbted 10/13/89
 쭁
 pr-238 1050 sign-544 nastlets p-3 25tk f-1/e-s(1.+5)
 94238
 plutonium 239 and /b-iv set 1264
 undated 10/13/89
 9239
 64
 020
 plutomium-240 endif/b-iv met 1265
 updated 10/13/89
 umbted 10/13/89
 94241
 66
 plutonium-241 endi/b-iv met 1266
 94242
 updated 10/13/89
 8
 plutonium-242 andf/b-iv met 1161
 an-241 1056 sign-5-4 nasklacs 218mp p-3 250k
an-243 1057 218 gp st f-1/e-m 0903/6 p3 250k
 95241
 88
 95243
 60
 updated 10/13/89
 95244
 70
 curium 24
 entito-iv met 1162
 eraff/to-iv med: 1269/thrm1002 upoleted 10/13/89
 202
 tencerature= 607.60
O hydrogen
 550,00 was selected.
 thermal acattering matrix number 2 at a temperature of
 temperatures 607.60
Ob-10 1273 218mp 042575 p-3 255k
 巫
 themal scattering matrix number 2 at a temperature of
 50.00 was selected.
 temperatures 607,60
0 baran-11
 endf/b-iv met 1160
 umbted 10/13/89
 204
 550.00 was selected.
 thermal scattering matrix number 2 at a temperature of
0 oxygen-16
 endf/b-iv met 1276
 undered 10/13/89
 201
 temeratures 607.60
0 zircelloy
 endf/b-iv mot 1284
 uiodeted 10/13/89
 205
 temperature 650.00
Oresonance data for this nuclide
Chass runber (a)
 90,436
 temperature(kelvin)
 = 650,000
 = 4.2560E-02
Ocotantial scatter signs =
 6.35
 lumbed nuclear density
 = 6.7509999E-01
 1.079
 lump dimension (a-bar)
Ospin factor (g)
 = 6.324600E-01
Oimer radius
 depoff correction (c)
 = 1.6805907E-01
Othe absorber will be treated by the northein integral method.
Othis resource material will be treated as a 2-dimensional object.
Oxcluse fraction of lusp in cell used to account for spatial self-shielding-1.0000
(prosp
 res abs
 res fiss
 res scet
 -1.15675ZE-03
 .00000E+00
 -7,806053E-01
 9
 4.625770E-02
 .000000E+00
 -2.075Z/0E+00
 10
 -5.99230E-02
 .0000000
 -1,35198/E+00
 11
 -1.76167Æ-01
 .00000E+00
 -7.350731E-01
Omonis resonance integrals
 resolved
```

Orbertion 2.92/02E-01 .0000CE-00 .00 min. .00 min. .00 min.

this such working tape was created 02/16/96 at 10:02:07
the title of the parent case is as follows
such weighted tape-parent case entitled-720 d, see2h: bebook wilcox 15x15,
3.00x7x, 20gx/www burn high temp

| tape id 8670 number of nuclides number of nautron groups 27 number of game groups | 70<br>0    |
|-----------------------------------------------------------------------------------|------------|
| first thermal grap 15 logical unit                                                | Ž.         |
| table of contents                                                                 | •          |
|                                                                                   | 202        |
| b-10 1273 218rgp 0/2375 p-3 293k id                                               | 21B        |
|                                                                                   | 204        |
| oxygen-16 endf/to-iv met 1276 updeted 10/13/89 id                                 | 201        |
|                                                                                   | 205        |
| (A CICES SOCIATE INVESTIGATION OF IN SIC ANCED EA                                 | 999        |
|                                                                                   | 001        |
|                                                                                   | 010        |
|                                                                                   | 011        |
|                                                                                   | 016        |
| oxygen-16 eraif/b-iv met 1276 updeted 10/13/89 id                                 | 6<br>083   |
|                                                                                   | (A)        |
|                                                                                   | 90         |
|                                                                                   | 89         |
|                                                                                   | oz<br>oz   |
|                                                                                   | 094        |
|                                                                                   | 05         |
|                                                                                   | B02        |
|                                                                                   | 094        |
|                                                                                   | 窈          |
|                                                                                   | 099        |
|                                                                                   | 101        |
|                                                                                   | 105        |
|                                                                                   | 103        |
| rh-105 mt= 102 kd 45                                                              | 105        |
|                                                                                   | 105        |
| cd-108 at=102 ucd=ccd 10/13/89 id 46                                              | 10B        |
| silver-109 endf/b-iv mat 1139 updated 10/13/89 id 47                              | 109        |
| sb-124 nt=102 updated 10/13/89 id 51                                              | 124        |
|                                                                                   | 131        |
|                                                                                   | 132        |
|                                                                                   | 135        |
|                                                                                   | 136        |
|                                                                                   | 133        |
|                                                                                   | 134        |
|                                                                                   | 135        |
|                                                                                   | 137        |
|                                                                                   | 136<br>139 |
|                                                                                   |            |
|                                                                                   | 144<br>141 |
|                                                                                   | 13         |
|                                                                                   | 143        |
|                                                                                   | 145        |
|                                                                                   | 147        |
|                                                                                   | 147        |

| 100 10           | 10.00 1770                              | THE MAKE WA                                     |                      |                                         |                                                                                 |              |           | <b></b>                                 |                                         |
|------------------|-----------------------------------------|-------------------------------------------------|----------------------|-----------------------------------------|---------------------------------------------------------------------------------|--------------|-----------|-----------------------------------------|-----------------------------------------|
|                  | ***                                     |                                                 |                      |                                         | •                                                                               |              |           |                                         | 11                                      |
|                  | pn-148                                  | nt× 1                                           |                      |                                         | AT 400                                                                          | ķ            |           | 48<br>77                                | •                                       |
|                  | sn-147                                  |                                                 | fission product      | updated 10                              |                                                                                 | ic<br>ic     |           | M7<br>V.O                               |                                         |
|                  | 978-149<br>978-150                      | nt=102,10<br>at=102                             | o, iur               | updated 10<br>updated 10                |                                                                                 | , k          |           |                                         |                                         |
|                  | sra-151                                 | ma=102 10                                       | B,104,105,106,10     | 7 undated 10                            |                                                                                 | k            |           |                                         |                                         |
|                  | sar-152                                 | mt=102, 10                                      | 8,104,105,106,10     | ucdeted 10                              |                                                                                 | î            |           |                                         |                                         |
|                  | er 123                                  | mt=102, 10                                      | 8,104,105,106,10     | updated 10                              |                                                                                 | î            |           |                                         |                                         |
|                  | ar 54                                   | mt=102,10                                       | B,104,105,106,10     | undated 10                              |                                                                                 | í            |           |                                         |                                         |
|                  | er-122                                  | st=102,10                                       | B, 104, 105, 106, 10 | violated 10                             |                                                                                 | î            |           |                                         |                                         |
|                  | <b>2</b> 155                            | mt=102                                          | المراسا إساراتها إن  | updated 10                              |                                                                                 | î            |           |                                         |                                         |
|                  | U-234 1043                              | sico-5+4 neukl                                  | acs p-3 255k f-1,    | (es(1.15)                               | ,                                                                               | î            |           |                                         |                                         |
|                  | uranium-2                               | 35 endf/b-lv                                    | r amt 1261           | updated 10                              | V13/89                                                                          | ic           |           |                                         |                                         |
|                  |                                         |                                                 | acs p-3 255k f-1,    |                                         |                                                                                 | le           |           | 36                                      |                                         |
|                  | uranius 2                               | 38 endf/b-iv                                    | mat 1262             | updated 10                              | <b>/13/89</b>                                                                   | ic           | 92        | <b>28</b>                               |                                         |
|                  | neptuniu                                | r237 endf/b-iv                                  | met 1263             | updated 10                              | V13/89                                                                          | ic           |           |                                         |                                         |
|                  | pu-238 105                              | i0 sigo <del>-5+4</del> no⊌k                    | daes p-3 285k f-1    | l/esr(1.+5)                             |                                                                                 | ic           |           |                                         |                                         |
|                  | plutaniu                                | r239 endf/b-jv                                  | rat 1264             | updated 10                              |                                                                                 | ķ            |           |                                         |                                         |
|                  |                                         | r260 endf/b-iv                                  |                      | updated 10                              |                                                                                 | ķ            |           |                                         |                                         |
|                  |                                         | raciforiy                                       |                      | updated 10                              | V 13/89                                                                         | ķ            |           |                                         |                                         |
|                  |                                         | 12/2 endf/b-1v                                  |                      | updated 10                              | V13/89                                                                          | ķ            |           |                                         |                                         |
|                  |                                         |                                                 | dacs 218ngp p-3      |                                         |                                                                                 | į            |           |                                         |                                         |
|                  |                                         |                                                 | Ven 00076 p3 2       |                                         | · · · · ·                                                                       | ic           |           |                                         |                                         |
|                  | curium 2                                |                                                 | net 1162             | updated_10                              | V 13VOV                                                                         | ic           | 96        | 344                                     |                                         |
| 0                | tape or                                 |                                                 | /o's, and took       | abroose 00.                             |                                                                                 |              |           |                                         | _                                       |
| 1 xx             |                                         | 86869696898                                     |                      | mmmm                                    |                                                                                 | <u>m mmm</u> |           |                                         | -                                       |
| 200              | -                                       | 8969996969696                                   |                      | mmmin                                   | <u>m</u>                                                                        | <u>m imm</u> |           |                                         |                                         |
|                  | XX XX                                   | 26 25                                           | स स                  | <u> </u>                                | mn_                                                                             | w th         | æ         |                                         | M<br>-                                  |
|                  | XX XX                                   | 85<br>86                                        | 8 8                  | u u                                     | mm<br>m                                                                         | m B          | 严         |                                         |                                         |
|                  | XX XX<br>XXX                            | 20000000000000000000000000000000000000          | # #                  | <del>111111111111</del>                 | m m                                                                             |              | P         |                                         | **<br>•                                 |
|                  | XXX                                     | 2000000000000                                   | E E                  | mmmm                                    |                                                                                 |              |           |                                         | -                                       |
|                  | XX XX                                   | 26                                              | <b>H</b> H           | u u                                     |                                                                                 | m th         | *****     | 633) M                                  | •••                                     |
|                  | x x                                     | 86                                              | <b>E E</b>           | u u                                     |                                                                                 | m pp         |           | am (#                                   |                                         |
|                  | XX XX                                   | 22 . 22                                         | स्र स                | u u                                     |                                                                                 | m p          |           | am M                                    | <br>R                                   |
| 30               |                                         | \$959696965000                                  | <del>aimmii</del>    | u u                                     |                                                                                 | m p          |           | ara ar                                  | A.                                      |
| XX               | ` XX                                    | 9999999998                                      | diffittitititi       | u u                                     |                                                                                 | m pp         |           | atin m                                  | 0.                                      |
| 0                |                                         |                                                 |                      | •                                       |                                                                                 | •••          |           |                                         |                                         |
|                  |                                         | •                                               | •                    |                                         |                                                                                 |              |           |                                         |                                         |
|                  |                                         | 600000000                                       | w w                  | 111111111111                            | 866666666666666666666666666666666666666                                         | 3            |           |                                         |                                         |
|                  | *************************************** | 80000000000                                     | w w                  | *************************************** | 88888888888                                                                     | 34           |           |                                         | •                                       |
| ᄲ                | ф                                       | 80 80                                           | w w                  | <u> </u>                                | 95 5                                                                            | 96           |           |                                         | ^                                       |
| ᄲ                | क्ष                                     | <b>20</b>                                       | w w                  | <b>!!</b>                               | <b>85</b>                                                                       |              |           |                                         |                                         |
| 쇉                | 쇉                                       | 80 86                                           | w w                  |                                         | 23                                                                              | _            |           |                                         |                                         |
| ᄲ                | 쇊                                       | \$0000000000000                                 | w w                  | ij                                      | SECURIS                                                                         |              |           |                                         |                                         |
| ᄲ                | 쇊                                       | 96060000000000                                  | w w                  | ij                                      | 9666599555                                                                      |              |           |                                         |                                         |
| 供                | 쇉                                       | 86 86                                           | w w                  | ij                                      | -                                                                               | 96           |           |                                         |                                         |
| #                | 娕                                       | 86 89                                           | w w                  | <u> </u>                                | -                                                                               | <b>36</b>    |           |                                         |                                         |
| 棋                | dd                                      | 88 88                                           | ww                   | ii                                      |                                                                                 | 16.<br>      |           |                                         |                                         |
|                  |                                         | 86 86                                           | w                    |                                         | \$35363333990                                                                   |              |           |                                         |                                         |
|                  | ***********                             |                                                 |                      |                                         | 9000000000                                                                      | <b>S</b>     |           |                                         |                                         |
|                  |                                         | 80 80                                           | V                    | *************************************** |                                                                                 |              |           |                                         |                                         |
| 0                |                                         |                                                 | •                    | 111111111111111111111111111111111111111 |                                                                                 |              |           |                                         |                                         |
| 0                | *************************************** | 80 80                                           |                      |                                         | <b>HHHHH</b>                                                                    | u            | ,,        | <b>60</b>                               | *************************************** |
| 0                | 0000000                                 | 80 80<br>777777772                              | <b>,</b>             | 11                                      | **********                                                                      |              | <i>!!</i> | \$\$\$\$\$\$\$\$\$\$                    | · · · · · · · · · · · · · · · · · · ·   |
| 0 0              |                                         |                                                 |                      | 11<br>111                               | <b>CHARACTER</b>                                                                |              |           | 977777777777777777777777777777777777777 | <b>CHARACTER</b>                        |
| 0 0              |                                         | 7/////////<br>7//////////////////////////       | //                   | 11<br>111<br>1111                       | <b>65</b>                                                                       |              | //        | 999999999999999999999999999999999999999 | <b>66</b>                               |
| 0 00             |                                         | 777777777<br>7777777777<br>72<br>72<br>72<br>72 | <i>"!</i>            | 11<br>111<br>1111<br>11                 | <b>6</b><br><b>6</b><br><b>6</b><br><b>6</b>                                    |              | //<br>//  | 99999999999999999999999999999999999999  | 66<br>66                                |
| 888              |                                         | 20000000000000000000000000000000000000          | //<br>//<br>//       | 11<br>111<br>1111<br>11<br>11           | R<br>R<br>R                                                                     | <b>3</b> 6   |           | 89 89<br>89 89<br>89 89<br>89 89        | 66<br>66<br>66                          |
| 888 <sub>8</sub> |                                         | 20000000000000000000000000000000000000          | <i>  </i><br>  <br>  | 11<br>111<br>1111<br>11<br>11<br>11     | 60<br>60<br>60<br>60<br>60<br>60<br>60<br>60<br>60<br>60<br>60<br>60<br>60<br>6 | <del>š</del> |           | 99 99<br>99 99<br>99 99<br>99 99        | 66<br>66<br>66<br>66                    |
| 888              |                                         | 20000000000000000000000000000000000000          | //<br>//<br>//       | 11<br>111<br>1111<br>11<br>11           | ######################################                                          | <del>š</del> |           | 89 89<br>89 89<br>89 89<br>89 89        |                                         |

Feb 16 10:05 1996 File Name: s3020.cf.cut BBA000000-01717-0200-00012 REV 01 ATTACHMENT I - Page 4/75

|   | 000000<br>00 00<br>00 00                                               | TZ<br>ZUMMIMI<br>ZUMMIMIMI<br>ZUMMIMIMIMIMIMIMIMIMIMIMIMIMIMIMIMIMIMIM |                                                                                                                                                      | ·11<br>11<br>11111111<br>11111111      |                                        | <b>//</b>                              | . 99<br>99<br>97<br>97<br>97<br>97<br>97<br>97<br>97<br>97<br>97<br>97<br>97<br>9 | ########<br>##########<br>##<br>##<br>##<br>## |
|---|------------------------------------------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----------------------------------------|----------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------|
| 1 | 11<br>111<br>1111<br>111<br>11<br>11<br>11<br>11<br>11<br>11<br>111111 |                                                                        |                                                                                                                                                      | 88 88 88 88 88 88 88 88 88 88 88 88 88 |                                        | :::<br>:::<br>:::<br>:::               | 88 88 88 88 88 88 88 88 88 88 88 88 88                                            |                                                |
| Ò |                                                                        |                                                                        | 56553626568<br>5553926565696<br>55 35<br>56<br>5523626363686<br>\$5236263655586<br>\$6<br>\$6<br>\$6<br>\$6<br>\$6<br>\$6<br>\$6<br>\$6<br>\$6<br>\$ |                                        | ###################################### | !! !! !! !! !! !! !! !! !! !! !! !! !! | 60000000000000000000000000000000000000                                            |                                                |

| program verification information                     | ****                                |
|------------------------------------------------------|-------------------------------------|
| same code system scale version:                      |                                     |
| *******************************                      |                                     |
|                                                      | Antik Antikok kokakakak ke ke kekal |
| pands.                                               | ***                                 |
| sassa program c0x001                                 | ****                                |
| erestion date: 04/27/95                              | ****                                |
| ***** Library: /nsutronics/scale/eve                 | ****                                |
| time y. // modulica/acatgene                         | ****                                |
| seement this is not a scale configuration controlled | d code season                       |
| statute jobrene: devis                               |                                     |
| state of exactions 02/16/95                          | ****                                |

```
time of execution: 10:02:08
 720 d, second part of see2h pass to make library
 -1q array has
 1 entries.
 Oct array has lo array has
 11 entries.
 To entries.
 20 array has
 10 entries.
 30 array has
 12 entries.
 4d array has
 9 entries.
 50 array has
 12 entries.
 Odirect access unit 9 requires 12 blocks of length 704 for cross section mixing.
 720 d, second part of see2h pass to make library
 Ogeneral problem description data block
 general problem data
 ige 1/2/3 = plane/cylinder/sphere
 isn quadrature order
 lect order of scattering
levt 0/1/2/3/4/5/6-0/k/alpha/c/z/r/h
 iza number of zones
 number of special intervals
 2000
 0/1/2/3 = vecum/refl/per/hhite
 i im irrer iteration maximum
 ibr right boundary condition
 ion outer iteration maximum
 mox runber of mixtures
 icle -1/0/n-flat res/sr/qpt
 ith O/1 = forward/adjoint
 70
 ms mixing table length
 ZZ
 Ō
 ign runber of energy groups
 iflu not used(always upto)
 ipt -2/-1/0/mmixture xee print
idl 0/1/2/3-mp/pt m/pth n/toth
ipt -1/0/1-mme/fire/all bal. prt
 •2
14
 rms number of neutron groups
 ۵
 ng number of genera groups
ifty number of first thermal group
 15
 special options
 ipn 0/1/2 diff. coef. param
 ifg 0/1 = none/heighting calculation
 iqui volumetric scurces (Q/marc/yes)
 idim 0/1 = none/dersity factors 30*
 isz 0/n = rone/n activities by zone
 ipm boundary sources (Q/maro/yes)
ifm Q/1/2 = input 35°/34°/use last
 iai O/1-rure/activities by interval
 itms meximum time (minutes)
 ifct 0/1=ro/yes upscatter scaling
 ipyt 0/1/2 rp/k/alcha parametric arch
 Õ
 ick1 0/1/2/3-rp/sect/srce/flux--out
 isk broad group fluxes
ibin activity data unit
 isen outer iteration acceleration
 ritrid band rebelin parameter
 jtkl 0/1/2 buckling geometry
 weighting data (ifg=1)
 ican -1/0/i=cell/zone/region seight
 intf total sect pan in brd go tables
 ndsf pangg or file number
nusf table length or max order
 ignif number of broad groups
 to 0/10/20/30/40 0/c/e/ac/a
 -2/-1/0/m-good assect print
 meeting and a sect positions
 -1/n anish xsect print
 iao
 floating point parameters
 .0000E+00
 as overall convergence
 1.0000E-04
 cyl/pla ht for buckling
 ptc point convergence
 plane depth for buckling 2,0000E-02
 1.0000E-04
 ďχ
 1.0000E+00
 void streaming correction .00000E+00
. Inf normalization factor
 VSC
 1,0000E+00
 ev eigenvelue guess
 .000000
 ipvt=1/2--k/alpha
 Þ
 ect ev charge eps for search 1,0000E-03
эгря гвы paramated for search 7,5000E-01
 can eigenvalue andifier
 .0000E+00
 bf buckling factor=1.420892
 1.42089E+00
 this case will require
 2611 locations for mixing
 this case has been allocated 200000 locations
```

| 1000 | Sq array<br>Vq array<br>Sq array                                       | /has 70 entries.<br>/has 70 entries. | part of sas2h pass t  | to make libna  | Ŋ                                       |            |
|------|------------------------------------------------------------------------|--------------------------------------|-----------------------|----------------|-----------------------------------------|------------|
| ŏ    | D4 a 1 9                                                               | TED TOURISM                          | data block 2 (mixing  | table etc.     | 1                                       |            |
| ŏ    | nuclides                                                               | ccc                                  | COLUMNIA SE CHINAIN I | mixing tabl    |                                         | extra '    |
| •    | on tape                                                                | identification                       | mixture               | component      | atom density                            | xsect id's |
|      | 1 202                                                                  |                                      |                       | 201            | 2.077106-02                             |            |
|      |                                                                        |                                      | 3                     | 202            | 4.19420E-02                             |            |
|      | 3 204                                                                  |                                      | 3                     | 203            | 3.855E-06                               |            |
|      | 4 201                                                                  |                                      | 3                     | 20%            | 1.5488/E-05                             |            |
|      | 5 205                                                                  |                                      | 3<br>3<br>3<br>2<br>1 | 205            | 4.2515 <del>(E</del> -02                |            |
|      | 2 28<br>3 204<br>4 201<br>5 205<br>6 999<br>7 1001<br>8 5010<br>9 5011 |                                      |                       | 92235          | 1.47017E-04                             |            |
|      | 7 1001                                                                 |                                      | 1                     | 92234          | 1.54011E-06                             |            |
|      | 8 5010                                                                 |                                      | 1                     | 92236          | 1.58412=-05                             |            |
|      | 9 5011                                                                 |                                      |                       | 92238          | 7.23470E-08                             |            |
|      | 10 8016<br>11 6                                                        |                                      | 1                     | 8016           | 1.50611E-02<br>1.1531 <del>5E-</del> 02 |            |
|      | 12 36083                                                               |                                      | i                     | 36085          | 4.00409E-07                             |            |
|      | 13 36065                                                               |                                      | i                     | 36085          | 1.927538-07                             |            |
|      | 14 38090                                                               |                                      | i                     | 38090          | 4.36630E-06                             |            |
|      | 15 39089                                                               |                                      | i                     | 39089          | 3.374AE-06                              |            |
|      | 16 40098                                                               |                                      | i                     | 42095          | 4.355E-06                               |            |
|      | 17 40094                                                               |                                      | 1                     | 40095          | 3.43072E-06                             |            |
|      | 18 40095                                                               |                                      | 1                     | 400%           | 5.36576E-06                             |            |
|      | 19 40302                                                               |                                      | 1                     | 40095          | 6.75357E-07                             |            |
| •    | 20 41094                                                               |                                      | 1                     | 41094          | 2.49821E-12                             |            |
|      | 21 42095                                                               |                                      | 1                     | 43099          | 5.24059E-06                             |            |
|      | 22 43099                                                               |                                      | 1                     | 45105          | 2.81650E-06                             |            |
|      | 201 222 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2                              |                                      | 1                     | 45105          | 6.6517E-09                              |            |
|      | 24 44106<br>25 45108                                                   |                                      | 1                     | 44101<br>44101 | 4.70557E-05<br>7.10825E-07              |            |
|      | 25 45105                                                               |                                      | 1                     | 44106<br>46105 | 1.745 <del>68E</del> -06                |            |
|      | 27 46105                                                               |                                      | i                     | 46108          | 4.60B7E-07                              |            |
|      | 28 46108                                                               |                                      | i                     | 47109          | 3.2736E-07                              |            |
|      | 29 47109                                                               |                                      | i                     | 51124          | 7.62183E-11                             |            |
|      | 30 51124                                                               |                                      | i                     | 54131          | 2.41807E-05                             |            |
|      | 31 54131                                                               |                                      | 1                     | 54132          | 4.37452E-05                             |            |
|      | <b>32</b> 54132                                                        |                                      | 1                     | 54135          | 2.208025-09                             |            |
|      | 33 54135                                                               |                                      | 1                     | 54136          | 8.9477ZE-05                             |            |
|      | 34 54136                                                               |                                      | 1                     | <b>2513</b> 4  | 2.21272E-07                             |            |
|      | <u> </u>                                                               |                                      | 1                     | <b>515</b>     | 2.53/59E-06                             |            |
|      | 35 25 TS<br>37 25 TS                                                   | •                                    | i                     | 55137<br>56136 | 5,58169E-05<br>4,34869E-08              |            |
|      | ·38 55137                                                              |                                      | i                     | 57139          | 5.5555E-06                              |            |
|      | 39 56136                                                               |                                      | i                     | 59141          | 4.73417E-06                             |            |
|      | 40 57139                                                               |                                      | i                     | 59143          | 1.2/9185-07                             |            |
|      | 41 58144                                                               |                                      | i                     | 58144          | 2.11613E-06                             |            |
|      | 42 59141<br>43 59143                                                   |                                      | i                     | 60143          | 4.42460E-06                             |            |
|      | 43 59143                                                               |                                      | 1                     | 60145          | 3.2317XE-05                             |            |
|      | 44 60143                                                               |                                      | 1                     | 61147          | 1.20498E-05                             |            |
|      | 45 60145                                                               |                                      | 1                     | 61148<br>60147 | 3.46153E-09                             |            |
|      | 46 60147<br>47 61147                                                   |                                      | 1                     | 60147          | 4.32241E-08                             |            |
|      | 47 61147                                                               |                                      | 1                     | 62147          | 3.371325-07                             |            |
|      | 48 61148<br>49 62147                                                   |                                      | 1                     | 62149<br>62150 | 2.77999E-08                             |            |
|      | 49 62147<br>50 62149                                                   |                                      | i                     | 62151          | 1.11012E-06<br>1.22001E-07              |            |
|      | 51 62150                                                               |                                      | i                     | Ø152           | 5.39391E-07                             |            |
|      | 50 62149<br>51 62150<br>52 62151<br>53 62152                           | •                                    | i                     | 64155          | 5.414/ <del>2E</del> -10                |            |
|      | 53 62152                                                               |                                      | j                     | खाञ्च          | 2.987 <del>55E-</del> 07                |            |

| - 00000001 | 36q array has 28 en<br>39q array has 4 en<br>40q array has 27 en<br>47q array has 27 en<br>51q array has 27 en<br>720 d, s | tries.<br>tries.<br>tries.<br>tries.<br>tries.<br>tries.<br>second part of |                      | 63154<br>63155<br>40602<br>1001<br>5010<br>5011<br>55133<br>55257<br>9429<br>94240<br>94241<br>94242<br>95241<br>95243<br>95244<br>95244<br>95244 | 5.428%E-08 3.2799E-08 4.4288E-08 2.3063UE-02 2.09787E-06 8.5167E-06 9.31928E-07 1.0790E-07 3.1928E-05 5.3768E-06 2.3787E-08 1.3788E-08 1.3788E-09 3.3075E-21 |                               |               |
|------------|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------|
| 0          | andries prupales                                                                                                           | ron group paras<br>weighted<br>velocities<br>1 4,605816409                 | broad go<br>rusbers  | calc<br>type                                                                                                                                      | grap<br>berd<br>1                                                                                                                                            | right<br>albado<br>1,0000E+00 | left<br>albub |
|            | 1 2.0000E+07 -6.95147E-0<br>2 6.43400E+06 4.40989E-0                                                                       |                                                                            | i                    | ŏ                                                                                                                                                 |                                                                                                                                                              | 1.0000E+00                    |               |
|            | 3 3,0000E+06 1,20897E+0                                                                                                    | 0 2.12201E+09                                                              | 1                    | 0                                                                                                                                                 | 2<br>3<br>4                                                                                                                                                  | 1,0000E+00                    |               |
|            | 4 1.85000E+06 1.68740E+0                                                                                                   |                                                                            | 1                    | Ŏ                                                                                                                                                 | 4                                                                                                                                                            | 1.000000                      |               |
|            | 5 1,4000E+05 1,96511E+0<br>6 9,0000E+05 2,4079E+0                                                                          |                                                                            | 1                    | 0                                                                                                                                                 | 2                                                                                                                                                            | 1.0000E+00<br>1.0000E+00      |               |
|            | 7 4.0000E+05 3.218EE+0                                                                                                     |                                                                            | ž                    | ŏ                                                                                                                                                 | 5<br>6<br>7                                                                                                                                                  | 1.0000E+00                    |               |
|            | 8 1.00000E+05 4.60517E+0                                                                                                   | 2.72415E+0B                                                                | 2                    | 0<br>0<br>0                                                                                                                                       | 8<br>9                                                                                                                                                       | 1.0000€00                     |               |
|            | 9 1.70000E+04 6.37713E+0<br>10 3.0000E+03 8.11173E+0                                                                       |                                                                            | 2                    | 0                                                                                                                                                 | 10                                                                                                                                                           | 1.0000E+00<br>1.0000E+00      |               |
|            | 11 5.5000E+02 9.80818E+0                                                                                                   |                                                                            | ž                    | ŏ                                                                                                                                                 | 11                                                                                                                                                           | 1.0000E+00                    |               |
|            | 12 1.0000E+02 1.15129E+0                                                                                                   | 1 1.010BŒ+07                                                               | Ž                    | Ŏ                                                                                                                                                 | 12<br>13                                                                                                                                                     | 1.0000E+00                    |               |
|            | 13 3.0000E+01 1.27169E+0                                                                                                   |                                                                            | 2                    | Ŏ                                                                                                                                                 | 13                                                                                                                                                           | 1.0000E+00<br>1.0000E+00      |               |
|            | 14 1.0000E+01 1.38155E+0<br>15 3.04999E+00 1.50E0E+0                                                                       |                                                                            | 5                    | ŏ                                                                                                                                                 | 14<br>15                                                                                                                                                     | 1.0000E+00                    |               |
|            | 44 1 77000E+00 1 55478E+0                                                                                                  | 1 1.70522E+06                                                              | 22222222222222222222 | 00000                                                                                                                                             | 16                                                                                                                                                           | 1.0000E+00                    |               |
|            | 17 1.2999E+00 1.5857E+0                                                                                                    | 1 1.52545E+06                                                              | 2                    | 0                                                                                                                                                 | 17                                                                                                                                                           | 1.0000E+00                    |               |
|            | 18 1.12999E+00 1.59999E+0<br>19 1.00000E+00 1.61181E+0                                                                     |                                                                            | 2                    | Ö                                                                                                                                                 | 18<br>19                                                                                                                                                     | 1.0000E+00<br>1.0000E+00      |               |
|            | 20 8.0000E-01 1.63412E+0                                                                                                   |                                                                            | Ž                    | 0                                                                                                                                                 | žó                                                                                                                                                           | 1.0000E+00                    |               |
|            | 21 4.0000E-01 1.7(B/4E+0                                                                                                   | 8.17974E+05                                                                | 3                    | 0                                                                                                                                                 | 21                                                                                                                                                           | 1.0000E+00                    |               |
|            | 22 3.2000E-01 1.72/20E+0<br>23 2.2000E-01 1.7609E+0                                                                        |                                                                            | ş                    | 0                                                                                                                                                 | Z2<br>77                                                                                                                                                     | 1.0000E+00<br>1.0000E+00      |               |
|            | 25 2.25000E-01 1.7609E=0<br>24 9.99999E-02 1.84207E+0                                                                      |                                                                            | 3                    | ŏ                                                                                                                                                 | <b>2</b>                                                                                                                                                     | 1.0000E+00                    |               |
|            | 24 9.9999E-02 1.84207E+0<br>25 5.0000E-02 1.91139E+0<br>26 3.0000E-02 1.96247E+0                                           |                                                                            | 3                    | 0                                                                                                                                                 | 20<br>20<br>20<br>20<br>20<br>20<br>20<br>20<br>20<br>20<br>20<br>20<br>20<br>2                                                                              | 1.0000E+00                    |               |
|            | 26 3.0000E-02 1.96247E+0                                                                                                   |                                                                            | 3                    | 0                                                                                                                                                 | 26<br>27                                                                                                                                                     | 1,0000E+00<br>1,0000E+00      |               |
|            | 27 1.0000E-02 2.0725E+0<br>28 1.0000E-05 2.78310E+0                                                                        |                                                                            | 3                    | U                                                                                                                                                 | u                                                                                                                                                            | i.uu.e-w                      |               |
| 1          | 1 720 d, second part of secth pass to sake Library                                                                         |                                                                            |                      |                                                                                                                                                   |                                                                                                                                                              |                               |               |
| 0          | mixture order p(l)                                                                                                         | activity                                                                   |                      | سدارات                                                                                                                                            | quadrature co<br>directions                                                                                                                                  | nstants<br>reflolirec         | MC X COS      |
|            | by zone by zone                                                                                                            | mati no.                                                                   | reaction             | weights                                                                                                                                           | CHICCHOR                                                                                                                                                     | icit caide                    | #C X 005      |

| 1234567890112345678901223456789001223456000000000000000000000000000000000000 | 3 2 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  | 3<br>3<br>3<br>3<br>3                        |                              |                                                      | 5.06 N 3:- 02<br>5.06 N 3:- 02<br>5.55 N 3:- 02<br>5.55 N 3:- 02<br>5.55 N 3:- 02<br>5.26 N 4:- 02<br>5.26 N 4:- 02<br>5.26 N 4:- 02<br>6.33 N 5:- 02<br>6.33 N 6:- 02<br>6.33 N 7 N 7 N 7 N 7 N 7 N 7 N 7 N 7 N 7 N | 1,97285-01<br>-6.0495-01<br>-5.28100-01<br>-2.313016-01<br>-2.313016-01<br>-8.20746-01<br>-8.20746-01<br>-6.07588-01<br>-2.20156-01<br>-2.20156-01<br>-6.07588-01<br>-9.80156-01<br>-9.80156-01 | 2887656564811102422 | 0<br>9.95/E-8<br>9.95/E-8<br>0<br>-3.10/50-02<br>1.25/E-02<br>1.25/E-02<br>3.10/50-02<br>-3.15/E-02<br>1.15/E-02<br>1.15/E-02<br>1.15/E-02<br>4.26/E-02<br>4.370/E-02<br>-3.70/E-02<br>-3.70/E-02<br>8.66/4E-8<br>8.66/4E-8<br>2.479/E-02<br>4.370/E-02 |
|------------------------------------------------------------------------------|------------------------------------------|----------------------------------------------|------------------------------|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                              | set 1<br>-2.7500/E-01<br>-1.9728/E-01    | set 2<br>8.825E-01<br>8.825E-01<br>8.825E-01 | .000000                      | ect 4<br>-6,16919E-01<br>-4,36229E-01<br>4,36229E-01 | 1.21411E-02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                 | •                   |                                                                                                                                                                                                                                                         |
|                                                                              | -6.0419E-01                              | 4.52016E-01<br>4.52016E-01                   | 3.16379E-01                  | -8.0435E-01<br>-7.43201E-01                          | -1.755/E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                 |                     |                                                                                                                                                                                                                                                         |
| 7<br>8                                                                       | 2.31301E-01                              | 4.52016E-01<br>4.52016E-01                   | -2.2713E-01<br>2.25713E-01   | 3.0784E-01<br>7.43201E-01<br>-1.9856E-01             | -1.61276E-01<br>6.68029E-02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                 |                     |                                                                                                                                                                                                                                                         |
| 10                                                                           | -8.2178/E-01                             | -8.5725E-02<br>-8.5725E-02                   | 5.4283E-01<br>.0000E+00      | -1.91694E-01<br>-1.40530E-01                         | -3.44X/E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                 |                     |                                                                                                                                                                                                                                                         |
| 13<br>14<br>15                                                               | 2.2019@-01<br>6.0198E-01                 |                                              | -5.42862E-01<br>.0000E+00    | 5.13643E-02<br>1.40530E-01<br>1.91694E-01            | -3.442K9E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                 |                     |                                                                                                                                                                                                                                                         |
| 16<br>17                                                                     |                                          | 4.4952E-01<br>4.4952E-01                     | 8.3685E-01<br>7.73181E-01    | 5.00705E-01<br>4.91083E-01                           | -7.51005E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                 |                     |                                                                                                                                                                                                                                                         |
| 19<br>20                                                                     | -5.46143E-01<br>-1.91780E-01             | 4,4952E-01                                   | -3.20262E-01<br>-7.73181E-01 | 2.78176E-01<br>9.76634E-02                           | 7.36579E-01<br>4.17256E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                 |                     |                                                                                                                                                                                                                                                         |
| 21<br>22<br>23                                                               | 5.46143E-01                              |                                              | -3.202625-01                 | -9.76524E-02<br>-2.78176E-01<br>-4.16520E-01         | -7.34579E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                 |                     |                                                                                                                                                                                                                                                         |
| 24<br>1 int                                                                  | 9.64143E-01<br>radii                     | -4,49529E-01<br>mid pts                      | 7.73181E-01<br>zone no.      | -4.91083E-01                                         | 6.2438E-01<br>volumes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | dens fact                                                                                                                                                                                       | redius mod          | spec(int)                                                                                                                                                                                                                                               |
| 2                                                                            |                                          | 1.97644E-02<br>5.92951E-02                   | 1                            | 2.4556E-01                                           | 4.9081E-03<br>1.4725/E-02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                 | 0                   |                                                                                                                                                                                                                                                         |
| 3 4                                                                          | 7.90579E-02<br>1.58119E-01               | 1.18586E-01<br>1.9764E-01                    | 1 1                          | 4.96733E-01<br>9.93466E-01                           | 5.89057E-02<br>9.81762E-02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                 | Ŏ                   |                                                                                                                                                                                                                                                         |
| 5<br>6                                                                       | 2.37172E-01<br>3.16250E-01               | 2.76701E-01<br>3.55759E-01                   | į                            | 1,49020E+00<br>1,98995E+00<br>2,48366E+00            | 1.374/Æ-01<br>1.7671Æ-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                 |                     |                                                                                                                                                                                                                                                         |
| 7<br>8<br>9                                                                  | 3.9520E-01<br>4.74349E-01<br>5.53403E-01 | 4.34816E-01<br>5.13874E-01<br>5.73167E-01    | į                            | 2.980/0E+00<br>3.47/13E+00                           | 2.15988E-01<br>2.5525E-01<br>1.4255E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                 |                     |                                                                                                                                                                                                                                                         |

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10 5.98931E-01 6.12696E-01
 3.7250E+00 1.52173E-01
 6.32X60E-01 6.42620E-01
 3.97389E+00 8.20/60E-02
 4.1015/EHOD 8.46/05E-02
 6.52780E-01 6.62940E-01
 6.73100E-01 6,9683E-01
 4.23921E+00 2.0562E-01
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 7.67033E-01 7.90517E-01
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 2.5706/E+00 2.6/825E+00
 27 2.76582E+00 2.81461E+00
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 6
 1.42607E-05
 27
 5
 1.00001E+00
 .0167
 471 -4.26155E-05 1.05491E+00 -2.09435E-05 -1.22726E-05 -7.12417E-05
 .0000E+00
 final monitor
 Lantich 1.05/86E+00
 production/absorption 1.078805+00
 angular flux on 16
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- elapsed time .02 min.
 720 d. second part of sas2h pass to make library
 7.905/8E-02 1.18586E-01 4.96733E-01 5.8905/7E-02 .0000E+00 7.905/7E-02 1.18586E-01 4.96735E-01 5.8905/7E-02 .0000E+00 7.905/7E-02 1.18586E-01 4.96733E-01 5.8905/7E-02 .0000E+00 7.905/7E-02 0 int. zone nurber
 1.5815E-01 1.9844E-01 9.9846E-01 9.8182E-02 .0000E-00 2.3717E-01 2.7870E-01 1.4902E+00 1.3744E-01 .0000E+00 3.1620E-01 3.5579E-01 1.9868E+00 1.76717E-01 .0000E+00 3.9528E-01 4.3486E-01 2.4866E+00 2.7588E-01 .0000E+00
 3.9528E-01 4.3686E-01 2.48366E-00 2.598E-01 .0000E-00 4.7636E-01 5.73167E-01 3.4770E-00 2.5528E-01 .0000E-00 5.5340E-01 5.73167E-01 3.4770E-00 1.4255E-01 .0000E-00 5.5340E-01 6.1268E-01 3.4770E-00 1.5277E-01 .0000E-00 6.3260E-01 6.4260E-01 3.4770E-00 1.5277E-01 .0000E-00 6.52780E-01 6.4260E-01 4.70154E-00 8.2040E-02 .0000E-00 6.52780E-01 6.6260E-01 4.70154E-00 8.4640E-02 .0000E-00 7.2005E-01 6.5663E-01 4.53431E-00 2.0566E-01 .0000E-00 7.2005E-01 7.4350E-01 4.53431E-00 2.3328E-01 .0000E-00 7.5033E-01 7.5031E-01 4.81941E-00 2.3328E-01 .0000E-00 8.1400E-01 8.6279E-01 5.11451E-00 5.2051E-01 2.4250E-02 9.1577E-01 9.6038E-01 5.7776E-00 5.8669E-01 2.4250E-02 1.2032E-00 1.3079E-00 7.5673E-00 1.5966F-00 6.8764E-02 1.3995E-00 1.40774E-00 8.7860E-00 1.5966F-00 6.8764E-02 1.5997E-00 1.6873E-00 1.000E-00 1.5660E-00 1.5660E-00 1.5660E-00 1.5660E-00 1.5660E-00 1.5660E-00 1.5660E-00 1.5660E-00 1.3660E-00 1.5660E-00 1.3660E-00
 10
 11
 <u>14</u>
 17
 18
 822224222
 2.7688E+00 2.81461E+00 1.75781E+01 1.7287E+00 7.0839/E-02
 2.85(1E-00 2.91220E-00 1.797(E-01 1.7857)E-00 7.3325E-02 2.96(00E-00 1.860/5E-01
 28
 720 d, second part of sas2h pass to make library
0 total flux
0 int. grp. 1 grp. 2 grp. 3 grp. 4 grp. 5 grp. 6 grp. 7 grp. 8
1 1.2827E-02 9.0508E-02 1.233E-01 6.8899E-02 1.0257E-01 1.923E-01 1.903E-01 1.4897E-01
2 1.2827E-02 9.0897E-02 1.1229E-01 6.8998E-02 1.0257E-01 1.9256E-01 1.903E-01 1.4897E-01
3 1.2822E-02 9.0490E-02 1.1229E-01 6.8998E-02 1.0257E-01 1.9256E-01 1.903E-01 1.4897E-01
4 1.2828E-02 9.0490E-02 1.1240E-01 6.8998E-02 1.0257E-01 1.9256E-01 1.9256E-01 1.4708E-01
5 1.2844E-02 9.0544E-02 1.1240E-01 6.9908E-02 1.0208E-01 1.9256E-01 1.9256E-01 1.4708E-01
6 1.2838E-02 9.0546E-02 1.1249E-01 6.993E-02 1.0808E-01 1.935E-01 1.936E-01 1.4708E-01
7 1.2848E-02 9.0778E-02 1.1329E-01 6.9358E-02 1.0300E-01 1.935E-01 1.936E-01 1.4708E-01
7 1.2848E-02 9.1078E-02 1.1329E-01 6.9557E-02 1.0300E-01 1.9356E-01 1.936E-01 1.4708E-01
9 1.2925E-02 9.1078E-02 1.13654E-01 6.9557E-02 1.0369E-01 1.9356E-01 1.936E-01 1.4736E-01
10 1.2926E-02 9.1868E-02 1.1468E-01 7.0408E-02 1.0468E-01 1.9736E-01 1.9566E-01 1.4735E-01
11 1.2522E-02 9.2668E-02 1.4668E-01 7.0898E-02 1.0668E-01 1.9786E-01 1.9586E-01 1.4735E-01
12 1.2568E-02 9.2868E-02 1.4668E-01 7.0898E-02 1.0560E-01 1.9828E-01 1.9666E-01 1.4735E-01
13 1.2938E-02 9.2868E-02 1.4658E-01 7.0830E-02 1.0567E-01 1.9828E-01 1.9666E-01 1.4735E-01
14 1.3039E-02 9.2868E-02 1.4658E-01 7.0830E-02 1.0567E-01 1.9828E-01 1.9666E-01 1.4735E-01
14 1.3039E-02 9.2868E-02 1.4658E-01 7.0830E-02 1.0567E-01 1.9828E-01 1.9666E-01 1.4735E-01
14 1.3039E-02 9.2818E-02 1.5698E-01 7.0830E-02 1.0567E-01 1.9828E-01 1.9708E-01 1.4735E-01
 O total flux
 1. 1.3535E-02 9.2615E-02 1.1554E-01 7.1082E-02 1.0576E-01 1.9722E-01 1.9725E-01 1.3535E-02 9.3305E-02 1.1677SE-01 7.1487E-02 1.0576E-01 2.0025E-01 1.9724E-01 16 1.3156E-02 9.4065E-02 1.1718EE-01 7.2125E-02 1.07762E-01 2.0213E-01 1.9875E-01 17 1.3230E-02 9.4863E-02 1.1820E-01 7.2777E-02 1.0883E-01 2.0405E-01 1.9900E-01
 1,47627E-01
 1,4772BE-01
 1. 1.2516-02 9.4608-02 1.1508-01 7.21176-02 1.0568-01 2.0568-01 2.0518-01 19 1.3539-02 9.55219-02 1.1508-01 7.33139-02 1.0578-01 2.0578-01 2.0518-
 1,48257E-01
 1.45511E-01
 1.48XXE-01
 1.48782E-01
 25 1.3/07/E-02 9.685/6-02 1.2069/E-01 7.4511/E-02 1.1165/E-01 2.0931/E-01 2.0931/E-01
 1.48231E-01
 1.34121E-02 9.6688E-02 1.20948E-01 7.45642E-02 1.11759E-01 2.0853E-01 2.08642E-01
 1.480736-01
 1.34/4CE-02 9.69657E-02 1.20986E-01 7.45895E-02 1.11799E-01 2.09787E-01 2.0578E-01 1.48994E-01
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2 1.3/19E-02 9.690E-02 1.2098E-01 7.459E-02 1.1177E-01 2.0974E-01 2.0974E-01 1.459E-01 7.456E-01 7.457E-02 1.1177E-01 2.0974E-01 2.0974E-01 1.459E-01 1.459E
 26 1.3419E-02 9.6900E-02 1.2094E-01 7.4999E-02 1.1179E-01 2.0994E-01 2.0972E-01 1.4899E-01 27 1.34118E-02 9.6940E-02 1.2097E-01 7.4570E-02 1.1177E-01 2.0989E-01 2.0869E-01 1.4898IE-01 28 1.34094E-02 9.6910E-02 1.2098E-01 7.4544E-02 1.1172E-01 2.0799E-01 2.0862E-01 1.4898IE-01
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28 6.5573/E-08 4.0053/E-08 9.8521/E-08 3.3527/E-02 9.4319/E-03 1.7629/E-02 6.2206/E-02 4.786/E-02
 t. grp. 25 grp. 26 grp. 27
1 2.86690E-02 2.06921E-02 3.93060E-03
2 2.86721E-02 2.06800E-02 3.92767E-03
 0 int. grp. 25
 3 2.85039E-02 2.05202E-02 3.91540E-03
 2.8589E-02 2.04957E-02 3.88959E-03
 5 2.86592-02 2.00522-02 3.85052-03
6 2.75722-02 2.00562-02 3.76172-03
7 2.75725-02 1.972652-02 3.75562-03
8 2.71372-02 1.93672-02 3.864712-03
 9 2.67352-02 1.8551/E-02 3.5524/E-03
10 2.65901E-02 1.8539/E-02 3.48169E-03
11 2.61608-02 1.8538E-02 3.4389/E-03
 12 2.61117E-02 1.840B1E-02 3.43602E-03
 13 2.57487E-02 1.8580E-02 3.39571E-03
14 2.55769E-02 1.75012E-02 3.2887E-03
 15 2.50587E-02 1.73970E-02 3.15374E-03
16 2.43080E-02 1.66761E-02 2.94211E-03
 16 2430E-02 1.665E-02 2.760E-03 17 2.357E-02 1.59956-02 2.7600E-03 18 2.287E-02 1.59956-02 2.760E-03 19 2.217E-02 1.479TE-02 2.500E-03 20 2.1678E-02 1.479TE-02 2.500E-03 21 2.1518E-02 1.470GE-02 2.350E-03 2.2007E-03 1.350E-02 2.350E-03 2.2007E-03 1.350E-02 2.350E-03 2.2007E-03 1.350E-02 2.350E-03 2.2007E-03 1.350E-02 2.350E-03 2.2007E-03 1.350E-03 1.350E-03 1.350E-03 1.350E-03 1.350E-03 1.350E-03 1.350E-03 1.350E-03 1.350E-03
 3. 2.0500E-02 1.3643E-02 2.2500E-03
25 2.0592E-02 1.3573E-02 2.2875E-03
26 2.0536E-02 1.3532E-02 2.28118E-03
 77 2.05205E-02 1.35175E-02 2.2787SE-05
28 2.05312E-02 1.35205E-02 2.27852E-08
 nim 20. mit becale
 If the grap summy for zone 1 by grap including sum for all graps in line 28
.0000E+00 5.7053E+02 6.91811E+02 5.5977E+02 3.6067E+05 1.4577E+03 9.9987E+01 .0000E+00 4.5418E+02 3.5107E+02 4.1062E+02 5.51711E+05 3.4457E+03 9.9997E+01 .0000E+00 4.5418E+02 3.5107E+02 4.1062E+02 6.0444E+05 4.0524E+03 9.9997E+01 .0000E+00 3.9478E+02 2.82751E+02 3.37650E+02 1.3614E+03 5.8537E+03 9.9997E+01 .0000E+00 3.9478E+02 1.0862E+02 2.0850E+02 1.3614E+03 5.8537E+03 9.9997E+01 .0000E+00 1.4272E+02 4.58254E+03 1.3506E+02 7.5277E+05 6.5527E+03 9.9997E+01 .0000E+00 7.3081E+03 1.2976E+03 1.200E+00 7.3081E+03 1.2976E+03 1.200E+00 1.0000E+00 1.07274E+02 2.9980E+03 9.70774E+03 6.55057E+05 9.5477E+03 1.0000E+00 .0000E+00 1.07274E+02 2.9980E+03 1.2976E+03 2.9576E+03 9.99997E+01 .0000E+00 1.07274E+02 2.9980E+03 9.70774E+03 6.55057E+05 9.5477E+03 1.0000E+00 .0000E+00 1.8262E+02 2.09765E+02 2.37765E+02 2.7575E+03 2.2676E+03 1.0000E+00 .0000E+00 1.8262E+02 4.9890E+03 1.0000E+00 1.0000E+00 2.6286E+02 4.9890E+03 1.0000E+00 1.0000E+00 2.6286E+02 4.9890E+03 1.0000E+00 2.6286E+02 1.2865E+03 1.0000E+00 2.6286E+02 1.2865E+02 1.0000E+00 1.0000E+00 2.6286E+02 1.2865E+03 1.0000E+00 2.6286E+02 1.2865E+03 1.0000E+00 2.6286E+02 1.2865E+03 1.0000E+00 2.6286E+02 1.2865E+03 1.0000E+00 2.6286E+02 1.2865E+03 1.0000E+00 2.6286E+02 1.2865E+03 1.0000E+00 2.6286E+02 1.2865E+03 1.0000E+00 2.6286E+02 1.2865E+03 1.0000E+00 2.6286E+02 1.2865E+03 1.0000E+00 2.6286E+02 1.2865E+03 1.0000E+00 2.6286E+02 1.2865E+03 1.0000E+00 2.6286E+02 1.2865E+03 1.0000E+00 2.6286E+02 1.2865E+03 1.0000E+00 2.6286E+02 1.2865E+03 1.0000E+00 2.6286E+02 1.2865E+03 1.0000E+00 2.6286E+02 1.2865E+03 1.0000E+00 2.6286E+02 1.2865E+03 1.0000E+00 2.6286E+02 1.2866E+03 1.0000E+00 2.6286E+02 1.0000E+00 2.6286E+02 1.0000E+00 2.6286E+02 1.0000E+00 2.6286E+02 1.0000E+00 2.6286E+02 1.0000E+00 2.6286E+02 1.0000E+00 2.6286E+0
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 .0000E+00 6.478DE-02 7.828SE-02 5.1410E-02 1.1368E-03 1.2238E-02
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 1.00002=+00
 .0000E+00 4.6104E-02 3.1360E-02 4.0667E-02 7.970EE-04 4.96113E-08
 1.00001E+00
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 ,0000E+00 3.68318E-02 3.50567E-02 3.2577E-02 8.10747E-04 3.64108E-08
 1.00001E+00
 .0000E+00 1.24/54E-02 7.609/5E-08 1.159/5E-02 2.8664E-04 6.1278/E-04 1.0000E+00
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.0000E-00 2.795CE-05 1.5095E-04 7.77779E-08 1.1195E-05 1.6117E-05 1.0000E-00 .0000E-00 5.0536E-03 8.0860E-02 5.0536E-03 6.1362DE-04 -6.0760E-04 9.99779E-01
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| 0 grp.                                                                                                                                                                                                                                                                                                                                 | rt bdy flux                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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-3.775E-04<br>-4.201E-08<br>-5.551E-0<br>-5.551E-0<br>-5.765E-0<br>-1.611E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.511E-0<br>-4.5 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|               |                          | •                         |              |                           |                        |                          |              |                          |
|---------------|--------------------------|---------------------------|--------------|---------------------------|------------------------|--------------------------|--------------|--------------------------|
| 2             | · 9.4870/E-02            | -6.22408E-08              | 9.3588/E-02  | -1.30925E-02              | 1.5855ZE-05            | 1.10279E-02              | 1.5927E-08   | 2,460BBE+00              |
| 3             | 1.20503E-01              | -6.99422E-08              | 1.16535E-01  | -1,67746E-02              | .000000                | 1.33342E-02              | 1.82577E-05  | 3.0689500                |
| 4             |                          | -6.03:51E-08              |              |                           | .0000E+00              | 5.7202 <del>5E-</del> 08 | 8.8%479E-0%  | 1,8919BE+00              |
| 5             |                          | -7,40120E-08              |              | -1.60891E-02              | .00000E+00             | 1.64010E-03              | 1.05213E-03  | 2.83390E+00 '            |
| 6             |                          | -1,3957 <del>6E</del> -07 |              | -2.9277 <del>3E</del> -02 | .0000E+00              | 1.36601E-05              | 1.73147E-03  | 5,319416+00              |
| 7             |                          | -4. <i>BARZE</i> -07      | 1.9804ZE-01  | -1,75457E-02              | .000 <del>0E+</del> 00 | 1,31390E-05              | 1.225GE-03   | 5.16980E+00              |
| 8             |                          | -3.07247E-08              | 1.47783E-01  | -3,6616E-G                | .000 <del>0E+</del> 00 | 1.3255 <b>X</b> -05      | 6.9815ZE-04  | 3.7892BE+00              |
| 9             | 1.15297E-01              | -5.32790E-06              | 1.15632E-01  | 8,9761E-04                | .000 <del>0E+0</del> 0 | 1.76700E-08              | 4,71301E-04  | 2,936 <del>//E</del> +00 |
| 10            |                          | -2.08661E-05              | 1.05412E-01  | 2.267GE-05                | .000000                | 3.77407E-05              | 4.2000E-04   | 2 <i>.69</i> 1395+00     |
| - 11          |                          | -1.68307E-05              | 9.9853E-02   | 5,31169E-03               |                        | 8.0 <del>7727E-</del> 03 | 3.8690E-04   | 2,48553€+00              |
| 12            |                          | -4.0618EE-07              | 6.35 BTE-02  | 6.32801E-05               | .000000                | 1.07519E-02              | 2.2764ZE-04  | 1.56757E+00              |
| ឋ             | 5.21389E-02              |                           | 5.41482E-02  | 5,89421E-05               | .0000E+00              | 1.19650E-02              | 1.9478/E-04  | 1.33309E+00              |
| 14            | 4.775Œ-02                | 1.09731E-07               | 5.06918E-02  | 8,73247E-05               | .000000=+000           | 7.583125-05              | 1.742E-04    | 1.22295E+00              |
| 15            |                          | -3.94109E-06              | 2.8554ZE-02  | 1.659BE-03                | .00000E+00             | 1.82802E-05              | 1.1091 E-04  | 7.1767E-01               |
| 16            | 1.55520E-02              | -2.6772E-05               | 1.5853E-02   | 9.3 <b>335E-</b> 04       | .00000E+00             | 1.27489E-05              | 5.743SE-05   | 3.96873E-01              |
| 17            |                          | -3.14314E-05              | 6.8269EE-05  | 8,00742E-04               | .0000E+00              | 1.54KŒ-05                | 2.1608ZE-05  | 1 <i>.6773</i> 9E-01     |
| 18            | 4.00778E+03              | -1.2753/E-05              | 4.7352£-03   | 2.08X8E-05                | .000000                | 1.2173/E-05              | 9.6700/E-05  | 1.03785E-01              |
| 19            | 9.8363 <del>2E</del> -03 | -3.9K89E-05               | 1.0530E-02   | 1,43421E-05               | .0000E+00              | 2.45687E-05              | 3.31437E-05  | 2.518K/E-01              |
| 20            | 3.35RE-02                | -7.5417XE-06              | 3.4710/E-02  | 3.37858E-05               | .00000E+00             | 1.4554/E-02              | 1.2574E-04   | 8,57487E-01              |
| 21            | 9,4367E-03               | -2.85075E-05              | 1.05385E-02  | 2.50235E-08               | .00000E+00             | 1,43881E-02              | 2.6497E-05   | 2,42825E-01              |
| 72            | 1.7641E-02               | -2.47474E-06              | 2.0470E-02   | 7.393325-05               | .00000E+00             | 4.25972E-02              | 4.57041E-05  | 4,57311E-01              |
| 23            | 6.ZX/ZE-02               | -8.76875E-06              | 7.03589E-02  | 1.804505-02               | .0000E+00              | 7.834795-02              | 1.66818E-04  | 1.61401E+00              |
| 24            | 4.78576E-02              | -5.42101E-07              | 5.60669E-02  | 1.60678E-02               | .00000=+00             | 7.5026E-02               | 1.01047E-04  | 1_2%8E+00                |
| 5             |                          | -9.54369E-07              | 2.4760BE-02  | 7.5118EE-03               | .0000E+00              | 4.30811E-02              | 3.4607SE-05  | 5.38677E-01              |
| 26            | 1.3526E-02               | -1.2050/E-07              | 1.710EE-02   | 5.765ZEE-05               | .00000E+00             | 3.95997E-02              | 1.70719E-05  | 3.56770E-01              |
| 27            | 2.27879E-03              | -6.6126/E-09              | 3.056/E-03   | 1.16533E-05               | .00000=+00             | 1.1136E-02               | 1.75/37E-05  | 6.0277ZE-02              |
| 28            | 1.730B9E+00              | -4.7818/E-05              | 1.74175E+00  | -1.00335E-02              | 2.25/4ZE-0B            | 4.09170E-01              | 1.19250E-02  | 4.412585+01              |
|               | TOLD SLEERLY             |                           |              |                           |                        |                          |              | ,,,,                     |
| 0 grp.        |                          | fiss source               | in scatter   | slf scatter               | aut scatter            | absorption               | Lenionce     | balance                  |
| ` ' ' ' ' ' ' | .0000E+00                | 2.30698E-02               | .000E+00     | 2.238/85-02               | 2.1475Œ-02             | absorption               | -5.92210E-09 | 9.98902E-01              |
| Ź             | .0000E+00                | 1.94222E-01               | 7.6/210E-03  | 2.6176ZE-01               | 1.8577F-01             | 1.56009E-02              |              | 1.00002E+00              |
| 3             | .0000E+00                | 2.1591SE-01               | 7.74376E-02  | 2.68762E-01               | 2.76957E-01            | 1.639905-02              | -6.9XZZE-08  | 9.99987E-01              |
| 4             | .0000E+00                | 1.23750E-01               | 1.1438E-01   | 1.8600E-01                | 2.305/GE-01            | 7.82729E-05              | -6.05651E-08 | 9.9999E-01               |
| Š             | .00000E+00               | 1.64063E-01               | 2.08/09E-01  | 4.6465E-01                | 3.67205E-01            | 5.26087E-05              |              | 9.99990E-01              |
| 6             | .0000E+00                | 1.7697SE-01               | 4.200E-01    | 1.256/75+00               | 5.95667E-01            | 8.33450E-0B              | -1.35576E-07 | 1.00001E+00              |
| 7             | .00000E+00               | 8.74/DE-02                | 6.5894XE-01  | 1.6700E+00                | 7.3813Œ-01             | 8.26141E-05              | -4.8/XXE-07  | 9.99990E-01              |
| Ė             | .0000E+00                | 1.346895-02               | 7.75915E-01  | 1.7042/E+00               | 7.7620/E-01            | 1.32/31E-02              |              | 9.99920E-01              |
| - Ģ           | .000000=+00              | 9.774325-04               | 7.66901E-01  | 1,48915E+00               | 7.4610BE-01            | 2.18575E-02              | -5.32790E-06 | 9.99900E-01              |
| 10            | .00000=000               | 7.2977E-05                | 7,42521E-01  | 1_35878E+00               | 7.09756E-01            | 3.2915E-02               |              | 9.99902E-01              |
| 11            | .0000E+00                | 5.71148E-06               | 7.14245E-01  | 1,257115+00               | 6.60% DE-01            | 5.3800/E-02              |              | 9.9994E-01               |
| 12            | .00000=+00               | 4.01221E-07               | 5.7500Œ-01   | 6.91490E-01               | 5.16521E-01            | 5.85005E-02              |              | 9.99975E-01              |
| 13            | .00000=+00               | 6.37102E-0B               | 5.10120E-01  | 5.50101E-01               | 4.54772E-01            |                          | 7.1156E-07   | 9.9996E-01               |
| 14            | .000000=000              | 1.26257E-0B               | 4.910(3E-01  | 5.14121E-01               | 4.1225E-01             | 7.8795/E-02              | 1.02731E-07  | 9.9998F-01               |
| 15            | .00000=00                | 1.A268E-09                | 2_69902E-01  | 2.3299XE-01               | 2.61909E-01            | 7.94000E-0B              |              | 1.00021E+00              |
| โด            | .00000E+00               | 4.18770E-10               | 1.8354/E-01  | 1.0980E-01                | 1.7750BE-01            | 6.00905E-05              |              | 1.00021E+00              |
| 17            | .00000E+00               | 1.34929E-10               | 9.78477E-02  | 3.31787E-02               | 9.02667E-02            | 7.5690E-05               |              | 1,00019E+00              |
| 18            | .0000E+00                | 9.66050E-11               | 8.712632-02  | 2.10447E-02               | 6.2600E-02             | 2.46971E-02              |              | 1.00007E+00              |
| 19            | .00000E+00               | 1.36579E-10               | 1.3698/E-01  | 6,377392-02               | 1.2661E-01             | 1.03079E-02              |              | 1.0001/E+00              |
|               | .0000E+00                | 2.22091E-10               | 3.285/E-01   | 3.76185E-01               | 3.00770E-01            | 2.800K5E-02              | 7.5417E-06   | 1.00020E+00              |
| 20<br>21      | .0000E+00                | 3.2070E-11                | 1.613838-01  | 7,478525-02               | 1.3687E-01             | 2.47814E-02              |              | 1.00011E+00              |
| 22            | .00000E+00               | 3.771506-11               | 3.07276E-01  | 1,9009E-01                | 2.34243E-01            | 7.30031-02               |              | 1.00010E+00              |
| 萝             | .0000E+00                | 3.60602E-11               | 7.41519E-01  | 1.0253E+00                | 6.0118E-01             |                          | 8.7677E-06   | 1,00017E+00              |
| <b>7</b> 4    | .00000=+00               | 9.81512-12                | 7.8566E-01   | 9.574 NE-01               | 6.4908/E-01            | 1.36540E-01              |              | 1.00011E+00              |
| ž             | .0000E+00                | 2.87322=-12               | 5.21100E-01  | 3.9056E-01                | 4.45809-01             | 7.52500-02               |              | 1,00007E+00              |
| ಹ             | .0000E+00                | 2.01472E-12               | 4.05560E-01  | 3.97483E-01               | 3.37140E-01            | 6.037625-02              |              | 1.0000£+00               |
| ž             | .0000E+00                | 4,80119E-13               | 1.3435/E-01  | 8.10578E-02               | 1.1474E-01             | 1.90185-02               |              | 1.0000E+00               |
| ž             | .0000E+00                | 1_0000E+00                | 1.022875+01  | 1.573285+01               | 1_02287E+01            | 1.002116-00              |              | 1.00002=+00              |
| 0 gp          | rt boy flux              |                           | lft boy flux | lft leskage               | n2n rate               | fias rate                | fluctor 2    | total flux               |
| 1             | 1.3008-02                | -5.92210E-09              | 1.263135-02  | .00000E+00                | 2.254/8E-03            | 2.5051E-05               | 3.27757E-04  | 3.67747E-01              |
| ż             | 9.68924E-02              | -6.23/0E-08               | 9.0/9/0E-02  | .0000E+00                 | 1.58552E-05            | 1.102796-02              |              | 2.65139E+00              |
|               |                          |                           |              |                           |                        |                          |              |                          |

```
3 1.20875E-01 -6.99427E-08 1.12597E-01
 .0000E+00 .0000E+00 1.33342E-02 1.9848E-03 3.3065E+00
 4 7.45277E-02 -6.03651E-08 6.87736E-02
 .00000E+00
 .0000E+00 5,72025E+0B 9,55975E+04 2,05769E+00
 .0000E+00 1.64010E+08 1.1165E+08 3.0518E+00 .0000E+00 1.3660E+08 1.8677E+08 5.72652E+00
 5 1.1169E-01 -7.40120E-08 1.0277/E-01 6 2.0977/E-01 -1.3957/E-07 1.92813E-01
 .00000E+00
 .00000E+00
 .00+3000.
00+30000.
00+30000.
 .0000E+00 1.3250E-03 1.3255E-03 5.57657E+00 .0000E+00 1.3250E-03 7.53354E-04 4.0960E+00 .0000E+00 1.7670E-03 5.0890E-04 3.17757E+00 .0000E+00 3.77607E-03 4.62763E-04 2.9757E+00
 7 2.0582E-01 -4.8692E-07 1.98091E-01 8 1.48942E-01 -3.07247E-08 1.4681E-01
 9 1.529/E-01 -5.32/30E-05 1.55/21E-01 10 1.056/8E-01 -2.086/8E-05 1.07/32E-01
 .0000E+00 .0000E+00 3.77407E-03 4.62763E-04 2.97371E+00 .0000E+00 .0000E+00 1.0757E-02 2.4679E-04 1.7678E+00 .0000E+00 .0000E+00 1.0757E-02 2.4679E-04 1.7678E+00 .0000E+00 .0000E+00 1.7638E-02 2.10778E-04 1.33742E+00 .0000E+00 .0000E+00 1.8638E-03 1.8779E-04 1.33742E+00 .0000E+00 .0000E+00 1.2748E-03 6.43374E-05 4.3015E-01 .0000E+00 .0000E+00 1.2748E-03 6.43374E-05 1.8273E-01 .0000E+00 .0000E+00 1.27474E-03 1.08745E-05 1.17478E-01 .0000E+00 .0000E+00 1.27474E-03 1.08745E-05 1.17478E-01 .0000E+00 .0000E+00 1.27474E-03 1.08745E-05 1.77537E-01 .0000E+00 .0000E+00 1.4544E-03 3.5773E-05 2.7852E-01 .0000E+00 .0000E+00 1.4544E-03 1.3357E-04 9.30784E-01 .0000E+00 .0000E+00 1.4544E-02 1.3356E-05 2.6652E-01 .0000E+00 .0000E+00 1.4584E-02 2.8858E-05 2.6652E-01 .0000E+00 .0000E+00 4.25772E-02 5.0670R-05 5.0869E-01 .0000E+00 .0000E+00 7.5036E-02 1.8205E-04 1.7579E+00 .0000E+00 .0000E+00 7.5036E-02 1.8205E-04 1.7579E+00 .0000E+00 .0000E+00 7.5036E-02 1.8205E-04 1.7579E+00 .0000E+00 .0000E+00 7.5036E-02 1.8205E-04 1.7579E+00 .0000E+00 .0000E+00 7.5036E-02 1.8205E-04 1.7579E+00 .0000E+00 .0000E+00 7.5036E-02 1.8205E-04 1.7579E+00 .0000E+00 .0000E+00 7.5036E-02 1.8205E-04 1.7579E+00 .0000E+00 .0000E+00 7.5036E-02 1.8205E-04 1.7579E+00 .0000E+00 .0000E+00 7.5036E-02 1.8205E-04 1.7579E+00 .0000E+00 .0000E+00 7.5036E-02 1.8205E-04 1.7579E+00 .0000E+00 .0000E+00 7.5036E-02 1.8205E-04 1.7579E+00 .0000E+00 .0000E+00 7.5036E-02 1.8205E-04 1.7579E+00 .0000E+00 .0000E+00 7.5036E-02 1.8205E-04 1.7579E+00 .0000E+00 .0000E+00 7.5036E-02 1.8205E-04 1.7579E+00 .0000E+00 .0000E+00 7.5036E-02 1.8205E-04 1.7579E+00 .0000E+00 .0000E+00 7.5036E-02 1.8205E-04 1.7579E+00 .0000E+00 .0000E+00 7.5036E-02 1.8205E-04 1.7579E+00 .0000E+00 7.5036E-02 1.8205E-04 1.7579E-04 1.7579E+00 .0000E+00 7.5036E-02 1.8205E-04 1.7579E-04 1.7579E+00 .0000E+00 7.5036E-02 1.8205E-04 1.7579E-04 1.7579E-
 11 9.74201E-02 -1,68307E-06 1.00890E-01
 18 4.007/8E-05 -1.2753/E-05 5.352/4E-05
19 9.8562E-05 -3.91/8E-05 1.074/8E-02
20 3.3538E-02 -7.54178E-05 3.5668E-02
 21 9.4367E-03 -2.8507E-05 1.1134E-02 22 1.7641E-02 -2.4747E-06 2.29257E-02 23 6.2247E-02 -8.7657E-06 7.75747E-02
 24 4.78578-02 -5.721016-07 6.34138-02 .00000600 7.50368-02 1.10748-04 1.37418-00 25 2.054126-02 -9.57368-07 2.85786-02 .00000600 .0000600 7.50368-02 1.10748-04 1.37418-04 2.05086-02 .0000600 3.75778-02 1.92278-05 3.96278-01 27 2.27878-03 -6.61248-09 3.98388-03 .0000600 3.75778-02 1.92278-05 3.96278-01 27 2.27878-03 -6.61248-09 3.98388-03 .0000600 2.27838-03 4.09178-01 1.29278-02 4.776016-01
 - elapsed time .02 min.
 Odirect access unit 9 requires 556 blocks of length 216 for cross section weighting.
 1 transport cross section weighting function
 1 the part cross section telegring furction

Ozne gp. 1 gp. 2 gp. 3 gp. 4 gp. 5 gp. 6 gp. 7 gp. 8

1 1.W20E-03 5.D5XE-03 5.X5XE-03 2.508E-03 3.1830E-03 5.5551E-03 3.769E-03 1.7635E-03

2 6.9551E-04 4.9900E-03 5.783EE-03 3.W55E-03 4.295E-03 6.1530FE-03 4.327E-03 2.W65E-03

3 1.1777E-03 5.A785E-03 5.8787E-03 2.975XE-03 3.8526E-03 6.7752E-03 4.3775E-03 1.2805E-03

4 8.0550E-04 4.300AT-03 4.985ZE-03 2.395E-03 2.824E-03 4.800E-03 3.3556E-03 1.7855E-03

5 8.3250E-04 4.300E-03 4.9827E-03 2.8483E-03 2.828E-03 4.800E-03 3.3556E-03 1.7855E-03
5 8.3250-04 4.3201-08 4.9272-03 2.4431-03 2.6789E-03 4.8830E-03 3.3754E-03 1.7850E-03 9p. 10 9p. 11 9p. 12 9p. 13 9p. 15 9p. 15 9p. 16 1 1.1131E-03 1.0461E-03 1.0461E-03 8.74330E-04 1.4569E-03 1.7652E-03 1.5850E-04 1.6418E-04 1.4569E-03 1.7652E-03 1.5850E-04 1.6450E-03 1.6552E-03 1.6552E-03 1.6552E-03 1.6552E-03 1.6552E-03 1.6552E-03 1.6552E-04 1.655
 5 7.52572E-05 9.27709E-05 1.26509E-04 3.98576E-04 1.52594E-04 3.90782E-04 1.17829E-03 9.44509E-04
 2 1.305E-03 9.56TE-04 1.6050E-05 4.2120E-02 1.305E-03 9.56TE-04 1.6050E-05 4.2120E-02 1.3050E-04 2.1374E-04 2.6034E-05 3.4543E-02 1.574E-04 2.6034E-05 3.4543E-02 1.574E-04 2.6034E-05 3.55342E-02 1.574E-05 3.574E-05 3
 Errord group parameters
 Upper energy mid energy
2.0000E+07 2.6557E+05
 velocity
 1.96EDE+09
 7.2105E-01
 9.0000E+05
 1.513/E+05
 9.980%E+06
 2.789/E-01
 4.0000E-01
 1.256E-01
 3.666/EHO5
 1.2147E-10
 1.000E-05
 720 d. second part of see2h pass to make Library
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#### Ocell averaged fluxes Ozore grp. 1 grp. 2 grp. 3 1 3.50743E-01 1.1359/E-00 2.20629E-01 2 3.5599E-01 1.1374E-00 2.11358E-01 3 3.98953E-01 1.13741E+00 2.07193E-01 4 4.16127E-01 1.13756E+00 1.77479E-01 5 4.14437E-01 1.1374E+00 1.8089E-01 Offlux disadvantage factors (zone average/cell average-flux) grp. 1 grp. 2 grp. 3 9.42828-01 9.97198-01 1.22310-00 9.55500-01 9.982616-01 1.17178-00 3 9.62638E-01 9.98479E-01 1.1486/E+00 4 1,0000E+00 1,0009E+00 9.8402E+01 5 1,0000E+00 1,0000E+00 1,0000E+00 Ocell averaged currents gp. 1 gp. 2 gp. 3 1.7802-02 1.83755-02 6.56765-03 1.9276-02 2.58245-02 1.02216-02 Ozone 1.9312E-02 2.23797E-02 1.0858E-02 1.5267E-02 1.6268E-02 2.9802E-03 1.54761E-02 1.6958E-02 3.36371E-03 VOLUME vol. fraction Ozone 1,25655+00 4.5625Æ-02 1,66687E-01 6.0516E-03 6.58265E-01 2.38987E-02 2.546XE+01 9.242E-01 2.754/0E+01 1.0000E+00 element time .CS min. 0000000000 0000000000 <del>ATTITUTE</del> ш w 8000000000000 HHHHHHP œ œ œ œ ш ш P 62 ш Þ $\alpha$ $\infty$ æ w œ w ш $\alpha$ $\infty$ Ø p P æ œ $\infty$ œ ш ш <del>йининий</del> 660000000 w œ $\infty$ ш HHHHHHP 000000000 8 w ü $\infty$ œ P œ $\infty$ 8 ш w 66 ш Œ $\infty$ œ ш шишшиш 产用 CONTRACTOR OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE .00000000000 0000000000 шшшш uuuuuuu шшшш w fiffiffiff 200000000 W 22220202020 Hillinin 20000000000 W W \$959899999996 W W 品品 86 W w 20 ᄲ 88 20 ш Ш 8800000000000 ш Щ 2000000000000 W Щ ш W ш Щ W W ᇳ <del>dittitititi</del> \*\*\*\*\*\*\*\*\*\* w 896989999998 <del>ашини</del> 1111111111111 200000000000

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| strategic to | Droz           | an verif                                | ication | infametian |      | ***              |
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| ***          | · code s       | vstane                                  | ecale   | versions   | 4.2  | desirability.    |
| ***          |                | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |         |            |      | ****             |
| ****         | -              | ****                                    |         | ****       | **** |                  |
| ****         | ****           | ****                                    | ****    | ****       | **** | ****             |
| Selection .  |                |                                         |         |            |      | detekt           |
| ****         |                |                                         |         |            |      | Salestate .      |
| ***          | progress       | d0:005                                  |         |            |      | ****             |
| ***          | P              |                                         |         |            |      | thair field of   |
| ***          | crestion date: | 04/21/9                                 | 5       |            |      | ****             |

```
library: /neutronics/scale/exe
 this is not a scale configuration controlled code
 ictreme: davis
 date of executions 02/16/96
 time of execution: 10:02:11
 -1q array has
 1 entries.
 1 entries.
 On array has
 Oc array has
 1 entries.
 1q array has
 1 entries.
 lq array has
 1 entries.
 1 entries.
 to array has
 entries.
 1 entries.
 1g array has
 1 entries.
 20 array has
 * ore allocated to army-data (by - 115 or default) was 20000 words. *
* broad 3-group flux weighting factors *
 them = .5110
res = .4318
 fast = 3.3315
O user requested (see jack) that only the nuclide transitions presently included in
O origen library be updated.
Icross sections, available from anpx (normalized to thermal flux), barra
 10010 to 10020 2.8256FE-01
10010 tot-cap 2.8256FE-01
50100 to 40100 2.38414E-02
50100 to 40000 3.63641E-03
50100 to 10020 3.6384E-03
50100 to 10020 3.6384E-03
50100 to 30000 3.25591E-03
 50100 to 30070 3.2540Fe/65
50100 to 20040 3.2540Fe/65
50100 to 10050 8.94021E-02
50100 tot-cap 3.2540Fe/65
50110 to 50100 1.05597E-05
50110 to 40110 1.3347EE-05
50110 to 40100 1.3347EE-05
50110 to 40000 1.15144E-05
50110 to 10050 1.15144E-05
50110 to 10050 1.15144E-05
50110 to 10050 1.15144E-05
 1.1911/E-05
1.1911/E-05
1.55497E-04
1.55497E-04
 50110 to 30080
50110 to 20040
 50110 tot-cap 4.48718E-03
80160 to 80170 1.51170E-04
80160 to 70160 9.15205E-05
80160 to 10010 9.15205E-05
 80160 to 70150 1.72607E-05
 80160 to 10020 1.72607E-05
```

80160 to 60130 2.5566/E-02

80160 to 20060 2,5566/E-02 80160 to 80161 4.0137/E-03 80160 tot-cap 2.58263E-02 360630 to 360620 2.077895-02 360830 to 360810 2.19372E-09 360830 to 360840 1,5366E+02 360630 to 350630 8.52333E-04 360830 to 10010 8,52532-04 360830 to 350830 6,85367-05 360830 to 10020 6,85267-06 340830 to 350810 2.37863E-06 340830 to 10080 2.37863E-06 340830 to 340810 3.88199E-08 360830 to 20080 3,88197E-08 360830 to 360800 4,539754E-05 360830 to 20060 4,539754E-05 36050 to -cap 1.5364cm. 36050 to -cap 1.5364cm. 36050 to 36060 1.3500500 1.3500500 36050 tot-cap 1.390905+00 380900 to 380910 6.282615-01 30000 tot-cap 6.2561E-01 30000 to 30000 9.85034E-01 30000 tot-cap 9.85034E-01 40080 to 40090 1.32657E-01 400750 to 400740 1.324576+01 400750 tot-cop 1.324576+01 400740 to 400750 1.837346-01 400%0 tot-cap 1,835%E-01 400%0 to 400%0 2,1981%E-00 400%0 tot-cap 2,1981%E-00 410%0 to 410%0 3,810%E-01 410940 tot-cap 3.810585+01 420950 to 420950 3.785265+01 420750 tot-cap 3.76526E+01 430750 to 430780 6.30457E-08 430750 to 431000 8.84718E+01 430990 tot-cap 8.847818-01 441010 to 441020 2.787338-01 441010 tot-cap 2.787338-01 441010 to 441070 8.555788-01 441060 tot-cap 8.5557FE-01 451090 to 451020 2,28529E-03 451090 to 451040 3,50881E-02 451050 tot-cap 3.505835+02 451050 to 451050 8.148005+05 3,505835+02 451050 tot-cap 8.14800E+05 461050 to 461050 3.34766E+01 461050 tot-cap 3.347645+01 461080 to 461080 6.758995+01 461080 tot-cap 6.7587/E+01 471090 to 471080 5.3094/E-08 471000 to 471100 3.662166-02 471000 to 461000 3.008106-04 471090 to 10010 3,00810E-04 471090 to 451060 2,48970E-04 471090 to 20040 2,48970E-04 471090 to 471091 6.27952E-01 471090 tot-cap 3,66221E+02 511240 to 511250 1.19320E+01 5112/0 tot-cap 1.19520E+01 5/1310 to 5/1300 6/3812E-02

\$4310 to \$4250 1.346225-05 \$4310 to \$4320 2.541205-02 \$4310 to \$33310 3.672925-05 \$4310 to \$1000 3.672925-05 541310 to 10010 3.87282E-05
541310 to 531300 5.35700E-07
541310 to 10200 5.35700E-07
541310 to 531200 5.53648E-07
541310 to 521200 1.81271E-05
541310 to 521200 1.81271E-05
541310 tot-cap 2.54184E-02
541320 to 541310 1.0000E-02
541320 to 541310 1.0000E-02
541320 to 541310 9.1633E-01
541320 to 541310 9.1633E-01 541320 to 531320 7.93439E-06 541320 to 10010 7.95437E-06 541320 to 531310 3.35207E-07 541320 to 10020 3.35207E-07 541320 to 551300 4.51340E-08 541320 to 10080 4.51340E-08 541320 to 521320 9.77472E-07 541320 to 20040 9.77472E-07 541320 tot-cap 9.200E-01 541350 to 541360 1,46510E+06 541350 tot-cap 1.45510E+05 541350 to 541350 1.77507E-02 \$41360 to \$41340 1.7740E-105
\$41360 to \$41340 5.43372E-05
\$41360 to \$31340 1.2256E-01
\$41360 to \$31340 3.28531E-07
\$41360 to \$10010 3.28531E-07 541360 to 531360 1.22506E-07 541360 to 10020 1.22506E-07 541360 to 531340 2.76311E-08 541360 to 10080 2,76511E-08 541360 to 521330 2,75575E-07 541360 to 20040 2,75575E-07 541340 tot-cap 1,40814E-01 551330 to 551320 8,33107E-03 551330 to 551340 1,00417E+02 551330 to 541330 9.01970E-04 551330 to 10010 9.01970E-04 551330 to 531330 1.4253E-05 55130 to 2000 1,425/35-05 55130 tot-cap 1,00/276/02 5513/0 to 55150 1,261/26-02 5130 tot-op 1.28178-02 5150 to 5130 2.1153-01 5150 tot-op 2.1153-01 5130 to 5130 2.2739-01 551370 tot-cap 2.27369E-01 561360 to 561370 8.92118E-01 \$61340 tot-cap 8,9219E-01 571390 to 571400 7,91315E-00 571390 tot-cap 7,91315E-00 561440 to 561460 1,2253E-00 581440 tot-cap 1.22858E+00 591410 to 591400 5.96984E-08 591410 to 591390 1.715285-06 591410 to 571370 2.566185-06 591410 to 20040 5.29664E-05

571410 to 581400 1,82016E-05 571410 to 10010 5,17872E-05 591410 to 591420 1.17725E+01 591410 to 581410 4.87936E-05 591410 to 10020 1.52100E-05 591410 to 581390 1.59511E-06 591410 to 10080 1.59511E-05 591410 to 571390 591410 to 20080 1,540/8E-0B 1.5404E-08 591410 to 57(380 5,04013E-05 591410 to 57 Cau 5,000 E-10 591410 to 5-cap 1,1778/E-01 591430 to 591440 9,732/3E-01 601430 to 601420 9,1333/E-02 601430 to 601410 9,322/E-06 601430 to 581390 2,016/3E-05 601430 to 20040 5.640978-04 601430 to 597420 3.902418-05 601430 to 10010 4.012488-05 601430 to 601440 1.927008-02 601430 to 571430 3.8544E-05 601430 to 10020 2.43219E-06 601430 to 591410 3.50476E-05
601430 to 591410 3.50476E-05
601430 to 10250 3.50476E-05
601430 to 581410 1.68390E-08
601430 to 581400 5.43395E-08 601430 to 5601440 1,97325-02
601430 to 601440 1,171825-01
601450 to 601450 1,171825-04
601450 to 501450 2,105765-04
601450 to 501440 2,105765-04
601450 to 10010 1,45585-05
601450 to 10010 1,45585-05 601630 to 10000 1,6336E-05
601630 to 601600 1,770/0E-01
601630 to 591630 1,364/0E-05
601630 to 10030 1,346/0E-05
601630 to 591630 2,11898E-05
601630 to 581630 4,314/0E-09 60160 to 2000 4.31407-09
60160 to 2000 2.021816-04
60160 tot-cap 7.782186-01
60160 tot-cap 1.86601602 601470 tot-cap 1,86601E+02 611470 to 611460 3,20722E-02 611470 to 611450 1,00070E-04 611470 to 571430 8,67611E-06 611470 to 20040 8,22451E-05 611470 to 601460 1.22598E-05 611470 to 10010 2.79163E-05 611470 to 611480 5.75790E-02 611470 to 601470 2.48362E-05 611470 to 10020 9.22362E-06 611470 to 601450 3.48476E-06 611470 to 10080 3.48476E-05 611470 to 591450 5.23943E-09 611470 to 20030 5.23943E-09 611470 to 591440 7,33690E-05 611470 tot-cap 5.75829E+02

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611480 to 611490 1.20170E+04
611420 to 611420 1.2077E+04
611420 tot-cap 1.2077E+04
621470 to 621450 8.36678E+02
621470 to 601430 6.5057E+05
621470 to 601450 6.5057E+05
621470 to 611460 1.57837E+04
621470 to 10010 2.16761E+05
 21470 to 621480 2.30086402
621470 to 611470 1.91166E-04
621470 to 10020 1.26241E-04
621470 to 611450 1.33554E-04
 1.3555/E-04
1.3555/E-04
 621470 to 10050 1.35554E-04
621470 to 601450 6.25710E-06
621470 to 2000 6.25700=05
621470 to 2000 6.25700=05
621470 to 60140 1.18275=05
621470 to 621471 1.641216+00
621470 to 621470 2.30786=02
621490 to 621470 3.755176=05
621490 to 621670 3.755176=05
621490 to 621670 4.500/46-04
621400 to 621500 4.5004E-04.
621400 to 611400 4.55152E-04.
621400 to 601460 4.55152E-04.
621400 to 601460 4.55152E-04.
621400 to 6021510 4.55152E-04.
621500 to 621510 1.33056E-02.
621510 to 621500 1.57776E-01.
621510 to 621500 1.57776E-01.
 1.5776E-01
1.4130/E-04
1.58/32E-04
1.28/0/E-04
1.98/87E-06
 621510 to 601470
621510 to 601470
621510 to 611500
621510 to 10010
 1.50424E-05
 621510 to 621520
621510 to 611510
 4.9330E+05
1.3860E-05
 621510 to 10020
621510 to 611490
 7.5273(E-07
 1.36805E-06
 1.36805E-06
 621510 to 10080
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 621510 to 20080
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1.07561E-04
 21510 tot-cap 4.9534E+05 621520 to 621530 1.872ZE-04 621530 to 621530 1.2765E-04 621530 to 601400 2.8572E-04 621530 to 601400 2.8572E-05
 621520 to 20040 1.18670E-05
621520 to 611510 8.19592E-07
 621520 to 10010 2.41860E-06
621520 to 621530 7.25060E-02
621520 to 611520 2.14847E-06
 621520 to 10020
 5.4939E-07
 621520 to 611500
 1.42901E-07
1.42901E-07
 621520 to 10080
 621520 to 601500 4.33072E-10
621520 to 20080 4.33072E-10
 621520 to 601490 9.00979E-06
 621520 tot-cap 7.25076+02
631530 to 631520 1.85776-02
 631530 to 631510 2.74392-05
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631530 to 611490 4,34003E-05 631530 to 20040 6.29487E-04 631530 to 621520 7.6864E-06 631530 to 10010 6.46952E-05 631530 to 631540 6.13434E+02 631530 to 621530 6.20694E-05 G150 to 1020 5,0272-06
G150 to 1020 5,0272-06
G150 to 62510 1,13/566-06
G150 to 61510 2,573/66-08 63150 to 611510 2.59266-08
631530 to 2000 2.59266-08
631530 to 611500 5.86027-04
631530 to 631530 2.59278-02
631540 to 631530 2.59278-02
631540 to 631530 1.06518-03
631540 to 631530 1.06518-03
631540 to 621530 2.31008-05
631540 to 10010 1.22018-05
631540 to 631550 1.06618-08
631540 to 631550 1.22018-05 63540 to 625540 1.25019E-03 635540 to 625540 1.25019E-03 635540 to 10000 2.30097E-05 635540 to 10030 3.91070E-05 635540 to 10300 1.66858E-03 635540 to 20000 1.66858E-03 61540 to 611510 7.5563E-04
61540 to 611510 7.5563E-04
61540 to 611510 2.41215E-02
61550 to 611510 1.81763E-05
61550 to 611510 1.81763E-05
61550 to 611510 1.81763E-05 631550 to 621540 3.6631/E-06 6350 to 10010 7.72905-06 63550 to 63560 2.55125+08 637550 to 627550 5.93760=06 637550 to 10020 1.89767=06 637550 to 627530 6.26000=07 67550 to 1000 6.26000=07 63750 to 611530 1.41865=10 63750 to 2000 1.41865=10 63750 to 611520 7.12783=06 631550 tot-cap 2.55125405 641550 to 641560 1.69605404 641550 tot-cap 1.69605E+04 922340 to 922330 6.31950E-05 922340 fission 4.38595E+00 92340 nu-sigf 1.153265-01 92340 to 92250 9.162005-05 92340 to 92350 1,8439E+02 2.94189E+00 1.8853E+02 922340 to 922341 92340 tot-cap 92350 to 92240 2.883/E-02 3.60472E+02 8.7283/E+02 92250 fission 92250 nu-sigf 8,72892+02 92250 to 92230 2,76018E-05 92250 to 92250 8.559745-07 92250 to 92251 8.367305-02 92250 tot-cap 4.459005-02 92250 to 92250 3.21925-02

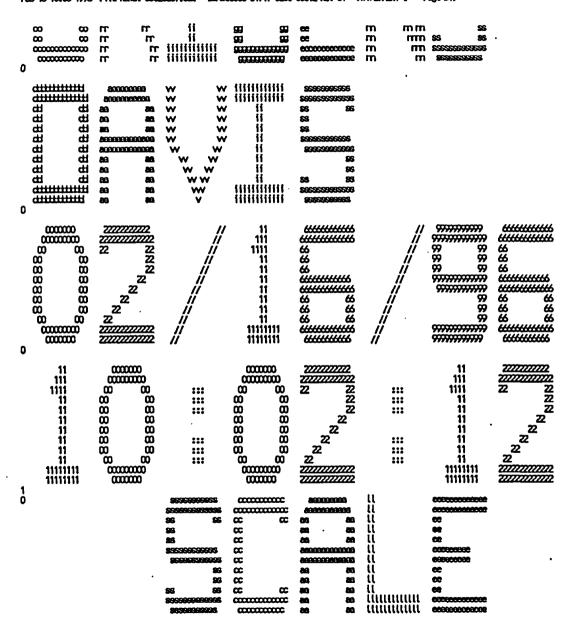
922360 fission 1.88166E+00 922360 nursiaf 5.16557E+00 922360 to 922340 4.2902/E-04 922360 to 922370 7.19083E+01 922360 to 922361 3.218/5E+00 972360 tot-cap 7.382265+01 92230 to 922370 6.425545-02 92290 fission 92290 rursigf 92290 to 92290 9,43300E-01 2,65616E-00 4.19521E-04 92230 to 92230 8.339425-00 92230 tot-cap 9.39646-00 92230 to 92230 1.46675-02 932370 fission 5.086985+00 92370 ru-sigf 92370 to 92350 92370 to 92380 1.53205E+01 5.60747E-05 2.97578E+02 92370 to 92371 92370 tot-cap 92380 to 92370 7.5/3///E-01 3.026/5E+02 2.30099E-03 942530 fission 2.20643E+01 94230 ru-sigf 94230 to 942360 94230 to 942390 94230 to 942391 6.25592+01 1.31853E-05 2.63395E+02 2.95315E+00 9/230 tot-cap 9/2390 to 9/2380 2.864535+02 1.24739E-02 942390 fission 8.39ZE+02 94290 nu-sigf 2.415018-08 94290 to 94250 2.12276-05 94290 to 94240 2.104328-08 94290 to 94240 4.705618-02 94250 to 94250 94260 to 94250 94260 fission 94260 nusigf 94260 to 94250 94260 to 94260 1.30981E+05 5.8674E-05 5.78657E+00 1.81189E-01 5.7271E-05 1.4944E-08 9/2/00 tot-cap 9/2/10 to 9/2/00 9/2/10 fission 1.500Z7E+05 7.40059E-02 7-2410 fission 8,954016-02 94340 ru-sigf 2,62727-648 942410 to 94230 1,225146-04 942410 to 942420 2,93008-09 9/2410 to 9/2410 9/2420 to 9/2410 9/2420 fission 9/2420 ru-sigf 9/2420 to 9/2420 9/2420 to 9/2420 1.189/8E+05 2.39183E-02 4.40995E+00 1.38159E+01 2.90785E-04 3.28X0'E+02 9/2/20 tot-cap 9/2/10 fission 9/2/10 ru-sigf 9/2/10 to 9/2/20 3\_33059E+02 1.23494E+01 3.99002=+01 1.0124/E+08 1.0247/E+08 3.40415E+00 952410 tot-cap 952430 fission 1.1444E+01 4.16052E+02 4.19456E+02 952/30 ru-sigf 952/30 to 952/40 952430 tot-cap 962440 to 962430 5.7482E-0B

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962440 fission
 1.51797E+01
 962440 ru-sigf
 5.08679E+01
 962440 to 962420 5.75241E-05
 962/40 to 962/50 1,39783E+02
 962640 to 962641 3.76645E+00
 962440 tot-cap
 1.549685+02
Othe reaction 50100 to 30070 was not used, because 50100 is not in Library., (in subr pool)
 in the search of library number 3
 Othe reaction 50100 to 40090 was not used, because 50100 is not in library., (in subr pool)
 in the search of Library number 3
Othe reaction 50110 to 40090 was not used, because 50110 is not in Library., (in subr pool) in the search of Library number 3
Othe reaction 50100 to 40100 was not used, because 50100 is not in library., (in subr pool)
 in the search of library number 3
Othe reaction 80160 to 80161 was not used, because 80161 is not in library., (in subr pool) Othe reaction 621470 to 621471 was not used, because 621471 is not in library., (in subr pool)
Othe fission product transitions for 922540 were not used. Library fissile ruclides are 92230 92250 92240 92250 92250 92250
 One substitute nuclide in block 8 data. or, update with new fission yield data.
 Othe reaction 922340 to 922341 tes not used, because 922341 is not in Library., (in subr pool)
 Othe reaction 92250 to 92251 was not used, because 92251 is not in library., (in subr pool)
Othe fission product transitions for 92730 were not used. Library fissile ruclides are 92730 92730 92730 92730 92730 92730 92730 92730 92730 92730 92730 92730 92730 92730 92730 92730 92730 92730 92730 in history, (in subr pool) othe reaction 92730 to 92730 was not used, because 92730 is not in library, (in subr pool)
 Othe fission product transitions for $525.00 were not used. Library fissile nuclides are
 922330 92250 942410 92250 942390
One substitute nuclide in block 8 data. or, update with new fission yield data.

Othe reaction 92370 to 92371 was not used, because 92371 is not in library., (in subr pool)

Othe fission product transitions for 94280 were not used. Library fissile ruclides are
 922330 92250 942410 922580 942590
One substitute ruckide in block 8 data, or, update with new fission yield data.
Othe reaction 94280 to 94281 was not used, because 94281 is not in Library. (in subr pool)
Other ission product transitions for 942400 were not used. Library fissile nuclides are 92230 92250 942410 92250 94250 9
 Othe fission product transitions for 943420 were not used. Library fissile nuclides are
 922330 92250 942410 922580 942390
One substitute runtide in block 8 data. or, under with rew fission yield data.
Othe fission product transitions for $22410 were not used. Library fissile runtides are $2230 $2250 $2240 $2280 $2280 $2280
One substitute nuclide in block 8 data. cr., update with rew fission yield data.

Othe fission product transitions for 952/30 were not used. Library fissile nuclides are 922/30 922/30 922/30 922/30 922/30
One substitute ructide in block 8 data. or, update with raw fission yield data. Othe fission product transitions for 96240 were not used. Library fissile nuclides are
 92230 92350 942410 922580 942390
 One substitute nuclide in block 8 data. or, update with new fission yield data.
 Othe reaction 962440 to 962441 was not used, because 962441 is not in library., (in subr pool)
 case completed, date, 2/16/1996
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program verification information
 code system scale version: 4.2
 DODGE 400004
 creation date: 04/27/95
 library: /neutronics/scale/exe
 this is not a scale configuration controlled code
 jobrene: devis
 date of executions 02/16/96
 time of execution: 10:02:12
 -1q array has
Oq array has
Oq array has
Oq array has
 1 entries.
 entries.
 1 extrics.
 Operay has 1 entries.

Ob. prec. machine word applied has, at least, a 16 significant figure accuracy.

short-lived split test fraction, opn = 9.1188E-04

half-norm of matrix used, sen = 7.0000E+00

4-place-accuracy-retention ratio, ratio = 6.4516E-13
 id sush jee
3d sush jee
3d sush jee
 20 entries.
 1 entries.
 i etries.
 30 array has
40 array has
50 array has
 1 entries.
 1 entries.
 12 entries.
1 library information...
 cross-section data taken from position number 1 of library on unit 15.
 pags 5
pags 1
pags 0
```

"scale-system control module sec2 library"
used a time-dependent neutron spectrum, for each of the above passes

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pass 0 applies start-up fuel densiities
 page in explicit mid time densities of nth Library interval
 first library undated was...
 CBS 1
 pess Ò
 scale-system control module sas2 library
 used a time-dependent neutron spectrum, for each of the above passes
 pass 0 applies start-up fuel densiities
 pass napplies mid time densities of nth library interval
 first library undsted was...
 prelim tur origens binary working library-id = 1143 made from modified cand-image origens libraries of scale 4.2
 data from the light element, actinide, and fission product libraries decay data, including game and total energy, are from end/b-vi
 neutron flux spectrum factors and cross sections were produced from
 the "presas2" case unditing all ruclides on the scale "burnup" library
 fission product yields are from endf/b-v
 photon libraries use an 18-energy-group structure
 the photon data are from the master photon data base,
 produced to include bremsstrehlung from up2 metrix
 see information above this box (if present) for later updates
ŏ
 other identification and sizes of library.
 data set reme: ft15f001
16/1996 date library was produced
1697 total number of nuclides in library
ŏ
٥
 2/16/1996
0
 number of light-element nuclides
 689
 129
 number of actinide nuclides
 879
 number of fission product nuclides
 785
 number of namero off-diagonal matrix elements
 see2h; beboook wilcox 15x15, 3.00x1X, 20px/wtu burn high tesp
 actinides
 page
 poer= 8.46/E-05ms, burnup-2.05/8E-02md, flur= 1.6/E+13ryon*2-sec
 ructide concentrations, gran atoms
 basis = converted to atoms/(barn-on)
 680.1 d 720.1 d
 760.1 d 800.1 d 800.1 d 840.1 d
 charge
 2,48E-08 3.05E-08 3.05E-08 3.70E-08 4,47E-08
 1,27E-08 1,60E-08 2,00E-08
 4.39E-21 5.21E-21 6.05E-21
 6.9E-21 7.9E-21 7.9E-21 9,0E-21 1.0E-20
 9.0/E-20 1.07E-19
 1.23E-19
 1.40E-19
 1.59E-19 1.58E-19
 1.79E-19 2.02E-19
 1.21E-12 1.40E-12 1.61E-12 1.65E-12 2.10E-12 2.10E-12 2.36E-12 2.66E-12
 婴
 3.07E-11 3.27E-11 3.34E-11 3.64E-11 3.62E-11 3.75E-11 3.84E-11
 4.75E-06 4.70E-06 4.65E-06 4.61E-06
 4.5Œ-05 4.5Œ-05
 4.5 E-06 4.4 E-06
 1235
 4.44E-04
 4.3/E-04
 4.ZE-04
 4.13E-04 4.03E-04
 4.67E-04 4.5Œ-04
 4.2E-04
 4,40E-05 4,60E-05 4,77E-05 4,90E-05
 5.16E-05 5.16E-05 5.3/E-05 5.51E-05
 6,02E-08 6,29E-08 6,49E-08 6,68E-08
 6.87E-08 6.85E-08 7.09E-08 7.2/E-08
 2.19E-02 2.19E-02 2.19E-02
 2.19E-02 2.19E-02 2.18E-02
 5.9E-09 5.9E-09
1.3E-33 2.4E-33
 5.9E-09 1.5E-09 5.9E-09 6.0E-09 7.4E-33 7.4E-33 1.2E-32 2.0E-32
 UZ39
 1.97E-09 5.9Œ-09
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 4.3E-33
 ,00±00,
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 LB41
 .00+00
 .OE+00
 .00±00
 .00+200.
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 3.43E-14 3.97E-14 4.51E-14 5.09E-14 5.69E-14 5.69E-14 6.33E-14 6.39E-14
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rt236# 4.59E-14 5.2EE-14 5.73E-14 6.19E-14 6.60E-14 6.50E-14 7.14E-14 7.63E-14
 1026 3.15E-12 3.6E-12 4.2E-12 4.8E-12 5.5E-12 5.5E-12 6.2E-12 7.0E-12
 2.37E-05 2.60E-05 2.82E-05 3.07E-05 3.27E-05 3.57E-05 3.77E-05
 2.94E-09 3.24E-09 3.54E-09
 3.82E-09 4.11E-09 4.07E-09 4.41E-09 4.71E-09
 nt 239 8.42E-07 8.61E-07 8.62E-07
 8.6X-07 8.6X-07 8.6X-07 8.64-07 8.64-07
 rp2/cn .00E+00 1.1/E-35 2.10E-35 3.71E-35
 6.34E-35 6.34E-35
 1.0E-34 1.7E-34
 7260 9.86-12 1.56-11 1.56-11 1.56-11 1.56-11 9.30-12 1.56-11 1.57-11 7241 .00-00 .00-0
 1237
1238
 1.9E-13 2.1E-13
 2.30E-13
 2.4Œ-13
 2.62E-13 2.62E-13
 2.7E-13 2.9E-13
 2.4E-07 2.8E-07
 3.27E-07
 3.7E-07
 4.2E-07
 4.23E-07
 4.77E-07
 5.35E-07
 9.04E-05 9.38E-05
 1.00E-04
 1.03E-04 1.03E-04
 1.05E-04 1.0EE-04
 9.7Œ-05
 1.76E-05
 1.40E-05 1.52E-05
 1.6E-05
 1.87E-05 1.87E-05
 1.9XE-05
 2.10E-05
 6.40E-06 7.13E-06 7.90E-06 8.77E-06 9.57E-06 9.57E-06
 1.05E-05 1.14E-05
 5.07E-07 6.08E-07 7.19E-07
 8.41E-07 9.75E-07 9.75E-07
 1.12E-06 1.2EE-06
 1.1/E-10
 1.53E-10 1.79E-10
 6,1E-11 8.2E-11 9.75-11
 1.3ZE-10
 1.19E-10
 p.8%
p.8%
 3.5 E-23 6.6 E-23
 1,225-22
 2.16E-22 3.7E-22
 3.7E-22 6.19E-22
 1.01E-21
 2.ATE-29 4.76E-29
 8.75-29
 1.55E-28 2.66E-28 2.55E-28 4.44E-28 7.25E-28
 12/6
 .OE+00 1.6E-31
 3.21E-31 5.78E-31
 1.00E-30 1.00E-30 1.70E-30 2.79E-30
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 2.19E-18 2.78E-18 3.27E-18 3.80E-18
 4.37E-18 4.12E-18 4.99E-18 5.69E-18
 0/9ra
 1.6/E-15
 1,89E-15 1,87E-15 2,14E-15 2,45E-15
 9.75E-16 1.20E-15 1.4TE-15
 an241
 1,42E-07 1,69E-07 1,90E-07 2,30E-07
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 1.35E-26 2.25E-26 2.25E-26 3.75E-26 6.05E-26
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 1.55E-10 2.05E-10 2.67E-10 3.47E-10 4.28E-10 4.28E-10 5.28E-10 6.45E-10
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| n-germa,           | , fission and                   |                |                         |                | 6.6274E+00  | 1.9620E+02 | 2.02536 |             | ~                 |          |
| start of           | f interval flu                  | K =            | 1.57777E+13             |                |             |            |         |             |                   |          |
|                    | , fission and                   |                |                         |                | 6.714/E+00  | 1.9629E+02 | 2.0500E | +02         |                   |          |
| STAFT OF           | fintervel. flu<br>, fission and | K≅<br>totoles  | 1.599@E+13              |                | 6.81260     | 1.9657E+02 | 2.0519E | <b>-</b> M2 |                   |          |
| start of           | f interval flu                  | K #            | 1.60171E+13             |                | مرتوبيد.    | INDIE      | LWIAL   | · · · ·     |                   |          |
| n-gamma,           | , fission and                   | total ne       | wfission =              |                | 6.910Æ100   | 1.9646E+02 | 2.037   | +02         |                   |          |
| start of           | f <b>interval</b> flu           | K =            | 1.60416E+13             |                |             |            |         |             |                   |          |
|                    | fintervel flu<br>, fission and  |                | .0000E+00               |                | 7.0227E+00  | 1.9545+02  | 2.086/E | ωo          |                   |          |
|                    | , rission aru<br>Fintervel flu  |                | 1.60681E+13             |                | i,uzzierw   | 1.ND-E-VE  | ڪسند    | ·VE         |                   |          |
| n-genna.           | fission and                     | total se       | v/fission =             |                | 7.10416+00  | 1,9662E+02 | 2.0372  | +02         |                   |          |
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| 1         | pess=6, enecha<br>HHHHHHH<br>HHHHHHH<br>Hb Hb<br>Hb Hb                                                                                                                                                                                                                                  | 00 00<br>00 00<br>00 00                      | m m<br>mm m                             |                                                                    | 800000000<br>800000000000<br>80 80                                                                                            | ATTA ATTA<br>ATTACO ATTACO<br>ATTACON ATTACON<br>ATTA AND ARMA CATO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                              | 7111111111<br>711111111111<br>72 72<br>72<br>72                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
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| 0         | шшшь                                                                                                                                                                                                                                                                                    | <b>*************************************</b> | m m                                     | **********                                                         | <b>26 26</b>                                                                                                                  | aca mo                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ************                                                 | and the second                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |
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|   | program verification information section code system: scale version: 4.2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                           |                                  |                                           |                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                        |  |  |
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1 O -1q array has 0 Oq array has 0 Iq array has 0 2q array has 1logical assignments

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 1,9160SE-05
 45105
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 4510B
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 1.0508/E-05
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 44101
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 1.92546E-06
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3.0/8/7E-10
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 8,7760BE-06
 1.6/9/7E-05
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 6,6776E-07
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5034
 54136
 3.3081/E-05
 55134
 9.57401E-07
 35135
 55(55)
 1.05022E-05
 XIX
 55137
 2.0525E-05
 56136
57139
 1.931ZE-07
 57139
59141
 2.032X0E-05
 59141
 1.75987E-05
 591/3
581/4
 59143
58144
 3.71186E-07
 6.70562E-05
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1,59150E-05
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 60143
 3374144446474495125355555596
 60145
 1.173/22-05
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 4.02258-06
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 61148
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 1.17777E-08
 60147
62147
62149
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 1.2971/E-07
 62147
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62150
 1,40155E-06
 8.6958ZE-0B
 4.1806E-06
 62150
 62151
 4.01901E-07
 85125
85121
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 2.00466E-06
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 64155
 2.18270E-09
 1.205425-06
 8153
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 63154
 2.521@E-07
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 1.3040E-07
 40802
 40002
1001
5010
 4.2515E-02
 4.19420E-02
 5010
 3.81515E-06
 5011
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55133
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 2.10205E-05
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 5,34530E-07
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 1.2795ZE-06
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Openetry and material description
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.0000E+00
Ozone mixture outer dimension temperature
1 1 4.68122E-01 9.75000E+02
 type (0/1--fuel/mod)
 4.7870E-01
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7711 locations of 20000 available are required to tasks a new master containing the self-shielded values. One nuclides in your problem have bondererso factor data thorses will copy from logical 12 to logical 1 copy 977 1/v cross sectio from log 12 to log 18 bondererso trigger 0 copy 977 1/v cross sectio from log 18 to log 1 bondererso trigger 0
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 ru-105
 from log 12 to log 1
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| 16                 | endf/b-iv mat 1276                                       | undeted 10/13/89  | id  | 8016           |
|--------------------|----------------------------------------------------------|-------------------|-----|----------------|
| aygan-16           |                                                          |                   | id  | ~~~~           |
| crygen-16          | endf/b-iv mat 1276                                       | updated 10/13/69  |     |                |
| lor-83             | m2=102,105,105,105,105,107                               | updeted 10/13/89  | id  | 36083          |
| kr~85              | mt= 102                                                  |                   | id  | 36085          |
| er-90              | at=102                                                   | ucdated 10/13/89  | id  | 38090          |
| y-89               | mt=102                                                   | uzdated 10/13/89  | id  | 39089          |
| zr-95              | mt= 102                                                  | 4                 | id  | 40095          |
|                    |                                                          |                   | id  | 400%           |
| zr-9 <u>4</u>      | mt=102                                                   | updated 10/13/89  |     |                |
| zr-95              | mt=102                                                   | updated 10/13/89  | id  | 40095          |
| zircalloy          | endi/to-iv mat 1284                                      | updated 10/13/89  | id  | 40502          |
| rb-% `             | mt=102 ·                                                 | uxdated 10/13/89  | id  | 41094          |
| tro-95             | at=102                                                   | updated 10/13/89  | id  | 42095          |
| tc-99              | mt=102                                                   | updated 10/13/89  | id  | 43099          |
|                    |                                                          |                   | ũ   | 44101          |
| ru-101             | at=102                                                   | updated 10/13/89  |     |                |
| ru-106             | at;=102                                                  | updated 10/13/89  | id  | 44106          |
| rh-103             | ext=102                                                  | updated 10/13/89  | id  | 45103          |
| rh-105             | at= 102                                                  | •                 | id  | 45105          |
| pcl-105            | at=102                                                   | updated 10/13/89  | id  | 46105          |
|                    | mt=102                                                   | uxdeted 10/13/89  | id  | 46108          |
| pd-108             |                                                          |                   |     | 47109          |
| silver-109         | <u>बर्में /b</u> -iv mat 1139                            | updated 10/13/89  | id  |                |
| sb-124             | mt=102                                                   | updated 10/13/89  | id  | 51124          |
| xx=131             | mt=102,108,104,105,106                                   | updated 10/13/89  | id  | 54131          |
| xe-132             | mt=102,103,104,105,106                                   | undeted 10/13/89  | id  | 54132          |
| xenon-135          | erulf/b-iv mat 12%                                       | updated 10/13/89  | id  | 54135          |
|                    | 400 4/R 404 405                                          | M7                | id  | 54136          |
| ж <del>-</del> 136 | nt= 102, 105, 104, 105,                                  | N/                |     |                |
| cesiun 133         | endi/o-iv mat 1141                                       | updated 10/13/89  | id  | 22123          |
| cs-134             | nt=102                                                   | updated 10/13/89  | id  | 55134          |
| CS-135             | ant= 102                                                 | •                 | id  | <b>35135</b>   |
| ca-137             | mt=102 .                                                 | undated 10/13/89  | id  | 55137          |
| ba-136             | mt=102                                                   | undated 10/13/89  | id  | 56136          |
|                    |                                                          |                   | id  | 57139          |
| la-139             | nt=102                                                   | updated 10/15/89  |     |                |
| CE-144             | mt= 102                                                  |                   | įd  | 58144          |
| pr-141             | mt=102,105,104,105,106,107                               | updated 10/13/89  | id  | 59141          |
| pr-143             | mt=102                                                   | uixteted 10/13/89 | id  | 59143          |
| nd-143             | mt=102                                                   | undated 10/13/89  | id  | 60143          |
| nd-145             | st=102                                                   | updated 10/13/89  | id  | 60145          |
|                    |                                                          | uzzteted 10/13/89 | id  | 60147          |
| nd-147             | mt=102                                                   |                   | ũ   |                |
| pa-147             | mt=102                                                   | upodated 10/15/89 |     | 61147          |
| pa-148             | mt= 102                                                  |                   | id. | 61148          |
| sm-147             | endf/b-v fission product                                 | updated 10/13/89  | id  | 62147          |
| ssa-149            | mt=102,105,107                                           | uxdated 10/13/89  | id  | 62149          |
| sn-150             | mt=102                                                   | undated 10/13/89  | id  | 62150          |
| sn-151             | m=102,105,104,105,106,107                                | uccleted 10/13/89 | id  | 62151          |
|                    |                                                          |                   | ធ័  | £152           |
| sm 152             | mt=102,105,104,105,106,107<br>mt=102,105,104,105,106,107 | updated 10/13/89  |     |                |
| er. <u>177</u>     | m=102,105,105,105,105,107                                | updated 10/13/89  | id  | ស្ថាស          |
| eur 154            | mt=102,108,104,105,106,107                               | updated 10/13/89  | id  | 63154          |
| en-222             | mt=102,108,104,105,106,107                               | undeted 10/13/89  | id  | ଷୀଞ୍ଚ          |
| gd-155             | mt=102                                                   | upoteced 10/13/89 | id  | 641 <b>5</b> 5 |
|                    | p=5+4 maxlacs p-3 265k f-1/e+                            | w1 45)            | id  | 92234          |
|                    |                                                          | updated 10/13/89  | id  | 9225           |
| uranium 25         | endi/b-iv mat 1261                                       |                   |     | 92236          |
|                    | p-5+4 neuklacs p-3-288k f-1/e-                           | II, 1679)         | id  |                |
| uranium 238        | erdi/o-iv mat 1282                                       | updated 10/13/89  | id  | 92238          |
| neptunium-237      | endf/b-iv mat 1263                                       | updated 10/13/89  | id  | 95257          |
| DJ-238 1050 si     | go-544 neuklacs p-3 255k f-1/e                           | <b>≰(1.+5</b> )   | ld  | 94Z5B          |
| nictorius 70       | endi/b-ly mat 1264                                       | undated 10/13/89  | id  | 94239          |
| please in the 20   | endf/b-iv mat 1265                                       | uzdeted 10/13/89  | id  | 9(2(0          |
| PULLUT RUIFON      |                                                          |                   | ũ   | 92261          |
|                    | endif/b-iv ant 1266                                      | updated 10/13/89  | id  | 92/2           |
| putaniun 24        | endif/b-iv.mst 1161                                      | updated 10/13/89  |     |                |
| an-241 1056 si     | gp54 nextacs 218ngp p-3 285                              | K                 | id  | 95241          |
| 2/3 1057 21        | 8 go wt f-1/e-ns 090376 p3 253k                          | •                 | id  | 95243          |
| arrou w z          |                                                          |                   |     |                |

| 0 1 | curium 2<br>tapa cq                     |                                       |                                        | uplated 10 .00 secords ttttttttttt ttt tt tt tt tt tt tt tt t             | #13/89  ################################### |            | ###<br>!! !! !! !! !! !! !! !! !! !! !! !! !!                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                        |
|-----|-----------------------------------------|---------------------------------------|----------------------------------------|---------------------------------------------------------------------------|---------------------------------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|     | <del>d111111111</del> 11                | 800000000                             | w w                                    | *********                                                                 | 9699969696                                  |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                        |
|     | # #<br># #                              | 26 26<br>26 26<br>26 26               | * *                                    |                                                                           | 8999988969896<br>88 96<br>88                |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                        |
|     | H H                                     | 80 80<br>8000000000000                | * *                                    | ij                                                                        | 85<br>85<br>83636363686                     |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | •                                      |
|     | 4<br>4<br>4                             | 800000000000<br>80 86                 | w w                                    | <b>!!</b>                                                                 | 2002222223<br>28                            |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                        |
|     | # #<br># #<br># #                       | 86 86<br>86 86                        | <b>**</b>                              | ##<br>##<br>################################                              | 55<br>55 66<br>53627535555300               |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                        |
|     | *************************************** | 80 86<br>80 86                        | w                                      |                                                                           | 9999969696                                  |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                        |
|     |                                         |                                       |                                        | 11<br>111<br>1111<br>11<br>11<br>11<br>11<br>11<br>11<br>11<br>11<br>1111 | ######################################      |            | 99999999999999999999999999999999999999                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ###################################### |
|     | 11<br>111                               | , , , , , , , , , , , , , , , , , , , |                                        | , , , , , , , , , , , , , , , , , , ,                                     |                                             |            | 11<br>111                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |
|     | 1111<br>11<br>11                        | 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 | :::<br>:::                             | 888                                                                       | 22 22 22 22                                 | •••        | 1111<br>13<br>11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 77 77<br>77                            |
|     | ii<br>11                                | 8 8                                   |                                        | 8 8                                                                       | 22<br>22                                    |            | 11<br>11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | $\eta$                                 |
|     | 11<br>11<br>11                          | 888<br>888<br>888                     | ***                                    | 888                                                                       | 22<br>22<br>22                              | :::<br>::: | 11<br>11<br>11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 77<br>77                               |
|     | 11111111<br>11111111                    |                                       | ***                                    | , , , , , , , , , , , , , , , , , , ,                                     |                                             | •••        | 11111111<br>11111111                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | "7<br>77                               |
| 1 0 |                                         |                                       | 200000000000<br>2000000000000<br>25 25 | œ . œ                                                                     | 800000000<br>80000000000<br>80 80           | u .<br>u   | COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION OF COORDINATION O | •                                      |

| 85<br>86<br>88 | 22222  | 8<br>8<br>8<br>8 |         | 86<br>89<br>800000                      | 26<br>26<br>20000000 | ll<br>ll<br>ll | 66<br>66<br>660000000                   |
|----------------|--------|------------------|---------|-----------------------------------------|----------------------|----------------|-----------------------------------------|
| 222222223      |        | œ                |         | 800000000000000000000000000000000000000 |                      | แ              | 000000000                               |
|                | 96     | œ                |         | 86                                      | 200                  | u              | ec                                      |
|                | 28     | œ                |         | 86                                      | 89                   | и .            | <b>66</b>                               |
| <b>\$</b> \$   | 95     | œ                | œ       | 88                                      | <b>89</b>            | u,             | <b>ee</b>                               |
| \$99999        | 383636 | 00000            | 2000000 | 20                                      | 88                   | ıllıllıllıllı  | 000000000000000000000000000000000000000 |
| 86969          | 200003 | 0000             | 2000000 | 80                                      | 88                   | ાાાાાાાાાા     | 600000000000000000000000000000000000000 |

```
season program verification information season `

```
1 -lq array has 1 entries.
0 0 q array has 9 entries.
0 tq array has 12 entries.
0 select 65 nuclides from the master 1 library on logical 1 0 nuclides from the working 1 library on logical 2 0 nuclides from the working 1 library on logical 3 to create the new working 1 library on logical 4
```

61 resonance calculations have been requested
0 output option for anyx formatted cross section data
Othe storage allocated for this case is 200000 words
0 2q array has 65 entries.
0 3q array has 915 entries.
0 4q array has 65 entries.

```
O general information concerning cross section library
    tace identification number
    number of nuclides on tace
                                                  66
                                                  Ź
    number of neutron energy groups
    first thermal neutron energy group
                                                  15
   runber of penns energy groups
0 direct access unit number 9 requires 117 blocks of length 1484 words
- xsdm tape 4321
                          scale 4.2 - 27 group neutron burnup library
based on eraff-b version 4 data with eraff-b version 5 fission products
                                compiled for mc
                                                      1/27/89
                                   last updated
                                                      9/16/93
                                      Laupetrie -
0 ruclides from xsdm tape
                                                                                              999
          1/v cross sections normalized to 1.0 at 0.0253 ev
                           endf/b-iv met 1269/thres1002 updated 10/13/89
           hydrogen
                                                                                              5010
          b-10 1273 218mp 042575 p-3 2578k
                           endf/b-iv met 1160
                                                           undsted 10/13/89
                                                                                              5011
           barar-11
                                                           uzdated 10/13/89
                                                                                              8016
           anygen-16
                           endf/b-iv mat 12/6
                                                                                                6
                           endf/b-iv met 1276
                                                           updated 10/13/89
           aggen-16
                          mt=102,105,105,105,105,107
mt= 102
                                                           updated 10/13/89
                                                                                             36083
           kr-83
                                                                                             36055
           kr-85
                                                           updated 10/13/89
                                                                                             38090
           2~90
                           st=102
    y-89
                          mt=102
                                                           ucdated 10/13/89
                                                                                             39080
                                                                                             40093
           21-55
                             mt≠
                                   102
                                                                                             40094
           25-94
                           at=102
                                                           updated 10/13/89
           27-95
                          ##=102
                                                           updated 10/13/89
                                                                                             40095
           zircalloy
                           endf/b-iv met 1284
                                                           undeted 10/13/89
                                                                                             40502
                                                                                             41094
           rb-94
                           st=102
                                                           updated 10/13/89
                                                           updated 10/13/89
           20-95
                           mt=102
                                                                                             42095
           tc-99
                           st=102
                                                           undeted 10/13/89
                                                                                             43099
                                                                                             44101
                           mt=102
                                                           ucdated 10/13/89
           ru-101
    mt=102
                                                           updated 10/13/89
                                                                                             44106
           ru-106
           rt-103
                           mt=102
                                                           updated 10/13/89
                                                                                             45103
                                                                                             45105
                             mt= 102
           rtr-105
                                                                                             46105
46108
           pd-105
                           mt=102
                                                           updated 10/13/89
           pd-108
                           sst=102
                                                           uculated 10/13/89
                                                           updated 10/13/89
                                                                                             47100
           silver-109
                           endf/b-iv met 1139
           sb-124
                           mt=102
                                                           undeted 10/13/89
                                                                                             51124
                          mt=102,103,104,105,105
mt=102,103,104,105,105
ercli/b-iv mat 1254
                                                                                             54131
           xe-131
                                                           ucclated 10/13/89
                                                                                             经
                                                           updated 10/13/89
           X2-132
           XETOT-135
                                                           updated 10/13/89
                                                                                             SER
                          mt= 102, 108, 104, 105, 107
and /b-iv mat 1141
           200-ES
           cesium (33)
                                                           updated 10/13/89
           cs-134
                           mt=102
                                                           updated 10/13/89
                                                                                             55134
                                                                                             55135
           CB-135
                             mt= 102
                                                                                             55137
           CS-137
                           mt=102
                                                           uzabted 10/13/89
                                                                                             56136
57139
           ba-136
                          mt=102
                                                           updated 10/13/89
           La-139
                           mt=102
                                                           uzdated 10/13/89
                                                                                             58144
59141
59143
           De-144
                             at= 102
           pr-141
                          nt=102,103,104,105,106,107
                                                           updated 10/13/89
           or-143
                           mt=102
                                                           umbted 10/13/89
                                                                                             60143
60145
           nd-143
                           mt=102
                                                           uzzhoad 10/13/89
          nd-145
                           mt=102
                                                           updated 10/13/89
                                                                                             60147
           nd-147
                           mt=102
                                                           umbered 10/13/89
                                                                                            61147
61148
           Dn-147
                           mt=102
                                                           undeted 10/13/89
           pm-148
ser-147
                             mt= 102
                                                                                            62147
62149
62150
                           endf/b-v fission product
                                                           undated 10/13/89
                                                           updated 10/13/89
           SER-149
                           mt=102,105,107
           SR-150
                           mt=102
                                                           undeted 10/13/89
```

```
m=102,103,104,105,105,107
m=102,103,104,105,105,107
m=102,103,104,105,105,107
m=102,103,104,105,105,107
                                                              ucdated 10/13/89
                                                                                                 62151
           80-151
                                                                                                 62152
    48
           sp-152
                                                              undeted 10/13/89
                                                              undeted 10/13/89
                                                                                                 ଷୀଅ
           ar 153
                                                              undeted 10/13/89
                                                                                                 63154
    SECURINA
           er 154
                                                                                                 හාන
           ar 55
                            mt=102,108,104,105,105,107
                                                              undeted 10/13/89
                                                              updated 10/13/89
                                                                                                 64155
                            mt=102
           gd-155
                                                                                                 92234
          u-234 1043 sigo-544 reaklacs p-3 255k f-1/e-#(1.+5)
                                                                                                 9225
                                                              updated 10/13/89
           uranium-255 endi/b-iv mat 1261
                                                                                                 92236
          u-236 1163 sigo-5+4 rewilecs p-3 288k f-1/e-n(1.+5)
    35
57
58
           uranium-238 endi/o-iv met 1262
neptunium-237 endi/o-iv met 1263
                                                              updated 10/13/89
                                                                                                 92238
                                                                                                 93237
                                                              undated 10/13/89
          pluonium-24 end/o-iv met 1256 updete
pluonium-240 end/o-iv met 1255 updete
pluonium-240 end/o-iv met 1255 updete
pluonium-241 end/o-iv met 1255 updete
                                                                                                 94238
                                                                                                 9239
    59
                                                              updated 10/13/89
                                                                                                 9220
    60
                                                              umbed 10/13/89
                                                              uzdated 10/13/89
                                                                                                 94241
94242
    61
                                                              updated 10/13/89
           plutonium-242 endi/b-iv mat 1161
    82
          an-241 1056 sign-5-4 resulters 218 pp p-3 255k
an-243 1057 218 gp set f-1/e-m 0505/6 p3 259k
                                                                                                 95241
    ഒ
                                                                                                 95243
                                                                                                 96244
           curium 24 ercli/b-iv mat 1162
                                                              umbted 10/13/89
                                                                                                temperature= 975.00
01/v cross sections round ized to 1.0 at 0.023 ev
                 ertif/b-iv met 1269/thrm1002 updated 10/13/89 1001 thermal scattering matrix number 2 at a temperature of
                                                                                                temperatures 607.60
0 hydrogen
                                                                                                 50.00 was selected
                                                                                                temperatures 607.60
                                                                                      5010
Ob-10 1273 218mp 042575 p-3 258k
                                 thermal scattering matrix number 2 at a temperature of 550.00 was selected.
                  erdf/b-iv met 1160
                                                    updated 10/13/89
                                                                                      5011
                                                                                                benceratures 607.60
0 boran-11
                                                                                                 50.00 was selected.
                                thermal scattering matrix number 2 at a temperature of
                                                    updated 10/13/89
                                                                                                temperatures 975.00
0 asygen-16
                 ercif/b-iv met 12/6
ercif/b-iv met 12/6
                                                                                      8016
                                                    updated 10/13/89
                                                                                         6
                                                                                                temerature: 607.60
0 goygan-16
                  nt=102,103,103,105,106,107
                                                                                                temperatures 975.00
                                                    undeted 10/13/89
                                                                                     36083
0 kr-83
Oresonence data for this ruclide
Omes runber (a)
                            = 82.302
                                                         temperature(kelvin)
                                                                                     = 975.000
                                                                                     = 1,427176E-06
Occupial scatter signs = 7.004
                                                         lumbed nuclear density
                           = 4988.190
                                                         lump dimension (a-bar)
                                                                                     = 4_6812201E-01
Ospin factor (g)
Oimer redius
                            = .000000E+00
                                                         dencoff correction (c)
                                                                                     = 3.4269251E-01
Othe absorber will be treated by the northeim integral method.
                                                       signs(per absorber atom)= 1.1954859E+05
Ones of moderator-1 = 15.995
Oncorator-1 will be treated by the norcheim integral method.
Onces of noderator-2 = 257.953 signs(per at
                                                      signs(per absorber atom)= 1.33/9052E+05
Oncerator 2 will be treated by the norchein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spetial self-shielding-1.0000
               res abs
                                res fiss
(prosp
                                                  res scat
           -2.107457E-03
                               .000000
                                              -2.46000E-03
  11
                                              9.89233/E-03
  12
            2.145/5EE-02
                               .000000E+00
           4.67078/E-01
                               .000000E+00
                                             -1.405/21E-01
  13
            4.782960E-05
                               .000000E+00
                                              -1.722996E-05
Opcess rescrence integrals
                     resolved
Osbearption
                    1.44733E+02
                     .0000E+00
 fission
- elapsed time
                    .O) min.
                                                                                                temperatures
                                                                                                                975.00
0 kr-85
                     mt= 102
0 =-90
                  int=102
                                                    undeted 10/13/89
                                                                                      39000
                                                                                                 temperature 975.00
                                                                                      39089
                                                                                                                975.00
                                                    updated 10/13/89
                                                                                                temperature=
0 y-89
                  nt=102
Oresonence data for this nuclide
Ottess runber (a)
                                 88.142
                                                         temperature(ke(vin)
                                                                                     = 975.000
                                                                                     = 1,29354/E-05
Occupied acatter signs =
                                  3.64
                                                         lurped ruclear density
                            = 78.664
                                                         lum dimension (a-bar)
                                                                                     = 4.6812201E-01
Opplin factor (g)
Oirmer ractices
                            = .0000000E+00
                                                         dencoff correction (c)
                                                                                     = 3.4269261E-01
Othe absorber will be treated by the northein integral method.
```

```
Oness of moderator-1 = 15.995
                                                     signatoer absorber atomi= 1.37836775+04
 Omodorstor-1 will be treated by the norcheim integral method.
Omess of moderator-2 = 237,933 signe(per al
                                                    signs(per absorber atum)= 1.53/82BYE+04
 Onoderator-2 will be treated by the norcheim integral method.
 Othis resonance material will be treated as a 2-dimensional object.
 Ovolume fraction of lump in cell used to account for scatial self-shielding-1,0000
 (group
               nes abs
                               res fiss
                                                res scat
   Q
           -3.3855E-06
                              000000=+00
                                            -2.523192-04
   10
           -7.54894E-05
                              .000000E+00
                                            -2.12828/E-04
 Descess resonance integrals
                    resolved
 Orbeanstian
                   1.46399E-01
 fission
                     .00000E+00

    elapsed time

                    .00 min.
0 27-93
                                                                                  40073
                                                                                                           975.00
                     mt= 102
                                                                                            temperature=
                  mt=102
 0 25-94
                                                  undated 10/13/89
                                                                                  40000
                                                                                            temperature=
                                                                                                           975.00
 Onescrience data for this ruclide
 Orass number (a)
                                93.100
                                                                                  = 975.000
                                                       temperature(kelvin)
 Opotential scatter signa =
                                 3.779
                                                       lumped nuclear density
                                                                                 = 1.958792/E-05
                               180.853
                                                                                 = 4.6812201E-01
 Ospin factor (g)
                           =
                                                       lump dimension (a-bar)
 Oimer radius
                           = .000000E+00
                                                      denceff correction (c)
                                                                                 = 3.4269261E-01
 Othe absorber will be treated by the norcheim integral method.
 Oness of moderator-1 = 15.995
                                                    signs(per absorber atom)= 8.7175996E+03
Oncerator-1 will be treated by the norcheim integral method.
Ones of moderator-2 = 237.953 signa(per st
                                                    signatoer absorber atom> 9.7251230E+03
Oncorator-2 will be treated by the northein integral method.
Othis resonance material will be treated as a 2-dimensional object.
 Oxoluse fraction of lusp in cell used to account for spatial self-shielding=1,0000
(Deroup
               resabs
                               res fiss
                                                res scati
           -1.205871E-06
                              .00000E+00 -1.13626E-03
   8
   9
           -3.8088/9E-05
                              .00000E+00 -3.369180E-03
Oscess resonance interrals
                    resolved
Cabacrotion
                   3.4369Œ-02
                    -0000E+00
 fission
- elapsed time
                    .00 min.
                                                  undeted 10/13/89
0 <del>₽</del>~$5
                 mt=102
                                                                                  40095

    temperatures 975.00

0 zircallov
                  erdf/b-iv met 1284
                                                  uzdated 10/13/89
                                                                                  41ED2
                                                                                            temperature: 650,00
Orescruppe data for this nuclide
Oness runber (a)
                                                                                 = 650,000
                                                      temperature(kelvin)
Opotential scatter signs =
                                 6.335
                                                      lumed nuclear density
                                                                                 = 4.2515602E-02
Ospin factor (g)
                                 1.079
                                                      (um dimension (a-bar)
                                                                                 = 5,4610002E-01
                           = 4.7878999E-01
Crimer redices
                                                      denote correction (c)
                                                                                 = 5.084/687E-01
Othe absorber will be treated by the nordhelm integral method. Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.00000
Caroan
              res abs
                               res fiss
                                                res scat
           -1.780596E-03
                              .000000E+00
                                            -1.295907E+00
   8
   9
           -5.883373E-02
                              .00000F+00
                                            -2_675297E+00
                              00+2000000.
           -6.93933E-02
                                            -1.601321E+00
           -1.883787E-01
                              .000000E+00
                                            -7.920912E-01
  11
Ocuces resonance integrals
                    resolved
                   2.253 X-01
Osbsorption
 fission
                     .0000E+00
- elapsed time
                    .02 min.
0 m-%
               . rst=102
                                                  updated 10/13/89
                                                                                 41094
                                                                                            terperatures 975,00
Orescrence data for this nuclide
Omess runber (a)
                           =
                                                      temperature(kelvin)
Opotential scatter signs =
                                                      lumped nuclear density
                                                                                 = 9.7096509E-12
```

```
Oppin factor (a)
                           =43908.801
                                                       lump dimension (a-bar) = 4.6812201E-01
                          = .0000000E+00
                                                      dencoff correction (c)
                                                                                = 3.4269261E-01
Oimer radius
Othe absorber will be treated by the northeim integral method.
Omes of productor-1 = 15.995
                                                    signe(per absorber atum)= 1.7586594E+10
Oppderator-1 will be treated by the norcheim integral method.
Omes of moderator-2 = 237.933
                                                    signs(per absorber atom= 1.9621155E+10
Oncolerator-2 will be treated by the norcheim integral method.
Othis rescrence asterial will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for scatial self-shielding-1,0000
              res abs
                               res fiss
Ograp
                                                res scat
           1.0325/E-02
                             .000000E+00
                                            9.25322 -04
  13
                             -000000E+00
                                           -4.064852E-04
  14.
           9.836713E-03
Ocicess resonance integrals
                   nesol vad
Osbsantian
                  9.15001E+01
                    .000000=+000
 fission
- elepsed time
                   .02 min.
                                                                                 42075
                                                                                            temperature= 975.00
0 mg-95
                 mt=102
                                                  updated 10/13/89
Oresonence data for this ruclide
Omes rutbor (a)
                                94,091
                                                       temperature(kelvin)
                                                                                 = 975.000
Opotential scatter signs =
                                3.806
                                                       lurged nuclear density
                                                                                 = 1,6557506E-05
                              607.724
                                                       luno dimension (a bar)
                                                                                 = 4,6812201E-01
Ospin factor (g)
                          =
Oimer radius
                           = .000000E+00
                                                       dencoff correction (c)
                                                                                 = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
                                                    signs(per absorber atom)= 1.0512990E+04
Omes of moderator-1 = 15.995
Omobrator-1 will be treated by the northeir integral method.
Omes of moderator-2 = 257.953 signs(per st
                                                    signe(per absorber atom)= 1.1505958E+04
Omourator 2 will be treated by the norcheim integral method.
Othis resource material will be treated as a 2-dimensional object.
Oxclume fraction of lump in cell used to account for spatial self-shielding-1.0000
(group
              resabs
                               res fiss
                                                res scat
                                           -2.077522E-02
  10
           -3.53095Æ-0B
                             .000000E+00
  11
           -6.534231E-03
                             _000000E+00
                                           -1.080905E-02
                             .000000E+00
                                           -5.20679E+00
  12
           -4.589763€+00
                             -000000E+00
                                           -2.12X8E-05
  13
           1.57562ZE-04
Oceans resonance integrals
                   resolved
Ostsantian
                  9.75400E+01
 fission
                    .000<del>-2</del>00000.

    elapsed time

                    .02 min.
0 tc-99
                                                  ucdated 10/13/89
                                                                                 43099
                                                                                            temeratures 975.00
                 at=102
Oresonence data for this ruclide
Omes runber (a)
                               98,150
                                                                                 = 975.000
                                                       temperature(kelvin)
                                                       lumped nuclear density
Opotential scatter signs =
                                6.000
                                                                                 = 1.916028TE-05
                          = 4527.940
                                                                                 = 4.6812201E-01
Displin factor (g)
                                                       turn diseasion (a-bar)
                          = .000000E+00
                                                       dercoff correction (c)
                                                                                 = 3.425926 E-01
Oimer radius
Othe absorber will be treated by the northelm integral method.
                                                    signs(per absorber atom)= 8.9121709E+03
Oness of moderator-1 = 15.995
Oncorator-1 will be treated by the northern integral method.
Ones of moderator-2 = 257.953 signs(par at
                                                    signs(per absorber atom)= 9.9432041E+03
Omderator 2 will be treated by the northern integral method.
Othis resource material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.0000
Ograp 
              nes abs
                               res fiss
                                                res scat
                             .000000=100 -1.163742E-02
  11
           -2.469531E-02
  12
           -6.508102E-03
                             _000000E+00
                                           -2.280359E-04
                                            -2.111810E-02
  13
           4.011/63E-01
                             _000+300000E+00
                             .000000
                                            -2.73218E-01
           -8.5<del>45725E+</del>00
  15
           1.07011SE-02
                              .000000E+00
                                            -5.38769Œ-04
```

.00000E+00

4.836025E-03

-2.802101E-04

```
17
           2.074640E-04
                              .00000E+00 -1.192373E-05
Ococess rescrence interrals
                    resolved
Outsorption
                   3.25/60E+02
 fission
                    .000E+00
- elapsed time
                    .OB min.
                                                  updated 10/13/89
                                                                                           barroeratures
0 101-101
                  mt=102
Oresonence deta for this ruclide
                               100.039
                                                                                 = 975.000
Oness number (a)
                                                      temperature(kelvin)
                                                      lumped nuclear density
                                                                                 = 1.7321991E-05
Ocotential scatter signs =
                                 3,965
                                                                                 = 4.6812201E-01
                                                      lump dimension (a-ber)
Oscin factor (a)
                           = 8785,290
                           = .000000E+00
                                                      dencoff correction (c)
                                                                                 = 3.4269261E-01
Oimer radius
Othe absorber will be treated by the northeim integral method.
                                                    signs(per absorber atom)= 9.8201582E+08
Omes of acclarator-1 = 15.995
Omobrator-1 will be treated by the northelm integral method.
Omes of moderator-2 = 257.933 signs(per at
                                                    signs(per absorber atom)= 1.075623/E+04
Oncerator 2 will be treated by the northelm integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxclume fraction of lump in cell used to account for spatial self-shielding=1.0000
Ograp
              res abs
                               res fias
                                                res scat
           -3.64763ZE-02
                              .000000=+00
                                            -3.48Y.222E-03
  11
  12
           -1.41291/E-01
                              .000000E+00
                                           -3.547577E-02
  13
                                            -1.257778E-02
           -4.671092E-01
                              -000000E+00
           2.371025E-04
                              .000000E+00
                                            -4.1522B/E-05
Occess resorance integrals
                    resolved
                   7.9235E+01
Deboration
 fission
                    .0000E+00

    elacoad time

                    .CB min.
0 ru-105
                                                  undated 10/13/89
                                                                                 44106
                                                                                            temperatures
                  mt=102
                                                                                 45103
                                                                                                          975.00
0 rh-103
                  mt=102
                                                  undeted 10/13/89
                                                                                            temperature-
Oresonence data for this ruclide
Omess runber (a)
                                                                                 = 975.000
                           = 102.021
                                                      temperature(kelvin)
                                                                                 = 1.0508389E-05
Opotential scatter signs =
                                 5.408
                                                      lumed ruclear density
                                                                                 = 4.6812201E-01
                                   .500
                                                      lum diameion (a-bar)
Ospin factor (g)
                           dercoff correction (c)
                                                                                 = 3.4269261E-01
Oimer radius
Othe absorber will be treated by the northeirs integral method.
                                                    signs(per absorber atmos 1.63/98/6E+04
Oracs of appearator-1 = 15.995
Gazderstor-1 will be treated by the northein integral wathed.

Oness of anderstor-2 = 257.933 signs(per at
                                                    signature absorber atom)= 1.8129760E+04
Oncorrator 2 will be treated by the norchers integral method.

Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.00000
(Darado
               res abs
                               res fias
                                                res scat
            1,25674 E-03
                              .00000E+00
                                             1.88057Æ-05
           4.02834ZE-03
                                            -5.558081E-03
  10
                              .000000E+00
           -2.106917E-02
                                            -1.85412XE-02
  11
                              .000000E+00
  12
           -3,399178E-04
                              -000000E+00
                                            -2.380681E-05
                                              .000000E+00
  13
                              -00000E+00
             .0000000
  14
                                              .00000E+00
             .000000
                              -0000E+00
                                             3.24497E-03
  15
            2.2<del>/200</del>5E-01
                              .00000E+00
           3.156197E+01
                                            -7.005092E-02
  16
                              .0000000
  17
                              .00000E+00
                                            -1.642171E-01
           -1.862040E+02
                                            2,607519E-01
  18
            8.6909835+01
                              .000000E+00
  19
                              .000000E+00
                                            -1.38590E-03
            1.145280E+01
            1.08440E+00
  20
                              .00000E+00
                                            -2.447919E-03
                                             1.925102E-03
  21
                              00+E000000
            2.165818E-01
  22
            2.583956E-01
                              .00000E+00
                                             2.928524E-03
                                             1.7XE71E-03
  23
           -9.87530E-02
                              .00000E+00
Occess resonance integrals
```

```
resolved
Orbeoration
                  1.14205F+03
 fission
                   .0000E+00
                   .07 min.

    elapsed time

0 rh-105
                   at= 102
                                                                            45105
                                                                                      temperatures 975.00
0 = 105
                mt=102
                                               undated 10/13/89
                                                                            46105
                                                                                      temperatures 975.00
Oresonence data for this nuclide
Omes number (a)
                         # 104.00L
                                                   temperature(kelvin)
                                                                            = 975,000
Opotential scatter signa =
                               4.09
                                                   lumed nuclear density
                                                                            = 6.8504922E-06
Ospin factor (g)
                         = 15210.000
                                                                            = 4.6812201E-01
                                                   lumb dimension (a-bar)
                                                                           = 3.4269261E-01
Oirner radius
                         = .000000E+00
                                                   dereoff correction (c)
Othe absorber will be treated by the norcheim integral method.
Omes of auderator-1 = 15.995
                                                 signs/per absorber atmb= 2,4890299E+04
Oppderator-1 will be treated by the norcheim integral method.
Omes of acclerator-2 = 257.953
                                                 signa(per absorber aton)= 2.77698135+04
Oncerator 2 will be treated by the northelm integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1.0000
Ograp
12
             res abs
                            res fiss
                                             res scat
          -5.988775E-02
                            .00000E+00 -1.650568E-03
  13
          -3.455140E-02
                            .00000E+00 -1.063048E-03
          7.764513E-04
                            .0000000
                                         -8.13256/E-05
Devoess resonance integrals
                  resolved
Orbsorption
                 6.12143E+01
 fission
                   .0000E+00
- elapsed time
                  .07 min.
0 mi-108
                mt=102
                                              undated 10/13/89
                                                                            4610B
                                                                                     temperature: 975.00
Oresonance data for this nuclide
                        = 106.977
Cross runber (a)
                                                   temperature(kelvin)
                                                                            = 975.000
Opotential scatter signs =
                              4.146
                                                   lumed ruclear density
                                                                           = 1.92545932E-05
Ospin factor (a)
                        = 21175.100
                                                                           = 4.6812201E-01
                                                   lump dimension (a-bar)
Oirrer radius
                         # .0000000E+00
                                                   dercoff correction (c)
                                                                           = 3.4269261E-01
Othe absorber will be treated by the northelm integral method.
Ones of moderator-1 = 15.995
                                                signa(per absorber atun)= 8.8665180E+04
Onceretor-1 will be treated by the northern integral method.
Oness of nuclerator-2 = 257.953
                                                signa(per absorber atmo= 9.89/500E+04
Oncobretor-2 will be treated by the northern integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1,00000
Grand
             res abs
                             res fiss
                                             res scat
                            .00000E-04
  11
          1.170138E-04
          -1.74531E+00
  12
                            .00000E+00
                                         -1.28438E+00
  13
          6.7X8671E-03
                            .000000E+00
                                         1.85719E-03
          8.561140E-02
                            .000000E+00
                                         -3.20BS2VE-05
  ъ
          -1.840957E-01
                           .000000E+00
                                         8.083612E-05
  ъ
          2.946577E-04
                           .000000E+00
                                         -9.25557E-06
Descess resonance integrals
                  resolved
Osbsanotian
                 2.11967E+02
fission
                  .0000E+00

    elapsed time

                  .07 min.
0 silver-109 erdf/b-iv mat 1139
                                              updated 10/13/89
                                                                            47109
                                                                                     temperatures 975.00
Orescrence data for this nuclide
Oness runber (a)
                        = 107.969
                                                   tencerature(kelvin)
                                                                            = 975.000
Opportunial scatter signs =
                              4,988
                                                  lunped nuclear density
                                                                           = 1.3/572/RE-05
                        = 1441.870
Ospin factor (g)
                                                  lump dimension (a-bar)
                                                                           = 4.6812201E-01
Dinner radius
                        = .0000000E+00
                                                  dercoff correction (c)
                                                                           = 3.4269261E-01
Othe absorber will be treated by the norcheirs integral method.
Oness of moderator-1 = 15.995
                                                signe(per absorber atom)= 1.2680/9E+05
```

```
Oncdenator-1 will be treated by the norcheim integral method.

Oness of moderator-2 = 257,933 signs(per el
                                                  signs(per absorber atom)= 1.4157022E+05
Omzkrator-2 will be treated by the northein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1,00000
                              res fiss
Oproup
                                              res scat
              res abs
  10
           -1.47296ZE-04
                             .000000=+00
                                           -1.567339E-04
                                           -4.491020E-0B
  11
           -6.107400E-03
                             .00+00
           -7.277873E-01
                             .000000E+00
                                          -3.450912E-02
  12
                             .00000E+00
  13
           7.66953E-01
                                           3.380737E-02
          -1.278252E+01
                             .000000E+00
                                          -1.192197E+00
Ocices rescrence integrals
                   resolved
Oabsantian
                  1.3953ZE+CB
 fission
                    ,0000<del>E+00</del>
- elapsed time
                   .07 min.
0 sb-124
                                                 undated 10/13/89
                                                                               51124
                 mt=102
                                                                                         Democratures
                                                                                                       975.00
0 xe-131
                 nt=102, 103, 104, 105, 106
                                                 undated 10/13/89
                                                                               5431
                                                                                         temperature:
                                                                                                       975.00
Oresonence data for this ruclide
Oness runber (a)
                          = 129,781
                                                     terperature(kelyin)
                                                                               = 975.000
Onotential scatter signa =
                                4.301
                                                     lumed nuclear density
                                                                              = 8.7760827E-06
Ospin factor (g)
                          = 26.825
                                                     lum dimension (a-bar)
                                                                              = 4.6812201E-01
Dirner radius
                          = .00000E+00
                                                     dencoff correction (c)
                                                                              = 3.4269261E-01
Othe absorber will be treated by the northeirs integral method.
Oness of moderator-1 = 15,995
                                                  signs(per absorber aton)= 1.9457393E+04
Oncounter-1 will be treated by the northern integral method.
Onces of moderator-2 = 257.953 signe(per et
                                                  signe(per absorber atum)= 2.170E3EE+04
Oncerator-2 will be treated by the norchein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1,00000
Oraco
              res abs
                              res fiss
                                               res scat
          -2.8X8X03E-06
                             W0000E+00
  9
                                          -2.6/OBJE-05
  10
          -1.93977ZE-04
                             .00HEH00
                                          -1.44874E-04
          -2.365111E-03
  11
                             .000000E+00
                                          -1.7656EE-03
           -4.517101E-02
                             .00000E+00
                                           -4.20725Æ-03
  12
                             .000000E+00
  13
          -7.038969E+01
                                          -1.650056E+02
                             .000000E+00
           1.06163XE-02
                                           1.48598/E-02
Cerces resonance integrals
                   resolved
Oabsorption
                  7.5838E+02
                    .0000E+00
 fission
- elacoed time
                   .CB min.
0 xe-132
                 nat=102, 108, 104, 105, 106
                                                undated 10/13/89
                                                                               54132
                                                                                         temerature 975.00
Oresonence data for this ruclide
Omes number (a)
                          = 130,771
                                                     temperature(kelvin)
                                                                               = 975.000
Opotential scatter signa =
                                                                              = 1.6494707E-05
                                4,301
                                                     lumped nuclear density
                                                                              = 4,6812201E-01
Depin factor (g)
                         = 675,879
                                                     lump dimension (a-ber)
Oimer radius
                          = .0000000E+00
                                                    dencoff correction (c)
                                                                             \cdot = 3.4269261E-01
Othe absorber will be treated by the northein integral method.
Ones of moderator-1 = 15.995 signofor a Onederator-1 will be treated by the norcheim integral method.
                                                  signs(per absorber atum)= 1.0552393E+04
Omes of moderator-2 = 257.953
                                                  signature absorber atom)= 1,15500/3E+04
Omoderator-2 will be treated by the norcheim integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1,0000
                              res fiss
Caroas
              res abs
                                              res scat
            .542E-05
  9
                             .000000E+00
                                          -1.1727XE-04
          -7.780082E-03
                             .00000E+00 -9.905657E-02
  10
           3.338821E-08
                             .00000E+00 -9.22953/E-07
  11
Ocioces resonence integrals
```

```
resolved
                 9.7131E-01
Osbearotian
                  .00000=+00
fission

    elassed time

                  .OB min.
                                              updated 10/13/89
                                                                           54135
                                                                                     temperature=
                                                                                                  975.00
0 xeron-135
                endf/b-iv seet 1294
                   nt= 102, 103, 104, 105, 107
                                                                                     temperature= 975.00
0 xe-136
                                                                           54136
               erdf/b-iv met 1141
                                                                           55133
                                                                                     temperature 975.00
O cesium-133
                                              ucdated 10/13/89
Orescrence data for this nuclide
Omes ruther (a)
                                                                           = 975.000
                        = 131.764
                                                  .temperature(kelvin)
                                                                           = 2.102062ZE-05
Octantial scatter signs = 7.100
                                                  lurged nuclear density
                        = 374.437
                                                                          = 4.6812201E-01
Ospin factor (g)
                                                  lump dimension (a-ber)
                        = _000000E+00
                                                                          = 3.4269261E-01
Oirner rectius
                                                  dercoff correction (c)
Othe absorber will be treated by the norcheim internal method.
                                                signs(per absorber atun)= 8.1234369=03
Omess of anderstor-1 = 15.995
Oppderator-1 will be treated by the northeim integral method.
Omess of moderator-2 = 258.051
                                                signs(per absorber atun)= 8.7134512E+03
Oroderator-2 will be treated by the northelin integral method.
Othis resource material will be treated as a 2-diversional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.00000
Quoras
             res abs
                            res fiss
                                            res acat
          -5.81531XE-05
                           .000000E+00
                                        -3.91247/E-04
  10
         -2.893950E-0B
                           .00000E+00
                                        -5.542378E-03
  11
         -1.080677E-01
                           .000000E+00
                                        -1.89016ZE-01
  12
         -1.67558E-01
                           .00000E+00
                                        -2.33127/E-02
 Ì
         -2.787342E-01
                           .00000E+00
                                        -1.516813E-02
          -1.213133E+01
                           _000000E+00
                                        -5.310487E-01
  15
                           .000000E+00
                                        -4.04721Æ-04
          5.621247E-03
  ĸ
          2.77785Æ-03
                           .000000E+00
                                        -2.215200E-04
  17
          2.352213E-03
                           .000000E+00
                                        -1.830EE-04
          2.215043E-03
                           .000000E+00
                                        -1.67753 E-04
  18
  19
          1.317405E-03
                           .00000E+00
                                        -9.67887E-05
Descess resorance integrals
                  resolved
Oabscrption
                 3.51131E+02
fission
                  .0000E+00
- elapsed time
                  .10 min.
0 cs-134
                nt=102
                                              updated 10/13/89
                                                                           55134
                                                                                     terperature-
                                                                                                  975.00
                   nt= 102
                                                                           5505
                                                                                     terperature:
                                                                                                  975.00
0 cs-135
                                                                                     terperature:
0 cs-137
                mt=102
                                              updated 10/13/89
                                                                           55137
                                                                                                  975.00
0 ba-136
               mt=102
                                              updated 10/13/89
                                                                           56136
                                                                                     terperature:
                                                                                                  975.00
Crescrence data for this ruclide
Omess runber (a)
                                                  temperature(le/ivin)
                                                                           975.000
Ocotential scatter signs =
                              4.835
                                                                          = 1.9312935-07
                                                  lumed nuclear density
                        = 1247,690
                                                                          = 4.6812201E-01
Ospin factor (g)
                                                  lum dimension (a-bar)
Cirner redius
                        = _000000E+00
                                                                          = 3.4269251E-01
                                                  dencoff correction (c)
Othe absorber will be treated by the northeim integral method.
Omess of auderator-1 = 15.995
                                                signe(per absorber atont= 8.8/19250E+05
Oncerator-1 will be treated by the norchein integral method.
                                                signs(per absorber atom)= 9.85/8313E+05
Onese of moderator-2 = 257.983
Omderator-2 will be treated by the northeim integral method.
Othis rescretce material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shieldings1,00000
                            res fiss
Ouroup
             nes abs
                                            res scat
          1.09705/E-05
                           .000000E+00
                                         4.64206ZE-07
  n
  11
         -1.20376E-05
                           .000000=+00
                                        -9.85700E-06
Osecess resorance integrals
                  resolved
Orbearption
                 1.38471E+00
fission
                  .0000E+00
                  .10 min.

    elapsed time
```

```
temperature= 975.00
0 La-139
                                                ucdated 10/13/89
                 mt=102
Orescrence data for this nuclide
                                                                              = 975.000
Omes runber (a)
                             temperature(kelvin)
                          =
                                                                              = 2.053/025E-05
                                                    lurped nuclear density
Opotential scatter signs =
                              4,906
                          = 145.855
                                                    lump dimension (e-bar)
                                                                              = 4.6812201E-01
Ospin factor (g)
                          = _000000E+00
                                                    direction (c)
                                                                              = 3.4269261E-01
Cirner radius
Othe absorber will be treated by the norcheim integral method.
Oness of moderator-1 = 15,975
                                                  signe(per absorber atom)= 8.4018643E+03
Omoderator-1 will be treated by the norchein integral method.
Omess of moderator-2 = 257.953
                                                  signs(per absorber atom)= 9.373060/E+0B
Oppolarator-2 will be treated by the norchein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.00000
Ograp .
              res abs
                              res fiss
                                              res scat
  9
          -1.25486E-05
                             .00000E+00
                                          -2.225172E-04
                                          -2.2X3899E-02
  10
          -3.93571Œ-04
                             .00000E+00
                             .000000E+00
                                            .00000E+00
  11
            .00000E+00
          -6.961611E-02
                             .000E+00
                                           -4.2002SE-02
  12
Descess rescrence integrals
                   resolved
                  8.0669E+00
Outboarption
                    .00000E+00
fission

    elapsed time

                   .12 min.
                                                                              58144
0 œ-144
                    mt= 102
                                                                                         temperature:
                                                                              59141
                                                                                                       975.00
0 pr-141
                 mt=102, 103, 104, 105, 106, 107
                                                undsted 10/13/89
                                                                                         terperature=
Oresonence data for this ruclide
                                                                              975.000
                          = 139,697
                                                    temperature(kelvin)
Omes ruther (a)
                                                    lumped nuclear density
                                                                              = 1.7578717E-05
                               4.933
Ocotential scatter signs =
                                                                              × 4.6812201E-01
                                                    lusp dinersion (a-bar)
Ospin factor (g)
                          = 1026,500
                                                                              = 3.4259251E-01
                                                    dencoff correction (c)
                          = .000000E+00
Oimer radius
Othe absorber will be treated by the northeim integral method.
                                                  signs(per absorber atom)= 9.7029629E+03
Omes of suckrator-1 = 15.995
Omderator-1 will be treated by the nordneim integral method.

Omes of moderator-2 = 257.953 signs(per al
                                                  signs(per absorber atom)= 1.08254816+04
Ornderstor - 2 will be treated by the norcheim integral method.

Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1.00000
                                              res acat
Otrato
                              res fiss
              nee ahe
                                          -2.3379X4E-01
  10
           -6.83339E-03
                             .000000E+00
          -1.12687/E-01
                                          -1,498327E+00
                             .000000E+00
  11
          -2.585/2XE-03
                             .00000E+00
                                          -2.525519E-04
  12
Oceans resonance integrals
                   resolved
Osbscrption
                  1_20778E+01
                    .0000E+00
fission
- elepsed time
                   .12 min.
                                                                                         temperature: 975.00
0 pt 143
                                                undated 10/13/89
                 mt=102
                                                                                         temperature 975.00
                                                                              60143
                 mt=102
                                                undeted 10/13/89
Oresonence data for this nuclide
                                                                              975.000
                                                    terperature(kelvin)
Omes ruther (a)
                          #
                                                    lumbed nuclear density
                                                                              = 1.575050E-05
                                5.000
Occurrial scatter signs =
                          = 1964.860
                                                    lump dimension (a-bar)
                                                                              = 4.6812201E-01
Ospin factor (g)
                                                    dercoff correction (c)
                                                                              = 3.4269261E-01
                          = .000000E+00
Oirmer rectius
Othe election will be treated by the northeim integral method.
Ones of recorator-1 = 15.995
                                                  signs(per absorber atom)= 1.0729448E+04
Occurator-1 will be treated by the norchein integral arthod.
Omes of moderator-2 = 257.933 signe(per at
                                                  signs(per absorber atom)= 1.1970719E+04
Orockrator-2 will be treated by the norche in integral method.
Othis rescrence meterial will be treated as a 2-dimensional object.
Oxolure fraction of turp in cell used to account for scatial self-shielding-1.0000
```

```
Ogroup
10
                              res fiss
              res abs
                                              res scat
          -1.57494E-04
                            .00000E+00
                                          -8.82300F-05
          -3.695361E-01
  11
                            -00000E+00
                                          -4.20528E+00
  12
          -2.44570E-01
                            .000000E+00
                                         -1.202319E-01
Oscess rescrence integrals
                  resolved
                  5.07642E+01
Oabsonation
fission
                   .0000E+00
                   .12 min.

    elected time

0 nd-1/5
                                                undated 10/13/89
                                                                                        temperature: 975.00
                mt=102
Oresonence data for this ruclide
Omes number (a)
                                                    temperature(kelvin)
                                                                              = 975.000
Opotential scatter signa = 5.047
                                                                              = 1.1734181E-05
                                                    lumed nuclear density
                                                                             = 4.6812201E-01
Ospin factor (g)
                         = 1007.250
                                                    lump dimension (a-ter)
Oimer redius
                          = .0000000E+00
                                                    denceff correction (c)
                                                                              = 3.425925 E-01
Othe absorber will be treated by the northein integral method.
                                                  signe(per absorber atom)= 1,4552332E+04
Omess of moderator-1 = 15.995
Oppderator-1 will be treated by the norcheim integral method.
                                                  signaturer absorber atom)= 1,625866E+04
Omess of moderator-2 = 237.953
Oppderator-2 will be treated by the northern integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.0000
(grap
             res abs
                             res fiss
                                             res acat
                            .00000E+00 -7.507609E-02
  10
          4.7815ZE-03
  11
          -7.205245E-02
                            .000000E+00
                                         -2.1809/SE-01
  12
          -1.73367 E+00
                                         -1.090983E+01
                            .000000E+00
  13 14 15
15
          9.577876E-05
                            .00000E+00
                                          2.044957E-04
          -1.591639E+00
                            .000000E+00
                                          -4.18325/E-02
           5,898307E-03
                            .0000000
                                          -4.60905/E-04
  16
           1.32662 -03
                            .000000E+00
                                          -1,451343E-04
          9.64244E-04
  17
                            .000000E+00
                                         -1.063907E-04
  18
           8.53983°E-04
                                         -9.3% ISE-05
                            .000000E+00
           7.63434Æ-04
  19
                            .000000E+00
                                          -8.070323E-05
  20
          2.83922/E-05
                            .000000E+00
                                          -2.91X3X2E-06
Opposes resonance integrals
                  resolved
Osbsorption
                  2.05973E+02
fission
                   .0000E+00
                  .13 min.

    elapsed time

0 nd 147
                mt=102
                                                uxdated 10/13/89
                                                                                        temperature: 975.00
0 pa-147
                                                                              61147
                                                                                        temperature 975.00
                mt=102
                                                undeted 10/13/89
Oresonence data for this ruclida
Omesa number (a)
                         = 1/5.653
                                                    temperature(let/vin)
                                                                              = 975.000
                                                                              = 4,022504E-06
Opotential scatter signs = 5.093
                                                    lumed nuclear density
Ospin factor (g)
                         = 21589,500
                                                    lump dimension (a-bar)
                                                                              = 4.6812201E-01
Oirner radius
                         ■ .0000000€+00
                                                    dencoff correction (c)
                                                                              = 3.4260261E-01
Othe absorber will be treated by the northern integral method.
                                                  signs(per absorber atom)= 4.2652719E+04
Omes of accidentar-1 = 15.995
Oncoderator-1 will be treated by the norcheim integral method.

Ones of moderator-2 = Z37.933 signa(per at
                                                  signs(per absorber aton)= 4.7363992E+04
Orderstor-2 will be treated by the norchein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.0000
grap
             res abs
                             res fiss
                                             res scat
                            .000000E+00
                                          -6.A72971E-02
  12
          -2.019989E-01
  ī
                            _000000E+00
                                          -2.944189E-03
          -5.178917E-02
                                          -3.888611E+01
          -9.048184E+01
                            .000E+00
                                          6.976340E-03
  15
           4.127173E-02
                            .0000000
           1.69791ZE-02
                            .000000E+00
                                           1.746667E-03
  16
                                           1.150\27E-03
           1.369759E-02
                            .000000E+00
```

```
1.253775E-02
                             _000000E+00
                                          9.6490B0E-04
  19
           6.999401E-04
                             .000000E+00
                                          5.068677E-05
Ocicess resorance integrals
                   resolved
Oabscrption
                  2.00495E+03
 fission
                   .0000E+00

    elaced time

                   .13 min.
                                                                              61148
0 pm 148
                    mt= 102
                                                                                        temerature= 975.00
0 sm-147
                 endf/b-v fission product
                                                undsted 10/13/89
                                                                              62147
                                                                                         temperatures 975.00
Oresonence data for this nuclide
                         = 145.653
                                                                              = 975,000
Omess number (a)
                                                     temperature(kelvin)
Opotential scatter signa = 5.093
                                                     lumed nuclear dinsity
                                                                              = 1.401546/E-05
                                                                              = 4.6812201E-01
                                                    lum dimension (a-bar)
Ospin factor (g)
                                 .000
                                                    derpoff correction (c)
Oimer ractius
                          = .000000E+00
                                                                              = 3.4269261E-01
Othe absorber will be treated by the northein integral method.
                                                  signs(per absorber atum)= 1,2183662E+05
Owes of moderator-1 = 15.995
Oncorrator-1 will be treated by the norcheim integral method.

Omes of moderator-2 = 257.953 signs(per et
                                                  signs(per absorber atom)= 1.35/8167E+05
Oncderator-2 will be treated by the norcheins integral method.
Othis resonance material will be treated as a 2-diagraignal object.
Ovolume fraction of lump in cell used to account for spetial self-shielding-1,0000
Ograp .
              res abs
                              res fiss
                                              res scat
  11
           2.691080E-01
                             .0000000
                                          1.0717092+00
  12
           8.99061E-01
                             .00000E+00 -1.596820E+00
  3442
          -3.91255E+00
                             .000000E+00
                                         -2.280B/E+00
          -4_33876E-01
                             .00000E+00 -5.141891E-03
           3.11332E-01
                             .000000E+00
                                         -1,904#0E-03
  16
           7.287709E-03
                             .0000000
                                          -3.79560E-04
  17
           4.28146E-03
                             .0000000
                                          -2.4016BZE-04
                             DDDDDE+00
  18
           3.510/5/E-0B
                                         -1.997176E-04
  19
           2.910619E-0B
                             .0000000
                                         -1.649500E-04
  ä
           8.AT56E-04
                             .000000E+00
                                         -4.628077E-05
Ociçess resonança integrals
                   resolved
Orbsonation
                  7.21750E+02
                   .00000
fission
- elected time
                   .15 min.
                              thermal scattering matrix runber 3 at a temperature of 900.03 was selected.
0 sp-149
                 mt=102,103,107
                                                updated 10/13/89
                                                                              62149
                                                                                        temperatures 975.00
Orescrence deta for this ruclide
                         = 147.638
                                                                              = 975,000
Omes ruiber (a)
                                                     temperature(lockyin)
Opotential scatter sigm = 3.260
                                                    lumped nuclear density
                                                                              = 8.6958181E-08
Ospin factor (g)
                         = 10407.900
                                                    lump dimension (a-bar)
                                                                              = 4.6812201E-01
Oirmer rectius
                          = .0000000E+00
                                                    dercoff correction (c)
                                                                              = 3.4269261E-01
Othe absorber will be treated by the nurcheirs integral method.
Oress of accierator-1 = 15.995 signa(per et
Oriclerator-1 will be treated by the norcheim integral method.
                                                  signature absorber atom>= 1.9636990E+06
                                                 signs(per absorber atom)= 2.1908/58E+06
Oness of moderator-2 = 257.953
Orderator 2 will be treated by the northern integral method.
Othis resonance material will be treated as a 2-diameteral object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1.00000
CTTLD
              res abs
                              res fiss
                                              res scat
  11
           8.54890E-03
                             .00000E+00 3.0715%E-02
  12
          -5.5328E-02
                             .00000E+00
                                          -1.820874E-01
  13
           2.250289E-02
                             .000000E+00
                                          2.796631E-0B
           2.746277E-03
                             .000000E+00
                                          -7.955149E-03
Ocicess resonance integrals
                   resolved
Outsarption
                  8.0433<del>2+</del>02
 fission
                   .00000E+00
```

```
    elacoad time

                 .15 min.
                                                updated 10/13/89
0 sm-150
                nt=102
                                                                              62150
                                                                                        temperatures 975.00
Oresonance data for this nuclide
                                                                              = 975.000
                          = 148.629
Omess runber (a)
                                                    temperature(kelvin)
                               5.162
                                                                             = 4.1806816E-06
Occtential scatter signs =
                                                    lumped nuclear density
Ospin factor (g)
                         = 4376,420
                                                    lump dimension (a-bar)
                                                                             = 4.6812201E-01
Oimer redius
                          = .0000000E+00
                                                    denoff correction (c)
                                                                              = 3.4260261E-01
Othe absorber will be treated by the norcheim integral method.
                                                  signs(per absorber atom)= 4.084941E+04
Oness of moderator-1 = 15.995
Oxoderator-1 will be treated by the norcheim integral method.
Oxess of moderator-2 = 257,953 signs(per el
                                                  signe(per absorber aton)= 4.5570219E+04
Oncderator-2 will be treated by the northeim integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.0000
                              res fiss
Ozrozo
              res abs
                                              res scat
  10
          -1.39836E-03
                            .000000E+00
                                          -1.34121ZE-02
  11
          -3.15156E-02
                            .00000E+00
                                          -3.5607/E-01
          -1.026808E-01
                            .000000E+00
                                          -3.108027E-02
  12
  13
          -7.2445/E+00
                            .000000E+00
                                          -5.702/47E+00
           1.05287E-04
                            _000000E+00
                                          -6.390289E-05
Descess resonence integrals
n
                   resolved
                  2.856492+02
Orbsonation
                   .00000E+00
 fission
- elapsed time
                   .To min.
0 sm-151
                mt=102, 108, 104, 105, 106, 107
                                                undeted 10/13/89
                                                                                        temperatures 975.00
Oresonence data for this nuclide
                         = 149.623
Omess rumber (a)
                                                    temperature(letvin)
                                                                              = 975,000
Occupial scatter signs =
                              5.125
                                                    lumed nuclear density
                                                                             = 4.0190145E-07
                         = 7574.703
                                                                             = 4.6812201E-01
Ospin factor (g)
                                                    lump dimension (arbor)
                          = .000000E+00
                                                    dencoff correction (c)
                                                                              = 3.4267261E-01
Oirmer redius
Othe absorber will be treated by the norcheim integral method.
Oness of acceptor-1 = 15,995
                                                  signs(per absorber aton)= 4.265753E+05
Oncommeter-1 will be treated by the northein integral method.
Oness of moderator-2 = 257.953 signs(per al
                                                  signs(per absorber atom)= 4,7405309E+05
Oncerator-2 will be treated by the norchein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1.0000
Ograp
14
                             res fiss
              nes abs
                                              res scat
          -2.31370Œ-01
                            .0000000
                                          -2.19822E-02
  15
           1.485611E+01
                            .0000000=+000
                                           7.5555E-02
          -2.1820BE+01
                            .000000E+00
                                          -6.201120E-02
  17
           1.7358295+02
                            .00000E+00
                                          8.2698KE-01
  18
          -3.207103E+02
                            .000000E+00
                                          -1.784223E+00
                                          3.86766E-01
  19
           6.25394/E+01
                            .0000000
  ã
           1.141187E+00
                            .000000E+00
                                          -1.398821E-04
  21
                            .00000E+00
                                           1.2410E-02
          -7.117673E-02
 22
           6.95259E-02
                            .000000E+00
                                          3.838923E-03
          -1.091910E-02
                            .000000E+00
                                          3.374BE-04
  23
Occess rescrence interrals
                  resolved
                  2.0561/E+03
Ostsorption
fission
                   .0000E+00

    elapsed time

                  .15 min.
0 an 152
                mt=102,103,104,105,106,107
                                                ucdated 10/13/89
                                                                              62152
                                                                                        terperatures 975.00
Oresonence deta for this nuclide
                            150,615
                                                                              = 975.000
Omess number (a)
                                                    terperature(kelvin)
Opotential scatter signs =
                               5,208
                                                    lumped nuclear density
                                                                             = 2.004#### OE-06
                                                                             =4.6812201E-01
Ospin factor (g)
                             863,574
                                                    lum dimension (a-bar)
Oimer redius
                          = .0000000
                                                    dencoff correction (c)
                                                                             = 3.4269261E-01
```

```
Othe absorber will be treated by the northeim integral method.
                                                   signs(per absorber atom)= 8.518199/E+04
Omes of moderator-1 = 15.995
Oppderator-1 will be treated by the northeim integral method.
Oness of moderator-2 = 257.953
                                                   signe(per absorber atom)= 9.503609/E+04
Ornoterator 2 will be treated by the norcheim integral method.

Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.0000
              res abs
                              res fiss
                                               res scat
OETOLD)
           2,402700E-06
                             .000000E+00
                                           1.158Y(BE-04
  10
          -1.613120E-03
                             .00000E+00
                                           -2.508739E-02
                                           -8.853147E-02
  11
          -2.32802/E-02
                             .00000E+00
          -1.561992E-01
                                           -4.95/25/E-01
                             .000000E+00
  12
           4.184019E-02
                             .000000E+00
                                            1.017387E-01
  13
          -1.368911E+02
                             .00000F+00
                                           -2.642978E+02
Ocicess resorunce integrals
                   resolved
Debaration
                  2.73/23=+03
                    -00000=+00
fission
- elapsed time
                   .17 min.
                 mt=102, 103, 104, 105, 106, 107
                                                 uccisted 10/13/89
                                                                                &153
                                                                                          teacerature 975.00
0 ar 153
Orescripto data for this ruclida
                                                                                = 975,000
Omess runber (a)
                          = 151.607
                                                      temperature(kelvin)
                                                                                = 1.205/2/6E-06
                                9.731
                                                     lumped nuclear density
Opotential scatter signa =
                                                                                = 4_6812201E-01
                          = 12265.900
                                                     lump chimension (a-ber)
Ospin factor (g)
                                                                               = 3.4269261E-01
                                                     dencoff correction (c)
                           # .000000E+00
Crimer radius
Othe absorber will be treated by the northein integral method.
                                                   signs(per absorber atom)= 1.416956E+05
Oness of accerator-1 = 15.995
Omoderator-1 will be treated by the northein integral method.

Omess of acclarator-2 = 257.953 signa(per al
                                                   signs(per absorber atom)= 1.5804769E+05
Oncderator-2 will be treated by the norcheim integral method.
Othis rescrerce material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1,00000
                              res fiss
Ograp
12
                                               res acat
              res abs
           -2.948301E-01
                                           -5.761080E-02
                             .000000E+00
                                           -6.44105/E-03
          -1.746831E-01
                             .000000E+00
  13
           -9.1357E-01
                             .000000E+00
                                           -1.894943E-03
  5
                                           4.22725-02
           1.2480745+00
                             .000000E+00
                                           8.15557E-03
  Ñ
          -3.300578E+00
                             .000000=+000
  17
           1.505586E-01
                             .000000E+00
                                           -3,43767X=-03
                                           -2.23121Æ-03
                             .00000E+00
           7.72651E-02
                                           -1.5410B0E-03
  19
           5.05%5/E-02
                              .000000E+00
                              .00000E+00
                                           -1.274977E-03
          -1.25380/E-01
  20
Opicios resonence integrals
                    resolved
                   1.35393E+03
Osboaration
                    .0000E+00
 fission
- elepsed time
                   .17 min.
                                                 undsted 10/13/89
                                                                                63154
                                                                                          tesperature
                                                                                                         975.00
                 mt=102, 105, 104, 105, 106, 107
0 ar-154
Oresonence data for this ruclide
                                                                                = 975.000
Omes runber (a)
                                                      temperature(kelvin)
                                                                                = 2.5216809E-07
                                9.731
                                                      lumped nuclear density
Ocotential acatter signa =
                                                                                = 4_6812201E-01
                           = 19135.801
                                                     Lump dimension (a-bar)
Ospin factor (g)
                                                                                = 3.4269261E-01
                           = .000000E+00
                                                     deposit correction (c)
Oimer radius
Othe absorber will be treated by the northein integral method.
Oness of moderator-1 = 15.995 signa(per at
Onoderator-1 will be treated by the norchein integral method.
                                                   signa(per absorber atunt)= 6.7716613E+05
                                                   signa(per absorber atom)= 7.5550625E+05
Omes of moderator-2 = 257.953
Oscilerator-2 will be treated by the northein integral method.
Othis resorance material will be treated as a 2-dimensional object.
Oxclume fraction of lump in cell used to account for spatial self-shielding-1.00000
```

```
Ograp
12
                              res fiss
              res abs
          -3.935/E-01
                            .000000E+00
                                          -6.141107E-02
          -3.23814E-01
  13
                            .000000E+00
                                          -2.535999E-02
           3.137257E-01
                            .000000E+00
                                           1.43/40E-02
  15
           1.216527E-01
                            .000000E+00
                                           2.052218E-02
           7.156821E+00
                                           9.208284E-02
  16
                            00+3000000.
  17
          -1,43276E+02
                            .000000E+00
                                          -1,87785ZE+00
  18
           1.13462=102
                            -000000E+00
                                           1.857V/E+00
  19
          -1.014757E+02
                            .000000
                                           1.18736E+00
Ocuces rescrence integrals
                   resolved
Osbearation
                  2.13624E+03
                   .00000E+00
 fission

    elapsed time

                   .18 min.
0 er-155
                mt=102, 103, 104, 105, 106, 107
                                                undated 10/13/89
                                                                              85
                                                                                         tenperature= 975.00
                                                                              45
                                                                                         temperature: 975.00
0 gd+155
                 mt=102
                                                updated 10/13/89
Oresonence data for this nuclide
                          = 53.592
                                                                              = 975.000
Omes runber (a)
                                                     temperature(lectvin)
                                                                              = 2.1827047E-09
                                5.277
                                                     lumed nuclear density
Opotential scatter signs =
Ospin factor (g)
                          = 12700.100
                                                     lump dimension (a-bar)
                                                                              = 4.681Z201E-01
                                                    dencoff correction (c)
                                                                              = 3.4269261E-01
Oimer redius
                          = .000000E+00
Othe absorber will be treated by the northeim integral method.
                                                  signs(per absorber aton)= 7.8253072E+07
Oness of moderator-1 = 15.995
Omogrator-1 will be treated by the norchein integral method.
Omes of moderator-2 = 237.953 signs(per al
                                                  signs(per absorber aton)= 8.7255712E+07
Oncorator 2 will be treated by the norchein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.0000
Ograp
                              res fiss
              resabs
                                              res acat
           -1.437325E+00
                            .000000E+00
                                          -1_839X93E-01
           1.54105/E+00
                                           1.984967E-01
                            _000000E+00
  13
           2.189140E-01
                                           9.807462E-0B
                            .000000E+00
  15
          -3.3531/SE-01
                            .000000E+00
                                          -1.14159E-04
                                          -4.148867E-03
  ĸ
           1.47758E+00
                            .000000E+00
  17
           1.568660E-01
                            .00000E+00
                                          -1.479ISE-03
  18
           9.60513/E-02
                            .00000E+00
                                          -1_078060E-03
                                          -8.026360E-04
  19
           6.29528E-02
                            -000000E+00
           1.670371E-02
                            .000000E+00
                                           1.627049E-04
  20
            .000000E+00
                            .000000E+00
                                            -00000E+00
  212223
             .000000E+00
                            .000000E+00
                                             .000000E+00
             ,000000E+00
                            .000000E+00
                                             .000000E+00
             .00000E+00
                            .00000E+00
                                             .000000=00
  ਠ
                            .000000E+00
                                           -1.622070E+00
          -2.127871E+03
          -5.20574Z=+03
                            .000000E+00
                                           1.961503E+00
  26
          -1,660003E+03
                            .000000E+00
                                           7.392749E-01
  27
Omcess resonance integrals
                   resolved
                  3.97(BZE+0%
Dabscrpt ion
fission
                   .000<del>1</del>

    elapsed time

                   .18 min.
0.-234 1043 sign-6+4 marklass p-3 299k f-1/en(1.+5)
                                                                                         temperature= 975.00
Oresonence data for this ruclide
Omes rumber (a)
                              252,029
                                                     temperature(kelvin)
                                                                              = 975.000
                                                                              = 4,4/80287E-06
Quotantial scatter signa =
                               10.021
                                                     lumed ruclear density
                          = 6948.450
                                                                              = 4.6812201E-01
                                                     lump dimension (a-bar)
Ospin factor (g)
                                                     dencoff correction (c)
Oirrer redius
                          = .000000E+00
                                                                              = 3.4269261E-01
Othe absorber will be treated by the northein integral method.
Oness of excerator-1 = 15,995
                                                  signatper absorber atomb= 3.8218129E+04
Onoderator-1 will be treated by the norcheim integral method.
Oness of accterator-2 = 257.955
                                                  signatoer absorber atom)= 4.2626/61E+04
```

```
Omderator-2 will be treated by the nurchein integral method.
 Othis resonance material will be treated as a 2-dimensional object.
 Ovolume fraction of lump in cell used to account for spatial self-shielding=1.00000
 Caroas
              res abs
                              res fiss
                                              nes scet
           -2.135940E-02
                                          -6.230/21E-02
                             .000000E+00
  11
           -1.742367E-01
  12
                             .00000E+00
                                          -7.295490E-02
                             .000000E+00
  13
           7.790282E-04
                                          -6.472778E-04
                             .000000E+00
           -1.7128/1E+01
                                          -2.805241E+00
 Descess resonence integrals
                   resolved
Oubscription
                  5.83639E+02
 fission
                    .00000E+00
 - elapsed time
                   .20 min.
 0 uranius 235 endf/b-iv mat 1261
                                                updated 10/13/89
                                                                              92235
                                                                                       temperatures 975.00
 Oresonence data for this nuclide
 Omess runber (a)
                          = 233.025
                                                    temperature(kelvin)
                                                                              × 975,000
 Opotential scatter signs =
                              11,500
                                                    lumed nuclear density
                                                                             = 4.0259271E-04
 Ospin factor (g)
                          = 15171.100
                                                    lump dimension (a-bar)
                                                                             = 4.6812201E-01
Dirner radius
                          = .000000E+00
                                                    dencoff correction (c)
                                                                             = 3.4269261E-01
Othe absorber will be treated by the norcheim integral method.
Oness of moderator-1 = 15.995
                                                  signature absorber atomo= 4.2404468:+02
Oncderator-1 will be treated by the northein integral method.
                                                  signs(per absorber atm)= 4.5507092E+02
 Omes of moderator-2 = 258.049
Omoderator-2 will be treated by the northeim integral method.
Othis resonance material will be treated as a 2-dimensional object.
 Ovolume fraction of lump in cell used to account for spatial self-shielding=1.00000
Carona
              res abs
                              res físs
                                              res scet
           -1.700852E+00
                         -1.057861E+00
                                          -3.985/3/E-02
  13
           -6.016437E+00
                          -2.996939E+00
                                          -1.308385E-01
           -4.839319E+00 -2.977209E+00
                                          -3.309X/SE-02
Oceas resonance integrals
                   nesolved
                  2,13/516+02
Oabsorption
 fission
                  1.270876+02
- elapsed time .22 min.
0.r236 1163 sigo-544 madacs p-3 285k f-1/e-m(1.+5)
                                                                             92256
                                                                                       temperature 975.00
Orescrience data for this ruclide
Oracs runber (a)
                          = 254,017
                                                                             # 975.m
                                                    temperature(kelyin)
Ocotential scatter signs =
                              10,995
                                                                             = 5.511417 E-05
                                                    lumed nuclear density
Ospin factor (g)
                          = 6328,490
                                                    lum dinension (a-bar)
                                                                             = 4.6812201E-01
Oirmer nedius
                          = .000000F+00
                                                                             = 3.4269261E-01
                                                    dereoff correction (c)
Othe absorber will be treated by the northein integral method.
Omes of moderator-1 = 15.975
                                                 signa(per absorber atom)= 3.0982900E+03
Outdoorstor-1 will be treated by the northein integral method.
Omess of moderator-2 = 257.954
                                                 signe(per absorber atom)= 3.4561223E+03
Oncobrator-2 will be treated by the northein integral method.
Othis rescrence asterial will be treated as a 2-disarsional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1,0000
Ograp
              res abs
                              res fiss
                                             res scat
  11
           -2.655879E-01
                            .00000E+00
                                          -6.67275E-01
  12
          -1,435917E+00
                            .00000E+00
                                          -9.749725E-01
  ß
          -6.785/SE-02
                            .000000=+00
                                          -3.511909E-03
          -4.<del>633</del>222+01
                            .00000E+00
                                          -4.05730E+00
Ocicios resonence integrals
                   resolved
Osbecrution
                  2.73775±+02
 fission
                   (0)+E000000.
- elapsed time
                   .22 min.
O uranium 258 erdi/to iv met 1262
Oreschence data for this ruclide
                                               updated 10/13/89
                                                                                       temperature: 975.00
```

```
256,006
                                                     temperature(kelvin)
                                                                              = 975.000
Omess number (a)
                                                                             = 2.182755E-02
Occupation acetter signs =
                               10.533
                                                     lumed nuclear density
                             656,527
                                                     lump dimension (a-bar)
                                                                             = 4.6812201E-01
Ospin factor (g)
                          *
                                                                             = 3.4269261E-01
                          = .0000000E+00
Oirner radius
                                                    dencoff correction (c)
Othe absorber will be treated by the northeim integral method.
                                                  signs(per absorber atom)= 7.8231969E+00
Oness of anderator-1 = 15.995
Omderator-1 will be treated by the northeim integral method.
Oness of moderator-2 = 25.041 signs(per at
Onoderator-2 will be treated by the northeim integral method.
                                                  signe(per absorber atom)= 3.368/471E-01
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1,00000
(prosp
              res abs
                              res fiss
                                              res acat
          -3,931561E-02
                             .000000E+00
                                           -4.037221E-01
  10
          -1.02460E+00
                          -1.7447TE-05
                                          -6.475117E+00
          -9.704497E+00
                            .000000E+00
                                          -2.6890(8E+01
  12
          4.304X5E+01
                             .000000E+00
                                          -4.998128E+01
  13
          -5.400749E+01
                             .000<del>1</del>
                                         -1.768351E+01
          -1.04879E+02
                             .00000E+00
                                          -6.059073E+00
Ococess resonence integrals
                   resolved
Osbearation
                  1.8066/E+01
                  5.0406E-04
fission
- elepsed time
                  .23 min.
                                                                              93237
                                                                                        terperature= 975.00
0 rectunium 257 eroff/b-iv met 1263
                                                undisted 10/13/89
Oresonence data for this nuclide
Oress runber (a)
                         = 255.012
                                                     temperature(kelvin)
                                                                              = 975.000
                                                                             = 3.730572/E-06
Occupial scatter signs = 10.500
                                                     lurped ruclear density
Ospin factor (g)
                          = 10100,800
                                                     lump dimension (a-bar)
                                                                              = 4.6812201E-01
                                                                              = 3.4269261E-01
Cirrer redius
                          = .0000000E+00
                                                    dencoff correction (c)
Othe absorber will be treated by the northeim integral method.
Chass of anderstor-1 = 15.995 signature stanter stone= 4.57790516+04
Onderstor-1 will be treated by the northeim integral method.
Orass of moderator-2 = 238.051
                                                  signs(per absorber atom)= 4.909/598E+04
Opperator-2 will be treated by the northeirs integral method.
Othis rescrerce natural will be treated as a 2-cineraicral object.
Ovolume fraction of lump in cell used to account for spetial self-shielding-1.0000
Ograp
             res abs
                              res fiss
                                              nes acat
          -6.37486/E-02
                          -2.167091E-06
                                          -7.42B92/E-05
  11
  D
           1.776590E-02
                         -1.16455ZE-04
                                           6.40800E-03
          -5.210091E-02
                          8.608940E-05
                                          -2.513370E-03
          -1.06165E-01 -1.266708E-05
                                          -1.75005/E-03
Occess resonance integrals
                   resolved
                  2,929545+02
Obbsorption
fission
                  1,35539E-01
- element time .27 min.
Du-228 1050 sigo-5+4 residens p-3 295k f-1/e-s(1,+5)
                                                                              92238
                                                                                        temperatures 975.00
Oresonence data for this ruclide
Orese ruther (a)
                                                     tencerature(kelvin)
                                                                              = 975,000
                                                                              = 5.3452973E-07
Opotential scatter signs = 10.890
                                                     lumped nuclear density
Ospin factor (g)
                          = 13130,600
                                                     lump distansion (a-bar)
                                                                              = 4.6812201E-01
                                                                              = 3.4269261E-01
Oinner radius
                          = .0000000E+00
                                                     dericoff correction (c)
Othe absorber will be treated by the northeim integral method.
Ones of enderator-1 = 15.995 signetper absorber atom;= 3.196766E-05
Omderator-1 will be treated by the northein integral method.
                                                  signs(per absorber atom)= 3,4266022E+05
Oness of moderator 2 = 255.051
Opplerator-2 will be treated by the northein internal aethod.
Othis resurence sesterial will be treated as a 2-disensional object.
Ovolume fraction of lump in cell used to account for spatial self-shieldings1.0000
Oppose
              res abs
                              res fiss
                                              res acat
```

```
-3,282632E-03 -5,090203E-04
                                         -3.151380E-03
  12
          -2.240102E-08 -2.553125E-04
                                         -1.052740E-0B
  ช
          3.933082E-01
                          7.47977Œ-02
                                         -1.1058/1E-02
          -3.82704/E-01 -6.9963/3E-02
                                         8.53910/E-03
Ocioces resorance integrals
                  resolved
Oabsorption
                  8.25191E+01
fission
                 9.08318E+00
- elapsed time
                 .27 min.
0 plutonium 239 endf/b-iv met 1264
                                               updated 10/13/89
                                                                            °9239
                                                                                       tenperature= 975.00
Oresonence data for this nuclida
                             256,999
                                                                             = 975.000
Oness runber (a)
                                                    temperature(icelyin)
Opotential scatter signa =
                              10,200
                                                   lumped nuclear density
                                                                            = 1.0774087E-04
Ospin factor (g)
                         = 6435.710
                                                   lump dimension (a-bar)
                                                                            = 4.6812201E-01
Oinner rectius
                          = .000000E+00
                                                   dencoff correction (c)
                                                                             = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
Omes of moderator-1 = 15.995
                                                 signatper absorber atom= 1.58/9110E+03
Oppderator-1 will be treated by the northeim integral method.
Oness of moderator-2 = 250.051 signs(per et
Oncderator-2 will be treated by the norcheim integral method.
                                                 signe(per absorber atom)= 1,70008/9E+03
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.00000
Ograp
                             res fiss
              res abs
                                             res acat
                          -9.05185Œ-02
  11
          -2.247174E-01
                                         -6.875905E-02
  12
          -1.9873\/E+00
                                         -2.615587E-01
                         -7.465539E-01
  ĩ
                         -3.828007E+00 -9.933720E-02
          -6.506670E+00
  14
          -2.074125E+00 -1.105918E+00
                                         -1.838/29E-02
Opicess resonance integrals
                  resolved
                 3.05743=+02
Osbeanstian
                 1.723/85+02
fission
- elepsed time
                  .28 min.
0 plutonium 260 endf/b-iv met 1265
                                               updated 10/13/89
                                                                             8330
                                                                                       temperatures 975.00
Oresonance data for this ruclide
Omes ruther (a)
                                                                             = 975.000
                                                   temperature(kelvin)
Ocotential scatter signa = 10.599
                                                   lumed nuclear density
                                                                            = 2.097309/E-05
                         = 669.24
Ospin factor (g)
                                                   lumo dimension (a-bar)
                                                                            # 4.6812201E-01
Oimer radius
                         = .0000000
                                                                            = 3.4269261E-01
                                                   dercoff correction (c)
Othe absorber will be treated by the northeir integral method.
Oness of moderator-1 = 15.995
                                                 signature absorber atomi= 8.1418721E+08
Oncderator-1 will be treated by the northein integral method.
Oness of moderator-2 = 238.051
                                                 signe(per absorber atom)= 8.733256E+08
Omderator 2 will be treated by the northein integral method.
Othis rescrence material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1,00000
approx
             res abs
                             res fiss
                                             res acat
                         -1.690/55E-06
                                         -2.56680E-04
          -5,648960E-05
  10
          -5.0070B2E-0B
                         -3.075440E-04
                                         -2.28537E-02
                         -9.211631E-04
                                         -2.116976E-01
  11
          -1.59254E-01
                         -1,200747E-02
  12
          -2,199039E+00
                                         -2.1081825+00
                         -1,67180Œ-03
  13
          -2.7251E-01
                                         -1.987130E-02
  14
15
                            .000000E+00
                                           .00000E+00
            .0000000
          1.75040E-02
                          3.30633E-06
                                         3.407707E-03
  16
          2,82561E+00
                          5,39270E-04
                                          3.5 K/OE-01
  17
          4.313114E+02
                          8.231768E-02
                                         3.839492E+01
                                         -6.4922EE+02
  18
          -8.23148E+03
                         -1.57101Æ+00
  19
          5,877919E+02
                          1,121827E-01
                                          4.667348E+01
 20
          -9.38(8:0E+01
                        -1.79114ZE-02
                                         1.79812/E+00
Opposes resonance integrals
                  resolved
```

```
Orbearption
                  4.49037E+03
                  1.8623=+00
 fission

    elassed time

                   .30 min.
0 plutonium 241 endf/b-iv met 1266
                                                 updated 10/13/80
                                                                              94241
                                                                                        temperature= 975.00
Oresonance data for this nuclide
Chass runber (a)
                          = 238,978
                                                     temperature(kelvin)
                                                                              = 975.000
Opportunitial acatter signs = 10.939
                                                     lumed nuclear density
                                                                              = 1.0380800E-05
Ospin factor (g)
                         = 16402,100
                                                                              = 4.6812201E-01
                                                     lump dimension (a-bar)
Oirner redius
                          = .000000E+00
                                                     dencoff correction (c)
                                                                              = 3,4269251E-01
Othe absorber will be treated by the northeim integral method.
Ones of moderator-1 = 15.995
                                                  signature absorber atom>= 1.5004189E+04
Onoderator-1 will be treated by the northeirs integral method.
Ones of moderator-2 = 238.051
                                                  signs(per absorber atom)= 1.6093961E+04
Oxoderator-2 will be treated by the northeim integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spetial self-shielding-1,0000
Oproup
              res abs
                              res fiss
                                              res scat
  12
                                           5.682180E-04
           -3.737381E-03
                          -3.81002E-03
                                          -2.221067E-02
  13
          -7.56/958E-01 -5.802743E-01
                          -5.134649E-01
          -7.322109E-01
                                          -1.785297E-05
  15
           1.785078E-02 1.600555E-02
                                          4.80529E-04
Ocuces rescreme integrals
                   resolved
Oubscript ion
                  5.07453E+02
 fission
                  4.2525+02
- elapsed time
                   .32 min.
0 plutonium 2/2 endf/b-iv met 1161
                                                undeted 10/13/89
                                                                              94242
                                                                                        temperatures 975.00
Oresonence data for this nuclide
Omes ruther (a)
                          = 240.145
                                                                              = 975.000
                                                     temperature(kelvin)
Occtential acetter signa =
                               10.694
                                                     lumbed nuclear density
                                                                              = 1.2793216E-06
Ospin factor (g)
                         = 6606.710
                                                     lump dimension (a-bar)
                                                                              = 4.6812201E-01
Oimer radius
                          = .00000E+00
                                                    dercoff correction (c)
                                                                              = 3.42698 E-01
Othe absorber will be treated by the northeim integral method.
Omes of moderator-1 = 15.995
                                                  signs(per absorber atom)= 1,33/6588E+05
Ompirator-1 will be treated by the northern integral method.

Omes of moderator-2 = 238,051 signe(per at
                                                  signs(per absorber atom)= 1,4314892E+05
Oxoderator 2 will be treated by the norchein integral method.

Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding=1,0000
(prosp
                              res fiss
             nes abs
                                              res scat
          -3.4095/E-03
  11
                            -000000E+00
                                          -9.32552E-03
          -7.25474E-02
  12
                            .000000E+00
                                          -1,407043E-01
  13
          -1.29776E-04
                            _000000E+00
                                          2.430201E-06
           8.12852£-02
                            .000000E+00
                                           1.520301E-02
                                          -2.064759E+00
  15
          -2.54104501
                            .000000E+00
           4.029600E-02
                            .000000E+00
                                          -3.450822E-03
           1,55038/E-02
                            .000000E+00
                                          -1.848193E-03
           1.112505-02
                            .000000E+00
                                          -1,43069E-03
  18
Opicess rescrence integrals
                  resolved
Oubscription
                  1.07547E+03
fission
                   .0000E+00
- elapsed time .32 min.
0am241 1056 sigp-544 newlacs 218mp p-3 288k
                                                                              95241
                                                                                        temperature= 975.00
Oresonence data for this nuclida
Omess number (a)
                         = 233,950
                                                                              = 975.000
                                                    terperature(lectvin)
Occiential scatter signa =
                               9,511
                                                    lurped nuclear density
                                                                             = 3.4056694E-07
Ospin factor (g)
                         = 52058,203
                                                    lump dimension (a-bar)
                                                                             = 4_6812201E-01
                         = .0000000E+00
                                                    dencoff correction (c)
                                                                             = 3,4269261E-01
Oimer radius
Othe absorber will be trested by the northeim integral method,
```

```
signs(per absorber aton)= 5.0139829E+05
Oness of moderator-1 = 15.995
Oncerator-1 will be treated by the northein integral method.
Omes of moderator-2 = 238.051
                                                   signs(per absorber atom)= 5.3781538E+05
Omogrator-2 will be treated by the northein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1,0000
              res abs
Ouroup
                              res fiss
                                              res scat
           4_BS7330E-01
                           1,209541E-02
                                           4.627123E-03
  ้ห
          4.587219E-01 -1.130258E-02 -5.07389XE-03
Ourcess resonance integrals
                   resolved
Orbearption
                   1.93/33=+02
                  1.07581E+00
 físsion
- elepsed time .32 min.
Oan 243 1057 218 gp at f-1/e-m 090376 p3 285k
                                                                                         temperature= 975.00
                                                                               95243
Oresonence data for this ruclide
                                                                               = 975.000
Orass ruther (a)
                          = 240,940
                                                     temperature(leglyin)
Opotential scatter signs = 9.511
                                                     lumped nuclear density
                                                                               = 1.1812768E-07
                          = B2052_602
                                                     lum dimension (a-bar)
                                                                               = 4.6812201E-01
Ospin factor (a)
Direction
                          = .000000E+00
                                                     dencoff correction (c)
                                                                              = 3.4269261E-01
Othe absorber will be treated by the northein integral method.
                                                   signs(per absorber atom)= 1.445521E+06
Oness of moderator-1 = 15.995
Oncderator-1 will be treated by the northein integral method.
                                                  signs(per absorber aton)= 1.556435+06
Oness of accorator-2 = 238.051
Omoderator-2 will be treated by the morcheim integral method.

Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spetial self-shielding-1.0000
Outroup
              res abs
                              res fies
                                              nes scat
           -7.920\27E-03
                             .000000E+00
                                            4.00857E-04
  13
           1.597974E-02
                             -00000E+00
                                           1,45215-04
Ocicess resonance integrals
                   resolved
Osbsorption
                  1_60142E+02
 fission
                   .0000E+00
- elapsed time
                   .⊋ min_
0 curium 244 endi/to-iv met 1162
                                                 undsted 10/13/89
                                                                               96244
                                                                                         temperatures 975.00
Orescrence data for this ruclide
Chaes runber (a)
                          = 242.133
                                                                               = 975.000
                                                     temperature(kelvin)
Opotential scatter signs = 10.320
                                                     luroed nuclear density
                                                                               = 1.129950E-08
                          = 5251.150
                                                                              = 4.6812201E-01
Ospin factor (g)
                                                     lump dimension (a-bar)
Oirmer radius
                          = .000000E+00
                                                     denceff correction (c)
                                                                              = 3.4269261E-01
Othe absorber will be treated by the northelm integral method.
Omess of moderator-1 = 15.995
                                                   signs(per absorber atom)= 1.5111569E+07
Oncderator-1 will be treated by the northein integral method.
Oness of accierator-2 = 258.051 signs(per absorber aton)= 1.6209140E+07 Oncderator-2 will be treated by the northern integral method.
Othis rescrerce autorial will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1,00000
OETGLED.
              res abs
                              res fiss
                                              res scat
  11
           2.2417792-04
                           6.14474E-06
                                           2.592307E-04
                           2.80428/E-05
  12
           5.777049E-04
                                           9.876 BEE-05
  13
           2.536/57E-03
                           1.25777E-04
                                           7.055791E-04
           2.97525E-02 1.780067E-05
                                           5.875189E-04
Ocicess rescretoe integrals
                   resolved
                  4 13835E+02
Orbitan
 fission
                  3.54181E+01
                   .33 min.
- element time
  elected time .33 min.
      this section working table was created 02/16/96 at 10:02:17
```

	perent case is as for oup nautron burnup (
	b version 4 data wit		version 5 f	ission products		
corpiled fo			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
tape id		4321	nut	er of nuclides		65
number of ne		27		seriot bassa aucrib	5	Ò
first thermal	auch	. 15		ical unit		4
44		le of cor			2.4	999
hydrogen	ions normalized to 1. endf/b-iv met 1269/			10/11/00	id id	1001
	p 042375 p-3 293k	u a micoz	quadas	id play	id	5010
barar-11	end /b-iv met 1160		undsted	10/13/89	id	5011
0xygen-16	erdi/o-iv mat 1276			10/13/89	id	8016
aygan-16	endif/b-iv met 1276			10/13/89	id	6
kr-83	mt=102,108,108,105,	106,107	updated	10/13/89	id	36083
kr-85	nt= 102	-			id	36065
a∿20	at=102			10/13/89	id	38090
y-89	st=102		upaetea	10/13/89	id	39059
zr-93 .	mt= 102			40:07:00	id	40075
21-94	at=102 at=102			10/13/89 10/13/89	id id	40094 40095
zr-95 zircelloy	endf/b-iv met 1284			10/13/89 10/13/89	id	40502
rb-94	st=102			10/13/89	ũ	41094
mo-95	mt=102			10/13/89	id.	42075
tc-99	st=102			10/13/89	id	43077
ru-101	mt=102			10/13/89	. id	44101
ru-106	mt=102			10/13/89	id	44106
rh-103	mt=102		updated	10/13/89	id	45108
rh-105	nt= 102				id	45105
pd-105	mt=102			10/13/89	id	46105
pt 108	mt=102			10/13/89	id id	46108
silver-109	endf/b-iv mat 1139			10/13/89		47109 51124
sb-124 xe-131	mt=102 mt=102,105,104,105,	106		10/13/89 10/13/89	id id	54131
xe-152	mt=102,100,104,100,	10%		10/13/89	นี	54132
xenor-135	mt=102,103,104,105, erclf/b-1v mat 1294	~~	undeted	10/13/89	ä	弘宝
xe-136	mt= 102, 103, 1	04. 105.	107	.4 -4	id	54136
cesium-133	nt= 102, 103, 1 erclf/b-iv mat 1141	,,	uzdated	10/13/89	id	55133
CS-134	mt=102			10/13/89	id	55134
C3-135	sat= 102		•		id	55155
cs-137	mt=102			10/13/89	id	20137
ba-136	Ht=102			10/13/89	id	56136
la-139	mt=102 mt= 102		upakes	10/13/89	id id	57139 58144
ce-144 pr-141	mt=102,105,104,105,	106 107	(erleted	10/13/89	1 2	59141
pr-143	st=102	iw, iw		10/13/89	ũ	59143
ដែរ	sst=102			10/13/89	id	60143
nd-145	mt=102			10/13/89	id	60145
nd-147	mt=102			10/13/89	id	60147
pn-147	at=102		updated	10/13/89	id	61147
pn-148	ant= 102				id	61148
Sm-147	endf/b v fission pr	cdet		10/13/89	id	62147
sm-149	mt=102,103,107			10/13/89	id	62149
sm-150	mt=102	104 107		10/13/89	id id	62150 62151
sm-151 sm-152	mt=102,103,104,105, mt=102,103,104,105			10/13/89 10/13/89	id	62152
er 123	mt=102,103,104,105, mt=102,103,104,105,	105,107		10/13/89	id	छाञ्च
au-154	mt=102,105,104,105	106,107		10/13/89	id.	63154
er 155	mt=102,105,104,105	105,107		10/13/89	id	හාන
g 1 -155	mt=102			10/13/89	id	64155

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hadadadada		***
	program verification information	100
MARKE		***
	code system; scale version: 4.2	***
	•	Add

***		*****

-	progress c0c001	tubah.
	• -	***
	creation date: 04/27/95	944
		944
MANA	library: /nautronics/scale/exe	***
lands		***
		Selection of the contract of t
AAAA	this is not a scale configuration controlled code	444

	johreme: clavia	****

	date of execution: 02/16/96	***
	Al	***
	time of execution: 10:03:24	***

800 d, sas2h: beboook willook 15x15, 3.00x1X, 20x4/wtu burn high temp -1q array has 1 entries.

```
1q array has
                           Tomtries.
                           10 entries.
         2g array has
         3q array has
                           12 entries.
                           9 entries.
         40 array has
                           12 entries.
         50 array has
Odirect access unit 9 requires 12 blocks of length 704 for cross section mixing.
1 850 d, see2h: bebook wilcox 15x15, 3.00x12, 20g-d/mtu burn high temp
Openeral problem description data block
                                  ceneral problem deta
                                                    isn cuscreture order
 ige 1/2/3 = plane/cylinder/sphere
 ian number of zones
                                                    lact order of scattering lent 0/1/2/3/4/5/6-0/k/alpha/c/z/r/h
 im number of special intervals
                                                    ing irrer iteration seximum
 ibl 0/1/2/3 = vecus/refl/per/shite
                                                                                              ਡ
 ibr right boundary condition
                                                    ion outer iteration maximum
                                                    iclc -1/0/n--flat res/sn/qpt
                                                                                              n
mox runber of mixtures
                                          65
                                                    ith Q/1 = forward/adjoint
                                                                                               0
     mixing table length
                                                                                              Ô
                                          \widetilde{\mathbf{z}}
 ign runber of energy groups
                                                    iffly not used/alvess with
                                                    iprt -2/-1/0/remixture xsec print idl 0/1/2/3-ro/prt rd/pth n/poth
                                          27
rms number of neutron groups
                                           ٥
ngs runber of gamma groups
iftg number of first thermal grap
                                          15
                                                    icht -1/0/i=none/fine/all bal. prt
                                                                                              0
                                   special options
                                                    im 0/1/2 diff. coef. param
                                                                                               Ω
 ifg Q/1 = none/weighting calculation
                                                    idim 0/1 = none/density factors 38*
 ion volumetric sources (O/n=ro/ves)
                                                    laz Q/n = name/n activities by zone
 ion boundary sources (O/mmp/yes)
 ifn 0/1/2 = input 35*/34*/use last
                                          53
                                                        O/1=rore/activities by interval
                                                                                               0
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                                                    ifet O/1=ro/yes upscatter scaling
                                                                                               ā
 itms maximum time (mirutes)
                                                    lost 0/1/2-ro/k/altha parametric srth
                                           Ω
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 idt1 0/1/2/3=rp/sect/srce/flux--aut
ist broad group fluxes
ibln activity data unit
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itkl 0/1/2 buckling geometry
                                    weighting data (lfg=1)
                                                    ihtf total xsect pan in brd ap tables
 icon -1/0/1=cell/zone/region weight
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 ignif runber of broad groups
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                                                    rust table length or most order
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 ito 0/10/20/30/40 0/c/e/ac/a
      -2/-1/0/magted xsect print
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      -1/n anish xsect print
 iap
                                   floating point parameters
                                                                                      -0000E+00
eps overall convergence
                                 1.0000E-04
                                                         cyl/pla ht for buckling
                                 1.0000E-04
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ptc point convergence
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e٧
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em eigenelus modifier
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     this case will require
                                   255 locations for inixing
     this case has been allocated 200000 locations
                        850 d. sas2h: baboock wilcox 15x15, 3.00x15, 20pxd/mtu burn high temp
                          & entries.
        13g array has
                          & entries.
        14d array has
0
        150 array has
                          6 entries.
                                       data block 2 (mixing table, etc.)
                                                            mixing table
                                                                                                          extra
0
     nucl ides
                                                                                                       xsect id's
                  identification
                                                  mixture
                                                                           atom density
       on tape
                                                            CURLOTERE
                                                                           4.02593E-04
           977
                                                               92235
          1001
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                                                                           4.4480DE-06
                                                                           5.5114ZE-05
          5010
                                                               92236
                                                                           2.18274E-02
                                                               92238
```

5011

5	8016	1	8016	4.5535XE-02
5 6 7			ωŅ	2.09710E-02
0	6	2	56	
7	36083	•	36083	1,42718E-06
8	36065	•	1 36085	6.864DE-07
ŏ	38090		30000	1.5626E-05
~			38050 35089 42095 1 40095 1 40094 1 40095 1 41094	1,2385E-05
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16	42095		43099	1.9160SE-05
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40	44101		43099 45108 45105	2.256/E-08
ю				2.210(2-0)
79	44105		44101	1.73087E-05
20	4510B	1	44106	2.62775E-06 6.85047E-06
21	45105 46105	•	46105	6.8 4 049E-05
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#	4010		(7100	1.767E W
چ	40105	1	47107	12012-10
24	47109	1	i 51124	3.0/8/AE-10
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- ⊼	5/131	•	54132	1.649475-05
37	5/170		£/.13E	4 4778E-00
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25	541.55	1	1 24126	3.300 (02:40)
29	54136	1	1 55134	9.57401E-07
30	55133	1	1 5 51765	1.05022E-05 2.0525E-05
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升	끄다	;	5/17/	1.931252-07
×	20120		30130	1.301ZE-U
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20	20144	1	20194	0.70002-00
37	59141		00143	1.59150E-05 1.17542E-05 4.0225E-06 1.1777E-08
38	59143	1	1 60145	1.173422-05
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42	59141 59143 60143 60145 60147 61147	•	02147	1,40155E-06 8,69582E-08
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53	92234		5 5010	3.855E-05
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57	95257	1	94298	5.3/630E-07
58	9238	1	94239	1,07741E-04
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4	96241		9282	
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	65 ' 96244	1	999	1.00000E-20		
-	elapsed time .00 min.					•
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0	39q array has 4 entries.					
Ö	40q array has 4 entries. 47q array has 27 entries.					
ŏ	51g array has 27 entries.					
1	880 d, sas2h: l	beboook wilcox 15x15,	3.00.cx, 20g	ud/tatu burn hi:	sh terp	
0		up parameters ghted broad go	calc	aurb	right	left
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		867E+06 18	0 0		1.0000E+00 1.0000E+00	
		002E+06 19 BREE+05 20	ŏ	20	1.000E+00	
	21 4.0000E-01 1.70844E+01 8.17	974±405 21 070±405 22	ŏ	21	1.0000E+00	
	22 3.2500E-01 1.72420E+01 6.90	070:+05 22	0	<u>22</u>	1.0000E+00	
		235+06 25 7655+06 24 8275+06 25	0		1.0000E+00	
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1	mixture order p(l)	beboock wilcox 15x15, activity table	Suma, 24	quedrature con	giusip stants	
٠		l no. reaction	weights	directions	refl direc	HC X COS
	1 1 3		0	-2.7900/E-01	3	. O COTE/OF. (77
	2 1 3 3 3			-1.9728XE-01 1.9728XE-01	3 2	-9.96548E-03 9.96548E-03
	3 2 3 4 3 3			-6.0419E-01	8	0
	3			-5.58410E-01	8	-3.10/50E-02
	<u>6</u>			-2.31301E-01	7	-1,2550E-02
	7		5.595E-02	2.31301E-01 5.58410E-01	ę	1.265/8E-02 3.10/50E-02
	2 1 3 3 2 3 5 6 7 8		0	-8.50774E-01	5 15 15 14	0
	10 11			-8.2178/E-01	15	-4.2965E-02
	11	•		-6.015899-01 -2.201965-01	1% 13	-3.14537E-02 -1.15128E-02
	Κ π		5.2204E-02	2.20196E-01	12	1,15129E-02
	12 13 14		5.228//E-02	6.0158E-01	11	3.14557E-02
	15		5.228\ /E -02	8,2178/E-01	10	4.2966E-02

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-9.83052E-01
                                                                                                                                                               XXX
                                                                                                           4.5356E-02 -9,64143E-01
                                                                                                                                                                             -4.37099E-02 :
                                                                                                           4.5355E-02 -8.17361E-01
                                                                                                                                                                             -3.70XXE-02
                                                                                                           4.5350E-02 -5.46143E-01
                                                                                                                                                                             -2.47597E-02
                                                                                                           4.5350E-02 -1.91780E-01
                                                                                                                                                                             -B.6944E-03
                                                                                                                                                                               8.6944E-03
                                                                                                          4.53365E-02 1.91780E-01
                                                                                                          4.5357E-02 5,46143E-01
4.5355E-02 8.17361E-01
                                                                                                                                                                               2,47597E-02
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Ourstants for p( 3) scattering
Ourgl set 1 set 2 set 3 set 4 set 5
1 -2,7500/E-01 8.83256E-01 6.741/3E-02 -6.16919E-01 -1.71701E-02
         2 -1.9729E-01 8.8525E-01 .0000E+00 -4.3622E-01 1.21411E-02
         3 1,972BXE-01 8.83236E-01
                                                              .0000E+00 4.3622E-01 -1.2141E-02
         4 -6,0419E-01 4,52016E-01 3,16379E-01 -8,0445E-01 -1,7456/E-01
         5 -5,58410E-01 4.52016E-01 2.23714E-01 -7,43201E-01 -6.68028E-02
        6 - 2.31301E-01 4.52016E-01 - 2.25713E-01 - 3.07844E-01 1.61276E-01 7 2.31301E-01 4.52016E-01 - 2.25713E-01 3.07844E-01 - 1.61276E-01 8 5.58410E-01 4.52016E-01 2.25713E-01 7.43201E-01 6.68028E-02 9 - 8.50776E-01 - 8.57250E-02 6.2683E-01 - 1.58856E-01 - 4.86550E-01
      17 -9.6442-01 -4.49528-01 7.7518-01 4.9103-01 1.46542-01 19 -5.4642-01 -4.49528-01 3.2025-01 4.16502-01 1.46542-01 2.76176-01 7.3672-01 2.76176-01 -4.49528-01 -7.751812-01 9.76824-02 4.17252-01 2.1.917602-01 -4.49528-01 -7.751812-01 9.76824-02 -4.17252-01 2.5.46432-01 -4.49528-01 -3.20252-01 -2.781762-01 -7.36578-01 2.8.17362-01 -4.49528-01 -3.20252-01 -2.781762-01 -7.36578-01 2.8.17362-01 -4.49528-01 -3.20252-01 -4.49528-01 -1.46542-01 -1.46542-01 -1.46542-01
       24 9.64 K3E-01 -4.49528E-01 7.73181E-01 -4.91083E-01 6.2438E-01
         1 0 1.29551E-02 1 0 2.5970E-02 4.3340E-02 1 0 1.6279E-01 3.81835E-01 4.1426E-01 1.74155E-01 1 7.17848E-01
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                                                                                 7.178/æ-01 1.3110/æ-01 1.0000æ-00 1.470/æ-01 1.27890æ-01 1.0000æ-00 2.259/æ-01 1.27890æ-01 1.0000æ-00 2.59/æ-00 9.30/æ-02 1.0000æ-00 2.9410æ-00 4.09/æ-03 0 2.9500æ-00 1.178/æ-02 0 2.978/æ-00 1.178/æ-02 0 2.978/æ-00 4.4602æ-03 0 3.0839æ-00 2.662/æ-02 1.0000æ-00 3.299/æ-00 8.2177/æ-02 1.0000æ-00 3.299/æ-00 8.2177/æ-02 1.0000æ-00 3.378/æ-00 2.978/æ-02 1.0000æ-00
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        5 2.3/05/E-01 2.5/95/6E-01 6 3.58/7E-01 3.806/2E-01 7 4.0/35/E-01 4.24/78/E-01 8 4.422/2E-01 4.55/2E-01
       9 4.68122E-01 4.68814E-01
10 4.69507E-01 4.71481E-01
       11 4.79/56E-01 4.75/31E-01 12 4.77/00E-01 4.78/30E-01 4.78/30E-01 4.8/319/E-01 4.8/30E-01 4.8/30E-01 4.8/30E-01 4.9/30E-01
        15 5.1245E-01 5.2490SE-01
       16 5.37362E-01 5.41731E-01 17 5.46100E-01 5.53513E-01
                                                                                    3.3763/£+00 2.9742/E-02 1.0000E+00
                                                                                    3.4312E+00 5.15631E-02
3.5240E+00 7.15548E-02
                                                                                                                                  1.0000E+00
                                                                                                                                  1,0000E+00
        18 5.60725E-01 5.70700E-01
                                                                                    3.647/KE+00 1.1462/E-01 1.0000E+00 3.8420/E+00 2.7816/E-01 1.0000E+00
        19 5,8087/E-01 5,96175E-01
        20 6.11479E-01 6.45759E-01
                                                                                    4.27278E+00 3.07702E-01
                                                                                                                                 1.0000E+00
       21 6.8008/E-01 7.1/313E-01
                                                                                    4.7054E+00 1.46675E-01 1.0000E+00
        22 7.48592E-01 7.63895E-01
       25 7.79193E-01 7.89167E-01
                                                                                    4.85582E+00 9.89116E-02 1.0000E+00
                                                                                    5.0215E+00 7.51357E-02 1.0000E+00
       24 7.99141E-01 8.00554E-01
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5,46100E-01 5.53513E-01 3,4312E+00 5.15631E-02

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5.11/31E+00
   25 8.1396E-01
- elapsed time .00 min.
1 outer irrer 1 - balance eigenvalue 1 - source 1 - scatter 1 - upscat
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          124 -4.56957E-06 1.05027E+00 -3.30817E-02 1.0000E+00 -1.13682E-02
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         190 1.53565E-05 1.03327E+00 -8.0419E-04 -3.40285E-03 -1.8259E-03
         23 -1,6674E-05 1.05412E-00 -1.3693E-04 -5.07654E-04 -4.3567E-04
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      4 202 1.94148E-05 1.0538E+00 -3.16278E-05 -1.22508E-04 -1.00750E-04
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7.61077E-08
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      5 309 -1.45963E-05 1.05425E+00 -7.58119E-06 -2.82615E-05 -2.13481E-05 .00000E+00
             final monitor
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                                                   production/absorption 1.05409E+00
                     Landada 1.05409E+00
   elepsed time
                   .02 min.
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redius int. midpoint ares volume prod density
0000005:00 1.295515-02 .000005:00 2.105065-03 3.020515-03
                       radius int. midpoint area
0 int. zone runber
                     .0000E+00 1.275 E-02 .0000E+00 2.5710E-02 4.3500E-02 1.6278E-01
                                                              9.46818E-03 1.35900E-02
                      6.07710E-02 8.75100E-02 3.81855E-01 2.9405E-02 4.21756E-02
                      1.142/9E-01 1.74155E-01 7.176/8E-01 1.3110/E-01 1.897/6E-01
                      2.34061E-01 2.95067E-01 1.47065E+00 2.2129XE-01 3.2565E-01
                                                 2.22%5E+CD
                                                                            1.99416-01
                      3,53873E-01 3,80612E-01
                                                              1.2760E-01
                                                              9.30425E-02 1,44661E-01
                      4.07351E-01 4.24781E-01
                                                 2.55946+00
                                                 2.7750E+00 7.4100/E-02 1.17536E-01
                      4,42212E-01 4,55167E-01
                      4,68122E-01 4,6881/E-01
                                                 2.94130E+00 4.07946E-05
                                                                              ,00000E+00
                      4,69507E-01 4.71481E-01 2.95000E+00 1.16989E-02
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                      4.73456E-01 4.75431E-01
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                      4.77405E-01 4.78096E-01
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    12 13 14 15
17 18 18 18
                                                 3,008335+00 2.65265-02
                                                                              .0000E+00
                      4.78790E-01 4.83159E-01
                      4.87529E-01 4.99987E-01 3.06329E+00 7.82768E-02
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                      5.124/SE-01 5.26/USE-01 3.21979E+00 8.21777E-02
                                                                              ,0000E+00
                      5.37362E-01 5.41731E-01 3.37634E+00 2.97427E-02
                                                                              .0000E+00
    16
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5.60926E-01 5.70900E-01 3.52440E+00 7.15548E-02
                                                                                         _00000E+00
                          5.80874E-01 5.95179E-01 3.64974E+00 1.14629E-01
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                          6.11475E-01 6.45755E-01 3.84201E+00 2.78169E-01
                          6.80034E-01 7.14313E-01 4.27278E+00 3.07702E-01
                                                                                          .0000E+00
                         7.45592E-01 7.6535E-01 4.2725E-00 3.0745E-01 .0000E-00 7.745592E-01 7.6555E-01 4.85552E-00 9.8714E-02 .0000E-00 7.5754E-01 8.06554E-01 5.0215E-00 7.5157E-02 .0000E-00 8.1354E-01 5.11431E-00 20 d, ses2n: betcck wilcox 15x15, 3.00x42, 20g-c/mtu turn high temp
0 total flux
           1,6066E+00 1,4777E+00 1,3590E+00 8,56679E+01 7,21647E+01 6,60181E+01 3,75047E+01 2,0705/E+01
      23 1,605/4:00 1,47152:00 1,558/2:400 8,558/3:01 7,2102/6:01 6,58/3:01 3,748/4:01 2,059/4:01 2,059/4:01 7,202/6:01 6,58/2:01 3,74/0:01 2,059/6:01 7,202/6:01 6,58/2:01 3,74/0:01 2,0550:01
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0 int. grp. 17 grp. 18 grp. 19 grp. 20 grp. 21 grp. 22 grp. 23 grp. 24 1 8.09/22-02 3.155/45-02 1.17/955-01 4.160/05-01 1.09/45-01 1.656/45-01 6.4/0/35-01 4.510/16-01
                                    2 8.0211E-02 3.1567E-02 1.1744E-01 4.1975E-01 1.0276E-01 1.6770E-01 6.4640E-01 4.8076E-01 3.8.0275E-02 3.16152E-02 1.1756E-01 4.16166E-01 1.0258E-01 1.6630E-01 6.4767E-01 4.8168E-01
                         3 8.0256E-02 3.16152E-02 1.1756E-01 4.1616E-01 1.0258E-01 1.663E-01 6.4767E-01 4.868E-01 4.8656E-01 3.2784E-02 1.1822E-01 4.17578E-01 1.0668E-01 1.6668E-01 6.5340E-01 4.6670E-01 6.8526E-01 4.778EE-01 6.8526E-01 4.970EE-01 6.8526E-01 4.970EE-01 6.8526E-01 4.970EE-01 6.8526E-01 4.970EE-01 6.8526E-01 4.970EE-01 6.8526E-01 4.970EE-01 1.0776E-01 1.8726E-01 6.8527E-01 5.1307E-01 7 8.3345TE-02 4.200EE-02 1.2626E-01 4.2637E-01 1.1194E-01 1.9434E-01 6.95126E-01 5.2500E-01 8 8.4044E-02 4.2642E-02 1.2402E-01 4.2853E-01 1.1194E-01 1.9434E-01 6.95126E-01 5.33172E-01 8.44710E-02 4.6622E-02 1.2402E-01 4.2853E-01 1.1448E-01 2.0436E-01 7.0548E-01 5.33172E-01 10 8.44710E-02 4.7753E-02 1.2402E-01 4.2863E-01 1.1526E-01 2.0638E-01 7.1140E-01 5.33073E-01 11 8.46562E-02 4.7426E-02 1.2466E-01 4.2991E-01 1.1576E-01 2.0638E-01 7.1446E-01 5.33073E-01 12 8.46113E-02 4.7604E-02 1.2466E-01 4.3004E-01 1.1580E-01 2.0638E-01 7.1446E-01 5.4476E-01 13.84763E-02 4.7604E-02 1.2604E-01 1.2605E-01 1.1580E-01 2.0638E-01 7.1446E-01 5.4476E-01 13.84763E-02 4.7604E-02 1.2605E-01 1.1580E-01 2.0638E-01 7.7446E-01 5.4476E-01 13.84763E-02 4.7604E-02 1.2605E-01 1.1580E-01 1.2605E-01 7.7446E-01 5.4476E-01 13.84763E-02 4.7604E-02 1.2605E-01 1.2605E-01 1.2605E-01 7.7446E-01 5.4476E-01 13.84763E-02 4.7604E-02 1.2605E-01 1.2605E-01 1.2605E-01 7.2606E-01 7.7466E-01 1.2606E-01 1.2606E-01 1.2
                         13 8.47298-02 4,78468-02 1,25128-01 4,30428-01 1,16208-01 2,05548-01 7,161248-01 5,46028-01 18,50398-02 5,05688-02 1,26588-01 4,31598-01 1,17238-01 2,14458-01 7,21888-01 5,45028-01 15 8,550708-02 5,150618-02 1,2658-01 4,31078-01 1,18538-01 2,14458-01 7,28038-01 5,55338-01 16 8,557028-02 5,150618-02 1,27428-01 4,347608-01 1,18538-01 2,166618-01 7,25398-01 5,59428-01 17 8,609828-02 5,221018-02 1,27428-01 4,347608-01 1,20228-01 2,18028-01 7,359618-01 5,59428-01 18 8,641128-02 5,315978-02 1,27428-01 4,347608-01 1,20228-01 2,21728-01 7,442718-01 5,64448-01 19 8,67728-02 5,431528-02 1,26588-01 4,367608-01 1,22528-01 2,24748-01 7,442718-01 5,74748-01 20 8,77298-02 5,47538-02 1,26588-01 4,38148-01 1,26588-01 2,24748-01 7,56088-01 5,74288-01 2,875998-02 5,67538-02 1,26688-01 4,39088-01 1,26088-01 2,321978-01 7,60398-01 5,86088-01 2,875988-02 5,66158-02 1,26088-01 4,39108-01 1,26088-01 2,321608-01 7,60398-01 5,86088-01 2,875988-02 5,66158-02 1,26708-01 4,390898-01 1,26638-01 2,321608-01 7,60388-01 5,86088-01 1,26638-01 2,321608-01 7,60388-01 5,86088-01 1,26638-01 2,321608-01 7,60388-01 5,86088-01 1,26638-01 2,30388-01 7,60388-01 5,86088-01 1,26638-01 2,30388-01 7,60388-01 5,86088-01 1,26638-01 2,30388-01 7,60388-01 5,86088-01 1,26638-01 2,30388-01 7,60388-01 5,86088-01 1,26638-01 2,30388-01 7,60388-01 5,86088-01 1,26638-01 2,30388-01 7,60388-01 5,86088-01 1,26638-01 2,30388-01 7,60388-01 5,86088-01 1,26638-01 2,30388-01 7,60388-01 5,86088-01 1,26638-01 2,30388-01 7,60388-01 5,86088-01 1,26638-01 2,30388-01 7,60388-01 5,86088-01 1,26638-01 2,30388-01 7,60388-01 5,86088-01 1,26638-01 2,30388-01 7,60388-01 5,86088-01 1,26638-01 2,30388-01 7,60388-01 5,86088-01 1,26638-01 2,30388-01 7,60388-01 5,86088-01 1,26638-01 2,30388-01 7,60388-01 5,86088-01 1,26638-01 2,30388-01 7,60388-01 5,86088-01 1,26638-01 2,30388-01 7,60388-01 5,86088-01 1,26638-01 2,30388-01 7,60388-01 5,86088-01 1,26638-01 2,30388-01 7,60388-01 5,86088-01 1,26638-01 2,30388-01 7,60388-01 5,86088-01 1,26638-01 2,30388-01 7,60388-01 5,86088-01 1,26638-01 2,30388
24. 8,7998E-02 5,6303/E-02 1,2523E-01 0 int. 9tp. 25 9tp. 26 9tp. 27 1 2,00502E-01 1,2219E-01 1,615/A-02 2,0056/E-01 1,2279E-01 1,615/A-02 3 2,008/AE-01 1,2279E-01 1,637/AE-02 4 2,008/AE-01 1,307/AE-01 1,657/AE-02 5 2,007/AE-01 1,307/AE-01 2,0500E-02 7 2,2210/E-01 1,476/AE-01 2,0500E-02 9 2,256/AE-01 1,476/AE-01 2,476/AE-02 12,2305/AE-01 1,506/AE-01 2,560/AE-02 12,2306/AE-01 1,506/AE-01 2,560/AE-02 12,336/AE-01 1,556/AE-01 2,560/AE-02 12,560/AE-02 1
                              14 2.3579E-01 1.5520E-01 2.5637E-02 15 2.3682E-01 1.55636E-01 2.6085E-02 16 2.36250E-01 1.57050E-01 2.6085E-02
                              17 2.39925E-01 1.58962E-01 2.6969/E-02 18 2.42697E-01 1.61755E-01 2.79907E-02
                                19 2.4608E-01 1,65360E-01 2,91890E-02
                                20 2.50714E-01 1.70280E-01
                                                                                                                                                                                                          3.0765E-02
                             21 2.5400E-01 1.7630E-01 3.2065E-02 22 2.55216E-01 1.7630E-01 3.2440E-02 25 2.5475E-01 1.7630E-01 3.260SE-02 24 2.5390E-01 1.7630E-01 3.260SE-02 24 2.5390E-01 1.7630E-01 3.260SE-02

    elapsed time .02 min.

         If ire grap summery for zone 1 by grap including sum for all graps in line 28
     0 grp. fix source fiss source in scatter alf scatter out scatter absorption Laskage belance
. 1 .00000=00 2.25947E-02 .0000E+00 1.2895E-02 1.07394E-02 3.2605E-08 1.1520E-02 9.9863E-01
                                 2 .00000+00 1.9978E-01 2.57978E-03 1.6785E-01 1.6785E-02 1.5628E-02 1.5638E-01 1.0000E+00 3.0000E+00 1.7878E-01 2.6660E-02 1.6478E-01 8.423E-02 1.5628E-02 1.6389E-01 1.0000E+00 4.0000E+00 1.2897E-01 3.9785E-02 1.0553E-01 6.7746E-02 7.37876E-03 8.7647E-02 1.0000E+00
                                    5 .0000E+00 1.644/2E-01 6.6167E-02 2.5866E-01 9.4750E-02 4.354/2E-03 1.33160E-01 9.55552E-01
                                                          .0000E+00 1.7710E-01 1.3643E-01 6.5383/E-01 5.4373/E-02 6.83651E-08 2.5077/E-01 1.000/E+00
                                                            .0000E+00 8,7520E-02 9.653E-02 7.465E-01 3.6352E-02 7.4047E-05 1.4258E-01 1.0001E+00
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8 2.050E+00 2.0878E+02 2.0578E+02 .000E+00 .000E+00 .000E+00 .5.578E+02 1.663E+02 2.5376E+02 .000E+00 .000E+00 .000E+00 .000E+00 .5.778E+02 11 1.3816E+00 -5.5278E+02 1.3636E+00 -5.5278E+02 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .00
                                                                                                                                                                                                                                                                      ,000E+00
,000E+00
,000E+00
                                                                                                                                                                                                                                                                                                                   .000000 5.0785E-02
.000000 4.6389E-02
.000000 4.245E-02
                                     .00000E+00
                                                                                  ,0000E+00 1,859XE-02 2,350XE-01 3,211XE-03 3,2012E-04 1,5027E-02 1,0000E+00
                                                                                   .0000E+00 1,2599E-02 2,3522E-01 1,1829E-05 3,44813E-04 1,0812E-02 1,0000E+00
                                     .0000E+00
                                                                                   ,0000E+00 2,1649E=03 1,58540E+01 7.6887E+05 2,95027E+04 -5,76940E+03 1,0000E+00
                                      .000000
                                                                                    .0000E+00 7_6722XE-08 1_05249E-01 8_7769XE-04 1_110X4E-08 5_6844SE-08 9_9999XE-01
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10 .0000E+00 .0000E+00 8,78975E-04 8,5702EE-02 8,50321E-04 8,34940E-04 -8,08245E-04 9,99975E-01
       -00000E+00
              .00000E+00 8.5085E-04 7.7216/E-02 8.72047E-04 1.33985E-08 •1.3615EE-08 9.99997E-01 •
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11	.0000E+00	.00000E+00	7.01225E-01	8.03947E-01	6.4415E-01	4.58187E-04	5.66533E-02	9.977X0E-01
12	.0000E+00	.0000E+00	5.6069EE-01	4.20470E-01	4.94739E-01	5.98279E-04	6.53774E-02	9.99979E-01
13	.00000E+00	.00000E+00	4.9087E-01	3.3778E-01	4.33197E-01	8,9754E-04	5.660BTE-02	9.99969E-01
4	.00000E+00	.00000E+00	4.70437E-01	3.20692E-01	3.83091E-01	1.45134E-03	8.5900E-02	9.999BE-01
15	.0000E+00	_0000E+00	2.50B9Œ-01	1.28231E-01	2.40229E-01	1.27767E-05	8.8706/E-03	1.00007E+00
16	.00000=+00	.0000E+00	1.6600E-01	5.385//E-02	1.98/89E-01	8.719225-04	6.42820E-03	1.0000E+00
17	.0000E+00	.0000E+00	8.5237SE-02	1.47529-02	7.66513E-02	4.150E-04	8.16807E-03	1.00007E+00
1/	.0000=000	.00006+00	7.52769E-02	9.1858 E-(B	5.01989E-02	2.810825-04	2.4780E-02	1.00005E+00
18		**********					1.375ZE-02	1.0000E+00
19	.000000	.000000	1.21976E-01	3.23965-02	1.07900E-01	7.03388E-04		
20	.0000E+00	.0000E+00	2.95567E-01	2.36429E-01	2.6731/E-01	3.02475E-08	2.61979E-02	1.00010E+00
21	.000E+00	-00000E+00	1.37852E-01	4.32250E-02	1.12448E-01	1.071026-05	2.4322E-02	1.0000E+00
22	.0000E+00	.000E+00	2.5926E-01	1.20520E-01	1.8755Œ-01	2.29087E-08	6.905E-02	1.0000E+00
25	.000000	.00000E+00	₹0000 E-01	7.16/51E-01	4.70474E-01	1.05289E-02	1.2625/E-01	1.0002E+00
22 23 24 25	.0000E+00	,000E+00	6.15921E-01	6.381356-01	4.92532E-01	1,15659E-02	1.1175Œ-01	1.00002E+00
25	.0000E+00	,00000E+00	3.9766E-01	2.6100BE-01	3.35781E-01	6.61997E-03	5.52590E-02	1,00001E+00
2 5	.00000E+00	.0000E+00	3.14313E-01	2.7808 4E- 01	2.568/9E-01	6.42X3X€-08	5.10299E-02	1,0000BE+00
27	.0000E+00	.0000E+00	1.04722E-01	5.80976E-02	8.85057E-02	2.2105/E-05	1,40051E-02	1,0000E+00
28	.0000E+00	_00000E+00	8.95/5/E+00	8.85793E+00	8.936536+00	5.24148E-02	-5.22/3/E-02	9.99981E-01
≠0 grp.	rt boy flux		lft boy flux	lft lesiage	ngu Lage	fiss rate	flucture2	total flux
777		-5.88278E-09	1.73679E-01	8.5123/E-05	4.46959E-10	.00000E+00	.00000E+00	1.9785/E-01
ż		-7.850E-08	1.26572+00	9.75369E-02	.00000E+00	.00000E+00	.00000E+00	1.43/60E+00
3	1.5762500		1.59390E+00	1.32025-01	.0000E+00	.00000=+00	.0000E+00	1.80528E+00
4	9.74847E-01	4.47741E-08	9.87999E-01	8.73-225-02	.000E+00	.0000E+00	.0000E+00	1.11689E+00
5			1.49053E+00	1.38966-01	-0000E+00	.0000E+00	.0000E+00	1.68263E+00
	1.46813=+00	3.2107ZE-08	2.85/572+00			.0000E+00	.0000E+00	3.2325E+00
6	2.82051E+00	1.4863E-07		2.658025-01	.00000			3.18 555 00
7		-1.55781E-07	2.80777E+00	1.53110E-01	.00000	.0000E+00	.000E+00	
8	2.05573E+00	2.5096E-08	2.0555E+00	1.50% (XZE-02	.00000€+00	.000E+00	.00000	2.36881E+00
9		-3.317ZZE-08		-1.51131E-02	.000025+00	.0000E+00	.00000=+00	1.838286+00
10	1.47101E+00	2.5647EE-08		-2.61250E-02	.0000E+00	.0000E+00	.000000	1,6833/E+00
11	1.35752至+00			-5.6652E-02	,000 00	.0000E+00	.00000E+00	1.55259E+00
12		-2.9351/E-0B		-6.53773E-02	.000000:+00	.00000E+00	.0000E+00	9.77399E-01
13		-1.49502E-08		-5.65082E-02	.0000E+00	.00000E+00	.0000E+00	8.2337/E-01
14		-1.79089E-08		-8.5900Æ-02	.0000Œ+00	.0000E+00	.0000E+00	7.51611E-01
15	3.74 <i>697</i> E-01	-2.59X5/E-05	3.7407E-01	-8.89659E-05	,0000E+00	,0000E+00	.000 0E+ 00	4.29087E-01
16	2.05E20E-01	-1.80713E-05	2.06013E-01	-6.44620E-03	.00000E+00	.00000E+00	.0000E+00	2.36736E-01
17	8.73505E-02	-8.21982E-05	8.57562E-02	-8.17719E-03	.000Œ+00	.00000E+00	.0000E+00	9.98628E-02
18		-6.7616E-05	5.17481E-02	-2.47997E-02	.0000E+00	.00000E+03	.0000E+00	6.3878E-02
19		·1.19514E-05	1.2719/E-01	-1.376/3E-02	.00000E+00	.0000E+00	-0000E+00	1.4800BE-01
2Ö		-3.56/8/E-05	4.3437E-01	-2.62331E-02	.00000E+00	.00000E+00	.000000=+00	5.01482E-01
21		-1.5126E-05		-2.43377E-02	.00000E+00	.0000E+00	.000E+00	1.41742E-01
2 2		-1.9162BE-05		-6.9257E-02	.00000E+00	.00000E+00	.0000E+00	2.62563E-01
茵		-1.4047E-05		-1.2025E-01	.000000	.00000E+00	_0000E+00	8.66197E-01
2 4		-3.4999E-05		-1.11780E-01	.00000E+00	.00000E+00	.00000=+00	6.64TEE-01
ž		-1.09521E-07		-5.5297E-02	.00000=+00	.0000E+00	.00000E+00	2,8773/E-01
ž		-9.33479E-06		-5.1057XE-02	.0000E+00	.00000	.0000E+00	1.99874E-01
27		-1.251%-07		-1.4052E-02	.0000E+00	.0000E+00	.0000E+00	3.5558E-02
				5.2086E-02	4.4699E-10	.0000E+00	.0000E+00	2.65785401
28		-1.55434E-04	المعتدي	3.2000E-V2	4,40935C-10	, manuer w	·	EJDH XCE'UI
	Lorb arutalA		f				1-4	balance
0 ab	fix source		in scatter	slf scatter	out scatter	absorption	lenkage	
1	.000E+00	2.29%/TE-02	.0000E+00	2.285425-02	2.17173E-02		-5.882/E-09	9.9833E-01
2	.0000E+00	1,93990E-01	7.51923E-03	2.7090£-01	1.867Z/E-01		-7.850E-08	1.00002E+00
3	.000000+00	2.1587Æ-01	7.71209E-02	2.80897E-01	2.77527E-01	1.5671/E-02	4.51767E-08	9.9998E-01
.4	.00000	1.29319E-01	1.14847E-01	1.93654E-01	2.3116E-01	7,49917E-03	4.47% E-08	1.0000000
5	.0000E+00	1.6414E-01	2.09563E-01	4.90174E-01	3.60161E-01	4.55042E-08	3.2107ZE-08	9.999BE-01
6	.000 0E+ 00	1.77110E-01	4.28929E-01	1.34430E+00	5.98800E-01	7.22711E-03	1.4863E-07	1,00001E+00
7	.0000000	8.752 6 0E-02	6.69XE-01	1.7751/EHO	7,4370/E-01		-1.55781E-07	9.99990E-01
8	.0000E+00	1.3X853E-02	7.8048E-01	1.7905/E+00	7.79920E-01	1.40748E-02	2.5096E-08	9.99920E-01
9	,0000E+00		7.7038E-01	1.557655+00	7.4748E-01	2.40135E-02	-3.31722E-08	9.998BE-01
10	,0000E+00	7.26789E-05	7.4418E-01	1.4¥41E+00	7.07891E-01	3.64441E-02	2.56478E-08	9.93300E-01
11	.000E+00	5.717825-05	7.12797E-01	1.308625+00	6.53192E-01	5.951E-02	3.41550E-08	9.99942E-01

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12 .0000E+00 4.01667E-07 5.69736E-01 7.07675E-01 5.0497E-01 6.47584E-02 -2.95514E-08 9.99974E-01
                                                                                           .0000E-00 6.37810E-08 5.0094SE-01 5.5676SE-01 4.4075SE-01 6.0804SE-02 -1.4950SE-08 9.99970E-01 .0000E-00 1.26397E-08 4.7759E-01 5.0830E-01 3.91118E-01 8.6283SE-02 -1.790SE-08 9.9998E-01
                                                                                                 .0000E+00 1,428/3E-09 2,5855E-01 2,328/3E-01 2,4990E-01 8,581/3E-03 -2,59/5/E-05 1,0003/E+00
                                                                                   .0000E-00 4,743E-10 1.7578E-01 1.06918E-01 1.6914E-01 6.76918E-03 -1.80718E-05 1.0003E+00 .0000E-00 1.5078E-10 9.36078E-02 3.27848E-02 8.4858E-02 8.9624E-03 -8.2784E-03 1.0003E+00 .0000E-00 9.6712E-11 8.3228E-02 1.76518E-02 5.46578-02 2.85641E-02 -6.7646E-06 1.0005E+00 .0000E-00 1.36730E-10 1.28778E-01 6.16230E-02 1.1653E-01 1.19757E-02 -1.7514E-05 1.0003E+00 .0000E-00 2.2233E-10 3.0795E-01 3.5537E-01 2.7773E-01 2.93918E-02 -3.5648E-05 1.0003E+00 .0000E-00 3.2631E-11 1.4787E-01 6.8778E-02 1.25778E-01 2.26738E-02 -1.5126E-05 1.0003E+00 .0000E-00 3.2631E-11 1.4787E-01 6.8778E-02 1.2673E-01 2.2673E-02 -1.5126E-05 1.0003E+00 .0000E-00 3.2631E-11 1.4787E-01 6.8778E-02 1.2673E-01 2.2673E-02 -1.5126E-05 1.0003E+00 .0000E-00 3.2631E-11 1.4787E-01 6.8778E-02 1.2673E-01 2.2673E-01 2.2673
                                        21 .0000E+00 3.2543E-11 1.4787E-01 6.8778E-02 1.2578E-01 2.2233E-02 1.5126E-05 1.0002E+00 2.0000E+00 3.7757E-11 2.7230E-01 1.6969E-01 1.9766E-01 7.4604E-02 -1.9162E-05 1.0002E+00 2.0000E+00 3.6100E-11 6.2281E-01 9.1259E-01 4.9064E-01 1.3203E-01 -1.4677E-06 1.0002E+00 2.0000E+00 9.8260E-12 6.4660E-01 7.7603E-01 5.1773E-01 1.2281E-01 -3.4797E-06 1.0007E+00 2.0000E+00 2.8764E-12 4.7639E-01 3.1556E-01 3.5237E-01 6.6997E-02 -1.9327E-07 1.0000E+00 2.0169E-12 3.2767E-01 3.1500E-01 2.8767E-02 -1.0000E+00 1.0000E+00 2.0169E-12 3.2767E-01 3.1500E-01 2.8767E-02 1.2757E-02 -1.2757E-07 1.0000E+00 2.0000E+00 1.0000E+00 9.6401E+00 1.5664E+01 9.6401E+00 1.0000E+00 -1.5538E-04 1.0000E+00 1.0000E+00 9.6401E+00 1.5664E+01 9.6401E+00 1.0000E+00 -1.5538E-04 1.0000E+00 1.7797E-01 -3.8772E-01 -3.8772E-01 1.0000E+00 1.5664E+01 9.6401E+00 1.0000E+00 -1.5538E-04 1.0000E+00 1.0000E+00 1.8662E-05 1.8861E-02 .0000E+00 3.6382E-01 2.2557E-04 4.5776E-08 1.6852E+00 .0000E+00 1.6862E-05 1.8861E-02 .0000E+00 3.4378E+00 4.9788E-01 4.7776E-08 1.6852E+00 .0000E+00 1.6862E-05 1.8861E-02 .0000E+00 3.3478E+00 4.9788E-01 4.7776E-08 1.6852E+00 .0000E+00 1.8962E-05 1.8861E-02 .0000E+00 3.3478E+00 4.9788E-01 4.7776E-08 1.6852E+00 .0000E+00 1.77778E-08 .0000E+00 3.3478E+00 .0000E+00 3.2478E+00 
77 .0000E-00 4.8055E-13 1.0677E-01 6.3347E-12 8.577E-12 1.737EE-12 - 28 .0000E-00 1.0000E-00 9.6601E-00 1.5645E-01 9.6601E-00 1.0000E-00 - 1.0000E-00 1.5645E-01 1.0000E-00 - 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.00000E-00 1.0000E-00 1.00000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.00000E-00 1.0000E-00 1.0000E-00 1.0000E-00 1.0000E-00
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.0000E+00 2.62507E-01
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .0000E+00 4.405ZE-01
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.0000E+00 1.1482E+00
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.0000E+00 4.83211E+01
                    · elacard time .02 min.
              Odirect secess unit 9 requires 516 blocks of length 1456 for cross section weighting.

1 transport cross section weighting function
          1 transport cross section hargining function
(200) grp. 1 grp. 2 grp. 3 grp. 4 grp. 5 grp. 6 grp. 7 grp. 8
1 2.4224-03 2.49647-02 3.5362-02 1.90531-02 2.9092-02 5.5474-02 3.1622-02 4.6054-03
2 3.6059-03 3.89574-02 4.8959-02 2.9665-02 4.47632-02 8.43002-02 4.7634-02 4.6984-03
3 3.09242-03 3.32162-02 4.31492-02 2.71752-02 4.22542-02 8.43062-02 4.76342-02 5.59651-03
4 1.05742-03 1.222512-02 1.65392-02 1.99242-02 1.75562-02 3.32762-02 1.99232-02 2.01082-03
5 1.76842-03 1.90574-02 2.47662-02 1.55672-02 2.42692-02 4.66274-02 2.66572-02 3.33334-03
          1.760/E-03 9p. 10 9p. 11 9p. 12 9p. 13 9p. 14 9p. 15 9p. 16
1 4.644E-03 5.675E-03 1.2576E-02 1.4559E-02 1.265E-02 1.9056E-02 1.505E-02 1.505E-03 1.4505E-03 1.4505E-03 1.505E-03 ```

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5 3.254/E-03 4.62607E-03 1,006/0E-02 1,174/BE-02 1,01999E-02 1,541/KE-02 1.6357E-03 1.1709E-03
 9 pp. 17 pp. 18 pp. 19 pp. 20 pp. 21 pp. 22 pp. 23 pp. 24
1 1.8125E-03 5.11151E-03 3.044E-03 5.853E-03 5.249E-03 1.4878E-02 2.7848E-02 2.4894E-02
2 2.7801E-03 8.43667E-03 4.5246E-03 8.7897E-03 8.4402E-03 2.3344E-02 4.207E-03 3.7584E-02
3 2.54130E-03 7.7519E-03 4.2420E-03 8.1379E-03 7.5419E-03 2.1582E-02 3.9219E-02 3.4578E-02
4 1.0201E-03 3.0594E-03 1.7335E-03 3.34197E-03 3.0207E-03 8.4409E-03 1.6019E-02 1.4460E-02
 5 1.4670'E-03 4.308'SE-03 2.4787E-03 4.7557E-03 4.3266'E-03 1.2255E-02 2.2638E-02 2.00145E-02
2 1,85795-02 1,710785-02 2,72665-03 3,73505-01 2 1,85795-02 1,717816-02 4,772165-03 3,75305-01 3 1,72025-02 1,58665-02 4,32265-03 3,7375-03 1,60255-03 3,15365-01 5 9,92005-03 9,92565-03 2,39025-03 3,15365-01 5 9,92005-03 9,92565-03 2,39025-03 3,15365-03
 890 d. sas2h: beboock wilcox 15x15, 3.00x12, 20p.c/mou burn high temp
 Ocell averaged fluxes

 Come
 Grp. 1
 Grp. 2
 Grp. 3
 Grp. 4
 Grp. 5
 Grp. 6
 Grp. 7
 Grp. 8

 1
 1.7550E-01
 1.31743E-00
 1.6596E-00
 1.0276E-00
 1.5217E-00
 2.5279E-00
 2.5769E-00
 2.5779E-00
 2.5779E-00
 2.5779E-00
 2.5779
 Ozore grp. 9 grp. 10 grp. 11 grp. 12 grp. 13 grp. 14 grp. 15 grp. 16 1 1.535/26-00 1.2537/2-00 1.2538/2-00 8.11/516-01 6.825616-01 6.008/25-01 3.69556-01 2.025/25-01
 2 1,60071E+00 1,4617SE+00 1,33742E+00 8,31961E-01 7,0054SE-01 6,27927E-01 3,72410E-01 2,0485/E-01
 3 1.6357E-00 1.663EE-00 1.363EE-00 8.3865E-01 7.0630E-01 6.3667E-01 3.7532E-01 2.0667E-01 4 1.6061E-00 1.47067E-00 1.3661E-00 8.53967E-01 7.1939E-01 6.5669E-01 3.7687E-01 2.0637E-01 5 1.6065E-00 1.4663E-00 1.3669E-00 8.3775E-01 7.0669E-01 6.3667E-01 3.7680E-01 2.0637E-01
 Certe gr. 17 gr. 18 gr. 19 gr. 20 gr. 21 gr. 22 gr. 23 gr. 24
1 8.2010/E-02 3.75766E-02 1.20576E-01 4.21811E-01 1.07656E-01 1.22176E-01 6.7468E-01 5.05257E-01
 2 8.4515/2-02 4.73592-02 1.247592-01 4.257752-01 1.155922-01 2.05792-01 7.150002-01 5.394792-01 3 8.53522-02 4.98392-02 1.24122-01 4.325/42-01 1.17592-01 2.125002-01 7.247122-01 5.494792-01 4.875192-02 5.581172-02 1.258122-01 4.381522-01 1.25822-01 2.254052-01 7.568102-01 5.802812-01
 5 8.52758E-02 4.90285E-02 1.26022E-01 4.3205E-01 1.17816E-01 2.1164E-01 7.2572E-01 5.51647E-01
 Ozone grp. 25 grp. 26 grp. 27
1 2.1222E-01 1.33660E-01 1.5486E-02
 2 2.3052/E-01 1.50125E-01 2.4550E-02 3 2.3520E-01 1.5442/E-01 2.5722/E-02 4 2.5139/E-01 1.7113/E-01 3.10500E-02
 5 2.3663E-01 1,56681E-01 2,65815E-02
 Offux disadientage factors (zone average/cell average-flux)
 Ozore grp. 1 grp. 2 grp. 3 grp. 4 grp. 5 grp. 6 grp. 7 grp. 8 1 1.02169-00 1.03166-00 1.03221-00 1.03242-00 1.03360-00 1.
 4 9,87619E-01 9,81527E-01 9,81367E-01 9,81327E-01 9,75218E-01 9,75072E-01 9,87521E-01 9,8057E-01
 5 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00
 02070 970 9 970 10 970 11 970 12 970 13 970 14 970 15 970 16 1 9.557700-01 9.557500-01 9.5
 0x10 grp. 17 grp. 18 grp. 19 grp. 20 grp. 21 grp. 22 grp. 23 grp. 24
1 9.61716-01 7.6622-01 9.5676-01 9.76316-01 9.5666-01 8.6666-01 9.25366-01 9.15960-01
2 9.91666-01 9.66526-01 9.92126-01 9.93166-01 9.15966-01 9.77666-01
 3 1,0005E+00 1,0045E+00 1,0005E+00 1,0007E+00 1.0018E+00 1.00404E+00 9,9884E+01 9,9805E+01
 4 1.02317E+00 1.13835E+00 1.02511E+00 1.01420E+00 1.05119E+00 1.08392E+00 1.05395E+00 1.05191E+00
 5 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00
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information only

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0zone grp. 25 grp. 26 grp. 27
1 8.99401E-01 8.33071E-01 7.33094E-01
 2 9.73358 -01 9.58156 -01 9.2860 -01
 3 9.99947E-01 9,85592E-01 9,67682E-01
 4 1.06240E+00 1.0927E+00 1.16578E+00 5 1.0000E+00 1.0000E+00 1.0000E+00
 Oceli averaged currents
0zore grp. 1 grp. 2 grp. 3 grp. 4 grp. 5 grp. 6 grp. 7 grp. 8 1 2,425/4-02 3,455/4-02 3,555/2-02 1,565/4-02 2,565/4-02 3,455/4-02 3,455/4-02 4,4505/4-02
 3.80578-03 3.9578-02 4.8579-02 2.9458-02 4.7538-02 8.3008-02 4.7578-02 6.9838-08 3.0028-03 3.32168-02 4.31478-02 2.71758-02 4.2554-02 8.01988-02 4.58548-02 5.58618-08
 4 1.057/E-05 1.223/E-02 1.659/E-02 1.097/E-02 1.797/E-02 3.5278E-02 1.983/E-02 2.0108E-05 5 1.768/E-03 1.987/E-02 2.4753/E-02 1.587/E-02 2.4297E-02 4.6527/E-02 2.657/E-02 3.5333/E-03
Corre grp. 9 grp. 10 grp. 11 grp. 12 grp. 13 grp. 14 grp. 15 grp. 16
1 4.66/9E-03 5.6752E-03 1.257/E-02 1.456/9E-02 1.268/E-02 1.505/E-02 1.505/E-02 1.505/E-02 1.505/E-03 1.505/E-03 1.505/E-03 1.505/E-02 2.165/E-02 1.505/E-02 2.855/E-02 2.925/E-03 2.165/E-03 3.5602/E-03 7.985/E-03 1.785/E-02 2.097/E-02 2.667/E-02 2.7317/E-03 1.93/GE-03 1.9
 4 1.8897-03 3.25176-03 7.06161-03 8.19520-03 7.09076-03 1.07376-02 1.17076-03 8.30776-03 5.35776-03 1.00605-02 1.17476-02 1.09556-02 1.54186-02 1.65376-03 1.17616-03
Cerre gr. 17 gr. 18 gr. 19 gr. 20 gr. 21 gr. 22 gr. 23 gr. 24 gr. 24 gr. 24 gr. 24 gr. 24 gr. 24 gr. 24 gr. 24 gr. 24 gr. 25 gr. 25 gr. 25 gr. 26 gr. 27 gr.
 4 1,020/E-03 3,05/AE-03 1,735/E-03 3,3419/E-03 3,05/AE-03 8,6/09/E-03 1,6/19/E-02 1,A/65/E-02 5 1,6/09/E-03 4,308/SE-03 2,4/29/E-03 4,755/AE-03 4,266/E-03 1,229/SE-02 2,2539/E-02 2,001/SE-02
 5p. 25 5p. 26 5p. 27
1.2560E-02 1.1025E-02 2.9266E-03
 2 1.85792-02 1.717816-02 4.772166-03
 3 1.7200E-02 1.5886E-02 4.38256E-03
 4 6.98616E-05 6.33737E-05 1.6062E-03 5 9.9400E-05 9.0466E-08 2.38022E-08
 (Coorne
 volume
 vol. fraction
 6.8843E-01
 3,30/53E-01
 3.1735ZE-02
 1.52X6E-02
 2.1672/E-01
 1.04122E-01
 5.49878E-01
 1.1464E+00
 2.0814/E+00
 1.00000E+00
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|---|-------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|   | 88888888888888888888888888888888888888                                  |                                                                                    |                                        | 11<br>111<br>1111<br>11<br>11<br>11<br>11<br>11<br>11<br>1111111<br>1111 |                                                                                                                        |                                                                     | 99999999999999999999999999999999999999                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        |
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| ò |                                                                         |                                                                                    | 96000000000000000000000000000000000000 |                                                                          | ######################################                                                                                 | (1<br>(1<br>(1<br>(1<br>(1<br>(1<br>(1<br>(1<br>(1<br>(1)(((((((((( | concontraction contraction con |                                        |
|   | program verification information                                        |                                                                                    |                                        |                                                                          |                                                                                                                        |                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                        |

Feb 16 10:06 1996 File Name: x3020.cf.cut BBA000000-01717-0200-00012 REV 01 ATTACHENT I - Page 569

```
code system: scale version: 4.2
 program c0c008
 creation date: 04/27/95
 library: /nautronics/scale/eve
 this is not a scale configuration controlled code
 jobreme: devis
 date of executions 02/16/96
 time of execution: 10:03:27
 -1q array has
0q array has
 1 entries.
 4 entries.
 1g array has
 6 entries.
0 24 array has
1 logical assignments
Omester library 12
working library 17
scratch file 18
 2 entries.
 new Library
Oproblem description
Digregometry (0/1/2/3-inf and/slab/cyl/schere
Diam-rusber of zones or material regions
User-nucer of zone of material regions 4

Dis-mixing table length 70

Dibt-shielded cross section edit option (Q/1--no/yes) 0

Dibr-bordereno factor edit option (Q/1--no/yes) 0

Disept-denoff factor option 0

Convergence criterion 1.00000E-03

Openetry connection factor for vigner retional approximation 1.350E+00
 3q array has
4q array has
 70 entries.
70 entries.
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 number density new identifier
 RESERVE
 8016
1001
 2.09710E-02
4.19420E-02
 2345
 5010
 3.81515E-06
 5011
40802
 1.5488/E-05
4.25156E-02
 3
```

| INFORMATION OF | 47.4 |
|----------------|------|
| Illian         |      |

|                                        | _    |                                                        |                                                       |                           |
|----------------------------------------|------|--------------------------------------------------------|-------------------------------------------------------|---------------------------|
| 6                                      | 1    | 92235                                                  | 1.33192E-04                                           | 20006                     |
| 6<br>7<br>8                            | 1    | 92234                                                  | 1.47781E-06                                           | 200007                    |
| À                                      | İ    | 92236                                                  | 1.82252E-05                                           | 20008                     |
| ă                                      | i    | 92238                                                  | 7.2194E-08                                            | 20009                     |
| .Y                                     |      |                                                        |                                                       |                           |
| 10                                     | 111. | 8016                                                   | 1,50611E-02                                           | 200010                    |
| 11                                     | 1    | 8016                                                   | 1.15356-02                                            | 200011                    |
| 12                                     | 1    | 36083                                                  | 4.720/3E-07                                           | 200012                    |
| 12                                     | 4.   | 7/05                                                   | 2.27030E-07                                           | 20012                     |
| 13                                     | 1    | 36085                                                  | 2.2/WE-W                                              | 200013                    |
| 14                                     | 1    | 38090                                                  | 5,16E52E-06                                           | 200014                    |
| 15                                     | 1    | 39089                                                  | 4.0975F-06                                            | 200015                    |
| 14                                     | 4    | 42075                                                  | 5.47657E-06                                           | 200016                    |
| 10                                     |      | 40/12                                                  | JAKOKE W                                              | 2000                      |
| W                                      | 1    | 40095                                                  | 4.12205E-06                                           | 200017                    |
| 18                                     | 1    | 40094                                                  | 6,47876E-06                                           | 200018                    |
| 10                                     | 1    | 40095                                                  | 6.6CB85E-07                                           | 200019                    |
| 20                                     | •    | 41094                                                  | 3.21149E-12                                           | 200020                    |
| జ                                      | •    | 7,070                                                  | 3,21PDC-12                                            | 2000                      |
| 21                                     | 1    | 43099<br>45105                                         | 6.3375 <del>E</del> -06<br>3.475 <del>6E</del> -06    | 200021<br>200022          |
| <b>22</b>                              | 1    | 4510B                                                  | 3,47 <del>569E-</del> 06                              | <b>Z</b> 2000 <b>Z</b> 22 |
| 23                                     | 1    | 45105                                                  | 7.392435-09                                           | 200025                    |
| <del>7</del> .                         | i    | 44101                                                  | 5 75134E-04                                           | 20023<br>20024            |
| <u>~</u>                               |      | 77101                                                  | J./JIJUE-UJ                                           | 20025                     |
| 0                                      | 1    | 44105                                                  | 7.3943E-09<br>5.7513E-06<br>8.6913E-07<br>2.28913E-06 | صببه                      |
| 26                                     | 1    | 46105                                                  | 2.26913E-06                                           | 200026                    |
| 27                                     | 1    | 46108                                                  | 6.3651E-07                                            | 200027                    |
| 20                                     | •    | 47109                                                  | 4.45102E-07                                           | 200028                    |
| ₩                                      |      | 51124                                                  | 1.00830E-10                                           |                           |
| ~                                      | 1    | 21124                                                  | 1,0505-10                                             | 200029                    |
| 30                                     | 1    | 54131                                                  | 2.90271E-06                                           | 200030                    |
| 31                                     | 1    | 54132                                                  | 5.45567E-06                                           | 20031                     |
| 50                                     | i    | 2/15                                                   | 2 200/JE_02                                           | 20032                     |
| #                                      | :    | 7,50                                                   | 1.00400                                               | 200B3                     |
| بد                                     | į    | %15<br>%15<br>%15<br>%15                               | 1.0%18E-05<br>3.1466E-07<br>3.4756E-06<br>6.78E21E-06 | بطبيه                     |
| 34                                     | 1    | 5134<br>5135<br>5137<br>5136                           | 3.1 <del>4663E-</del> 07                              | 200054<br>200055          |
| 35                                     | 1    | 55135                                                  | 3.47362E-06                                           | 30035                     |
| ₹.                                     | i    | \$177                                                  | A 70HO1E-CA                                           | 20036                     |
| #                                      | - 1  | 5/17/                                                  | 4 TOTALE TO                                           | 20087                     |
| 2/                                     |      | 20120                                                  | 6.3876£-08<br>6.7223£-06                              | aub/                      |
| 38                                     | 1    |                                                        | 6,7225E-05                                            | 200038                    |
| 39                                     | 1    | 59141                                                  | 5.82082E-06                                           | 200039                    |
| 40                                     | 1    | 50143                                                  | 1 2277 F-IV                                           | 200040                    |
| 74                                     | 4    | 57141<br>57143<br>58144<br>60143                       | 5.83082E-05<br>1.22771E-07<br>2.21790E-06             | 200041                    |
| 7.1                                    | !    | 20144                                                  | 2.21/NE-00                                            | 2001                      |
| 42.                                    | 7    | 60143                                                  | 5.20095E-06                                           | 200042                    |
| 43                                     | 1    | 60145                                                  | 3.88111E-05                                           | 200043                    |
| 44                                     | 1    | 60145<br>61147<br>61148                                | 1.33040E-06                                           | 20074<br>20075            |
| 45                                     | i    | A11/R                                                  | 3.8752E-09                                            | 2007/5                    |
| 77                                     | - 1  | (04/3                                                  | 4.29701E-08                                           | 200046                    |
| 40                                     | 1    | 60147<br>62147                                         | 4.2/VIE-UD                                            | awo                       |
| 47                                     | 1    | 62147                                                  | 4.6368-07<br>2.87617E-08<br>1.38277E-06<br>1.3830E-07 | 200047                    |
| 48                                     | 1    | WYS                                                    | · 2.87617E-08                                         | . 200048<br>200049        |
| ĹÕ                                     | 1    | 62150<br>62151                                         | 1 3077E-06                                            | , julio                   |
| 50                                     | ÷    | 42151                                                  | 4 77700-07                                            | 200050                    |
| 20                                     | :    | 02131                                                  | 1260AE-U                                              |                           |
| 51                                     | 1    | 62152                                                  | 6.630/SE-07                                           | 200051                    |
| 52                                     | 1    | <i>6</i> 4155                                          | 7,2195/E-10                                           | 20052<br>20053            |
| 53                                     | 1 .  | 63153                                                  | 3.QKQF-07                                             | 200053                    |
| ĩ.                                     | i    | 2157                                                   | 3.9859E-07<br>8.34053E-08                             | 200054                    |
| #                                      | - 1  |                                                        | / 74/7T 00                                            | 200055                    |
| 20                                     |      | ह्यास<br>ह्यास<br>ह्यास<br>ह्यास                       | 4.3143ZE-0B                                           |                           |
| 56                                     | 1    |                                                        | 4.42681E-05                                           | 200056                    |
| 57                                     | 1    | 5010<br>5010<br>5011<br>5013<br>5013<br>50237<br>50237 | 2.30530E-02                                           | 20057<br>20058            |
| SR                                     | i    | 5010                                                   | 2.09787E-06                                           | 200758                    |
| ñ                                      |      | <b>₩</b>                                               | 8.51673E-06                                           | 20059                     |
| 23                                     |      | 3011                                                   | ما عدام ده                                            |                           |
| 60                                     | 1    | 55133                                                  | 6,95 <del>263E-</del> 06                              | 200060                    |
| 61                                     | 1    | 93237                                                  | 1,23390E-06                                           | 200061                    |
| 62                                     | 1    | 94733                                                  | 1.76797E-07                                           | 200062                    |
| ā                                      | i    | 9239                                                   | 7 5454£_FK                                            | 200063                    |
| <b>33</b>                              |      |                                                        | 3.56 <del>35/E-</del> 05<br>6.95/89E-06               |                           |
| 88888888888888888888888888888888888888 | į    | 94240                                                  | D.YXXXXE UD                                           | 200064                    |
| 65                                     | 1    | 94241                                                  | 3.76423E-06                                           | 2000:55                   |
|                                        |      |                                                        |                                                       |                           |

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94242
95241
 4.2320E-07
 67
68
 2000%
 1.12432-07
 200057
 952/3
 3.90711E-08
 200098
 69
 96244
 3.75748E-09
 200069
 3.30753E-21
 200070
Ogeometry and material description
 type (0/1--fuel/mod)
Ozone mixture outer dimension
 terperature
 extra xs
 6.32X60E-01
 6.07600E+02
 7.9056/E-01
 1,250525+01
 6.73100E-01
 6.5000E+02
 3.5/862+00
 8.14000E-01
 6.07600E+02
 2.96100E+00
 9.75000E+02
 2.32B3E-01
8067 locations of 20000 available are required to make a rew master containing the self-shielded values. One nuclides in your problem have bonderented factor data thorand will copy from logical 12 to logical 1
 999 1/v cross sectio from log 12 to log 1
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 from lag 12 to lag 18
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 hydrogen
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 from lag 18 to lag 1
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 hydrogen from log 18 to log 1
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 from log 12 to log 18
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0000y
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 from lag 18 to lag 1
 bordererlo trigger 0
 boron-11
 8016
 from lag 12 to lag 18
from lag 18 to lag 1
Ocepy
 angen-16
 banderenko trigger 0
 8016
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Occipy
 asygen-16
 from log 18 to log
Oxpy
 8016
 arygen-16
 bonderenko trigger 0
 from lag 18 to lag
Остру
 8016
 bondererko trigger 0
 axygen-16
360E3
 from log 12 to log
 bondererlo trigger 0
 kr-83
 36055
 from lag 12 to lag
 kr-85
 bondarerico trigger 0
 39030
39089
 from log 12 to log
from log 12 to log
from log 12 to log
 gr-90
 bondarento trigger 0
OCTY
OCTY
 7-89
21-93
 bordereito trigger 0
 40093
 bonderatio trigger 0
40094
 from lag 12 to lag
from lag 12 to lag
 Z-94
 bondarerko trigger 0
 40075
 bondererles trigger 0
 ₹-95
 from lag 12 to lag 18
from lag 18 to lag 1
Octoby
 40302
 burdererico trigger 0
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Ocepy
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 from log 18 to log
from log 12 to log
 40302
 bordererio trigger 0
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 41094
 rb-94
 bordererlo trigger 0
Ocepy
42075
 from log 12 to log
 bondarerico trigger 0
 ED-95
 43000
 from lag 12 to lag
 bardererko trigger 0
 tc-99
 44101
44105
 from lag 12 to lag
 bordererko trigger 0
 ru-101
 from lag 12 to lag
Ocepy
 ru-106
 bordererko trigger 0
 45103
 rh-103
 from los 12 to los
 bordererlos trigger 0
Oupy
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 45105
 rh-105
 from lag 12 to lag
 bondararios trigger 0
pt-105
 46105
 from log 12 to log
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 fron las 12 to las
 46108
 bordarerko trigger 0
 i⊒-108
 from log 12 to log
from log 12 to log
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from log 12 to log
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47109
 silver-109
 bordererko trigger 0
 51124
 sb-124
 bordererko trigger 0
 54131
 xe-131
 bordererico triccer 0
Occipy
 54132
 bordererko trigger 0
Oxpy
 xe-132
Ωфу
 5405
 Jenon-135
 from log 12 to log
 borderetto trigger 0
 54136
 from lag 12 to lag
 buderello trigger 0
Офу
 xe-136
Outry
 from lag 12 to lag
from lag 12 to lag
 227
 cesiun-133
 bordanerko trigger 0
Occipy
 55134
 cs-134
 bandarerico trigger 0
 55135
 from lag 12 to lag
 bondarerko trigger 0
 cs-135
Ocepy
 from log 12 to log
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 55137
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 bondanenko tripozer 0
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 56136
 borderello trigger 0
 from log 12 to log
 ps-139
 57139
 La-139
 from log 12 to log
 bordererko trigger 0
Осфу
 9314
97141
 CE-144
 from log 12 to log
 bordererko trigger 0
 D-141
 fron lag 12 to lag 1
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from lay 12 to lay 1 from lay 12 to lay 1 from lay 12 to lay 1
 p-1/3
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 59143
 bandenerko triazer 0
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 bandarenko trigger 0
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 from lag 12 to lag
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 bonderenko trigger 0
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 pn-148
 bondarenko trigger 0
 62147
 bandarerko trigger 0
 Occipy
 sn-147
 Осфу
 62149
 sp-1/9
 bandenenko trigger 0
 bonderenko trigger 0
Octoy
 62150
 sn-190
 62151
 bandarerico trigger 0
 an-151
Option
 62152
 sp-152
 banderenko triazer 0
0ccpy
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 හත
 ar-153
 bandarenko triazer 0
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 bordererko trigger 0
 63154
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 bordererlos trigger 0
 au-155
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 gd-155 from log 12 to log
u-234 1043 sign= from log 12 to log
 0copy
 bonderatio trigger 0
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 uranium 255 from log 12 to log 1
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 bondererlos trigger 0
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 bandererko trigger 0
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pur 28 1050 sigo from log 12 to log 1
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 number of neutron groups
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erdf/b-iv set 1269/thres002
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 baran-11
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 erulf/b-iv met 1276
erulf/b-iv met 1276
 updated 10/13/89
 avgen-16
 ucdated 10/13/89
 avgen-16
 erof/o-ly set 1276
st=102,105,105,105,105,107
 200011
 updated 10/13/89
 anygan-16
kr-83
 200012
 ucdated 10/13/89
 200013
 kr-85
 67-70
 uzdated 10/13/89
 200014
 mt=102
 200015
 75-82
AB
 undered 10/13/89
 nt=102
 200017
 mt= 102
 200018
 27-94
 mt=102
 umbord 10/13/89
 200019
 umbted 10/13/89
 ZF-95
 at=102
 updated 10/13/89
 205
200056
 zircalloy
 endf/b-iv met 1284
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 zircalloy
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 rb-94
 at=102
 undated 10/13/89
 200016
 ED-95
 at=102
 tc-99
 mt=102
 undated 10/13/89
 200021
 undeted 10/13/89
 200024
 ru-101
 mt=102
```

|   | ru-106                  | ant=102                                | updated                         | 10/13/89                 |       | 00025                                  |
|---|-------------------------|----------------------------------------|---------------------------------|--------------------------|-------|----------------------------------------|
|   | rh-103                  | mt=102                                 | updated                         | 10/13/89                 |       | 00022                                  |
|   | rtr-105                 | mt= 102                                |                                 | 40.07.00                 |       | 00023                                  |
|   | pt 105                  | st=102                                 |                                 | 110/13/89                |       | 00026<br>00027                         |
|   | pd-108                  | mt=102                                 |                                 | 10/13/89                 |       | 00027<br>00028                         |
|   | silver-109<br>sb-124    | endf/b-iv mat 113<br>mt=102            |                                 | 10/13/89<br>  10/13/89   |       | 00029                                  |
|   | xe-131                  | mt=102,108,104,10                      |                                 | 10/13/89                 |       | 0000                                   |
|   | xe-132                  | mt=102,108,104,10                      |                                 | 10/13/89                 |       | 00031                                  |
|   | xenon-136               | endi/b-iv met 129                      | 4 Umbter                        | 10/13/89                 |       | 0032                                   |
|   | xe-136                  | art= 102, 103,                         | 104, 105, 107                   |                          |       | 00133                                  |
|   | cesium 133              | ant= 102, 105,<br>endf/to-iv ment 114  | 1 uzdate:                       | 10/13/89                 |       | 00060                                  |
|   | cs-134                  | sst=102                                | u <del>jzdatec</del>            | 10/13/89                 | id 2  | 00034                                  |
|   | cs-135                  | nt= 102                                | •                               |                          |       | 00035                                  |
|   | cs-137                  | nt=102                                 |                                 | 10/13/89                 |       | 00036                                  |
|   | ba-136                  | mt=102                                 |                                 | 10/13/89                 |       | 00037                                  |
|   | (a-139                  | mt=102                                 | updated                         | 1 10/13/89               |       | 00038                                  |
|   | œ-144                   | mt= 102                                | 5 40V 407                       | 110/17/00                |       | 00041<br>00039                         |
|   | P-141                   | mt=102,105,104,10                      |                                 | ! 10/13/89<br>! 10/13/89 |       | 0000                                   |
|   | pr-1/3<br>nd-1/3        | nt=102<br>nt=102                       |                                 | 10/13/89                 |       | 0002                                   |
|   | nd-145                  | nt=102                                 |                                 | 10/13/89                 |       |                                        |
|   | nd-147                  | at=102                                 |                                 | 10/13/89                 |       | 000%                                   |
|   | pn-147                  | mt=102                                 |                                 | 10/13/89                 |       | 00044                                  |
|   | pn-148                  | mt= 102                                |                                 |                          |       | 0006                                   |
|   | sa-147                  | endif/b-v fission                      | product updated                 | 10/13/89                 | id 2  | 00047                                  |
|   | sm-149                  | mt=102,105,107                         | Lipchotec                       | 10/13/89                 |       | 00048                                  |
|   | sm-150                  | nd=102                                 | Lippleton                       | 10/13/89                 |       | DD049                                  |
|   | san-151                 | mt=102,103,104,10                      | 5,106,107 updated               | 10/13/89                 |       | 00050                                  |
|   | SSR-152                 | mt=102,103,104,10                      | 5,105,107 update:               | 10/13/89                 |       | 00051                                  |
|   | en 🔯                    | mt=102,103,104,10                      |                                 | 10/13/89                 |       | 00053                                  |
|   | eu-154                  | mt=102,103,104,10                      |                                 | 10/13/89                 |       | 00054<br>00055                         |
|   | 발표                      | mt=102,103,104,10                      |                                 | 1 10/13/89<br>1 10/13/80 | 17 2  | 0052                                   |
|   | gd-155<br>25% 1063 eige | nt=102<br>>=5+4 resklacs p-3           |                                 | 10/13/89                 |       | 0007                                   |
|   | uranium 25              | endf/b-iv met 126                      | DOK ("Versicista)<br>1 Induktor | 10/13/89                 |       | 0006                                   |
|   |                         | 754 raklacs p-3                        |                                 |                          |       | 0000B                                  |
|   | uranius 238             | endf/b-iv met 126                      | 2 uzdatec                       | 10/13/89                 | id 2  | 00009                                  |
|   |                         | erdf/b-iv mat 126                      |                                 | 10/13/89                 | id 2  | 00061                                  |
|   | pu-238 1050 sig         | 20 <del>-5-4</del> neuklaca p-3        | 25k f-1/e-x(1.+5)               |                          | id 2  | 00062                                  |
|   |                         | erolf/b-iv met 126                     |                                 | 10/13/89                 |       | 00083                                  |
|   |                         | endf/b-iv met 120                      |                                 | 10/13/89                 |       | 00064                                  |
|   |                         | endi/b-iv met 125                      |                                 | 10/13/89                 |       | 00065                                  |
|   |                         | endi/b-iv met 116                      |                                 | 10/13/89                 |       | 00066<br>00067                         |
|   |                         | 218 marklacs 218                       | rgp pra ∠ox<br>rox = 200±       |                          |       | 00068                                  |
|   | curium 24               | go wt f-1/e-m 090<br>endf/b-iv met 116 | oro po zoak<br>O Indohen        | 10/13/89                 |       | 00059                                  |
| 0 | tabe odby res           |                                        |                                 |                          | ~ .   | ~~~                                    |
| ĭ | ساد مله س               | m iiliii                               | iiiiii <del>uuuuu</del>         |                          | 144   | w II                                   |
| • | un<br>                  | *******                                |                                 |                          |       | માં <b>દે</b> દ                        |
|   | m                       |                                        |                                 | 86 65                    |       | in II                                  |
|   | m                       |                                        | í tt                            | 86 86                    | 164   | w ll                                   |
|   | m                       | m m i                                  |                                 | <b>66 85</b>             | 144   | w II                                   |
|   | m                       | m m j                                  |                                 | 800000000000             |       | w II                                   |
|   | m                       | <u> </u>                               |                                 | ACT-02000000000          |       | w                                      |
|   | <u>m</u>                | <u>m</u> m (                           |                                 | <b>as as</b>             | •-•   | MA II                                  |
|   | m                       | mm i                                   |                                 |                          | 141 H |                                        |
|   | m                       | mn iiiiii                              |                                 | 86 86<br>88 88           | MAN M | 🖫 દેશાસાસાસ                            |
|   | m<br>m                  | m iiiii                                |                                 | 86 88                    |       | 🖫 iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii |
|   | ***                     | *** ******                             |                                 |                          |       |                                        |

| 0 | •                                                                      |                                        |                                                                                                                                           | •                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |                                        | • |
|---|------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----------------------------------------|---|
|   |                                                                        | 20000000000000000000000000000000000000 | ***************************************                                                                                                   |                                                                       | \$6565558585<br>\$5555555553535<br>\$2<br>\$3<br>\$5<br>\$56666666666666666666666666666666                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                        | ٠                                      |   |
|   | 888 88 88 88 88 88 88 88 88 88 88 88 88                                |                                        |                                                                                                                                           | 11<br>111<br>1111<br>11<br>11<br>11<br>11<br>11<br>11<br>11<br>111111 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        | 99999999999999999999999999999999999999 |   |
| 1 | 11<br>1111<br>1111<br>11<br>11<br>11<br>11<br>11<br>11<br>11<br>111111 | 88888888888888888888888888888888888888 | :::<br>:::<br>:::<br>:::                                                                                                                  | 88 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8                                | munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>munum<br>mu | :::<br>:::<br>:::<br>:::               |                                        |   |
| 0 |                                                                        |                                        | 9599595588<br>959956668595<br>95<br>95<br>93<br>95995996959<br>96<br>96<br>96<br>96<br>96<br>96<br>96<br>96<br>96<br>96<br>96<br>96<br>96 |                                                                       | ### APP ### ### ### ### ### ### ### #### ######                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | !! !! !! !! !! !! !! !! !! !! !! !! !! | 60000000000000000000000000000000000000 |   |

```
program verification information
 code system: scale version: 4.2
 program c0x002
 creation date: 04/27/95
 library: /hsutronics/scale/exe
 this is not a scale configuration controlled code
 johneme: devis
 date of executions 02/16/96
 time of execution: 10:05:28
 1 entries.
4 entries.
12 entries.
 - lo array has
Od array has
0 1q array has 12 entries.

Oselect 5 nuclides from the master library on logical 1
 65 nuclides from the working library on logical 3
0 nuclides from the working library on logical 0
to create the new working library on logical 4
 1 resonance calculations have been requested
0 output option for appx formatted cross section data
Othe storage allocated for this case is 200000 words
 3d array has
 70 entries.
 15 artries.
 40 array has
 5 entries.
O general information concerning cross section library
 tape identification number
 number of nuclides on tape
 65
 number of neutron energy groups
 Z
 first thermal neutron energy group
 15
number of gramma energy groups 0
0 direct access unit number 9 requires 72 blocks of length 1484 words
- xechn tape 4321
 scale 4.2 - 27 group reutron turnup I library
based on enti-b version 4 data with enti-b version 5 fission products
 1/27/89
9/16/93
 compiled for mrc
 last updated
 Lapetrie - ami
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Ó Õ

- work tape 4349

## xscim weighted tape--parent case entitled-- 880 d, sas2n: baboock willow 15x15, 3.00x2%, 20p.d/mtu burn high temp

| 0244                                   | es from xechn t     | 200                             |                                        |                |
|----------------------------------------|---------------------|---------------------------------|----------------------------------------|----------------|
| 1                                      | hydrogen            | endi/b-iv mat 1269/thraf002     | updated 10/13/89                       | 202            |
|                                        | b-10 1273 218       | hap 042375 p-3 25%              | •                                      | 202<br>205     |
| 2<br>3                                 | boron-11            | endi/b-iv mat 1160              | updated 10/13/89                       | 204            |
| 4                                      | axygen-16           | endi/b-iv mat 1276              | updated 10/13/89                       | 201            |
| <u> </u>                               | zircalloy           | endf/b-iv set 1284              | updated 10/13/89                       | 205            |
|                                        | es from work t      |                                 |                                        |                |
| 6                                      | 1/v cross sec       | tions normalized to 1.0 at 0.02 | ವ ev                                   | 977            |
| 7                                      | hydrogen            | erulf/b-iv met 1269/thrmi002    | updated 10/13/89                       | 1001           |
| 8                                      | b-10 1273 218       | hgp 042375 p-3 285k             | •                                      | 5010           |
| 9                                      | boror-11            | endf/to-liv mat 1160            | updated 10/13/89                       | 5011           |
| 10                                     | aygen-16            | endi/to-iv met 1276             | updated 10/13/89                       | 8016           |
| 11                                     | aygen-16            | endi/to-iv mat 1276             | updated 10/13/89                       | 6              |
| 12                                     | kr-83               | mt=102,108,108,105,105,107      | updated 10/13/89                       | 36063          |
| 12 13 N 12                             | kr-85               | at= 102                         |                                        | 36085          |
| 14                                     | \$r~90              | mt=102                          | updated 10/13/89                       | 38090          |
| 15                                     | y-89                | nt=102                          | updated 10/13/89                       | 39089          |
| 16                                     | zr-95               | mt= 102                         |                                        | 40075          |
| 17                                     | 21~ <del>94</del>   | nt=102                          | updated 10/13/89                       | 40094          |
| 18                                     | 21-95               | mt=102                          | updated 10/13/89                       | 40095          |
| . 19                                   | zircalloy           | endi/b-iv met 1284              | updated 10/13/89                       | 40802          |
| 20                                     | rb-94               | mt=102                          | updated 10/13/89                       | 41094          |
| 21                                     | 8D-52               | mt=102                          | updated 10/13/89                       | 42095          |
| 22                                     | tc- <del>57</del>   | mt=102                          | updated 10/13/89                       | 43099          |
| 25                                     | ru-101              | mt×102                          | updated 10/13/89                       | 44101          |
| 24                                     | ru-106              | mt=102                          | updated 10/13/89                       | 44106          |
| 25                                     | rh-103              | mt=102                          | updated 10/13/89                       | 45105          |
| ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | rh-105              | nt= 102                         |                                        | 45105          |
| 27                                     | pr 105              | <b>社利</b> 2                     | updated 10/13/89                       | 46105<br>4610B |
| <b>#</b>                               | pd-108              | mt=102                          | updated 10/13/89                       | 47109          |
| 2                                      | silver-109          | erdf/b-iv amt 1139<br>at=102    | updated 10/13/89<br>updated 10/13/89   | 51124          |
| ₹.                                     | sb-124              | mt=102,103,104,105,106          | updated 10/13/89                       | 54131          |
| 31                                     | xe-131              | m=102,103,104,105,105           | uppleted 10/13/89                      | £152           |
| <del>*</del> **                        | xe-132<br>xenon-135 | endi/b-iv met 1294              | updated 10/13/89                       | 5435           |
| 33)<br>72                              | ж <del>а</del> 136  | nt= 102, 105, 104, 105,         | 107                                    | 54136          |
| 캎                                      | cesius-133          | endr/b-iv met 1141              | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | \$133          |
| # H                                    | ca-134              | at=102                          | updated 10/13/89                       | 53.            |
| . <del></del>                          | G-135               | et= 102                         | quada iq ayor                          | · 55136        |
| · 34                                   | G-137               | nt=102                          | uzdated 10/13/89                       | 55137          |
| ~ ≈                                    | be-136              | nt=102                          | uzdeteci 10/13/89                      | 56136          |
| ű                                      | la-139              | mt=102                          | updated 10/13/89                       | 57139          |
| 15887                                  | œ-144               | at= 102                         | 4                                      | 58144          |
| Ü                                      | pr-141              | mt=102,105,104,105,106,107      | updated 10/13/89                       | 59141          |
| <i>-</i> 3                             | p-143               | mt=102                          | undeted 10/13/89                       | 59143          |
| ũ.                                     | hd-143              | mt=102                          | undated 10/13/89                       | 60143          |
| ¥5<br>46                               | nd-145              | mt=102                          | uzdeted 10/13/89                       | 60145          |
| 46                                     | nd-147              | nt=102                          | updated 10/13/89                       | 60147          |
| 47                                     | pm-147              | mt=102                          | updated 10/13/89                       | 61147          |
| 48                                     | pa-148              | at= 102                         |                                        | 61148          |
| 49<br>50                               | sar-147             | endi/b-v fission product        | updated 10/13/89                       | 62147          |
| 50                                     | son-149             | mt=102,105,107                  | updated 10/13/89                       | 62149          |
| 51<br>52                               | sm-150              | mt=102                          | updated 10/13/89                       | 62150          |
| 2                                      | sm-151              | nt=102,103,104,105,106,107      | updated 10/13/89                       | 62151          |
|                                        |                     |                                 |                                        |                |

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mt=102,105,104,105,105,107
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mt=102,105,104,105,105,107
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 undeted 10/13/89
 62152
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 er 153
 umbted 10/13/89
 63123
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 63154
 ar 154
 ar 155
 mt=102,105,104,105,106,107
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 63155
 64155
 cd+555
 mt=102
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 u-234 1043 sigo-5+4 nauklacs p-3 295k f-1/e-s(1,+5)
 92234
 9225
 uranium 255 endi/b-iv met 1261
 undsted 10/13/89
 92236
 u-256 1163 sigo-544 rasklacs p-3 295k f-1/e-n(1.+5)
 uranium 238 erdi/to iv set 1262
reptunium 237 erdi/to iv set 1263
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 92238
 9227
9228
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 undered 10/13/89
 pu-293 1050 sign-544 masklars p-3 229k f-1/e-m(1.+5)
plutorium-239 endi/b-iv mpt 1264 update
plutorium-240 endi/b-iv mpt 1265 update
 <u>ස</u>
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9230
9231
9231
9231
 updated 10/13/89
 updated 10/13/89
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 66
 plutonium 241 and /b-iv met 1266
 undated 10/13/89
 plutonium 2/2 endi/b-iv mat 1161
 updated 10/13/89
 am 241 1056 sign-5+4 nawless 218mgp p-3 255k
am 243 1057 218 gp let f-1/em 090376 p3 255k
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 undered 10/13/89
 endi/b-iv met 1162
 curium-24
 erchi/o- iv met 1269/thrm1002 updated 10/13/89
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 temperatures 607.60
0b-10 1273 218mp 042575 p-3 255k
 203
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 thermal acattering matrix number 2 at a temperature of
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 204
 temperature: 607.60
0 boran-11
 endf/b-iv met 1160
 550.00 Has selected
 thermal acattering matrix runbar 2 at a temperature of
t 1275 updated 10/13/89 201
 temperatures 607.60
0 psygen-16
 endf/b-iv met 1276
 205
 temperatures 650,00
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 erdf/b-iv met 1284
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Oresonence data for this nuclide
Oness runber (a)
 90,436
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 temperature(kelvin)
Opportial scatter signs =
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 = 4.2515602E-02
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 1.079
 lump diamesion (a-bar)
Ospin factor (g)
Oirner radius
 = 6.32X6000E-01
 dencoff correction (c)
 = 1.6805907E-01
Othe absorber will be treated by the northein integral method.
Othis rescreme material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1.00000
(DETOLD)
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 res acat
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 .000000E+00
 -7.806083E-01
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Opcess rescrence integrals
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 2.92402E-01
Osbsorption
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 elapsed time
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 this xschm working tape was created 02/16/96 at 10:03:28
 the title of the parent case is as follows
 aschn weighted tape-parent case entitled- 800 d, sas2h: babook wilcox 15x15,
 3.00xX, 20p.c/mtu burn high temp
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 number of neutron groups
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 table of contents
 器器被泵
 hydrogen erolf/b-iv met 126
b-10 1273 218rpp 042375 p-3 253k
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 updated 10/13/89
 boron-11
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 undeted 10/13/89
 endif/b-iv met 1276
 avgan-16
 205
 zircelloy
 endf/b-iv mat 1284
 undeted 10/13/89
 1/V cross sections normalized to 1.0 at 0.023 ev
```

| hydrogen                                | endf/b-iv mat 1269/thrm1002                  | updated 10/13/89                       | id       | 1001           |
|-----------------------------------------|----------------------------------------------|----------------------------------------|----------|----------------|
|                                         | p 042375 p-3 289k                            |                                        | id       | 5010           |
| baran-11                                | erof/b-iv met 1160                           | updated 10/13/89                       | id       | 5011           |
| avgen 16                                | endif/b-iv mat 1276                          | updated 10/13/89                       | id       | 8016           |
| avgen 16                                | ends/b-iv mat 1276                           | updated 10/13/89                       | id       | 7/007          |
| pr-82                                   | m=102,105,105,105,106,107                    | uprated 10/13/89                       | id       | 36083<br>36085 |
| <b>β</b> 2-β <u>5</u>                   | nt= 102                                      |                                        | id       |                |
| sr-90                                   | nt=102                                       | updated 10/13/89                       | įd       | 38090          |
| y-89                                    | nt=102                                       | updated 10/13/89                       | id<br>id | 39089<br>40093 |
| zr-95                                   | mt= 102                                      | ·                                      | 10       | 400%           |
| 27-94                                   | mt=102                                       | updated 10/13/89                       | id       | 40075          |
| 27-95                                   | mt=102                                       | updated 10/13/89                       | id       | 40802          |
| ziroslloy                               | endi/to-iv met 1284<br>mt=102                | updated 10/13/89<br>updated 10/13/89   | id       | 41094          |
| <del>ф%</del>                           | mz-102<br>mz-102                             |                                        | ŭ        | 42095          |
| 100-95<br>100-95                        | m=102                                        | uppleted 10/13/89<br>uppleted 10/13/89 | id       | 43099          |
| ru-101                                  | mt=102                                       | updated 10/13/89                       | Ĭď       | 44101          |
| ru-106                                  | mt=102                                       | updated 10/13/89                       | ũ        | 44106          |
| rh-103                                  | mt=102                                       | uzdated 10/13/89                       | ŭ        | 4510B          |
| rh-105                                  | int= 102                                     | drawn in the                           | id       | 45105          |
| ±-105                                   | m≥102                                        | updated 10/13/89                       | id       | 46105          |
| £-108                                   | mt=102                                       | uzdated 10/13/89                       | id       | 46108          |
| silver-109                              | endi/to-iv mat 1139                          | uzdated 10/13/89                       | iã.      | 47109          |
| sb-124                                  | m=102                                        | updated 10/13/89                       | id<br>id | 51124          |
| xe-131                                  | mt=102,105,104,105,106                       | uzdated 10/13/89                       | id       | 54131          |
| xe-132                                  | #E#102,105,104,105,105                       | updated 10/13/89                       | id       | 5/132          |
| xenor-135                               | nt=102,108,104,105,106<br>eruf/b-iv mat 1234 | updated 10/13/89                       | ોંત      | 54135          |
| xe-136                                  | est= 102, 105, 104, 105, 1                   |                                        | id       | 54136          |
| cesiun-133                              | ercli/to-iv mat 1141                         | ucclated 10/13/89                      | id       | 55133          |
| cs-134                                  | mt=102                                       | uxdated 10/13/89                       | id       | 55134          |
| CB-135                                  | nt= 102                                      | .,                                     | id       | 55135          |
| cs-137                                  | mt=102                                       | updated 10/13/89                       | id       | 55137          |
| be-136                                  | pt=102                                       | updated 10/13/89                       | id       | 56136          |
| La-139                                  | mt=102                                       | ucdated 10/13/89                       | id       | 57139          |
| c=144                                   | mt= 102                                      | •                                      | id       | 58144          |
| pr-141                                  | mt=102,103,104,105,106,107                   | updated 10/13/89                       | id       | 59141          |
| pr-143                                  | mt=102                                       | updated 10/13/89                       | id       | 59143          |
| nd-143                                  | mt=102                                       | updated 10/13/89                       | id       | 60143          |
| nd-145                                  | mt=102                                       | updated 10/13/89                       | id       | 60145          |
| nd-147                                  | mt=102                                       | updated 10/13/89                       | id       | 60147          |
| pn-147                                  | nt=102                                       | updated 10/13/89                       | id       | 61147          |
| par-148                                 | mt= 102                                      | 4 . 4 44 45                            | id       | 61148          |
| sm-147                                  | endi/b-v fission product                     | updated 10/13/89                       | įd       | 62147          |
| SR-149                                  | et=102,103,107                               | updated 10/13/89                       | id       | 62149          |
| sn-150                                  | mt=102                                       | undeted 10/13/89                       | id       | 62150          |
| sm-151                                  | m=102,105,104,105,106,107                    | undeted 10/13/89                       | id       | 62151          |
| sm-152                                  | mt=102,105,104,105,105,107                   | updated 10/13/89                       | id       | 85             |
| នាញ                                     | mt=102,103,104,105,105,107                   | updated 10/13/89                       | id       | 63153<br>63154 |
| eu-154                                  | mt=102,103,104,105,105,107                   | updated 10/13/89                       | id<br>id | 93.22<br>93.52 |
| eu 155<br>eu 155                        | m=102,105,104,105,105,107                    | updated 10/13/89                       | id       | 64 <u>155</u>  |
|                                         | mt=102<br>=5+4 residecs p-3 295k f-1/e-m     | updated 10/13/89                       | ŭ        | 92234          |
|                                         | endi/o-iv mat 1261                           | updated 10/13/89                       | ŭ        | 9225           |
| 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | #5+4 neuklacs p-3 255k f-1/e-m               | (1 45)                                 | id       | 9236           |
| uranium-238                             |                                              | updated 10/13/89                       | ĭď       | 92238          |
|                                         | andif/b-iv net 1263                          | undeted 10/13/89                       | ŭ        | 95257          |
| 11 - 780 1050 ein                       | p-54 needacs p-3 200k f-1/er                 |                                        | ũ        | 9238           |
| nlumius-70                              | ercif/to-iv met 12%                          | updated 10/13/89                       | ũ        | 9239           |
|                                         | endiforiy met 1265                           | updated 10/13/89                       | ũ        | 94240          |
|                                         | ercif/b-iv mat 1266                          | updated 10/13/89                       | id<br>id | 94241          |
| h                                       |                                              | <del>, </del>                          |          |                |

| 0 1 | am-241 105                                                            | 7 218 gp lift f-1,<br>4 endf/b-iy                           | lacs 218tpp p-3 2<br>/e-na 090376 p3 23 | updated 10, 250k  updated 10, .00 seconds  mmmmmm  m                   | 73/89 m m mm m mm m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m m | P P P P P P P P P P P P P P P P P P P | %1<br>%3                               |                                                                                                      | INFORMATION ONLY | • |
|-----|-----------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|----------------------------------------|------------------------------------------------------------------------------------------------------|------------------|---|
| 0   |                                                                       | ######################################                      |                                         |                                                                        | ######################################                                                                                                                                                                                                                        |                                       |                                        |                                                                                                      |                  |   |
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| •   | 11<br>111<br>1111<br>11<br>11<br>11<br>11<br>11<br>11<br>11<br>111111 | 888<br>888<br>888<br>8888<br>8888<br>8888<br>88888<br>88888 | :::                                     | 888 88 88 88 88 88 88 88 88 88 88 88 88                                |                                                                                                                                                                                                                                                               | :::<br>:::<br>:::<br>:::              |                                        | 9777777777<br>97 97<br>97 97<br>97 97<br>97 97<br>97 97<br>97 97<br>97 97<br>97 97<br>97 97<br>97 97 |                  |   |

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880 d, second part of ass2h pass to make library

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 general problem data
 ige 1/2/3 = plane/cylinder/schere
 isn cuscheture order
 isct order of scattering
iext 0/1/2/3/4/5/6-0/k/elphe/c/z/r/h
 izm number of zones
 number of special intervals
 ibl 0/1/2/3 = vecun/refl/per/white
 in irrer iteration meximum
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 ibr right boundary condition
 ion outer iteration meximum
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 mox number of mixtures
 icle -1/0/n-flat res/sn/cot
 ms mixing table length
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 ith Q/1 = forward/adjoint
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 ipbt -1/0/1-none/fine/all bal. prt
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 special options
 ifg Q/1 = none/weighting calculation
 ipn 0/1/2 diff. coef. peram
 0
 ign volumetric sources (Q/TFTQ/yes)
 idfm 0/1 = name/density factors 38*
 ipm boundary sources (O/nero/yes)
 iaz Q/n = none/n activities by zone
 ifn 0/1/2 = ircut 33*/3/*/use last
 iai O/=none/activities by interval
 itms sexioum time (minutes)
 ifct 0/1-no/yes upscatter scaling ipvt 0/1/2-no/k/alpha persecuric srch
 idt1 0/1/2/3-m/xsect/sroe/flux--aut
 isk broad group fluxes
 ison outer iteration acceleration
 ibln activity data unit
 riand band rebeln parameter
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 jbkl 0/1/2 buckling geometry
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 ion -1/0/1=cell/zone/region weight
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 ignif number of broad groups
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rust table length or max order
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 -2/-1/0/naugued xsect print
 mean extra 1-d x-sect positions
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 iap -1/n anian xsect print
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 plane depth for buckling 2,00000=02
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 .000000
 ev charge sps for search 1.0000E-03
 buckling factor=1.420892
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 Argum new param and for search 7,50000E-01
 this case will require
 2611 locations for mixing
 this case has been allocated 200000 locations
 880 d, second part of sea2h pass to make library
 13q array has
 70 entries.
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 14d arrey has
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 Eci array has
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 data block 2 (mixing table, etc.)
 ruck ides
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identification
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 2.09710E-02
 202
 4.19420E-02
 252
 3.81515E-06
 201
 1.5488/E-05
 205
 205
 4.25156E-02
 999
 9225
 1.33198E-04
 1001
 92234
 1,47781E-05
 5010
 92236
 1.82292E-05
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 92238
 7.219XE-13
 10
 8016
 8016
 1.50611E-02
 11
 1.1531SE-02
 36083
 36083
 4.72043E-07
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| 42                                     | 36085                                          | 1                                       | 36085                         | 2.27030E-07                |
|----------------------------------------|------------------------------------------------|-----------------------------------------|-------------------------------|----------------------------|
| 13                                     | 38090                                          | . 1                                     | 38090                         | 5.1685ZE-06                |
| 5                                      | 39089                                          | i                                       | 39089                         | 4.0775E-06                 |
| 44                                     | 40075                                          | i                                       | 42075                         | 5.47657E-06                |
| 16<br>17                               | 4000                                           | i                                       | 40093                         | 4.1220BE-06                |
| 1/                                     | 400%                                           | <u> </u>                                | 40094                         | 6.47876E-06                |
| 18<br>19                               | 40095                                          | 1                                       | 40094                         |                            |
| 79                                     | 40802                                          | 1                                       | 40095                         | 6.60335E-07                |
| a)                                     | 410%                                           | 1                                       | 41094                         | 3,21149E-12                |
| 21                                     | 42075                                          | 1                                       | 43077                         | 6.33732E-06                |
| <b>Z</b> 2.                            | 43099                                          | 1 1                                     | 45108                         | 3.475£E-06                 |
| 25                                     | 44101                                          | 1                                       | 45105                         | 7.3943E-09                 |
| 24                                     | 44106                                          | 1                                       | 44101                         | 5.751 <del>3/E</del> -06   |
| 25                                     | 45108                                          | 1                                       | 44106                         | 8.69130E-07                |
| 26                                     | 45105                                          | 1                                       | 46105                         | 2.26913E-06                |
| 27                                     | 46105                                          | 1                                       | 4610B                         | 6.36851E-07                |
| 28                                     | / <b>4100</b>                                  | 1                                       | 47109                         | 4,45102E-07                |
| 29                                     | 47109<br>51124<br>5131<br>5132<br>5135<br>5135 | 1                                       | 51124                         | 1,00830E-10                |
| 30                                     | 51124                                          | 1                                       | 54131                         | 2.90271E-05                |
| 31                                     | 54131                                          | 1                                       | 54132                         | 5.45567E-06<br>2.208/EE-09 |
| 32                                     | 54132                                          | 1                                       | <b>54135</b>                  | 2.208/8E-09                |
| 33                                     | 54135                                          | 1                                       | 54136                         | 1.09418E-05                |
| 34                                     | 54136                                          | i                                       | 55134                         | 3.16663E-07                |
| 35                                     | <b>₩</b> 144                                   | i                                       | 55135                         | 3,473625-06                |
| 36                                     | \$137<br>\$137<br>\$137                        | 1<br>1<br>1<br>1                        | 55137                         | 6.78821E-06                |
| ₹                                      | 55135                                          | i                                       | 56136                         | 6.38766E-0B                |
| <b>3</b>                               | 817                                            | i                                       | 57139                         | 6.72225E-06                |
| ₹                                      | EXTEX                                          | i                                       | 59141                         | 5.82082E-06                |
| 70                                     | 57130                                          | i                                       | 59143                         | 1.22771E-07                |
| 77                                     | 57139<br>58144<br>59141                        | i                                       | 58144                         | 2.21750E-06                |
| 41                                     | 2014<br>E01/4                                  | i                                       | <b>M</b>                      | 5.203798-06                |
| 42                                     | 59N3                                           |                                         | 60145                         | 3.88111E-06                |
| 43                                     | 60143                                          | 1.<br>1<br>1<br>1                       | 61147                         | 1.33040E-06                |
| 44                                     | COLLE                                          | - 1                                     | 61 M                          | 3.89552E-09                |
| 42                                     | 601/5<br>601/7                                 |                                         | 61148<br>60147                | 4.29701E-08                |
| 49                                     | 6UW<br>411/7                                   |                                         | 62147                         | 4.6366E-07                 |
| 4/                                     | 61147<br>61148                                 |                                         | 62 PM                         | 2.87617E-08                |
| 43                                     | 01140                                          |                                         | 62149<br>62150                | 1.382776-06                |
| 47                                     | 62147                                          | 1                                       | 42151                         | 1,329306-07                |
| 20                                     | 62149<br>62150<br>62151                        |                                         | 62151<br>62152                | 6.630/6E-07                |
| 汉                                      | 62150                                          | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 02132<br>4/485                | 7.2193/E-10                |
| ≥ 2                                    | 62151                                          | 1                                       | <b>415</b>                    | 7.2NOOE*10                 |
| 22                                     | <u>&amp;1</u> 2                                | 1                                       | 63123                         | 3.9859E-07<br>8.3405E-08   |
| 54                                     | <u>ស153</u>                                    | 1                                       | <b>63154</b>                  | 9-3403E-03                 |
| 55                                     | 815<br>815<br>815<br>8234                      |                                         | <u>മിട്ട</u>                  | 4.31432E-08<br>4.4268E-08  |
| 56                                     | សាន                                            | ]                                       | 40502                         | 4.A268E-US                 |
| · 57                                   | 64155                                          | 1                                       | 1001                          | 2.30630E-02                |
| 58                                     | 92234                                          | . 1                                     | 1001<br>5010<br>5011<br>55133 | 2.07787E-06                |
| 59                                     | 9225<br>9276<br>9278<br>9237<br>9237           | 1                                       | 5011                          | 8.5167 <b>3E</b> -06       |
| ക                                      | 92236                                          | 1                                       | ऋध                            | 6.95 <del>263E-</del> 06   |
| 61                                     | 92238                                          | 1                                       | 93237                         | 1,23390E-06                |
| 62                                     | 93237                                          | 1                                       | 94238                         | 1.76797E-07                |
| ഒ                                      | 94238                                          | 1                                       | 94239                         | 3.5686E-05                 |
| ************************************** | 9(239)                                         | 1                                       | 94240                         | 6.95689E-06                |
| 65                                     | 94240                                          | 1                                       | 94241                         | 3.76/295-06                |
| 66                                     | 02241                                          | 1                                       | 94242                         | 4.23205E-07                |
| ã                                      | 9/2/2                                          | i                                       | 95241<br>95263                | 1.126435-07                |
| 68                                     | 95241                                          | 1                                       | 95263                         | 3.90711E-08                |
| 69                                     | 95243                                          | 1                                       | 96244                         | 3.737482-09                |
| <i>69</i><br>70                        | 952/3<br>962/4                                 | i                                       | 999                           | 3.30753E-21                |
| elan                                   | ed time .00 min.                               | •                                       |                               |                            |
| 2.5                                    | 7 locations will be used                       |                                         |                               |                            |
|                                        |                                                |                                         |                               |                            |

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 390 array has
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 51d array has
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1.4000E+06 1.96611E+00
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 850 d, second part of sec21 pass to make library order p(l) activity table
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 3.10450E-02
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4.5355E-02 -5.46143E-01
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| 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 4.53355E-02 -1.91780E-01 21 -8.6944E-05                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| 20<br>21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4.5355E-02 1.91780E-01 20 8.6944E-08                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 4.5339%E-02 5.46143E-01 19 2.47977E-02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Z</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4.53350E-02 8.17361E-01 18 3.70550E-02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <del>x</del>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 4.53355E-02 9.64143E-01 17 4.37057E-02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Occretants for p( 3) scattering                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 4.3333E-02 9.04 PDE-01 17 4.37099E-02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Cargi set 1 set 2 set 3 set                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 4 set 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 75E-01 -1.7770E-02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| 10 -8.2178/E-01 -8.5725/E-02 5.428/E-01 -1.91/                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 11 -6.01588E-01 -8.5725E-02 .0000E-00 -1.40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 12 -2.2019Œ-01 -8.5725Œ-02 -5.4285Œ-01 -5.136<br>13 -2.2019Œ-01 -8.5725Œ-02 -5.4285Œ-01 -5.136                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| 21 1,91780E-01 -4,49528E-01 -7,7318E-01 -9,769                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 8/E-02 4,17/26E-01<br>9/E-02 -/ 17/8/E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 22 5.46143E-01 -4.4952E-01 -3.20262E-01 -2.781                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 22 3.40M2E'U 14.49042E'U 13.40424E'U 12.701                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 78 9 17749CM -J. //EDE-M 7 20040CM -J. 1/2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| 24 9.641/3E-01 -4.49520E-01 7.73181E-01 -4.910                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 20E-01 -1.4661/E-01<br>80E-01 6.24438E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 24 9.641/3E-01 -4.49529E-01 7.73167E-01 -4.910<br>1 int radii seid pts zone ro. er                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 202-01 -1. <i>4651/2</i> -01<br>892-01 6.2/4392-01<br>eas volumes dens fact radius mod spec(int) :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 24 9.64143E-01 -4.49528E-01 7.73181E-01 -4.910<br>1 int radii sid pts zone no. sr<br>1 0 1.97644E-02 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 20E-01 -1.465VE-01<br>8SE-01 6.243SE-01<br>8SE-01 6.243SE-01<br>90 4.5UBSE-03 0 spec(int)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 24 9.64 k2E-01 -4.4952E-01 7.73 k8E-01 -4.910<br>1 int radii sid pts zone no. sr<br>1 0 1.9764E-02 1<br>2 3.95287E-02 5.9588E-02 1 2.485                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 20E-01 -1.4651/E-01<br>BSE-01 6.2433E-01<br>BBS volumes dens fact radius acid spec(int)<br>0 4.5083E-03 0<br>66E-01 1.4726/E-02 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 24 9.64 V.SE-01 -4.49526E-01 7.73 VSE-01 -4.910 1 int radii mid pts zone no. er 1 0 1.97644E-02 1 2 3.9526E-02 5.9259E-02 1 2.455 3 7.9357E-02 1.16586E-01 1 4.967                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 20E-01 -1.466 (E-01<br>80E-01 6.243 (E-01<br>886 Volumes dans fact radius acid spec(Int)<br>0 4.50 (B1E-03 0<br>66E-01 1.478 (E-02 0<br>50E-01 5.85 (57E-02 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 24 9.64 N.E-01 -4.4952E-01 7.73181E-01 -4.910 1 int radii aid pts zone ro. ar 1 0 1.97644E-02 1 2 3.95257E-02 5.9538E-02 1 2.453 3 7.9557E-02 1.16536E-01 1 4.967 4 1.58119E-01 1.97644E-01 1 9.954                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20E-01 -1.4664E-01<br>80E-01 6.2439E-01<br>886 Volumes dens fact radius acci spec(int)<br>0 4.5088E-03 0<br>66E-01 1.47264E-02 0<br>33E-01 5.85057E-02 0<br>66E-01 9.81762E-02 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 24 9.64/43E-01 -4.4952E-01 7.73181E-01 -4.910 1 int radii siid pts zone no. sr 1 0 1.97644E-02 1 2 3.95287E-02 5.9581E-02 1 2.453 3 7.9575E-02 1.1656E-01 1 4.957 4 1.58119E-01 1.97644E-01 1 9.954 5 2.37172E-01 2.76701E-01 1 1.490                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 20E-01 -1.465VE-01<br>8SE-01 6.243SE-01<br>80E-01 6.243SE-03<br>80 4.50BSE-03<br>80E-01 1.4726VE-02<br>80E-01 5.85057E-02<br>80E-01 9.81762E-02<br>80E-01 9.81762E-02<br>80E-01 1.374VE-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 24 9.64 V3E-01 -4.49526E-01 7.73 V3E-01 -4.910 1 int radii mid pts zone no. ar 1 0 1.97646E-02 1 2 3.95287E-02 5.928VE-02 1 2.483 3 7.9575E-02 1.16586E-01 1 4.967 4 1.581 V3E-01 1.97644E-01 1 9.934 5 2.37172E-01 2.76701E-01 1 1.4967 6 3.16280E-01 3.55798E-01 1 1.986                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 20E-01 -1.4654E-01<br>BE-01 6.243E-01<br>BE-01 6.243E-01<br>00 4.50EBE-03<br>60 4.50EBE-03<br>60 0<br>60-01 1.4726E-02<br>00 0<br>53E-01 5.85057-02<br>00 0<br>60E-01 9.8176E-02<br>00 0<br>60E-01 1.3744E-01<br>60E-00 1.76717E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 24 9.64 V.SE-01 -4.49526E-01 7.73 VSE-01 -4.910 1 int radii mid pts zone ro. ar 1 0 1.97644E-02 1 2 3.9526E-02 5.925VE-02 1 2.483 3 7.9257E-02 1.16586E-01 1 4.967 4 1.9319E-01 1.97644E-01 1 9.954 5 2.3717E-01 2.7670E-01 1 1.490 6 3.16230E-01 3.55759E-01 1 1.960 7 3.9526E-01 4.34814E-01 1 2.483                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 20E-01 -1.466/E-01<br>80E-01 6.2430E-01<br>88S Volumes dans fact radius acid spec(int) 0<br>0 4.5081E-03 0<br>66E-01 1.4726/E-02 0<br>50E-01 5.85057E-02 0<br>66E-01 9.81762E-02 0<br>60E-00 1.37447E-01<br>50E-00 1.76717E-01<br>66E-00 2.7598E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 24 9.64 N.E-01 -4.4552E-01 7.73 N.E-01 -4.910 1 int radii nid pts zone ro. ar 1 0 1.5764E-02 1 2 3.9526E-02 1.9586E-02 1 2.455 3 7.9557E-02 1.1858E-01 1 4.967 4 1.58115E-01 1.9764E-01 1 9.954 5 2.3717E-01 2.7670E-01 1 1.960 6 3.16230E-01 3.5579E-01 1 1.960 7 3.9526E-01 4.3481E-01 1 2.465 8 4.74345E-01 5.13874E-01 1 2.980                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 20E-01 -1.466/E-01<br>80E-01 6.243/E-01<br>886 Volumes dans fact radius acid spec(int)<br>0 4.5(18)E-03 0<br>64E-01 1.4726/E-02 0<br>30E-01 5.8505/E-02 0<br>64E-01 9.87/62E-02 0<br>20E-00 1.374/E-01<br>65E-00 1.774/E-01<br>64E-00 2.5528E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 24 9.64\( \) \$\text{XE-01} \cdot -4\( \) \$\text{XE-01} \cdot -2\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cdot -1\( \) \$\text{XE-01} \cd | 20E-01 -1.466/E-01<br>80E-01 6.2430E-01<br>88S Volumes dans fact radius acid spec(int) 0<br>0 4.5081E-03 0<br>66E-01 1.4726/E-02 0<br>50E-01 5.85057E-02 0<br>66E-01 9.81762E-02 0<br>60E-00 1.37447E-01<br>50E-00 1.76717E-01<br>66E-00 2.7598E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 24 9.64V3E-01 -4.4952E-01 7.73181E-01 -4.910 1 int radii mid pts zone no. ar 1 0 1.9764E-02 1 2 3.9528E-02 5.9281E-02 1 2.483 3 7.9575E-02 1.1658E-01 1 4.957 4 1.5811E-01 1.9764E-01 1 9.934 5 2.37172E-01 2.76701E-01 1 1.4957 6 3.1623E-01 3.5579E-01 1 1.966 7 3.9528E-01 4.34816E-01 1 2.483 8 4.7634E-01 5.1867E-01 1 2.483 9 5.5340E-01 5.73167E-01 1 3.477 10 5.9281E-01 6.1266E-01 1 3.477                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20E-01 -1.466VE-01<br>BE-01 6.243E-01<br>BE-01 6.243E-01<br>BE-01 6.243E-01<br>BE-01 6.243E-03<br>CE-01 1.4726E-02<br>BE-01 5.8505-02<br>BE-01 9.818E-02<br>BE-00 1.3747E-01<br>BE-00 1.7671E-01<br>EE-00 2.553E-01<br>BE-00 1.425E-01<br>BE-00 1.425E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 24 9.64V3E-01 -4.4952E-01 7.73181E-01 -4.910 1 int radii mid pts zone no. ar 1 0 1.9764E-02 1 2 3.9528E-02 5.9281E-02 1 2.483 3 7.9575E-02 1.1658E-01 1 4.957 4 1.5811E-01 1.9764E-01 1 9.934 5 2.37172E-01 2.76701E-01 1 1.4957 6 3.1623E-01 3.5579E-01 1 1.966 7 3.9528E-01 4.34816E-01 1 2.483 8 4.7634E-01 5.1867E-01 1 2.483 9 5.5340E-01 5.73167E-01 1 3.477 10 5.9281E-01 6.1266E-01 1 3.477                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20E-01 -1.466/E-01 80E-01 6.2430E-01 80E-01 6.2430E-01 80E-01 6.2430E-01 80E-01 6.2430E-01 80E-01 6.2430E-02 80E-01 1.4726/E-02 80E-01 1.4726/E-02 80E-01 1.4726/E-02 80E-01 1.5747/E-01 80E-00 1.7671/E-01 80E-00 1.7671/E-01 80E-00 1.7670E-01 80E-00 1.5270E-01 80E-00 1.5270E-01 80E-00 1.5270E-01 80E-00 1.5270E-01 80E-00 1.5270E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 24 9.64V3E-01 -4.4952E-01 7.73181E-01 -4.910 1 int radii mid pts zone no. ar 1 0 1.9764E-02 1 2 3.9528E-02 5.9281E-02 1 2.483 3 7.9575E-02 1.1658E-01 1 4.957 4 1.5811E-01 1.9764E-01 1 9.934 5 2.37172E-01 2.76701E-01 1 1.4957 6 3.1623E-01 3.5579E-01 1 1.966 7 3.9528E-01 4.34816E-01 1 2.483 8 4.7634E-01 5.1867E-01 1 2.483 9 5.5340E-01 5.73167E-01 1 3.477 10 5.9281E-01 6.1266E-01 1 3.477                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20E-01 -1.466/E-01 80E-01 6.2430E-01 80E-01 6.2430E-01 80E-01 6.2430E-01 80E-01 6.2430E-01 80E-01 6.2430E-02 80E-01 1.4726/E-02 80E-01 1.4726/E-02 80E-01 1.4726/E-02 80E-01 1.4726/E-01 80E-00 1.76717E-01 80E-00 1.76718-01 80E-00 1.86718-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 24 9.64V3E-01 -4.4952E-01 7.73181E-01 -4.910 1 int radii mid pts zone no. ar 1 0 1.9764E-02 1 2 3.9528E-02 5.9281E-02 1 2.483 3 7.9575E-02 1.1658E-01 1 4.957 4 1.5811E-01 1.9764E-01 1 9.934 5 2.37172E-01 2.76701E-01 1 1.4957 6 3.1623E-01 3.5579E-01 1 1.966 7 3.9528E-01 4.34816E-01 1 2.483 8 4.7634E-01 5.1867E-01 1 2.483 9 5.5340E-01 5.73167E-01 1 3.477 10 5.9281E-01 6.1266E-01 1 3.477                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20E-01 -1.466/E-01 BE-01 6.243E-01 BE-01 6.243E-01 BE-01 6.243E-01 BE-01 6.243E-01 BE-01 6.243E-01 BE-01 6.243E-03 BE-01 1.4726/E-02 BE-01 1.4726/E-02 BE-01 1.4726/E-02 BE-01 1.58057-02 BE-01 1.3746/E-01 BE-00 1.76717E-01 BE-00 2.5525E-01 BE-00 1.5217E-01 BE-00 1.5217E-01 BE-00 1.5217E-01 BE-00 8.2660E-02 BE-00 8.2660E-02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 24 9.64V3E-01 -4.4952E-01 7.73181E-01 -4.910 1 int radii mid pts zone no. ar 1 0 1.9764E-02 1 2 3.9528E-02 5.9281E-02 1 2.483 3 7.9575E-02 1.1658E-01 1 4.957 4 1.5811E-01 1.9764E-01 1 9.934 5 2.37172E-01 2.76701E-01 1 1.4957 6 3.1623E-01 3.5579E-01 1 1.966 7 3.9528E-01 4.34816E-01 1 2.483 8 4.7634E-01 5.1867E-01 1 2.483 9 5.5340E-01 5.73167E-01 1 3.477 10 5.9281E-01 6.1266E-01 1 3.477                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20E-01 -1.466/E-01 BE-01 6.243/E-01 BE-01 6.243/E-01 BE-03 6.243/E-01 BE-03 6.243/E-01 BE-03 6.243/E-01 BE-03 6.243/E-03 BE-03 1.4726/E-02 BE-01 1.4726/E-02 BE-01 1.4726/E-02 BE-01 1.374/E-01 BE-00 1.374/E-01 BE-00 1.767/E-01 BE-00 1.767/E-01 BE-00 1.423/E-01 BE-00 1.521/E-01 BE-00 1.521/E-01 BE-00 1.521/E-01 BE-00 1.521/E-01 BE-00 1.521/E-01 BE-00 1.521/E-01 BE-00 2.556/E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 24 9.64 N.E-01 -4.4952E-01 7.73 ISE-01 -4.90 1 int radii mid pts zone ro. 1 0 1.9764E-02 1 2.453 3 7.957E-02 1.1658E-01 1 4.967 4 1.5815E-01 1.9764E-01 1 9.594 5 2.3717E-01 2.7670E-01 1 1.490 6 3.1623E-01 3.5579E-01 1 1.490 6 3.1623E-01 4.3454E-01 1 2.483 7 3.952EE-01 4.3454E-01 1 2.483 8 4.7435E-01 5.1357E-01 1 2.483 8 4.7435E-01 5.1357E-01 1 3.477 10 5.923E-01 6.1269E-01 1 3.725 11 6.526E-01 6.4260E-01 2 3.973 11 6.526E-01 6.4260E-01 2 3.973 12 6.5278E-01 6.4260E-01 2 4.101 13 6.7310E-01 6.958E-01 3 4.259 14 7.2005E-01 7.9557E-01 3 4.534 15 7.6763E-01 7.9557E-01 3 4.534 16 8.1400E-01 8.6279E-01 4 5.114                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20E-01 -1.4664E-01 80E-01 6.243E-01 80E-01 6.243E-01 80E volumes dere fact radius and spec(int) 80 4.5080E-03 80 0 4.5080E-03 80 0 0 0 80E-01 1.4724E-02 80E-01 9.8176E-02 80E-01 1.78717E-01 80E-00 1.78717E-01 80E-00 2.5560E-01 80E-00 1.4230E-01 80E-00 8.24460E-02 80E-00 8.24460E-02 80E-00 2.5526E-01 80E-00 8.24460E-02 80E-00 8.24460E-02 80E-00 2.5526E-01 80E-00 2.5526E-01 80E-00 2.5526E-01 80E-00 2.5526E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 24 9.64V3E-01 -4.4952E-01 7.73181E-01 -4.910 1 int radii mid pts zora ro. ar 1 0 1.9764E-02 1 2 3.9528E-02 5.9638E-02 1 2.483 3 7.9575E-02 1.1688E-01 1 4.957 4 1.5811SE-01 1.9764E-01 1 9.954 5 2.37172E-01 2.76701E-01 1 1.4957 6 3.1623E-01 3.5579E-01 1 1.995 7 3.9528E-01 4.3484E-01 1 2.483 8 4.7634SE-01 5.7316F-01 1 2.483 8 4.7634SE-01 5.7316F-01 1 3.477 10 5.95281E-01 6.4250E-01 1 3.477 10 5.95281E-01 6.4250E-01 2 3.973 11 6.3240E-01 6.4250E-01 2 4.101 13 6.73100E-01 6.4250E-01 3 4.250 14 7.2056E-01 7.43590E-01 3 4.250 15 7.6708E-01 7.43590E-01 3 4.250 16 8.4000E-01 8.6279SE-01 4 5.174                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 20E-01 -1.4664E-01 BE-01 6.24XE-01 BE-01 6.24XE-01 BE-01 6.24XE-01 BE-01 6.24XE-01 BE-03 4.9UBB-03 0 4.9UBB-03 0 0 64E-01 1.4726E-02 0 0 33E-01 5.8505E-02 0 0 33E-01 1.3746E-01 BE-00 1.76717E-01 66E-00 2.5525E-01 1E-00 1.5217E-01 SE-00 1.5217E-01 SE-00 1.5217E-01 SE-00 1.5217E-01 SE-00 2.0556E-01 SE-00 2.0556E-01 SE-00 2.0556E-01 SE-00 2.0556E-01 SE-00 2.0556E-01 SE-00 5.2505E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 24 9.64VE-01 -4.4952E-01 7.73181E-01 -4.910 1 int radii mid pts zore ro. ar 1 0 1.9764E-02 1 2 3.9528E-02 5.9638E-02 1 2.483 3 7.9575E-02 1.1658E-01 1 4.997 4 1.5811E-01 1.9764E-01 1 9.954 5 2.37172E-01 2.76701E-01 1 1.4967 6 3.1623E-01 3.5579E-01 1 1.966 7 3.9528E-01 4.34816E-01 1 2.483 8 4.7634E-01 5.1367E-01 1 2.483 9 5.5340E-01 5.73167E-01 1 3.477 10 5.9638E-01 6.1266E-01 1 3.477 11 6.3246E-01 6.4260E-01 2 3.973 12 6.5278E-01 6.6958E-01 3 4.293 13 6.7310E-01 7.4550E-01 3 4.293 14 7.2005E-01 7.9651E-01 3 4.293 15 7.670SE-01 7.9651E-01 3 4.293 16 8.400E-01 8.6279E-01 4 5.114 17 9.1159E-01 9.4089E-01 4 5.714 18 1.00918E-00 1.10677E-00 4 6.360                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 20E-01 -1.4664E-01 BEE-01 6.243E-01 BEE-01 6.243E-01 BEE-01 6.243E-01 BEE-01 6.243E-01 BEE-01 6.243E-01 BEE-01 1.4726E-02 D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 24 9.64V3E-01 -4.4952E-01 7.73181E-01 -4.910 1 int radii mid pts zere ro. ar 1 0 1.9764E-02 1 2 3.9528E-02 5.9281E-02 1 2.483 3 7.9567E-02 1.1686E-01 1 4.907 4 1.5811E-01 1.9764E-01 1 9.954 5 2.57172E-01 2.7670E-01 1 1.966 6 3.1629E-01 4.34816E-01 1 2.483 8 4.7639E-01 4.34816E-01 1 2.483 8 4.7639E-01 5.73167E-01 1 2.900 9 5.530E-01 5.73167E-01 1 3.477 10 5.9281E-01 6.1266E-01 1 3.775 11 6.3260E-01 6.260E-01 2 3.973 12 6.5278E-01 6.6260E-01 2 3.973 13 6.7310E-01 6.9660E-01 3 4.250 14 7.2006E-01 7.4350E-01 3 4.250 15 7.670SE-01 7.4350E-01 3 4.534 15 7.670SE-01 7.9517E-01 3 4.819 16 8.1400E-01 8.6279E-01 4 5.114 17 9.1157E-01 9.6080E-01 4 5.714 18 1.0091E-00 1.10577E-00 4 6.360 19 1.2033E-00 1.3057E-00 4 7.567                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 20E-01 -1.466VE-01 80E-01 6.243E-01 80E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 24 9.64V3E-01 -4.4952E-01 7.73181E-01 -4.910 1 int radii mid pts zone ro. ar 1 0 1.9764E-02 1 2 3.9528E-02 5.9281E-02 1 2.453 3 7.9575E-02 1.1658E-01 1 4.967 4 1.5811SE-01 1.9764E-01 1 9.934 5 2.3717E-01 2.7670E-01 1 1.4967 6 3.1623E-01 3.5579E-01 1 1.496 7 3.9528E-01 4.34816E-01 1 2.483 8 4.763SE-01 5.73167E-01 1 2.483 8 4.763SE-01 5.73167E-01 1 3.477 10 5.9281E-01 6.1269E-01 1 3.477 10 5.9281E-01 6.4269E-01 2 3.973 11 6.3246E-01 6.4269E-01 2 3.973 12 6.52780E-01 6.4269E-01 3 4.254 13 6.73100E-01 7.4359E-01 3 4.254 14 7.2058E-01 7.4359E-01 3 4.534 15 7.6703E-01 7.9517E-01 3 4.534 16 8.1400E-01 8.6279E-01 4 5.114 17 9.11591E-01 9.6039E-01 4 5.114 17 9.11591E-01 9.6039E-01 4 5.174 18 1.0091E+00 1.10577E+00 4 6.360 1.3995SE+00 1.3099E+00 4 7.557 10 1.3995SE+00 1.3099E+00 4 7.567                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20E-01 -1.466/E-01 80E-01 6.243/E-01 80E-01 6.243/E-01 80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 24 9.64V3E-01 -4.4952E-01 7.73181E-01 -4.910 1 int radii mid pts zora ro. ar 1 0 1.9764E-02 1 2 3.9528E-02 5.9531E-02 1 2.453 3 7.9575E-02 1.1588E-01 1 4.957 4 1.5811SE-01 1.9764E-01 1 9.954 5 2.37172E-01 2.75701E-01 1 1.4957 6 3.1623E-01 3.5579E-01 1 2.453 6 3.1623E-01 3.5579E-01 1 2.453 7 3.9528E-01 4.3484E-01 1 2.453 8 4.7534SE-01 5.73167E-01 1 2.453 8 4.7534SE-01 5.73167E-01 1 3.477 10 5.95281E-01 6.4252E-01 1 3.477 11 6.3246E-01 6.4252E-01 2 3.973 12 6.52780E-01 6.4252E-01 2 4.101 13 6.7310E-01 6.4252E-01 3 4.253 14 7.2052E-01 7.4359E-01 3 4.253 15 7.6783E-01 7.4359E-01 3 4.253 16 8.10094E-00 1.1057E-00 4 5.767 18 1.0094E-00 1.1057E-00 4 6.350 19 1.2053E-01 1.4974E-00 4 6.7567 20 1.3959E-00 1.4974E-00 4 6.7567 20 1.3959E-00 1.4974E-00 4 6.7567 20 1.3959E-00 1.4974E-00 4 6.7567 20 1.3959E-00 1.4974E-00 4 6.7567 20 1.3959E-00 1.4974E-00 4 6.7567 21 1.9547SE-00 1.4974E-00 4 6.7567                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 20E-01 -1.4664E-01 BEE-01 6.24XEE-01 BEE-01 6.24XEE-01 BEE-01 6.24XEE-01 BEE-03 6.24XEE-01 BEE-03 6.24XEE-02 BEE-01 1.4726E-02 BEE-01 1.4726E-02 BEE-01 5.25057E-02 BEE-00 1.76717E-01 BEE-00 1.76717E-01 BEE-00 1.5217E-01 BEE-00 1.5217E-01 BEE-00 1.5217E-01 BEE-00 2.0556E-01 BEE-00 2.0556E-01 BEE-00 5.2505E-01 BEE-00 5.2505E-01 BEE-00 5.2505E-01 BEE-00 5.2505E-01 BEE-00 1.5217E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 24 9.64V3E-01 -4.4952E-01 7.73181E-01 -4.910 1 int radii mid pts zore ro. ar 1 0 1.9764E-02 1 2.483 3 7.9567E-02 5.9281E-02 1 2.483 3 7.9567E-02 1.1688E-01 1 4.967 4 1.5811E-01 1.9764E-01 1 9.924 5 2.3717E-01 2.7670E-01 1 1.490 6 3.1629E-01 3.9579E-01 1 1.966 7 3.9528E-01 4.34816E-01 1 2.483 8 4.7639E-01 4.34816E-01 1 2.900 9 5.5345E-01 5.1837E-01 1 2.900 9 5.5345E-01 6.1266E-01 1 3.477 10 5.9281E-01 6.1266E-01 1 3.725 11 6.3266E-01 6.4260E-01 2 3.973 12 6.5278E-01 6.6260E-01 2 4.101 13 6.7310E-01 6.9688E-01 3 4.226 13 6.7310E-01 7.9581E-01 3 4.236 15 7.6708E-01 7.9581E-01 3 4.236 15 7.6708E-01 7.9581E-01 4 5.114 17 9.11591E-01 9.4682E-01 4 5.727 18 1.0091E-00 1.8679E-00 4 6.360 19 1.2036E-00 1.3095E-00 4 7.557 20 1.3992E-00 1.4979E-00 4 6.376 20 1.3992E-00 1.4979E-00 4 6.376 21 1.9597E-00 1.4879E-00 4 6.376 22 1.78991E-00 1.8675E-00 4 1.027                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 20E-01 -1.4664E-01 BEE-01 6.243E-01 BEE-01 6.243E-01 BEE-01 6.243E-01 BEE-01 6.243E-01 BEE-01 6.243E-03 BEE-01 6.243E-03 BEE-01 1.4726E-02 BEE-01 5.850E-02 BEE-01 1.3744E-01 BEE-00 1.7671E-01 BEE-00 1.7671E-01 BEE-00 1.5217E-01 BEE-00 1.5217E-01 BEE-00 1.5217E-01 BEE-00 2.553E-01 BEE-00 2.553E-01 BEE-00 2.553E-01 BEE-00 2.553E-01 BEE-00 5.253E-01 BEE-00 5.253E-01 BEE-00 5.253E-01 BEE-00 5.253E-01 BEE-00 1.5217E-01 BEE-00 1.523E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 24 9.64 N.E. 01 -4.49526-01 7.73 N.E. 01 -4.90 1 int radii mid pts zore ro. ar 1 0 1.97646-02 1 2.453 3 7.9575-02 1.16586-01 1 4.967 4 1.58115-01 1.97646-01 1 9.594 5 2.37172-01 2.76701-01 1 1.495 6 3.16236-01 3.55756-01 1 1.495 7 3.95286-01 4.3616-01 1 2.453 7 3.95286-01 4.3616-01 1 2.453 8 4.7635-01 5.13876-01 1 2.453 8 4.7635-01 5.13876-01 1 3.477 10 5.92816-01 6.12696-01 1 3.725 11 6.3266-01 6.42626-01 2 3.973 12 6.52786-01 6.42626-01 2 3.973 13 6.731006-01 6.42626-01 2 3.973 14 7.20056-01 7.45596-01 3 4.253 15 7.67636-01 7.45596-01 3 4.254 16 8.140006-01 8.62796-01 4 5.114 17 9.11596-01 9.40896-01 4 5.727 18 1.00916-01 1.3076-00 4 6.354 20 1.39756-00 1.497746-00 4 6.756 20 1.39756-00 1.497746-00 4 7.567 21 1.59476-00 1.48756-00 4 1.002 21 1.59476-00 1.48756-00 4 1.002 22 1.785916-00 1.487506-00 4 1.002 22 1.785916-00 1.487506-00 4 1.002 22 1.785916-00 1.887506-00 4 1.267                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 202-01 -1.46542-01 803-01 6.24392-01 805 Volumes obre fact radius and spec(int) 80 4.50803-03 80 4.50803-03 80 0 4.50803-03 80 0 1.47242-02 80 0 0 8.8742-02 80 0 1.37443-01 80 0 1.37443-01 80 0 1.37443-01 80 0 1.58703-01 80 0 1.42503-01 80 0 1.42503-01 80 0 1.42503-01 80 0 1.42503-01 80 0 1.52173-01 80 0 1.42503-01 80 0 1.52173-01 80 0 1.52173-01 80 0 1.52173-01 80 0 1.57313-01 80 0 1.57313-01 80 0 1.57313-01 80 0 1.57313-01 80 0 1.57313-01 80 0 1.57313-01 80 0 1.57313-01 80 0 1.57313-01 80 0 1.57313-01 80 0 1.57313-01 80 0 1.57313-01 80 0 1.57313-00 80 0 1.57313-00 80 0 1.57313-00 80 0 1.57313-00 80 0 1.57313-00 80 0 1.57313-00 80 0 1.57313-00 80 0 1.57313-00 80 0 1.57313-00 80 0 1.57313-00 80 0 1.57313-00 80 0 1.57313-00 80 0 1.57313-00 80 0 1.57313-00 80 0 1.57313-00 80 0 1.57313-00 80 0 1.57313-00 80 0 1.57313-00 80 0 1.57313-00 80 0 1.57313-00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 24 9.64V3E-01 -4.4952E-01 7.73181E-01 -4.910 1 int radii mid pts zone ro. ar 1 0 1.9764E-02 1 2 3.9528E-02 5.9281E-02 1 2.453 3 7.9575E-02 1.1686E-01 1 4.967 4 1.5811SE-01 1.9764E-01 1 9.934 5 2.3717E-01 2.7670E-01 1 1.4967 6 3.1623E-01 3.5579E-01 1 1.496 7 3.9528E-01 4.34816E-01 1 2.483 8 4.7633E-01 5.7316E-01 1 2.483 8 4.7633E-01 5.7316E-01 1 3.477 10 5.9281E-01 6.1266E-01 1 3.477 10 5.9281E-01 6.1266E-01 1 3.753 11 6.3246E-01 6.4260E-01 2 3.973 12 6.52780E-01 6.4260E-01 2 4.101 13 6.73100E-01 6.4260E-01 3 4.254 14 7.2058E-01 7.9517E-01 3 4.534 15 7.6703E-01 7.9517E-01 3 4.534 16 8.1400E-01 8.6279E-01 4 5.114 17 9.11591E-01 9.6036E-01 4 5.727 18 1.0091E-00 1.60570E-00 4 6.340 19 1.2036E-00 1.16970E-00 4 6.340 20 1.3995E-00 1.46750E-00 4 1.002 21 1.5947SE-00 1.6959CE-00 4 1.002 22 1.76991E-00 1.6959CE-00 4 1.267 23 1.9509E-00 2.0282E-00 4 1.267 24 2.18027E-00 2.22776E-00 4 1.369                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 20E-01 -1.466/E-01 80E-01 6.243E-01 80E-01 6.243E-01 80 4.5088E-03 80 4.5088E-03 80 0 4.5088E-03 80 0 0 80E-01 1.4726/E-02 80E-01 5.8505E-02 80E-01 9.8176E-01 80E-00 1.7777E-01 80E-00 1.7777E-01 80E-00 1.5217E-01 80E-00 1.5217E-01 80E-00 1.5217E-01 80E-00 8.2666E-02 80E-00 8.2666E-02 80E-00 8.2666E-01 80E-00 2.5538E-01 80E-00 1.5217E-01 80E-00 1.5338E-01 80E-00 1.5368E-00 80E-00 1.8638E-00 80E-00 1.8638E-00 80E-00 1.8638E-00 80E-00 1.8638E-00 80E-00 1.8548E-00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 24 9.64V3E-01 -4.4952E-01 7.73181E-01 -4.910 1 int radii mid pts zora no. ar 1 0 1.9764E-02 1 2 3.9528E-02 5.9638E-02 1 2.483 3 7.9575E-02 1.1686E-01 1 4.957 4 1.5811E-01 1.9764E-01 1 9.954 5 2.37172E-01 2.76701E-01 1 1.4957 6 3.1623E-01 3.5579E-01 1 2.483 8 4.7632E-01 4.3484E-01 1 2.483 8 4.7632E-01 5.13674E-01 1 2.900 9 5.5340E-01 5.7316E-01 1 3.477 10 5.9638E-01 6.4262E-01 1 3.477 11 6.3262E-01 6.4262E-01 2 3.973 12 6.5780E-01 6.4262E-01 2 3.973 12 6.5780E-01 6.9658E-01 3 4.293 14 7.2058E-01 7.4550E-01 3 4.293 15 7.6703E-01 7.4550E-01 3 4.293 16 8.400E-01 8.6279E-01 4 5.174 17 9.11597E-01 9.4682E-01 4 5.772 18 1.00918E-00 1.10577E-00 4 6.340 17 9.11597E-01 9.4682E-01 4 5.772 18 1.00918E-00 1.3093E+00 4 7.567 20 1.3975E+00 1.4974E+00 4 6.340 22 1.78591E+00 1.86750E+00 4 1.002 23 1.78591E+00 1.86750E+00 4 1.267 24 2.19576E+00 1.86750E+00 4 1.267 25 2.3754SE+00 2.2776SE+00 4 1.267 26 2.3754SE+00 2.2776SE+00 4 1.369 25 2.3754SE+00 2.2776SE+00 4 1.369 25 2.3754SE+00 2.2776SE+00 4 1.442                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 20E-01 -1.4664E-01 BEE-01 6.24XEE-01 BEE-01 6.24XEE-01 BEE-01 6.24XEE-01 BEE-01 6.24XEE-02 BO 4.5UBBE-03 CEE-01 1.4726E-02 BEE-01 5.8505E-02 BEE-01 9.8176E-02 BEE-00 1.76717E-01 BEE-00 1.76717E-01 BEE-00 1.5217E-01 BEE-00 1.5217E-01 BEE-00 1.5217E-01 BEE-00 2.0556E-01 BEE-00 2.0556E-01 BEE-00 1.5217E-01 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 |
| 24. 9.64 N.E01 -4.4952E-01 7.73 N.E01 -4.90 1 int radii mid pts zone ro. ar 1 0 1.9764E-02 1 2 3.952E-02 5.925E-02 1 2.453 3 7.957E-02 1.1558E-01 1 4.957 4 1.5515E-01 1.954E-01 1 9.954 5 2.3717E-01 2.7570E-01 1 1.4957 6 3.1623E-01 3.5579E-01 1 1.966 7 3.952EE-01 4.3451E-01 1 2.453 8 4.7634E-01 5.1567E-01 1 2.453 8 4.7634E-01 5.1567E-01 1 2.900 9 5.5340E-01 6.1266E-01 1 3.477 10 5.925E-01 6.1266E-01 1 3.477 11 6.3246E-01 6.4250E-01 2 3.973 12 6.5278E-01 6.6250E-01 2 3.973 12 6.5278E-01 6.6950E-01 3 4.254 13 6.7310E-01 7.4550E-01 3 4.254 15 7.670SE-01 7.9517E-01 3 4.899 16 8.1600E-01 8.6279E-01 4 5.174 17 9.11597E-01 9.4659E-01 4 5.774 18 1.0091E-00 1.10677E-00 4 6.340 19 1.2036E-00 1.307SE+00 4 7.567 20 1.3950E-00 1.6950E-00 4 1.002 21 1.7597E-00 1.6950E-00 4 1.002 22 1.75991E-00 1.6950E-00 4 1.002 23 1.950E-00 1.6950E-00 4 1.002 25 1.950E-00 2.4730E-00 4 1.346 26 2.3954E-00 2.4730E-00 4 1.462 26 2.3954E-00 2.4730E-00 4 1.462 26 2.57064E-00 2.4650SE-00 4 1.462 26 2.57064E-00 2.4650SE-00 4 1.665                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 20E-01 -1.465/E-01 80E-01 6.243/E-01 80E-01 6.243/E-01 80E-01 6.243/E-01 80E-01 1.478/E-02 80E-01 1.478/E-02 80E-01 1.478/E-02 80E-01 1.878/E-02 80E-01 1.374/E-01 80E-00 1.374/E-01 80E-00 1.374/E-01 80E-00 1.425/E-01 80E-00 1.425/E-01 80E-00 1.425/E-01 80E-00 1.425/E-01 80E-00 1.521/E-01 80E-00 1.521/E-01 80E-00 1.521/E-01 80E-00 1.521/E-01 80E-00 1.5373/E-01 80E-00 1.5373/E-01 80E-00 1.5373/E-00 80E-00 1.5373/E-00 80E-00 1.5373/E-00 80E-00 1.5373/E-00 80E-00 1.5373/E-00 80E-00 1.5373/E-00 80E-00 1.5373/E-00 80E-00 1.5373/E-00 80E-00 1.5373/E-00 80E-01 2.5347/E-00 80E-01 2.5347/E-00 80E-01 3.573/E-00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 24 9.64 N.E. 01 -4.652 E-01 7.73 ISE 01 -4.90 1 int radii mid pts zone ro. 2 3.952 E-02 5.92 SE-02 1 2.65 3 7.95 F-02 1.15 SE-01 1 4.95 4 1.58 115-01 1.97 64-01 1 9.59 5 2.37 172-01 2.76 70 1 1 9.59 5 2.37 172-01 2.76 70 1 1 1.60 6 3.16 23 E-01 2.76 70 1 1 1.60 6 3.16 23 E-01 2.76 70 1 1 1.96 6 3.16 23 E-01 2.76 70 1 1 2.60 7 3.95 28 E-01 4.34 81 E-01 1 2.65 8 4.7 3.35 E-01 4.34 81 E-01 1 2.65 9 5.53 (0E-01 5.73 16 E-01 1 3.47 10 5.92 8 E-01 6.12 6 E-01 1 3.75 11 6.32 6 E-01 5.73 16 E-01 1 3.75 11 6.32 6 E-01 6.25 2 E-01 1 3.75 11 6.32 6 E-01 6.25 2 E-01 2 3.97 12 6.52 7 E-01 6.25 2 E-01 2 3.97 13 6.73 10 E-01 6.25 2 E-01 3 4.25 15 7.6 7 8 E-01 7.4 5 5 E-01 3 4.25 15 7.6 7 8 E-01 7.4 5 5 E-01 3 4.25 15 7.6 7 8 E-01 7.5 5 E-01 3 4.25 16 8.1 400 E-01 8.6 7 7 9 5 E-01 4 5.1 14 17 9.1 15 9 E-01 9.6 8 5 E-01 4 5.7 2 18 1.00 9 1 8 E-01 1.30 7 8 E-01 4 5.1 14 17 9.1 15 9 E-01 1.6 7 9 E-01 4 5.7 2 20 1.3 9 7 8 E-01 1.6 7 9 E-01 4 6.3 0 20 1.3 9 7 8 E-01 1.6 7 9 E-01 4 6.3 0 21 1.5 9 7 8 E-01 1.6 7 9 E-01 4 6.3 0 22 1.7 8 9 1 E-01 1.6 7 9 E-01 4 6.3 0 23 1.9 8 9 2 E-01 1.6 7 9 E-01 4 6.3 0 24 2.5 7 6 E-01 2.6 8 2 E-01 4 1.3 6 25 2.5 7 6 E-01 2.6 8 2 E-01 4 1.3 6 26 2.5 7 6 6 E-02 2.6 8 2 E-00 4 1.6 6 27 2.7 8 8 2 E-00 2.6 8 2 E-00 4 1.6 6 27 2.7 8 8 2 E-00 2.6 8 2 E-00 4 1.6 7 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 20E-01 -1.4664E-01 BEE-01 6.24XEE-01 BEE-01 6.24XEE-01 BEE-01 6.24XEE-01 BEE-01 6.24XEE-02 BO 4.5UBBE-03 CEE-01 1.4726E-02 BEE-01 5.8505E-02 BEE-01 9.8176E-02 BEE-00 1.76717E-01 BEE-00 1.76717E-01 BEE-00 1.5217E-01 BEE-00 1.5217E-01 BEE-00 1.5217E-01 BEE-00 2.0556E-01 BEE-00 2.0556E-01 BEE-00 1.5217E-01 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 BEE-00 1.5373E-00 |

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 1.3995E+00 1.5997VE+00 8.7950E+00 1.5960E+00 7.6333E+02
1.5947E+00 1.6925E+00 1.0200E+01 2.07540E+00 8.5357ZE+02
1.7897E+00 1.88750E+00 1.12463E+01 2.3147EE+00 9.44850E+02
1.9850E+00 2.0824E+00 1.24727E+01 2.5541ZE+00 1.0557SE+01
 1.560/E-00 2.052/E-00 1.26/2/E-01 2.554/E-00 1.12/5/E-01 2.352/E-00 2.4730/E-00 1.26/5/E-01 3.052/E-00 1.270/E-01 2.576/E-00 2.4730/E-00 1.26/5/E-01 3.052/E-00 1.270/E-01 2.576/E-00 2.66/2/E-00 1.575/E-01 3.72/2/E-00 1.352/E-01 2.766/E-02 2.852/E-00 2.9120/E-00 1.759/E-01 1.765/E-00 7.176/E-02 2.852/E-00 2.9120/E-00 1.769/E-01 1.765/E-01 2.96/0/E-00 1.860/E-01 E-00/E-01 E-0
0 total flux
0 int. grp. 1 grp. 2 grp. 3 grp. 4 grp. 5 grp. 6 grp. 7 grp. 8 1 1.2526-02 9.00206-02 1.12538-01 6.901006-02 1.02738-01 1.92768-01 1.92768-01 1.92768-01 1.92768-01
 1. 2526-02 9.0536-02 1.1246-01 6.9000-02 1.0256-01 1.9266-01 1.9266-01 1.4006-01 1.4006-01 1.2466-01 1.2466-01 1.4006-01 1.246
 28 1.55/0E-02 9.7828E-02 1.2119E-01 7.4633E-02 1.1177E-01 2.0808E-01 2.0808E-01 1.4897E-01 int. gp. 9 gp. 10 gp. 11 gp. 12 gp. 13 gp. 14 gp. 15 gp. 16 1 1.1595E-01 1.0788E-01 1.009E-01 6.5478E-02 5.5898E-02 5.2245E-02 2.6998E-02 1.6048E-02 1.1595E-01 1.0789E-01 1.009E-01 6.5478E-02 5.5898E-02 5.3702E-02 2.6998E-02 1.6048E-02 6 1.5995E-01 1.0789E-01 1.009E-01 6.5395E-02 5.5908E-02 5.3702E-02 2.6998E-02 1.6048E-02 6 1.5995E-01 1.0789E-01 1.009E-01 6.5395E-02 5.5908E-02 5.3702E-02 2.6997E-02 1.6086E-02 6 1.5995E-01 1.0789E-01 1.0092E-01 6.5395E-02 5.5908E-02 5.3702E-02 2.6997E-02 1.6086E-02 6 1.5995E-01 1.0092E-01 1.0092E-01 6.5395E-02 5.5908E-02 5.3702E-02 2.6997E-02 1.6086E-02 6 1.5995E-01 1.0092E-01 1.0092E-01 6.5395E-02 5.5908E-02 5.2000E-02 2.6997E-02 1.5995E-02 6.1590E-01 1.0092E-01 1.0092E-01 6.5082E-02 5.5908E-02 5.2000E-02 2.6997E-02 1.5995E-02 6.4868E-02 5.5908E-02 5.2000E-02 2.6997E-02 1.5996E-02 1.5996
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 18 1.154/7E-01 1.060/7E-01 9.83799E-02 6.24079E-02 5.31127E-02 4.8978/E-02 2.85531E-02 1.56/27E-02 ;
 19 1.1539/E-01 1.059/E-01 9.806/E-02 6.20/29E-02 5.2769/E-02 4.89/07E-02 2.8253/E-02 1.55869E-02
 1.153/2E-01 1.0573E-01 9.786/E-02 6.1802E-02 5.2767/E-02 4.840/E-02 2.853/E-02 1.5548E-02 21 1.553/E-01 1.0573E-01 9.786/E-02 6.1802E-02 5.254/E-02 4.840/E-02 2.8178/E-02 1.554/E-02 2.153/E-01 1.0573E-01 9.782/E-02 6.1802E-02 5.286/E-02 4.783/E-02 2.8178/E-02 1.554/E-02 2.153/E-01 1.0573E-01 9.782/E-02 6.1523E-02 5.286/E-02 4.7787/E-02 2.8077/E-02 1.547/E-02 2.153/E-01 1.0573E-01 9.786/E-02 6.1402E-02 5.286/E-02 4.776/E-02 2.803/E-02 1.547/E-02 2.803/E-01 1.056/E-01 9.780/E-02 6.133/E-02 5.203/E-02 4.754/E-02 2.803/E-02 1.546/E-02 5.203/E-02 4.754/E-02 2.803/E-02 4.754/E-02 5.203/E-02 5.203/E-02 4.754/E-02 5.203/E-02 5.203/E-02 5.203/E-02 4.754/E-02 5.
77 1.55%E-01 1.657E-01 9.767E-02 6.135E-02 5.25EE-02 4.75ME-02 2.80ME-02 1.566E-02 28 1.553Te-01 1.657Te-01 9.767E-02 6.135ME-02 5.215E-02 4.75ME-02 2.802SE-02 1.566E-02 0 1.657Te-01 9.767E-02 3.52ME-02 1.05ME-02 1.05ME-02 2.802SE-02 1.566E-02 0 1.657Te-02 3.52ME-02 1.05ME-02 2.22ME-02 7.57ME-02 6.21ME-02 2.7005E-03 5.25ME-03 1.657Te-02 3.52ME-02 1.05ME-02 2.22ME-02 7.57ME-02 6.21ME-02 3.52ME-02 1.05ME-02 2.22ME-02 7.57ME-02 6.21ME-02 3.52ME-02 1.05ME-02 2.22ME-02 7.57ME-02 6.21ME-02 6.75ME-02 6.21ME-02 5.67ME-03 5.25ME-03 1.65ME-02 3.55ME-02 1.05ME-02 2.22ME-02 7.5ME-02 6.17ME-02 6.65ME-03 5.26ME-03 1.65ME-02 3.55ME-02 1.05ME-02 2.22ME-02 7.45ME-02 6.17ME-02 6.65ME-03 5.16ME-03 1.65ME-02 3.55ME-02 1.05ME-02 2.22ME-02 7.45ME-02 6.17ME-02 6.65ME-03 5.16ME-03 1.65ME-02 3.55ME-02 1.05ME-02 2.2MG-02 7.45ME-02 6.17ME-02 6.65ME-03 5.16ME-03 1.65ME-02 3.45ME-02 1.05ME-02 2.15ME-02 7.45ME-02 6.05ME-02 6.05ME-02 6.05ME-02 1.05ME-02 1.05ME-02 2.15ME-02 7.35ME-02 6.05ME-02 6.05ME-02 6.05ME-02 1.05ME-02 1.05ME-02 2.15ME-02 7.35ME-02 6.05ME-02 1.05ME-02 1.05ME-02 1.05ME-02 2.15ME-02 7.35ME-02 6.05ME-02 1.05ME-02 27 1.15340E-01 1.05672E-01 9.7476/E-02 6.13452E-02 5.2052E-02 4.7520E-02 2.8014/E-02 1.5463E-02 28 1.15337E-01 1.0567/E-01 9.74919E-02 6.13457E-02 5.21158E-02 4.7547/E-02 2.8025/E-02 1.5465E-02
 0 int. grp. 25 grp. 26 grp. 27
1 2.81217E-02 2.0283E-02 3.8549E-03
2 2.81110E-02 2.02814E-02 3.85212E-03
 3 2.804/2E-02 2.02229E-02 3.86012E-03
4 2.79023E-02 2.00228E-02 3.81469E-08
 5 2.7626-02 2.0096-02 3.56456-03 5 2.7626-02 1.99516-02 3.7625-03 6 2.76156-02 1.99576-02 3.7625-03 6 2.7656-02 1.99476-02 3.56472-03 8 2.66976-02 1.89486-02 3.4656-03 10 2.56976-02 1.89886-02 3.4656-03 10 2.56976-02 1.89886-02 3.4656-03 10 2.56976-02 1.89886-02 3.4656-03 10 2.56976-02 1.89886-02 3.4656-03 10 2.56976-02 1.89886-02 3.4656-03 10 2.56976-02 1.89886-02 3.4656-03 10 2.56976-02 1.89886-02 3.4656-03 10 2.56976-02 1.89886-02 3.4656-03 10 2.56976-02 1.89886-02 3.4656-03 10 2.56976-03 1.89886-0
 11 2.55576-02 1.80305-02 3.37426-03 12 2.55076-02 1.80505-02 3.37426-03 12 2.54686-02 1.774686-02 3.33826-03 1.75646-02 3.33826-03 1.75646-02 3.2308-03
 15 2.4580XE-02 1.7078YE-02 3.00772YE-03
 16 2.38500E-02 1.63782E-02 2.80161E-03
 17 2.31323E-02 1.57165E-02 2.71461E-03
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18 2.24490E-02 1.51197E-02 2.5810/E-03

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19 2.17641E-02 1.4540/E-02 2.46055E-08
 20 2.12802E-02 1.41490E-02 2.38726E-03
 20 2.12812-02 1.24912-02 2.3372-03
21 2.09212-02 1.33912-02 2.3372-03
22 2.09312-02 1.34612-02 2.3372-03
23 2.0932-02 1.3412-02 2.2322-03
23 2.0932-02 1.33132-02 2.2342-03
23 2.0932-02 1.33132-02 2.2342-03
23 2.0932-02 1.33132-02 2.2342-03
23 2.0932-02 1.33132-02 2.2342-03
24 2.0932-02 1.33132-02 2.2342-03
28 2.01520-02 1.32976-02 2.2324-03

**elapsed time .02 min

**fire grup summy for zer .1 by grup including sum for all grups in line .28

1 .0000-03 .00000-03 .0000-03 .0000-03 .0000-03 .0000-03 .0000-03 .0000-03 .00000-03 .0000-03 .0000-03 .00000-03 .0000-03 .0000-03 .0000-03 .00000-03 .0000-03 .000000-03 .00000-03 .00000-03 .00000-03 .00000-03 .00000-03 .00000-03 .00000-03 .00000-03 .00000-03 .00000-03 .00000-03 .00000-03 .00000-03 .00000-03 .00000-03 .00000-03 .00000-03 .00000-03 .000000-03 .00000-03 .00000-03 .00000-03 .00000-03 .00000-03 .00000-0
 - etapsed time .02 min.

If the group summery for zone 1 by group including sum for all groups in line 28
 .0000E+00 1.7978E-05 1.3466E-01 .0000E+00 1.7958E-05 1.2655E-01 .0000E+00 1.7958E-05 8.14618E-02 .0000E+00 8.7978E-05 8.14618E-02 .0000E+00 8.7978E-05 3.62800E-02 .0000E+00 2.7958E-05 2.0058E-02 .0000E+02 2.7958E-02 2.0058E-02 .0000E+02 2.7958E-02 2.0058E-02 .0000E+02 2.7958E-02 2.0058E-02 .0000E+02 2.7958E-02 2.0058E-02 .0000E+02 2.7958E-02 2.0058E-02 .0000E+02 2.7958E-02 2.0058E-02 .0000E+02 2.7958E-02 2.0058E-02 .0000E+02 2.7958E-02 2.0058E-02 .0000E+02 2.000E-02 .0000E+02 2.000E-02 .0000E-02 2.000E-02 .0000E-02 2.000E-02 2
 13 5.4857E-02 3.8520/E-08 5.58900E-02
 .00000E+00
 .00000E+00
 .000E+00
 .0000E+00
 14 5.1677/E-02 5.70861E-08 5.32088E-02
 15 2.8720E-02 1.2565E-05 2.89919E-02
 .000000
 .00000E+00
 _00000E+00
 16 1.5H05E-02 6.82897E-04 1.60393E-02
 .0000E+00 8.9185/E-07 8.7039E-05
.0000E+00 6.38681E-07 6.395/0E-08
 17 6.84927E-03 5.66708E-04 6.99819E-03
 -00000E+00
 .000000E+00
 18 4.8507E-05 1.4090E-05 5.2605E-03
 -00000E+00
 .000000
```

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19 1.05147E-02 1.03678E-03 1.05871E-02 .00000E+00
 .0000E+00 .0000E+00 1.37643E-06 1.31647E-02 .0000E+00 5.15148E-06 4.37514E-02
 20 3.46379E-02 2.36309E-05 3.52632E-02
 .0000E+00
 .00000+00 .00000+00 .00000+00 1.25650-06 1.34750-02 .00000+00 .00000+00 2.46600-06 2.73040-02 .00000+00 .00000+00 7.634750-06 9.256760-02 .00000+00 .00000+00 4.62030-06 7.53550-02
 21 1.04519E-02 1.66868E-05 1.09349E-02
 22 2.08960E-02 4.85135E-03 2.25889E-02
 23 7.12707E-02 1.21837E-02 7.57014E-02 24 5.75307E-02 1.06050E-02 6.2152E-02
 25 2.55007E-02 4.8419E-05 2.81161E-02 26 1.81170E-02 3.5486E-05 2.0291E-02 27 3.37778E-03 5.97017E-04 3.8550E-03
 .0000E+00
 .0000E+00
 .0000E+00 1.6052/E-06 3.38995E-02
 .0000E+00 8.47061E-07 2.42219E-02
 .00000E+00
 .0000E+00 .0000E+00 .0000E+00 9.98262E-08 4.5674E-05 .0000E+00 3.6927E-11 .0000E+00 5.88141E-04 2.19007E+00
 28 1.73900-00 -6.20396-05 1.76396-00 .00000-00 3.66276-11 .00000-00 5.88148-04 2.19006-00 1fine group summy for zero 2 by group including sum for all groups in line 28 0 grp. fix source fiss source in scatter slif scatter out scatter absorption leakage balance 2.00006-00 .00006-00 .00006-00 1.66276-05 1.66276-05 1.66276-05 1.66276-05 1.66276-05 1.00006-00 2.00006-00 .00006-00 1.50728-04 2.771566-05 8.763376-04 2.028126-05 -7.65336-05 1.00006-00 3.00006-00 .00006-00 1.50728-04 2.771566-05 8.763376-04 2.028126-05 -7.65336-04 9.99998-01 4 .00006-00 .00006-00 2.87438-04 2.30886-05 2.98536-04 1.310846-05 -2.416276-05 9.99998-01 5 .00006-00 .00006-00 4.81626-04 4.48026-05 2.78066-04 1.310846-05 -2.416276-05 9.99998-01 6 .00006-00 .00006-00 4.81626-04 4.26068-05 1.6908-04 2.780786-05 8.275846-04 1.00006-00 7 .00006-00 .00006-00 4.73528-04 1.25808-02 6.33388-05 2.681826-05 5.83298-04 1.00006-00 8 .00006-00 .00006-00 1.775306-04 9.20758-05 4.53466-04 2.211646-05 3.48078-04 1.00006-00 9 .00006-00 .00006-00 4.63036-04 6.36208-05 5.33346-05 7.67327-05 3.75526-04 9.99988-01 10.00006-00 .00006-00 4.65036-04 6.36208-05 4.991826-05 5.39326-05 5.58226-05 5.58128-05 1.00006-00 11 .00006-00 .00006-00 4.65036-04 6.36208-05 4.991826-05 5.79327-05 3.75526-05 1.00006-00 11 .00006-00 .00006-00 4.65036-04 6.36208-05 4.991826-05 5.79327-05 3.75526-05 1.00006-00 11 .00006-00 .00006-00 4.65036-04 6.36208-05 4.991826-05 5.79327-05 3.75526-05 1.00006-00 11 .00006-00 .00006-00 4.65036-04 6.36208-05 5.79326-05 5.79327-05 5.79326-05 1.00006-00 11 .00006-00 .00006-00 4.65036-04 6.36208-05 5.79326-05 5.79326-05 5.79326-05 5.79326-05 1.00006-00 11 .00006-00 .00006-00 4.65036-04 6.36208-05 5.79326-05 5.79326-05 5.79326-05 5.79326-05 1.00006-00 11 .00006-00 .00006-00 4.65036-04 6.36208-05 5.79326-05
 28 1.739600+00 -6.202960-05 1.746390+00
.0000e40 8.35/61e-06 3.2753f-02 .0000e40 5.2756f-06 1.93196f-02 .0000e40 4.9635f-06 1.93196f-02 .0000e40 4.7697e-06 1.66391e-02 .0000e40 3.21656f-06 1.0717f-02 .0000e40 2.73753f-06 9.1536f-08 .0000e40 1.4096f-06 4.7637e-08 .0000e40 3.7636f-07 2.4630f-08 .0000e40 3.7636f-07 1.4096f-07 2.4630f-07 2.463
 14 5.15252E-02 5.70125E-05 5.16774E-02 5.70561E-05
 .0000E+00
 15 2.85823E-02 1.22427E-05 2.87205E-02 1.2565E-05
 .000000
 .0000E+00
 16 1.58612E-02 6.75050E-04
 1.50005E-02 6.82097E-04
 .0000E+00
 .0000E+00 3.3580E-07 1.1402E-08
.0000E+00 2.3751E-07 8.0574E-04
 17 6.85/25E-05 5.65915E-04 6.85927E-05 5.6670E-04
 1,41300E-05 4,86091E-05 1,4080E-05
 .00000E+00
 18 4.82579E-0B
 .00000E+00 5.05165E-07 1.71661E-08
 19 1.02956E-02 1.02551E-05 1.05167E-02 1.05678E-05
 .00000E+00
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| 23 | SANGE-02 | 2.5973E-05 | 3.6573E-02 | 2.3603E-05 | 0.000E-00 | 1.5664E-05 | 5.7673E-05 | 2.1673E-05 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1.6673E-06 | 1
 19 1.01351E-02 1.56119E-05 1.0284E-02 1.02831E-05
 .0000E+00
 .00000E+00 7.04202E-07 6.73015E-05
 .00000E+00
 .0000E+00 2.65761E-06 2.26742E-02
 20 3.4282E-02 3.4701E-0B 3.4574E-02 2.3573E-0B
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.00000E+00 6.20757E-07 6.77228E-03
 21 1.01129E-02 2.57891E-05 1.04109E-02 1.64718E-05
 .00000E+00
 .0000E+00 1.2299E-06 1.3220E-02 .0000E+00 3.80129E-06 4.6879E-02 .0000E+00 2.27057E-06 3.70427E-02
 22 1.98472E-02 7.59177E-03 2.07798E-02 4.84952E-03
 .00000E+00
 .000E+00
 23 6.87225E-02 1.79761E-02 7.0083E-02 1.20992E-02 24 5.49320E-02 1.57399E-02 5.73016E-02 1.05216E-02
 .0000E+00 7.79712E-07 1.6469E-02
.0000E+00 4.02947E-07 1.1522E-02
.0000E+00 4.6277E-08 2.11894E-03
 25 2.42893E-02 7.32872E-03 2.59947E-02 4.86574E-03 26 1.67928E-02 5.61187E-03 1.80578E-02 3.59429E-03
 .0000E+00
2 1.500E-0 1.500E-0 1.000E-0 ... 1.000E-0 ... 1.000E-0 ... 1.000E-0 ... 1.000E-0 1.000E-0 ... 1.000E-0 2.100E-0 2.100E-0 2.100E-0 3.1100E-0 .0000E+00
 .00000=000
 27 3.0148E-03 1.1368E-03 3.37218E-03 6.12528E-04 .0000E-00 28 1.73727E-00 -9.8547E-03 1.74042E-00 -6.80663E-03 1.9578E-11
 .0000E+00 3.1160/E-04 1.14477E+00
 .0000E+00 9.99567E-04 8.52702E-06 9.69294E-02
 18 3.7524CE-CB 7.91146E-C7 4.53947E-CB 2.25469E-CB
 .0000E+00 2.2422E+05 3.2044E+05 2.45872E+01 .0000E+00 1.4087E+02 1.21849E+04 8.4540E+01
 19 9.59424E-03 5.28000E-06 1.01361E-02 1.56119E-03
 20 3.3050E-02 5.4050E-05 3.42628E-02 3.470TE-03
 .0000E+00 1.4686E+02 2.5529E+05 2.3649E-01
 21 9.18212E-03 1.81122E-05 1.01129E-02 2.57871E-03
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| 22             |              | -7.07403E-06                 |                          | 7.59177E-03                            |             |             | 4.3367 E-05  |                          |
|----------------|--------------|------------------------------|--------------------------|----------------------------------------|-------------|-------------|--------------|--------------------------|
| 23             | `6,05425E-02 | 1.A3647E-05                  | 6.87225E-02              | 1.79761E-02                            | .0000000    | 7.66330E-02 | 1.62200E-04  | 1.5731 <del>SE+</del> 00 |
| 24             | 4.69019E-02  | 4.10178E-06                  | 5.49520E-02              | 1.57389E-02                            | .0000Œ+00   | 7.14205E-02 | 9.90571E-05  | 1.224185+00              |
| 25             | 2.01600E-02  |                              | 2.4280E-02               | 7.3267Æ-05                             | ,0000E+00   | 4.08084E-02 | 3,405/E-05   | 5.28740E-01              |
| æ              | 1.3295/E-02  | -3.23816E-07                 | 1.67929E-02              | 5.61187E-03                            | ,0000E+00   | 3.752XEE-02 | 1.6820/E-05  | 3.50725E-01              |
| 27             |              | -9.92557E-09                 | 3.011482-03              | 1.13681E-08                            | .0000€+000  | 1.057825-02 | 1.731/XE-06  | 5,93197E-02              |
| 28             | 1,725905+00  | 2.1353ZE-05                  | 1.73727E+00              | -9.85547E-03                           | 2.28340E-0B | 3.97176E-01 | 1.192192-02  | 4.40122E+01              |
| 1fine o        | TOLD SLINELY | for system                   |                          |                                        |             |             |              |                          |
| 0 gp           | fix source   | fiss source                  | in scatter               | slf scatter                            | cut scatter | absorption  | leskage      | balance                  |
| 1              | .00000E+00   | 2.32907E-02                  | .000000                  | 2.25752E-02                            | 2.170505-02 | 3,8875E-03  | -7.77193E-09 | 9.9890BE-01              |
| 2              | .0000E+00    | 1.948E3E-01                  | 7.71837E-03              | 2.62641E-01                            | 1.86981E-01 | 1.5632BE-02 | -6.6547E-0B  | 1,00002E+00              |
| ã              | .00000E+00   | 2.160B1E-01                  | 7.77609E-02              | 2.69148E-01                            | 2.7740Œ-01  | 1.63891E-02 | -9.77021E-08 | 9.99987E-01              |
| 4              | .0000E+00    | 1.23708E-01                  | 1.1663E-01               | 1.84797E-01                            | 2.3053/E-01 | 7.856E-05   | -8.01678E-08 | 9.97777E-01              |
| 5              | .0000E+00    | 1.63830E-01                  | 2.08753E-01              | 4_ <del>((80)E-</del> 01               | 3.6733E-01  | 5.25/6/E-03 | -8.22760E-0B | 9.99990E-01              |
| 6              | .0000E+00    | 1.7658/E-01                  | 4.25450E-01              | 1.25646+00                             | 5.9575/E-01 | 8.2919Œ-05  | -6.88761E-08 | 1.00001E+00              |
| 7              | .0000E+00    |                              | 6.59203E-01              | 1.66997E+00                            | 7.38207E-01 |             | 8.5425E-07   | 9.999BE-01               |
| 8              | .00000=+00   | 1.3426/E-02                  | 7.76089E-01              | 1.70433E+00                            | 7.7636/E-01 |             | 5.0214 TE-08 | 9.99919E-01              |
| 9              | .0000E+00    |                              | 7.67053E-01              | 1,48963E+00                            | 7.46576-01  |             | -9.3073/E-06 | 9.9990/E-01              |
| 10             | .0000E+00    | 7.25186-05                   | 7.4275Œ-01               | 1.36003E+00                            | 7.10161E-01 | 3.27431E-02 | 4.43340E-07  | 9.9989E-01               |
| ñ              | .0000E+00    | 5.69890E-06                  | 7.14619E-01              | 1.2000E+00                             | 6.610175-01 |             | -2.8051E-06  | 9.99945E-01              |
| 12             | .0000E+00    | 3.9991/E-07                  | 5.75430E-01              | 6,98481E-01                            | 5.16882E-01 |             | -3.7099E-07  | 9.997/SE-01              |
| ซี             | .0000E+00    | 6.350BDE-08                  | 5.10483E-01              | 5.50999:-01                            | 4.5499E-01  |             |              | 9.99779E-01              |
| Ĩ.             | .00000=+00   | 1.2584E-08                   | 4.9116E-01               | 5.1328/E-01                            | 4.11272E-01 |             | -3.01971E-07 | 9.99990E-01              |
| <del>5</del>   | .0000E+00    | 1,42220E-09                  | 2.69489E-01              | 2.323085-01                            | 2.6123 E-01 | 8.19648E-0B | 2.29467E-06  | 1.00020E+00              |
| 16             | .0000E+00    |                              | 1.835%E-01               | 1.063265-01                            | 1.76657E-01 | 6.42016E-03 | 1.5122E-06   | 1.00022=+00              |
| <del>1</del> 7 | .0000E+00    | 1.34/9DE-10                  | 9.7400E-02               | 3.2677XE-02                            | 8.90X02E-02 | 8.41055E-05 | 4.01001E-06  | 1.00014E+00              |
| 18             | .0000E+00    |                              | 8.66180E-02              | 1.99160E-02                            | 5.94394E-02 | 2.717392-02 | 7.9114E-07   | 1.0000/E+00              |
| 19             | .0000E+00    | 1.3613/E-10                  | 1.35338E-01              | 6.25080E-02                            | 1.2/0192-01 | 1.130176-02 | 5.280X0E-05  | 1.00007E+00              |
| ວັກ            | .0000E+00    |                              | 3.265E-01                | 3.70875E-01                            | 2.96/885-01 | 2.81767E-02 | 5.4000E-06   | 1.00019E+00              |
| 20<br>21<br>22 | .000000      |                              | 1.50919E-01              | 7.2654E-02                             | 1.337Æ-01   | 2.55274E-02 | 1.81228-06   | 1.00009E+00              |
| 22             | .000E+00     |                              | 3.0180E-01               | 1.89125E-01                            | 2.26781E-01 |             | -7.0740E-06  | 1.00014E+00              |
| ž              | .0000E+00    |                              | 7.26157E-01              | 1.098176+00                            | 5.8¥00₹-01  | 1.39X0EE-01 | 1.43647E-05  | 1.00018E+00              |
| 2              | .0000E+00    | 9.78520E-12                  | 7.688/4E-01              | 9.37620E-01                            | 6.3567E-01  | 1.33057E-01 | 4.10178E-06  | 1.00015E+00              |
| ж<br>Б         | .00000       |                              | 5.1044Œ-01               | 3.83202E-01                            | 4.372 E-01  | 7.31081E-02 | 2.68128-06   | 1.00009E+00              |
| ັສ             | .0000E+00    |                              | 3.9745/E-01              | 3.90809E-01                            | 3.3100Œ-01  | 4 44100E-00 | -3.2814-07   | 1.0007E+00               |
| 27             | .0000E+00    | 4.7657E-13                   | 1.31766-01               | 7.98522-02                             | 1.1265E-01  | 1 0000      | -9.925/E-09  | 1.00003E+00              |
| 28             | .0000E+00    |                              | 1.016352+01              | 1.565765+01                            | 1.016356-01 | 1.002025+00 | 2.128BE-05   | 1.00002E+00              |
|                | rt bele flux |                              | lft by flux              | lft leekage                            | non rate    | fies rate   | flucture2    | total flux               |
| 0 ab           |              |                              | 1.257 E-02               | .0000E+00                              | 2.27261E-05 | 2.52141E-05 | 3.30%/E-04   | 3.71348E-01              |
| ż              |              | -6.45417E-08                 | 9.08450E-02              | .000E+00                               | 1.57676E-05 | 1.1027E-02  | 1.771E-03    | 2.66159E+00              |
| ž              |              | -9.77021E-08                 | 1.125886-01              | .0000E+00                              | .0000E+00   | 1.3320/E-02 | 1.98748E-05  | 3.312116+00              |
| 3              |              | -8.01678E-08                 | 6.90% E-02               | .0000E+00                              | .00000      | 5.7081SE-0B | 9.5622 0     | 2.03997E+00              |
| 3              |              | -8.22760E-08                 | 1.02781E-01              | .000000                                | .0000=00    | 1.62672E-05 | 1.1170E-05   | 3.0538E+00               |
| 6              |              | -6.88761E-08                 | 1.92551E-01              | .0000                                  | .0000       | 1.3305/E-05 | 1.8699E-03   | 5.72820E+00              |
| 7              | 2.059E-01    | 8.5/23E-07                   | 1.95118E-01              | .0000=+00                              | .00000      | 1.287/E-05  | 1.325/XE-03  | 5.5770£+00               |
| 8              | 1.48979E-01  |                              | 1.4701E-01               | .000                                   | .0000       | 1.2577E-05  | 7.556E-04    | 4.0% <del>8</del> E+00   |
| Ş              |              | -9.39734E-06                 |                          | .0000                                  | .0000=00    | 1.66411E-05 | 5.0712XE-04  | 3.178686+00              |
| 10             |              | 4.A33/0E-07                  | 1.1595Æ-01<br>1.0718Æ-01 | .00000                                 | .000E+00    | 3.554125-05 | 4.628XE-04   | 2.9154/E+00              |
|                | 1.05681E-01  |                              | 1.00967E-01              | .00000                                 | .00000E+00  | 7.48.78E-03 | 4.19KE-04    | 2.6963/E+00              |
| 11<br>12       |              | -2.80511E-05<br>-3.70599E-07 | 6.5429E-02               | .00000                                 | -0000E+00   | 1.02×55E-02 | 2.4652E-04   | 1.705E+00                |
| 13             |              | -1.63153E-06                 | 5.58900E-02              | .0000E+00                              | -0000E+00   | 1,17766E-02 | 2.10/21E-04  | 1.447565+00              |
| ¥              |              | -3.01591E-07                 | 5.300E-02                | .0000E+00                              | .0000E-00   | 7.40263E-05 | 1.88739E-04  | 1.32/5/E+00              |
| 5              | 2.80289E-02  |                              | 2.89919=-02              | -0000E+00                              | .0000       | 1.73351E-05 | 1.1871E-04   | 7.75362E-01              |
| 16             | 1.548E-02    | 1.51225E-06                  | 1.60393E-02              | .0000E+00                              | .0000       | 1.22133E-05 | 6.11950E-05  | 4.27935E-01              |
| 17             | 6.4480E-08   | 4.01001E-05                  | 6.99815E-05              | -0000E+00                              | -0000=+00   | 1.4045ZE-08 | 2.2708/E-05  | 1.7839E-01               |
| 18             | 3.752/CE-05  | 7.9114E-07                   | 5.26061E-03              | .0000E+00                              |             | 9.99567E-04 | 9.7125 E-06  | 1.07230E-01              |
| 19             | 9.5942/E-05  | 5.28060E-06                  | 1.087E-02                | .00000=+00                             | .0000       | 2.24225E-08 | 1.465Æ-05    | 2.67473E-01              |
| ao ao          | 3.3050E-02   | 5.40500E-06                  | 1.5X32E-02               | .0000E+00                              | .0000E+00   | 1.40x57E-02 | 1.31373E-04  | 9.17802E-01              |
| 21             | 9.1821Æ-05   | 1.811225-06                  | 1.07547E-02              | -0000E+00                              | .00000      | 1.46585E-02 | 2.7806E-05   | 2.5835E-01               |
| 22             |              | -7.07405E-06                 |                          | -0000E+00                              |             | 4.3/60E-02  |              | 4.8/5/SE-01              |
| ~              | 1,000 2,00   | -1-W1-TUE-TUD                |                          | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | ·····       | APPROPERTY. |              |                          |
|                |              |                              |                          |                                        |             |             |              |                          |

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.0000E+00 7.66330E+02 1.77097E+04 1.7256E+00 .0000E+00 7.14206E+02 1.08735E+04 1.34618E+00
 25 6.05425E-02 1.43547E-05 7.57016E-02 24 4.69019E-02 4.10176E-06 6.21525E-02
 .00000E+00
 .0000E+00
 25 2.01605E-02 2.68412E-06 2.81161E-02
 .0000E+00 4.08034E-02 3.76430E-05 5.83382E-01
 .00000E+00
 26 1.3295/E-02 -3.2381/E-07 2.02911E-02
 .0000E+00 3.7529E-02 1.87305E-05 3.85482E-01
 .0000E+00
 27 2.2425/E-03 -9.9257E-09 3.85306E-03
 .0000E+00
 .0000E+00 1.05782E-02 2.05318E-06 6.65679E-02
 28 1.7290E+00 2.13532E-05 1.74639E+00
 .0000E+00 2.28ESE-03 3.9717/E-01 1.2924/E-02 4.76371E+01
 elapsed time .02 min.
Odirect access unit 9 requires 556 blocks of length 216 for cross section weighting.

1 transport cross section weighting function
Octre grp. 1 grp. 2 grp. 3 grp. 4 grp. 5 grp. 6 grp. 7 grp. 8
1 1.5546E-05 5.07544E-05 5.3040E-05 2.5182E-05 3.7654E-05 5.5545E-05 3.7624E-05 1.7440E-05
2 7.0537E-04 5.01016E-05 5.80210E-05 3.44720E-05 4.3000E-05 6.15070E-05 4.33124E-05 2.1470E-05
 3 1.1897E-03 5.4989E-03 5.899E-03 2.9176E-03 3.820E-03 6.7767E-03 4.3754E-03 1.8249E-03
 4 8.163/x=-04 4.317/x=-05 4.967/x=-05 2.3917/x=-05 2.897/x=-05 4.800/x=-05 3.3267/x=-05 1.7970/x=-05 8.4025/x=-04 4.3847/x=-05 4.990/x=-05 2.41617/x=-05 2.879/x=-05 4.8897/x=-05 3.37567/x=-05 1.7970/x=-05
 9p. 9 9p. 10 9p. 11 9p. 12 9p. 13 9p. 14 9p. 15 9p. 16
1.11347e-03 1.0459e-03 1.0452e-03 8.7474e-04 7.9777e-04 1.0534e-03 3.2056e-04 1.6703e-04
1.77161e-03 1.9546e-03 2.04376e-03 1.46847e-03 1.4265e-04 1.7778e-04 1.0534e-03 3.8697e-04 3.4765e-04
1.12197e-03 1.0536e-03 1.2252e-03 1.2252e-03 1.2252e-03 1.4007e-03 3.8697e-04 2.1015e-04
 1.19619E-03 1.095/5E-03 1.080/ZE-03 6.7805/E-04 6.0193/E-04 6.43761E-04 3.1135/E-04 1.613/7E-04
 5 1.19421E-03 1.09997E-03 1.04598E-03 7.05653E-04 6.2987VE-04 6.91805E-04 3.15511E-04 1.6393VE-04
Octre grp. 17 grp. 18 grp. 19 grp. 20 grp. 21 grp. 22 grp. 23 grp. 24
1 1.06/31E-04 2.28736E-04 1.8260E-04 4.8262E-04 2.2820E-04 8.1210E-04 2.1171E-03 1.8164E-03
2 1.9084E-04 3.5380E-04 3.2054E-04 8.7947E-04 4.4977E-04 1.2482E-03 3.2521E-03 2.7845E-03
3 1.5955-04 3.5001-04 2.8608-04 6.7859-04 4.5227-04 1.3838-03 3.2648-05 2.86521-05 4.72532-05 8.0658-05 1.2750-04 3.8672-04 1.3838-03 3.2648-06 8.2648-06 5 7.6672-05 9.6538-05 1.27578-04 3.97678-04 1.5428-04 3.9338-04 1.6578-05 9.32828-04 0xre gp. 25 gp. 26 gp. 27 gp. 28 1 8.1903-04 5.76182-06 8.80728-05 4.27782-02
 1.2756E-03 9.2828E-04 1.5958E-04 5.5277E-02
 1.29911E-03 9.70769E-04 1.8126E-04 5,21167E-02
 3,4544E-04 2,0965E-04 2,60554E-05 3,4552E-02
3,5545E-04 2,4677E-04 3,3585E-05 3,5459E-02
 forced group parameters
 uper energy
2.0000E+07
 mid energy
 velocity
 2.65%E+06
 1.969/E+09
 7.2174E-01
 9.0000E+05
 1.006E+07
 1.5150E+05
 2.7826E-01
 4.0000E-01
 1.25KE-01
 3.6496E+05
 1.2107E-10
 1.000E-05
 850 d, second part of sas2h pass to make library
Ocell averaged fluxes
Ozone grp. 1 grp. 2 grp. 3
1 3.91548E-01 1.13534E+00 2.15989E-01
 2 3.96806E-01 1.13638E+00 2.06823E-01
 3 3.99768E-01 1.13659E+00 2.02707E-01
 4 4.16951E-01 1.13825E-00 1.73311E-01
 5 4.1626CE-01 1.13807E+00 1.76163E-01
Offux disadentage factors (zore average/cell average-flux)
Ozne grp. 1 grp. 2 grp. 3
1 9.42898-01 9.975188-01 1.226078-00
 2 9.5560E-01 9.98517E-01 1.1740/E+00
 3 9.626P/E-01 9.98703E-01 1.15067E+00
 4 1.00407E+00 1.00017E+00 9.85808E-01
 5 1.0000E+00 1.0000E+00 1.0000E+00
Ozell averaged currents
Ozone grp. 1 grp. 2 grp. 3
1 1.72525E-02 1.8356E-02 6.51225E-03
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| O <sub>2</sub> | 3 1.93532=-<br>4 1.53034E-<br>5 1.55113E-<br>one volum            | 02 2.25041E-02<br>02 1.63041E-02<br>02 1.66075E-02<br>e vol. frac                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 3.32702E-05<br>tian |                                                                        |                                                                                                           |                                        | , .                                                                                              |                                             |
|----------------|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------|
|                | 1 1.25660<br>2 1.66697<br>3 6.58260<br>4 2.54624<br>5 2.75440     | E-01 6.05165<br>E-01 2.38987<br>E-01 9.24/26<br>E-01 1.0000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | -03<br>-02<br>-01   |                                                                        |                                                                                                           | •                                      |                                                                                                  | •                                           |
| 0              | elapsed time concentration cc cc cc cc cc cc cc cc cc cc cc cc cc | .02 min. coccoccocc coccoccocc coccocc coccocc coccoc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                     |                                                                        | u<br>u<br>u<br>u<br>u<br>u<br>u<br>u<br>u<br>u<br>u                                                       | 60000000000000000000000000000000000000 |                                                                                                  | . •                                         |
| 0              |                                                                   | AMMONDO DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DEL LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DE LOS DEL LOS DE LOS DE LOS DE LOS DE LOS DEL LOS DE LOS DE LOS DE LOS DEL LOS DE LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS DEL LOS D | *****               |                                                                        | ######################################                                                                    |                                        |                                                                                                  |                                             |
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|                | 11<br>111<br>1111<br>1111<br>11                                   | 8 8<br>8 8<br>8 8<br>8 8<br>8 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | :::<br>:::<br>:::   | 8 8 8 8 8                                                              | 333<br>33<br>33<br>34<br>34<br>35<br>35<br>35<br>35<br>35<br>35<br>35<br>35<br>35<br>35<br>35<br>35<br>35 | :::<br>:::<br>:::                      | m<br>n<br>n<br>n<br>n<br>n<br>n<br>n<br>n<br>n<br>n<br>n<br>n<br>n<br>n<br>n<br>n<br>n<br>n<br>n | 7777777<br>72 72<br>72 72<br>72 72<br>72 72 |

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| ò |                                                     |                                                                                 | 96969696   | 9696 | 000000<br>0000000 | aaac   |                      | 300000   | ll<br>ll | 000000000000000000000000000000000000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                 |
|   |                                                     |                                                                                 | <b>85</b>  | 86   | œ                 | œ      | 20.<br>20.           | 86<br>80 | H        | ee<br>ee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                 |
|   |                                                     |                                                                                 | \$3<br>\$6 |      | æ                 |        | 88<br>88             | 86       | ii       | œ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                 |
|   |                                                     |                                                                                 | 298989898  | GER. | æ                 |        | _                    | 8888888  | ii       | 000000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                 |
|   |                                                     |                                                                                 | 96969999   |      | æ                 |        | 800000               |          | ii       | 000000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                 |
|   |                                                     |                                                                                 |            | 86   | œ                 |        | 20                   | æ        | ll       | œ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                 |
|   |                                                     |                                                                                 |            | 96   | Œ                 |        | <b>86</b>            | 86       | ll       | 66                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                 |
|   |                                                     |                                                                                 | 22         | 86   | œ                 | Œ      | <b>89</b>            | 20       | 11       | œ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                 |
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| -   | progres verification information                  | ****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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|     | this is not a scale configuration controlled code | 1444                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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|     | CHIEF OF GRADATULE CENTRO                         | ***                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|     | time of execution: 10:03:32                       | ***                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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621520 to 20030 4.47780E-10 621520 to 601490 9.31374E-06 621520 tot-cap 7.31215E+02 631530 to 631520 1.9002E-02 631530 to 631510 2.83757E-05 631530 to 611490 4.44447E-05 631530 to 20040 6.46822E-04 631530 to 621520 7.948/E-06 631530 to 2000 6.67346-05
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2.2679E+01

6.371635+01

942380 fission

942380 ru-sigf

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9/2300 to 9/23/0
9/2300 to 9/2390
 1,36331E-05
 2.66029E+02
 942380 to 942381
 3.0273/E+00
 2.88X/99E+02
 942380 tot-cap
 942390 to 942380
 1.28918E-02
 942390 fission
 8.36076E+02
 942590 ru-sigf
942590 to 942570
942590 to 942360
942590 to 942400
 2,403985+03
 2.19485E-05
 2.17579E-08
 4.6785EH02
 942390 tot-cap
 1.30375E+03
 6.0667ZE-03
 942400 to 942390
 942400 fission
 5.90498E+00
 1.8502/E+01
 942400 ru-sigf
 9/2400 to 9/2/30
9/2400 to 9/2/410
 5.92015E-05
 1.3834E+03
 942400 tot-cap
 1,399256+05
 942410 to 942400
 7,63800E-02
 942410 fission
 8,96700E+02
 942410 ru-sigf
 2,631125+03
 942410 to 942390
942410 to 942420
 1,25675E-04
 2,928176+02
 942410 tot-cap
 1.18757E+05
 942420 to 942410
 2,47305E-02
 942420 fission
 4,52350E+00
 1.41737E+01
 9/2/20 nu sigf
 9/2/20 to 9/2/00
 3.0068E-04
 9/2/20 to 9/2/30 3,33/58E+02
 942420 tot-cap
 3,38000E+02
 952410 fission
 1.24977E+01
4.04062E+01
 952410 nu-sigf
 952410 to 952420
 1,01282E+05
 952410 tot-cap
 1.02331E+03
 952/30 fission
 3.49225E+00
 952/30 ru-sigf
 1.174ZZE+01
 95200 to 95240
 4.22109E+02
 952/30 tot-cap
 4.25601E+02
 5.9350E-03
 962440 to 962430
 962440 fission
 1.55149E+01
 962440 ru-sigf
 5,19995E+01
 962440 to 962420
 5.9270E-05
 962440 to 962450
 1.4207E+02
 963440 to 962441 3.86081E+00
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 1.5802BE+02
Othe reaction 50100 to 30070 was not used, because 50100 is not in library., (in subr pool)
 in the search of Library number 3
Othe reaction 50100 to 40000 was not used, because 50100 is not in library., (in subr pool) in the search of library number 3
Othe reaction 50110 to 40090 was not used, because 50110 is not in Library., (in sub- pool)
 in the search of Library number 3
Othe reaction 50100 to 40100 was not used, because 50100 is not in library., (in subr pool)
 in the search of Library runber 3
Othe reaction 80160 to 80161 was not used, because 80161 is not in library., (in sub-pool) Othe reaction 621470 to 621471 was not used, because 621471 is not in library., (in sub-pool) Othe fission product transitions for 922540 were not used. Library fissile rucides are 92230 92250 92250 92250 92250
Oue substitute rucide in block 8 data. or, update with new fission yield data. Othe reaction 92240 to 92241 was not used, because 92241 is not in library., (in subr pool)
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Othe reaction 92250 to 92251 was not used, because 92251 is not in library. (in subr pool) Othe fission product transitions for 92250 were not used. library fissile nuclides are 92230 92250 92250 92250 92250 92250
One substitute ruci ide in block 3 data. or, update with raw fission yield data.

Othe reaction 927360 to 927361 was not used, because 927361 is not in library., (in subr pool)
Othe fission product transitions for 952370 were not used. Library fissile ruclides are
 922330 922350 942410 922380 942390
One substitute ructice in block 8 data, or, update with raw fission yield data.

Othe reaction 932370 to 932371 was not used, because 932371 is not in library., (in subr pool)
 Othe fission product transitions for 94290 were not used. Library fissile nuclides are
 922330 92250 942410 922580 942390
Oue substitute ructide in block 8 data, or, update with new fission yield data.

Othe reaction 94230 to 94231 was not used, because 94231 is not in Library., (in subr pool)
Othe fission product transitions for 942400 were not used. Library fissile ruclides are 922330 92250 942410 92250 942590
One substitute ructide in block 8 data. or, update with raw fission yield data.
Other fission product transitions for %2820 were not used. Library fissile ructides are

92330 92350 92410 92380 94390
One substitute ructide in block 8 data. or, update with new fission yield data.

Othe fission product transitions for 952410 were not used. Library fissile nuclides are
 922330 92250 942410 922380 942390
One substitute nuclide in block 8 data. or, update with new fission yield data.

Othe fission product transitions for 952430 were not used. library fissile nuclides are 922330 92250 942410 92250 942390
One substitute ruckide in block 8 data. or, update with new fission yield data.

Othe fission product transitions for 962440 were not used. Library fissile ruckides are
 922330 92250 942410 922380 942390
One substitute ruclide in block 8 data. or, update with new fission yield data.

Othe reaction 963440 to 963441 was not used, because 963441 is not in library., (in sub-pool)
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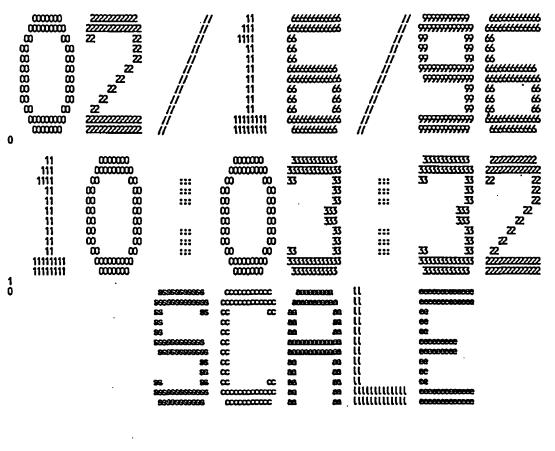
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| hanak                 |                                        | ***      |
| ***                   | code system: scale version: 4.2        | ***      |
| habak                 |                                        | ***      |
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library: /neutronics/scale/eve
 this is not a scale configuration controlled code
 ichneme: clavis
 date of execution: 02/16/96
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half-norm of satrix used, sen = 7.0000=00
4-place-accuracy-retention ratio, ratio6 = 6.4516E-13
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 4q array has
 1 entries.
0 5/q array has
11 ibrary information...
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 cross-section data taken from position number 1 of library on unit 15.
 page 6
 DB98
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 Scale System control sucide ses2 library* used a time-department mattern spectrum, for each of the above passes
 pass 0 applies start-up fuel densities
pass n applies and time densities of non-library interval
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scale-system control excide sec2 library
used a time-dependent matron spectrum, for each of the above passes
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pass n applies and time densities of nth library interval
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 prelin lar origens binary sorking library--id = 1143
nach from modified card-image origens libraries of scale 4.2
data from the light element, actinide, and fission product libraries
data, including gamm and total energy, are from end/b-vi
 neutron flux spectrum factors and cross sections were produced from
the "presse" case updating all ruclides on the scale "currup" (firery
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fission product yields are from endf/b-v
 photon libraries use an 18-energy-group structure
 the photon data are from the master photon data base,
 produced to include bremstrehlung from up2 metrix
 see information above this box (if present) for later updates
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 page
 power= 8.466E-15mu, burrup=2.0518E-02md, flux= 1.61E+13myat+2-sec
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 7.9E-21 9.22E-21 1.0E-20 1.19E-20 1.33E-20 1.33E-20 1.44E-20 1.67E-20
 1.5E-19 1.8E-19 2.0E-19 2.5E-19 2.5E-19 2.5E-19 2.5E-19 2.6E-19 3.2E-19 2.1E-12 2.3E-12 2.6E-12 3.0E-12 3.3E-12 3.7E-12 3.7E-12 4.1E-12
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 4,ZE-04 4.1E-04 4.0E-04 3.9E-04 3.8E-04 3.8E-04 3.7E-04 3.8E-04
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 5.1/E-05 5.3/E-05 5.5/E-05 5.6/E-05 5.8/E-05 5.8/E-05 6.0/E-05 6.1/E-05
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 7.BE-14

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 6.5CE-14
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 1.27E-06
 1.76E-10
 1.95E-10 2.26E-10 1.97E-10 2.51E-10 2.77E-10
 1.19E-10 1.5/E-10
 nB4
 2.51E-21 2.51E-21 3.8/E-21 5.7/E-21
 3.7E-22 6.20E-22
 1.01E-21
 1.61E-21
 1.81E-27 1.70E-27 2.77E-27 4.17E-27
 1.1Æ-27
 DD 25
 2.5E-28 4.WE-28
 7.2/E-28
 1,02-30 1,692-30 2,802-30 4,512-30 7,122-30 7,112-30 1,102-29 1,672-29
 n.EK6
 4.18-18 5.08-18 5.76-18 6.46-18 7.21-18 6.8E-18 8.00-18 8.8E-18
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1.87E-15 2.20E-15 2.44E-15 2.80E-15 3.12E-15 3.0EE-15 3.46E-15 3.80E-15 2.64E-07 3.01E-07 3.40E-07 3.80E-07 4.23E-07 4.23E-07 4.66E-07 5.16E-07
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 4.2E-10 5.3E-10 6.4E-10 7.8E-10 9.3E-10 9.3E-10 1.1E-09 1.2E-09
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 3.8E-21 1.0/E-20 1.61E-20 2.4/E-20 3.6/E-20 2.0/E-20 5.3/E-20 7.7/E-20
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| Oman             | 7935                                                                                                                          | 20<br>19                                |                                                                                  | 6               | 18          | 1697                  |                 |          |                   |           |            |
| CHIM I           | 7                                                                                                                             | 7                                       |                                                                                  | 0               | 0           | 1                     | 1               | 0        | 0                 | 0         | 0          |
| <b>~</b>         | 21                                                                                                                            | 100                                     | . 1                                                                              | 697             | 4           | 3                     | 74              | 4        | 1                 | 0         |            |
| Otconst<br>8.640 | 000E+04 8.0                                                                                                                   | 5<br>2002/315+02                        | .00000                                                                           | -00 -0          | 0000F400 1  | 1.00000E-08           |                 |          |                   |           |            |
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| O                | 0                                                                                                                             | <b>.</b> 689                            | 1                                                                                | 129             | <i>5</i> 79 |                       |                 |          |                   |           |            |
| Opow<br>.mn      | . CO+3000                                                                                                                     | 3<br>30000€+00                          | .000000                                                                          | ÷00             |             |                       |                 |          |                   |           |            |
| 0 lirp           |                                                                                                                               | 9                                       |                                                                                  |                 |             |                       |                 |          |                   |           |            |
| -                | ., 6,                                                                                                                         | 0                                       |                                                                                  | 51              | _ 26        | 2                     | 3000            | 1000     | 1697              | 94        |            |
|                  | a, fission                                                                                                                    |                                         | mev/fiss                                                                         | ion =           |             | 7.0520E+00            | 1.9535          | 02 2.085 | <del>2E+</del> 02 |           |            |
|                  | of intervel<br>a, fission                                                                                                     |                                         |                                                                                  | 0012E+1<br>km = |             | 7.1140E+00            | 1.9661          | 02 2.057 | <del>2E+</del> 02 |           |            |
|                  | of interval                                                                                                                   |                                         |                                                                                  | 0313E+1         | 3           |                       |                 |          |                   |           |            |
|                  | a, fission                                                                                                                    |                                         |                                                                                  |                 | _           | 7.2102E+00            | 1.96692+        | 02 2.059 | XE+02             |           |            |
|                  | of intervel<br>a. fission                                                                                                     |                                         |                                                                                  | 0021E+1         | 3           | 7.30575+00            | 1.96775         | 02 2.040 | 7E+02             |           |            |
|                  | of interval                                                                                                                   |                                         |                                                                                  | 075Œ+1          | 3           | I MOIL W              | 11,0016         |          |                   |           |            |
| start            | of Interval                                                                                                                   | l flux =                                | .(                                                                               | XXXXXX          |             |                       |                 |          |                   |           |            |
|                  | a, físsion                                                                                                                    |                                         |                                                                                  |                 | 7           | 7.418Æ+00             | 1.968/E+        | 02 2.042 | <del>2:</del> 402 |           |            |
|                  | of intervel<br>e, fission                                                                                                     |                                         |                                                                                  | 31290E+1        | 3           | 7.4947E+00            | 1.96925+        | 02 2.0%  | E+02              |           |            |
|                  | of interval                                                                                                                   | i flux =                                | 1.0                                                                              | 169Œ+1          |             |                       |                 |          |                   |           |            |
|                  | or arposse                                                                                                                    | ્ 1 aas                                 | an: baboox                                                                       | k wiloo         | k 15x15, 3. | ,00,00 <b>4,</b> 20ga | d/mu burn high  | terp     |                   |           |            |
| 0                | 200 allah<br>200 allah                                                                                                        |                                         | ) entries.<br>1 entries.                                                         |                 |             |                       |                 |          |                   |           |            |
| ŏ                | Sed at all                                                                                                                    |                                         | l entries.                                                                       |                 |             |                       |                 |          |                   |           |            |
| Ō                | 500 array                                                                                                                     | hes 2                                   | etries.                                                                          | •               |             | •                     |                 |          |                   |           |            |
| Ō                | 56q array                                                                                                                     |                                         | क्रमांह                                                                          |                 |             |                       |                 |          |                   |           |            |
| 0                | 200 allah<br>200 allah                                                                                                        |                                         | lentries.<br>Dentries,                                                           |                 |             |                       |                 |          |                   |           |            |
| ŏ                | 560 8118/                                                                                                                     |                                         | entries.                                                                         |                 | •           | •                     |                 |          |                   |           |            |
| Oreques          | ted persofs                                                                                                                   | stit8,skipo                             | ellut,skip                                                                       | shipdet         | *           |                       |                 |          |                   |           |            |
| 1 11111          | 7, exects                                                                                                                     | nette atter<br>cocccco                  |                                                                                  |                 | -           |                       | 800000000       | (T       | m 111111111111    | 1 200000  | m          |
|                  |                                                                                                                               | *************************************** |                                                                                  |                 | m           |                       | 8000000000      |          |                   |           |            |
| <u> </u>         | њ                                                                                                                             | <b>\(\omega\)</b>                       | ∞ n                                                                              | m               | m           |                       | 66 69           |          |                   | 22        | . 22       |
| 曲                | 曲曲                                                                                                                            | œ<br>~                                  |                                                                                  | ım              | m           |                       | #5 #8<br>#6 #6  |          | mi ii<br>miii     |           | · 22       |
|                  | <del></del>                                                                                                                   | œ<br>œ                                  | on m                                                                             |                 | LLU         | *******               | AS AS           |          |                   | •         | <b>2</b> " |
|                  | шшь                                                                                                                           | ∞<br>∞                                  | æ m                                                                              |                 |             |                       | 800000000000000 |          | an H              | 22        |            |
| 曲                | Ь                                                                                                                             | <b>∞</b>                                | <b>∞</b> п                                                                       |                 | n m         |                       | 20 20           |          | man ji            |           |            |
| ш                | ь                                                                                                                             | œ                                       | ωп                                                                               | 1               | mm          |                       |                 | 60C F    | m ii              | <b>22</b> |            |

|   |                                                                              |                                                                             |                                                                                                                                                    |                                                                        |                                         |                                        | _                                                              |                                              |
|---|------------------------------------------------------------------------------|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------------------------|----------------------------------------|----------------------------------------------------------------|----------------------------------------------|
| 0 | b b                                                                          | 00000000000000000000000000000000000000                                      | m mm<br>m m                                                                                                                                        |                                                                        | 86 89<br>86 89<br>86 88                 | im mi<br>im mi                         |                                                                | <u>1111111111111111111111111111111111111</u> |
|   |                                                                              | \$0000000000000000000000000000000000000                                     | ******                                                                                                                                             |                                                                        | \$6966666666666666666666666666666666666 |                                        |                                                                |                                              |
| 0 | 8888<br>8 8 8<br>8 8 8 | 20000000000000000000000000000000000000                                      | . "                                                                                                                                                | 11<br>1111<br>1111<br>11<br>11<br>11<br>11<br>11<br>11<br>11<br>111111 |                                         |                                        | 933333333<br>99 99<br>99 99<br>93 99<br>933333333<br>933333333 | ######################################       |
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|   |                                                                              |                                                                             | 265050500006<br>26605060600005<br>26 25<br>26<br>26<br>2650505060000<br>26<br>26<br>26<br>26<br>26<br>26<br>26<br>26<br>26<br>26<br>26<br>26<br>26 | CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC                                 | ######################################  | 11 11 11 11 11 11 11 11 11 11 11 11 11 | 00000000000000000000000000000000000000                         |                                              |

```
program verification information
 code system: scale version: 4.2
 DECEMBER COCCOS
 creation date: 04/27/95
 library: /neutronics/scale/exe
 this is not a scale configuration controlled code
 ichneme: devis
 date of executions 02/16/96
 time of execution: 10:05:37
 -1q array has
 1 entries.
 Oci activy has
liq activy has
 4 entries.
 6 entries.
 20 array has
 2 entries.
1 logical assignments
Onester library 12
working library 0
scratch file 18
Or oblem description

Oigr-geometry (0/1/2/3--inf med/slab/cyl/sphare

Oign-number of zers or material regions

One-mixing table length

Oibl-shielded cross section edit option (0/1--nu/yes)

Oibr-borderation factor edit option (0/1--nu/yes)
 Dissopt--denoif factor option
Occamergence criterion 1.0000E-03
Operating correction factor for signer rational approximation 1.300=00

O 3q array has 66 entries.
O 4q array has 66 entries.
O 5q array has 66 entries.
 60 array has
 4 entries.
 70 array has
80 array has
90 array has
 4 entries.
 4 entries.
```

nex Library

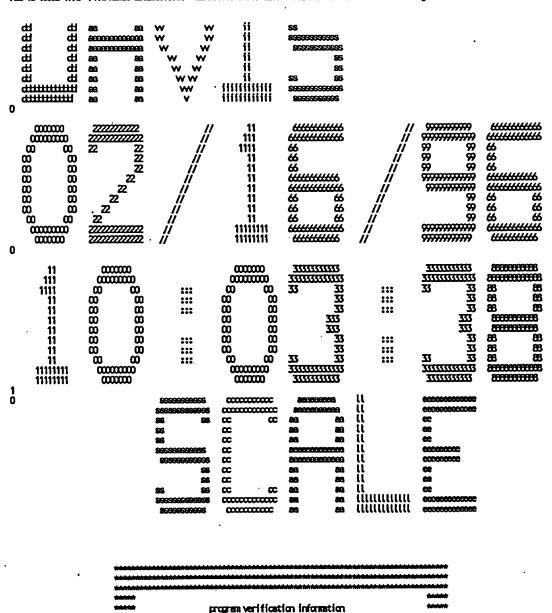
4 entries.

| 0                                                           | 10q array<br>11q array                  | has 4           | etrie.                     |                         |
|-------------------------------------------------------------|-----------------------------------------|-----------------|----------------------------|-------------------------|
| Cnix                                                        | ng ta<br>mixture                        | ble             | number density             | nex identifier          |
| Oantry<br>1                                                 |                                         | isotope<br>9225 | 3.6452E-04                 | 976                     |
| ż                                                           | i                                       | 92234           | 4.28462E-06                | 92234                   |
| 3                                                           | 1                                       | 92236           | 6.155 <del>865-</del> 05   | 9236                    |
| 4                                                           | 1                                       | 92238           | 2.17805E-02                | 92238                   |
| 5                                                           | 1                                       | 8016            | 4.553998-02                | 8016                    |
| 6                                                           | W                                       | 8016<br>36083   | 2.09710E-02<br>1.62790E-06 | 6<br>34083              |
| (                                                           | 1                                       | 360E5           | 7.825/SE-07                | 3606                    |
| ö                                                           | i                                       | 38090           | 1.707805-05                | 38090                   |
| 1Ó                                                          | i                                       | 37089           | 1,44715E-05                | 39089                   |
| 11                                                          | 1                                       | 42075           | 1,98507E-05                | 42095                   |
| 12                                                          | 1                                       | 40093           | 1,44900E-05                | 40095                   |
| 13                                                          | 1                                       | 40094           | 2. <del>2006/E-</del> 05   | 40094                   |
| 14                                                          | - 1                                     | 40095           | 1.96022E-06<br>1.19775E-11 | 40095<br>41094          |
| 15                                                          | 1                                       | 41094<br>43099  | 2,23951E-05                | 43099                   |
| 17                                                          | - 1                                     | 4510B           | 1.2431E-05                 | 45103                   |
| 18                                                          | i                                       | 45105           | 2.38399E-08                | 45105                   |
| 19                                                          | i                                       | 44101           | 2,38399E-08<br>2,05378E-05 | 44101                   |
| 20                                                          | 1                                       | 44106           | 3.08150E-06                | 44106                   |
| 21                                                          | 1                                       | 46105           | 8.54907E-06                | 46105                   |
| Z2<br>77                                                    | 1                                       | 46108           | 2.52052E-06<br>1.72855E-06 | 46108<br>47109          |
| 깘                                                           | 1                                       | 47109<br>51124  | 3.866E-10                  | 51124                   |
| <del>*</del> * * * * * * * * * * * * * * * * * *            | - 1                                     | 54131           | 1.01679E-05                | 54131                   |
| <b>x</b>                                                    | i                                       | 54152           | 1.98610E-05                | \$152<br>\$456          |
| 27                                                          | İ                                       | 54135           | W- <del>-2002-</del> 09    | 54136                   |
| 28                                                          | 1                                       | 54136           | 3,91425-05                 | 54136<br>55134          |
| 29                                                          | 1                                       | 55134           | 1.275895-06                | 2012<br>2012            |
| 30                                                          | ?                                       | 25125<br>75128  | 1.24307E-05<br>2.41337E-05 | 2012<br>25137           |
| 윘                                                           |                                         | 56136           | 2.65456-07                 | 56136                   |
| ₹₹                                                          | i                                       | 57139           | 2.38740E-05                | 5709                    |
| 34                                                          | i                                       | 59141           | 2.08\5\ <del>E</del> -05   | 59141                   |
| 35                                                          | 1                                       | 59143           | 3.6534RE-07                | 59143                   |
| 36                                                          | 1                                       | 58144           | 6,86967E-06                | 58144                   |
| 37                                                          |                                         | 60143<br>60145  | 1,8286/E-05                | 60143<br>60145<br>61147 |
| 20                                                          | 1                                       | 61147           | 1.36331E-05<br>4.30510E-06 | 61147                   |
| 20                                                          | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 61148           | 1,285585-08                | 611/8                   |
| 41                                                          | 1                                       | 60147           | 1,26358E-08<br>1,29254E-07 | 60147                   |
| 42                                                          | 1                                       | 621/27          | 1.7999E-06<br>8.9113/E-08  | 62147                   |
| 43                                                          | 1<br>1<br>1                             | 62149           |                            | 62149                   |
| 44                                                          | 1                                       | 62150           | 5.01098E-05                | 62150<br>62151          |
| 45                                                          | 1                                       | 62151<br>62152  | 4.32635E-07<br>2.36311E-06 | 62152                   |
| 47                                                          | i                                       | 64195           | 2.8530E-09                 | 64195                   |
| 48                                                          | i                                       | खाञ्च           | 1.53061E-06                | 8153<br>8153            |
| 49                                                          | 1                                       | 63154           | 3.5946E-07                 | 63154                   |
| 50                                                          | 1                                       | ଷୀଞ୍ଚ           | 1,67707E-07                | ಪ್ರಕ್ಷ                  |
| <u>51</u>                                                   | 2                                       | 40502           | 4.25154E-02                | 40502                   |
| 2                                                           | 3                                       | 1001            | 4.19420E-02<br>3.81515E-06 | 1001<br>5010            |
| 23                                                          | ą                                       | 5010<br>5011    | 1.5488/E-05                | 5011                    |
| 12345678991123145678982NXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX | 2<br>3<br>3<br>1                        | 55133           | 2.45710E-05                | 55133                   |
| 56                                                          | i                                       | 93237           | 4.70037E-05                | · 93237                 |
|                                                             | •                                       |                 |                            |                         |

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8.09289E-07
 9429
9424
9424
9424
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58
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 9239
9230
9231
 1.16525-04
 2.5/80BE-05
 1.47624E-05
 92/2
 2.01045E-05
 82
83
84
 95241
 5.15913E-07
 952/3
 2.2520/E-07
 96244
 2.62419E-08
 65
 1,00000E-20
 1.0000E-20
Ozonetry and material description
Ozone mixture outer dineration temperature
1 1 4.68122E-01 9.75000E-02
 type (0/1-fuel/mod)
 extra es
 9.0584E-01
 5,49010E-01
 2.93000E+02
 4.78790E-01
 5.46100E-01
 6.5000E+02
 .0000E+00
 8.1396E-01
 6.07600E+02
 7711 locations of 200000 available are required to make a resumester containing the self-shielded values
One nuclides in your problem have bordereries factor determinant will copy from logical 12 to logical 1
 1/v cross sectio from log 12 to log 18
1/v cross sectio from log 18 to log 1
Орфу
 bondarenko trigger 0
 bandarenko trigger 0
0pppy
 1/V cross sectio from log 18 to log 1
 bandarenko trigger 0
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 from log 12 to log 1
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 bonderento trigger 0
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 from log 12 to log 1
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 boran-11
 bonderarko trigger 0
 from log 12 to log 18
from log 18 to log 1
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 arygen-16
 bordererko trigger 0
Oppy
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 aygen 16
 bondarenko trigger 0
 from log 18 to log
Отру
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 axygen-16
 bondarento trigger 0
 360B3
 kr-63
Отру
 from log 12 to log
 bondarento trigger 0
Octby
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 36055
 kr-85
 from lag 12 to lag
 borderello trigger 0
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 from lag 12 to lag
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Офру
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 y-89
 from log 12 to log
from log 12 to log
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 x-93
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 from lag 12 to lag
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 from log 12 to log
 bordererko trigger 0
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 zircalloy
 from log 12 to log 1
 bandarerico trigger 0
 from lag 12 to lag
from lag 12 to lag
 41094
 rb-94
 bondereriko trigger 0
OCCEN
OCCEN
 42075
 100-95
 bondererko trigger 0
 43077
 from lag 12 to lag
 bordererlo trigger 0
 tc-99
Octpy
 44101
 ru-101
 from lag 12 to lag
 banderenko trigger 0
 44106
 from log 12 to log
Octy
Octy
 bonderarko trigger 0
 ru-105
 from log 12 to log
from log 12 to log
 bondarento trigger 0
 45103
 rh-103
Осфу
 45105
 rh-105
 bundarenko trigger 0
 from log 12 to log
 46105
 bondarenko trigger 0
Oppy
 四-105
 4610B
 from log 12 to log
 bondarento trigger 0
Oppy
 pd-108
Octoby
 47109
 silver-109
 from log 12 to log
 bondererico trigger 0
 51124
 from lag 12 to lag 1
Octoby
 sb-124
 bondarenko trigger 0
OCT V
 54131
 xe-131
 from log 12 to log
 banderenko trigger 0
 from lag 12 to lag
from lag 12 to lag
 54132
 xe-132
 bondarento trigger 0
 54135
 721-ransx
 bordererko trigger 0
Ocepy
 54136
 from lag 12 to lag
(Corpy
 xe-136
 bondererio trigger 0
55133
 cesiun-133
 from log 12 to log
 bondererio trigger 0
 from lag 12 to lag
 55134
 cs-13%
 bondarento trigger 0
 from log 12 to log
from log 12 to log
Oxpy
 25125
 CS-135
 banderenko trigger 0
 5507
 cs-137
 bondarario trigger 0
Oppy
EEEEE
 56136
 from log 12 to log
from log 12 to log
 bordererko trigger 0
 ba-136
 57139
 La-139
 bondererko trigger 0
 9314
93141
93143
 ce-144
 from log 12 to log
 bondererles trigger 0
 pr-141
 from lag 12 to lag
from lag 12 to lag
 bondarento trigger 0
 p-143
 bandarerko trigger 0
Occupy
Occupy
 60143
 rd-143
 from log 12 to log 1
 bondarerico trigger 0
```

| <b>488888</b>    | 60%7 rd-<br>61%7 pp-<br>61%8 pp-<br>62%7 sm | -147 from<br>-147 from<br>-148 from<br>-147 from         | 1 lag 12 to lag<br>1 lag 12 to lag<br>1 lag 12 to lag<br>1 lag 12 to lag<br>1 lag 12 to lag<br>1 lag 12 to lag | 1 border<br>1 border<br>1 border<br>1 border         | erko trigger 0<br>erko trigger 0<br>erko trigger 0<br>erko trigger 0<br>erko trigger 0<br>erko trigger 0 |                |                         |
|------------------|---------------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------------|-------------------------|
| Octpy<br>Octpy   | 62151 sm                                    | ·151 from                                                | log 12 to log<br>  log 12 to log<br>  log 12 to log                                                            | 1 bandan                                             | erko trigger 0<br>erko trigger 0<br>erko trigger 0                                                       |                |                         |
| Occity<br>Occity | 63154 eur                                   | ·153 fra:<br>·154 fra:                                   | log 12 to log<br>log 12 to log<br>log 12 to log                                                                | 1 bander<br>1 bander                                 | erko trigger 0<br>erko trigger 0<br>erko trigger 0                                                       |                |                         |
| Ocepy<br>Ocepy   | 92254 U-23                                  | ·155 from<br>K_1043 sigo= from                           | log 12 to log                                                                                                  | 1 bondan<br>1 bondan                                 | erko trigger 0<br>erko trigger 0<br>erko trigger 0                                                       |                |                         |
| OCCEPY<br>OCCEPY | 92256 u-23<br>92258 ura                     | 163 sigo= from                                           | lag 12 to lag<br>lag 12 to lag                                                                                 | 1 bonden                                             | erko trigger 0<br>erko trigger 0<br>erko trigger 0                                                       |                |                         |
| Ocepy<br>Ocepy   | 94258 pp-2<br>94259 ptu                     | 38 1050 sigo from<br>Acmius 239 from<br>Acmius 240 from  | lagi 12 to lagi<br>lagi 12 to lag                                                                              | 1 bandan<br>1 bandan                                 | enko trigger 0<br>enko trigger 0<br>enko trigger 0                                                       |                |                         |
| Octoby<br>Octoby | 94241 plu                                   | tanium 241 from<br>tanium 242 from<br>141 1056 sigo from | laa 12 to laa                                                                                                  | 1 bandan                                             | erko trigger 0<br>erko trigger 0<br>erko trigger 0                                                       |                |                         |
| 0cdbA            | 9534 and                                    | K3 1057 ZTB from                                         | log 12 to log<br>log 12 to log                                                                                 | 1 bandan                                             | anko trigger 0<br>anko trigger 0                                                                         |                |                         |
|                  | besed on end<br>compiled<br>last u          | X-b version 4 dat<br>for nrc 1/27/1<br>posted 9/16/      | a idith endf-b v<br>89                                                                                         | ersion 5 fis                                         | sion products                                                                                            |                |                         |
|                  | tape id                                     | er Barb<br>entuau Barbs<br>enbetaje – ouu                | 4321<br>27<br>15                                                                                               | runber<br>logica                                     | of nuclides<br>of game groups<br>lunit                                                                   |                | 66<br>0<br>1            |
|                  | 1/V cross sec                               | tions normalized :                                       | to 1.0 at 0.02                                                                                                 | 3 ev<br>3 ev                                         |                                                                                                          | id<br>id       | 999<br>66               |
|                  | baran-11                                    | hgp 042375 p-3 23<br>endf/b-jv mat                       | 1160                                                                                                           | updated 10                                           | /13/89                                                                                                   | И              | 1001<br>5010<br>5011    |
|                  | 00/927-16<br>00/927-16<br>kr-83             | ercif/b-iv ent<br>ercif/b-iv ent<br>et=102,105,105       | 1276                                                                                                           | updated 10<br>updated 10<br>updated 10               | /13/89                                                                                                   | id<br>id       | 8016<br>6<br>36083      |
|                  | λ88<br>8×80<br>Pv-92                        | nt= 102<br>nt=102<br>nt=102                              |                                                                                                                | updated 10<br>updated 10                             |                                                                                                          | A<br>A<br>A    | 36065<br>38090<br>39089 |
|                  | zi~95                                       | sst= 102<br>sst=102                                      |                                                                                                                | ucdated 10                                           | /13/80                                                                                                   | id<br>id       | 40075<br>40074          |
|                  | zr-94<br>zr-95<br>zimaliov                  | mt=102                                                   | 1284                                                                                                           | updated 10                                           | /13/89                                                                                                   | id             | 40095<br>40802          |
|                  | zr-95<br>zircalloy<br>nb-94<br>mb-95        |                                                          | 1284                                                                                                           | updated 10<br>updated 10<br>updated 10<br>updated 10 | rG/89<br>rG/89<br>rG/89<br>rG/89                                                                         | 7<br>7<br>7    | 40802<br>41094<br>42095 |
|                  | zr-95<br>zircalloy<br>nb-94                 | nt=102<br>endi/to-iv met '<br>mt=102<br>mt=102           | 1264                                                                                                           | updated 10<br>updated 10<br>updated 10               | rti/89<br>rti/89<br>rti/89<br>rti/89<br>rti/89<br>rti/89                                                 | id<br>id<br>id | 40802<br>41094          |

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|--------------------|---------------------------|-----------------------------------------|----------------------|
| sb-124             | mt=102                    | updated 10/13/89                        | id 51124             |
| xe-131             | m=102,103,104,105,106     | updated 10/13/89                        | id 54131             |
| xe-132             | mt=102,103,104,105,106    | updated 10/13/89                        | id 5/12 .            |
| X87127-135         | endf/b-iv mat 1254        | updated 10/13/89                        | id 54135             |
| xe-136             | mt= 102, 108, 104,        | 105 <b>, 1</b> 07                       | id 54136             |
| cesium-133         | endf/b-iv mat 1141        | updated 10/13/89                        | M 22123              |
| cs-134             | Rt=102                    | undated 10/13/89                        | id 55134             |
| cs-135             | mt= 102                   | •                                       | id 55135             |
| cs-137             | mt=102                    | updated 10/13/89                        | id 55137 .           |
| be-136             | mt=102                    | updated 10/13/89                        | id 56136             |
| la-139             | mt=102                    | updated 10/13/89                        | id 57139             |
| ce-144             | mt= 102                   | drawn id na                             | id 58144             |
|                    |                           | 107                                     |                      |
| p-1/1              | mt=102,103,104,105,106,   |                                         | id 59141             |
| p-1/3              | mt=102                    | u <del>xlated</del> 10/13/89            | id 59143             |
| nd-1/3             | mt=102                    | updated 10/13/89                        | id 60143             |
| nd-145             | nt=102                    | updated 10/13/89                        | id 601/5             |
| nd-147             | mt=102                    | updated 10/13/89                        | id 60147             |
| <del>pa-14</del> 7 | mt=102                    | updated 10/13/89                        | id 61147             |
| pm·148             | mt= 102                   |                                         | id 61148             |
| sn-147             | endf/b-v fission produc   | t updated 10/13/89                      | id 62147             |
| sn-149             | nt=102,105,107            | uxdated 10/13/89                        | id 62149             |
| sn-150             | ##=102                    | undated 10/13/89                        | id 62150             |
| sn-151             | mt=102,108,104,105,106,   |                                         | id 62151             |
| sn-152             | nt=102,108,104,105,106,   | 107 updated 10/13/89                    | id 62152             |
| er <u>53</u>       | mt=102,105,104,105,106,   |                                         | រ៉េ ស៊ីន៊ែ           |
| ar-154             | nt=102,108,104,105,106,   | 107 undeted 10/13/89                    | ति छ।ई               |
| er 55              | nt=102,105,104,105,106,   | 107 updated 10/13/89                    | id &155              |
| <b>2</b> 155       | mt=102                    | uzdeted 10/13/89                        | id &155              |
|                    |                           |                                         | id 92234             |
|                    | 9544 neuklacs p-3 205k f  |                                         |                      |
| uraniun-235        | endif/b-iv mat 1261       | updated 10/13/89                        |                      |
|                    | 0544 naviacs p-3 205k f   | -1/e-f(1.45)                            | id 92236<br>id 92238 |
| uranium 238        | ercli/b-iv met 1262       | updated 10/13/89                        |                      |
|                    | endr/b-iv met 1263        | updated 10/13/89                        | id 95257             |
|                    | pr514 navdacs p-3 293k 1  |                                         | id 94238             |
|                    | endf/b-iv mst 1264        | updated 10/13/89                        | ld 94239             |
|                    | endi/b-iv mat 1265        | u <del>pdated</del> 10/13/89            | id 94340             |
| pļutanium 241      | erdi/b-iv mat 1266        | updated 10/13/89                        | id 94241             |
| plutoniun 242      | endi/b-iv met 1161        | ujxdeted 10/13/89                       | id 94242             |
| an-241 1056 si     | p=5+4 ns.klacs 218ngp p-3 | 5 295k                                  | id 95241             |
|                    | B go wt f-1/em 000376 p3  |                                         | id 953/3             |
| curium 244         | erdf/b-iv met 1162        | uzdated 10/13/89                        | id 96244             |
| 0 tape copy use    |                           |                                         |                      |
| 1 m                | m iiiiiiiiiiii            | ttttttttttt ammones                     | મા માી               |
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| in.                | mm ii                     | tt as as                                |                      |
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|                    |                           | • • • • • • • • • • • • • • • • • • • • |                      |
|                    | a w                       | γ ii as as                              |                      |



```
code system: acale version: 4.2

 program c0c002
 creation date: 04/27/95
 library: /neutronics/scale/exe
 this is not a scale configuration controlled code
 johneme: davis
 date of execution: 02/16/96
 time of execution: 10:05:38
 -1q array has
 1 entries.
0
 Og array has
No array has
 9 ertries.
 12 entries.
Oselect 65 nuclides from the master Library on logical 1
0 nuclides from the working Library on logical 2
0 nuclides from the working Library on logical 3
to create the new working Library on logical 4
 61 rescretce calculations have been requested
O cuthut option for anyt formatted cross section data
Othe storage allocated for this case is 200000 words
 2q array has 65 entries.
3q array has 915 entries.
4q array has 65 entries.
0 4g array has 65 entries.
0 general information concerning cross section library tape identification number 4321 number of nuclides on tape 66
 number of neutron energy groups
 Z7
 ъ
 first thereal neutron energy group
number of grams energy groups 0 direct access unit number 9 requires 117 blocks of length 1484 words
- xedm tape 4321
 scale 4.2 - 27 group reutron burnup (Strary
based on enti-b version 4 data with enti-b version 5 fission products
compiled for nrc 1/27/89
 last updated
 9/16/93
 L.m.petrie
 - and
O ruclides from section tape
 1/v cross sections normalized to 1.0 st 0.0253 ev
hydrogen endf/b-iv met 1269/thm#1002 updated 10/13/89
 1001
 b-10 1273 218 pp 0/2375 p-3 293k
baran-11 endf/b-jv mat 1160
 5010
 undstad 10/13/89
 5011
 endf/b-iv set 12%
 undeted 10/13/89
 8016
 aygan-16
 endf/b-iv sest 1276
 updated 10/13/89
 6
 aygar 16
```

| 7                                            | kr-83              | mt=102,103,103,105,106,107                       | updated 10/13/89                     |     | 36083        |        |
|----------------------------------------------|--------------------|--------------------------------------------------|--------------------------------------|-----|--------------|--------|
| 8                                            | kr-85              | mt= 102                                          | •                                    |     | 36085        |        |
| 9                                            | sr-90              | mt=102                                           | updated 10/13/89                     |     | 38090        |        |
| 10                                           | y-89               | mt=102                                           | updated 10/13/89                     |     | 39089        |        |
| 11                                           | 21-93              | mt= 102                                          | 4                                    |     | 4008         |        |
| 12                                           | <del>2</del> -%    | mt=102                                           | updated 10/13/89                     | •   | 40094        |        |
| 12<br>13<br>14                               |                    |                                                  |                                      |     | 40095        |        |
| ມ                                            | 27-95              | nt=102                                           | updated 10/13/89                     |     |              |        |
| 74                                           | zircalloy          | endi/b-iv mat 1264                               | updated 10/13/89                     |     | 40302        |        |
| 15                                           | rb-94              | mt=102                                           | updated 10/13/89                     |     | 41094        |        |
| 16                                           | 100-95             | nt=102                                           | updated 10/13/89                     |     | 42095        |        |
| 17                                           | tc-99              | mt=102                                           | uzdated 10/13/89                     |     | 43099        |        |
| 18                                           | ru-101             | mt=102                                           | updated 10/13/89                     |     | 44101        |        |
| 19                                           | ru-106             | nt=102                                           | undeted 10/13/89                     |     | 44106        |        |
| 20                                           | rtr-103            | at=102                                           | updated 10/13/89                     |     | 45103        |        |
| ~                                            |                    |                                                  | drawn id the                         |     |              |        |
| ٤١                                           | rh-105             | at= 102                                          |                                      |     | 45105        |        |
| 22                                           | pd-105             | at=102                                           | updated 10/13/89                     |     | 46105        |        |
| 23                                           | pd-108             | at=102                                           | updated 10/13/89                     |     | 46108        |        |
| 24                                           | silver-109         | endf/b-iv mat 1139 -                             | updated 10/13/89                     |     | 47109        |        |
| 25                                           | sb-124             | mt=102                                           | updated 10/13/89                     |     | 51124        |        |
| <u> </u>                                     | ж <del>-</del> 131 |                                                  | undeted 10/13/89                     |     | 54131        |        |
| <del>77</del>                                | xe-132             | nt=102,103,104,105,105<br>nt=102,103,104,105,105 | updated 10/13/89                     |     | 54132        |        |
| 36                                           | xenor-135          | endf/b-iv met 1294                               | updated 10/13/89                     |     | \$\igotimes  |        |
| ~                                            | Marin Lin          | 400 407 407 40E 4                                | CATACON ICA COLOR                    |     | 54136        |        |
| 2                                            | ж <del>-</del> 136 | mt= 102, 108, 104, 105, 1                        | W                                    |     |              |        |
| 30                                           | cesiun 133         | endiforivest 1141                                | updated 10/13/89                     |     | <u> ऋध्य</u> |        |
| 31                                           | cs-134             | mt=102                                           | updated 10/13/89                     |     | . 55134      |        |
| 32                                           | CS-135             | mt= 102                                          |                                      |     | 55135        |        |
| 33                                           | cs-137             | mt=102                                           | updated 10/13/89                     |     | 55157        |        |
| 34                                           | be-136             | mt=102                                           | updated 10/13/89                     |     | 56136        |        |
| BUNDANANARARARARARARARARARARARARARARARARAR   | La-139             | mt=102                                           | undeted 10/13/89                     |     | 57139        |        |
| ₹.                                           | œ-144              | nt= 102                                          | 4                                    |     | 58144        |        |
| ₩                                            | 6-Ki               | mt=102,103,104,105,106,107                       | updated 10/13/89                     |     | 59141        |        |
| 30                                           |                    | HE-102, RD, 101, RD, RD, 101                     | 10/17/80                             |     | 5943         |        |
| 30                                           | pr-143             | mt=102                                           | updated 10/13/89                     |     |              |        |
| 37                                           | nd-143             | mt=102                                           | updated 10/13/89                     |     | 60143        |        |
| 40                                           | nd-145             | mb=102                                           | updated 10/13/89                     |     | 60145        |        |
| 41                                           | nd-147             | mt=102                                           | updated 10/13/89                     |     | 60147        |        |
| 42                                           | pm-147             | mt=102                                           | updated-10/13/89                     |     | 61147        |        |
| 43                                           | pm-148             | nt= 102                                          | •                                    |     | 61148        |        |
| ũ.                                           | sm-147             | endf/b-v fission product                         | ucdated 10/13/89                     |     | 62147        |        |
| 45                                           | san 149            | mt=102,105,107                                   | updated 10/13/89                     |     | 62149        |        |
| 72                                           | sa-150             | mt=102                                           | updated 10/13/89                     |     | 62150        |        |
| 46 47 48                                     |                    | MAP INC.                                         |                                      |     | 62151        |        |
| 4/                                           | sn 51              | mt=102,105,104,105,106,107                       | updated 10/13/89                     |     |              |        |
| 46                                           | 8R-152             | mt=102,103,104,105,106,107                       | updated 10/13/89                     |     | <u> </u>     |        |
| 49                                           | er <u>53</u>       | mt=102,103,104,105,106,107                       | uppleted 10/13/89                    |     | ୟାୟ          |        |
| \$85885555<br>\$5855555555555555555555555555 | eu 154             | mt=102,105,104,105,106,107                       | updated 10/13/89                     |     | <u> </u>     |        |
| 51                                           | en-222             | mt=102,103,104,105,106,107                       | updated 10/13/89                     |     | <u>න</u> ාන  |        |
| 52                                           | gd-155             | st=102                                           | updated 10/13/89                     |     | 64155        |        |
| 53                                           | 11-2% 10/3 sign    | >544 residads p-3 200k f-1/e-s                   | (1.45)                               |     | 92234        |        |
| Ñ.                                           | uranium 25         | endf/briv set 1261                               | updated 10/13/89                     |     | 9225         |        |
| æ                                            | 1276 1162 ala      | 7644 naklaca p-3 298k f-1/es                     | (1.45)                               |     | 92236        |        |
| 20                                           | UZD IID SIG        | And Hawking his cont 1. Asia                     | updated 10/13/89                     |     | 92238        |        |
| 22                                           | urenium 238        | endf/b-iv inst 1262                              |                                      |     |              |        |
| 2/                                           | nepturium 23/      | endf/b-ivest 1265                                | updated 10/13/89                     |     | 95237        |        |
| 58                                           | pr-220 1000 sig    | p-5+4 maklacs p-3 255k f-1/e-                    | 以いつ)                                 |     | 94238        |        |
| 59                                           |                    | eralf/b-iv mat 1264                              | rhinered 10/13/89                    |     | 9/239        |        |
| 59<br>60                                     |                    | endf/b-iv met 1265                               | updated 10/13/89<br>updated 10/13/89 |     | 94340        |        |
| 61                                           |                    | endf/to-iv mat 1266                              | undeted 10/13/89                     |     | 94241        |        |
| 62                                           | plumrius 2/2       | endif/b-iv ant 1161                              | updated 10/13/89                     |     | 922          |        |
| ळ                                            | 50-241 1054 eld    | p-5+4 readacs 218 pp p-3 295k                    |                                      |     | 95241        |        |
| ü                                            | 50-203 MAT 21      | gp wt f-1/em 090576 p3 283k                      | •                                    |     | 9523         |        |
| 65                                           |                    | endif/b-iv mat 1162                              | updated 10/13/89                     |     | 96244        |        |
|                                              | curium 24          | dissipation to the contract of the               | drawn in the                         | 999 | terperatures | 075 M  |
| v an                                         | PR PECCIOR UNIT    | klized to 1.0 at 0.023 ev '                      |                                      | 777 | miles ann a. | 713.00 |

```
0 hydrogan
 erdf/b-iv net 1269/thm/1002 undated 10/13/89
 1001
 betreretures 607.60
 thermal scattering matrix matter 2 at a temperature of 50.00 was selected.
Ob-10 1273 218mp 042575 p-3 289k
 5010
 temerature= 607.60
 thermal scattering matrix number 2 at a temperature of $50.00 was selected.
0 boron-11
 endf/b-iv met 1160
 undeted 10/13/89
 5011
 temerature: 607.60
 thermal scattering matrix runber 2 at a temperature of
 550.00 was selected.
0 avygen-16
 erdf/b-iv met 12/6
 ucdated 10/13/89
 8016
 temperatures 975.00
0 aggan-16
 erdf/b-iv met 1276
 undeted 10/13/89
 temperature= 607.60
 mt=102,105,105,105,106,107
 36083
 temperature= 975.00
0 kr-83
 uzdated 10/13/89
Oresonence data for this ruclide
Omess runber (a)
 82.202
 temperature(kelvin)
 = 975.000
 7.004
Opotential scatter signs =
 lumed nuclear density
 = 1.6278999E-06
 = 4988.190
Ospin factor (g)
 lum dimension (a-bar)
 = 4.6812201E-01
 = 3.4269261E-01
Oirmer radius
 = .000000E+00
 dercoff correction (c)
Othe absorber will be treated by the northelm integral method.
 signs(per absorber aton)= 1.0489573E+05
Omess of moderator-1 = 15.995
Omoderator-1 will be treated by the norchein integral method.
Omes of moderator-2 = 237,933 signs(per at
 signatoer absorber atom> 1.1708092E+05
Omotivator-2 will be treated by the porchein integral author.
Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1,0000
OETOLD.
 res abs
 res fiss
 res scat
 -2.429425E-03
 .000000E+00
 -3.070/67E-03
 11
 12
 2.16/8/E-02
 .000000E+00
 9.887997E-0B
 13
 -5.318041E-01
 .0000000=+00
 -1.595370E-01
 4.785ZE-05
 .000000E+00
 -1.725/97E-05
Ocices resonance integrals
 resolved
Debecration
 1.446CE+02
 fission
 .0000E+00
- elapsed time
 .00 min.
 3605
0 kr-85
 nat= 102
 temperatures.
0 = -90
 mt=102
 undated 10/13/89
 38070
 temperatures 975.00
0 y-89
 mt=102
 undated 10/13/89
 3XB9
 temperature=
 975.00
Orescrence data for this nuclide
Omnes number (a)
 88.142
 temperature(ke(vin)
 = 975.000
Opotential scatter signa =
 = 1.4471508E-05
 3.644
 lumed nuclear density
 = 4.6812201E-01
Ospin factor (g)
 78.664
 lump distansion (a-ber)
Crimer redius
 = .0000000E+00
 denoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
 signs(per absorber atunt)= 1.1799717E+04
Omess of moderator-1 = 15.995
Omoderator-1 will be treated by the northeim integral method.
Omess of moderator-2 = 257,933 signs(per al
 signs(per absorber atom)= 1.316/805E+04
Omcderator-2 will be treated by the porchein integral method.

Othis resonance material will be treated as a 2-diameteral object.
Oxolumne fraction of lump in cell used to account for spatial self-shielding-1.00000
 res abs
 res fiss
Oproup
 res scat
 4.18480/E-05
 .000000E+00
 -3.31577EE-04
 -8.899182E-05
 -2.498548E-04
 10
 .0000000
Openiess resorance integrals
 resolved
 1.46374E-01
Osbscrption
 .00000E+00
 fission

 element time

 .00 min.
0 zr-95
 nt= 102
 40073
 terperature-
0 27-94
 mt=102
 undeted 10/13/89
 terperature*
 975.00
Oresonance data for this ruclide
 = 975.000
Omes runber (a)
 95.100
 temperature(kelvin)
Opotential scatter signs =
 3.779
 = 2.2064122-05
 lumped ructeer density
 180.853
Ospin factor (g)
 lum dimension (a-bar)
 = 4.6812201E-01
```

```
Oirmer radius
 = .000000E+00
 dencoff correction (c) = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
Oness of moderator-1 = 15.995
 signaturer absorber atomb= 7.4611826E+03
Oncerator-1 will be treated by the norche in integral method.
Ones of moderator-2 = 257.953 signs(per et
 signe(per absorber atom)= 8.32(3535E+03
Oncommeter-2 will be treated by the northern integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1,0000
Ograp
 res abs
 res fiss
 res scat
 8
 -1.48317E-06
 .00000E+00 -1.371799E-03
 -4.468161E-05
 .00000E+00 -3.95098/E-03
Opicess resonance integrals
 resolved
Osbeanstian
 3.4357E-02
 fission
 .0000E+00

 elapsed time

 .00 min.
0 = 5
 mt=102
 undated 10/13/80
 40005
 temperature= 975.00
 endf/b-iv met 1284
O zirostloy
 updated 10/13/89
 40302
 tencerature= 650.00
Oregonence dista for this nuclide
 90,436
Oness runber (a)
 temperature(kelvin)
 = 450,000
Opotential scatter signa =
 6.355
 lumped nuclear density
 = 4.255002E-02
Ospin factor (g)
 1.079
 lunp dimension (a-ber)
 = 5.4610002E-01
Oimer radius
 = 4.7878999E-01
 dencoff correction (c)
 = 5.0564637E-01
Othe absorber will be treated by the northeim integral method.
Othis rescrance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spetial self-shielding-1,0000
(Careco
 res ebs
 res fiss
 res acat
 -1.78059Œ-03
 .000000E+00
 -1,285907E+00
 -5.88373E-02
 .000000E+00
 -2.695297E+00
 10
 -6.99935E-02
 .000000E+00
 -1.601321E+00
 11
 -1,853,87E-01
 .00000E+00
 -7.920912E-01
Occess rescrence integrals
 resolved
Osbsorption
 2.28539E-01
 fission
 .0000000
- elamed time .02 min.
0 rb-94
 mt=102
 undated 10/13/89
 terpereture: 975.00
 41094
Oresonence data for this nuclide
Orace number (a)
 93.101
 = 975.000
 temperature(ke(vin)
Opotential scatter signs =
 3.779
 lumped nuclear density
 = 1.1977532E-11
Ospin factor (g)
 = 43808.801
 lump dimension (a bar)
 = 4,6812201E-01
Oinner rectius
 dercoff correction (c)
 = .000000E+00
 = 3.4269261E-01
Othe absorber will be treated by the norcheim integral method.
Orass of accerator-1 = 15.995
 signs(per absorber aton)= 1.4256668+10
Omogrator-1 will be treated by the norcheim integral method.

Omes of moderator-2 = 257.953 signs(per et
 signe(per absorber atom)= 1,5905996E+10
Oncerntor-2 will be treated by the northein integral method.

Othis resource material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.0000
(paran)
 res abs
 res fias
 res scat
 1.03531E-02
 .000000E+00
 9.253882E-04
 13
 -000000E+00
 9.83671ZE-03
 -4.064814E-04
Descess rescrence integrals
 resolved
Orbitation
 9.15001E+01
fission
 .0000E+00
 .02 min.
- elepsed time
0 mg-55
 mt=102
 undeted 10/13/89
 42075
 temperature 975.00
Oresonence data for this ruclide
Omess runber (a)
 = 94.001
 temperature(logivin)
 = 975.000
```

```
= 1.98509192-05
Opotential scatter signs =
 lumed rucker density
 = 4.6812201E-01
Ospin factor (a)
 = 607.724
 lum dimension (a-bar)
 = .0000000±00
Chimper rectices
 dencoff correction (c)
 = 3.4260251E-01
Othe absorber will be treated by the nondelse integral method.
 signs(per absorber atom)= 8.602105/£+03
Omes of anderstor-1 = 15.95
Oppdarator-1 will be treated by the northeirs integral method.
Cases of moderator-2 = 257.953
 signature absorber atomi= 9.597260E-0B
Constructor 2 will be treated by the northein integral method.

Othis resource material will be treated as a 2-dimensional object.
Oxoluse fraction of lump in cell used to account for scatial self-shielding-1.0000
Ograp
 res fles
 res abs
 res scat
 -2.51952/E-02
-1.294/21E-02
-6.236692E-00
 -4.21318E-03
 .000000=+00
 -7.85110/E-03
-5.421113=00
 11
 _00000E+00
 12
 .00000E+00
 -2.0001E-05
 1.5679128-04
 -00000E+00
 13
Omcess reconstce integrals
 resolved
 9.651353+01
Orbeartation
 fission
 .00000E+00
 - elaxed time
 .02 min.
0 tc-99
 mt=102
 undated 10/13/89
 43009
 temeratures 975.00
Oresonence data for this ruclide
Omes rusber (a)
 98,150
 975.000
 tamperature(lasivin)
 lumed nuclear density
Opotential scatter signs =
 = 2.255 BUE-06
 6.000
 = 4527,940
Oppin factor (a)
 (up disension (arber)
denoaff correction (c)
 * 4_6812201E-01
 = 3.42908/E-01
 - .00000E+00
Oirmer redius
Othe absorber will be treated by the norcheim integral matrod.
Omes of accelerator-1 = 15,995 signa(per ab
 signafor elegator atom= 7.63/85/95+05
Omderator-1 will be treated by the norchain internal method.
Omess of moderator-2 = 257.953
 signs(per absorber atom) = 8.5069639E+05
Ompirator 2 will be treated by the northein integral author.
Othic recourse material will be treated as a 2-dimensional object.
Oxolumn fraction of lump in cell used to account for spatial self-shieldings.0000
Gran
 res ebs
 res fice
 res ecet
 -2.8800/Æ-02
 .000000E+00
 -1.36006E-02
 11
 12
 -7.452/62E-03
 .00000E+00
 -2.60610/E-04
 4.68.640E-01
 -2.4653/6E-02
 13 14
 .000000E+00
 -9.9/561/E-00
 .00000E+00
 -3.17066E-01
 1.0975/E-02
 ъ
 _000000E+00
 -5.38316E-04
 76
 4.5577/E-03
 .000000E+00
 -2.80202E-04
 17
 2.0743498-04
 .00000E+00
 -1.1919ZE-05
Opicios resonance interrela
 resolved
Orbearation
 3.21540E+02
 .00000
 fission

 elected time

 ـدند کا۔
 undeted 10/13/89
 44101
0 ru-101
 mt=102
 temperature= 975.00
Oresonence data for this nuclide
 = 975.000
Omes runber (a)
 100.030
 temperature(leclvin)
Chotential scatter signs
 7.95
 luned rucker desity
 = 2.053784/E-05
 = 4.6812201E-01
Ospin factor (a)
 = 8785,290
 lum dimension (arbur)
 - MMMF400
 deposit correction (c)
 = 3.4280261E-01
Direct redice:
Othe absorber will be treated by the northeirs internal seathod.
Omess of moderator-1 = 15,995
 signatper absorber atomics 8.31/392/E+05
Omderator-1 will be treated by the runders integral method.
Omes of moderator-2 = 257.953
 signs(per absorber atom)= 9.2762695E+05
Occimator 2 will be treated by the norchein integral exthal.
Othis resonance exterial will be treated as a 2-discretoral object.
Occluse frection of lump in call used to account for scatial salf-shieldings1.0000
Orres
 res abs
 res fice
 res scat
```

```
.000000E+00 -3.695435E-03
 -3.67037E-02
 11
 12
 -1.758/7ZE-01
 .00000000
 -4.27705E-02
 13
 -5.51600E-01
 .000+00
 -1.4850B3E-02
 2.369341E-04
 .000000E+00
 -4.1439X2E-05
Opicess resonance integrals
 nexol ved
 7.90%1E+01
Orbearation
 .0000E+00
 fission
- elepsed time .03 min.
 updated 10/13/89
 44106 temperature= 975.00
0 ru-105
 mt=102
 mt=102
 undeted 10/13/89
 4510B
 tenperatures 975.00
0 rtr-103
Oresonance data for this ruclide
 = 975.000
 = 102,021
 temperature(kelvin)
Omes number (a)
 lumped nuclear density
 = 1.243051E-05
Quotential scatter signs =
 = 4.6812201E-01
 lump dimension (a-bar)
Ospin factor (g)
 .500
 = .000000E+00
 dercoff correction (c)
 = 3.4259251E-01
Oimer radius
Othe absorber will be treated by the northelia integral aethod.
 signa(per absorber aton)= 1.3725287E+04
Oress of moderator-1 = 15.995
Oncorretor-1 will be treated by the norche in integral method.

Oness of moderator-2 = 257.953 signs(per al
 signs(per absorber atun)= 1.5310909E+04
Oncorator-2 will be treated by the norcheim integral method.

Othis resource material will be treated as a 2-dimensional object.
Oxolure fraction of lump in cell used to account for spatial self-shielding=1.0000
 res fiss
Ograp
 nes abs
 res scat
 1.220378E-03
 .000000E+00
 1.838319E-03
 -4.52174E-03
 .000000E+00
 -6.2532E-03
 10
 11
 -2.501817E-02
 .000000E+00
 -2.197417E-02
 -2.574820E-05
 12
 -4.149507E-04
 .000000E+00
 .000000E+00
 13
 .00000E+00
 .00000E+00
 .000000E+00
 -0000E+00
 .000000E+00
 3.20699Œ-03
 5
 2.257U50E-01
 .0000000
 2,989885+01
 -7.77300/E-02
 16
 .00000E+00
 17
 -1.571487E+02
 .00000E+00
 -1.707123E-01
 .000000
 2.60X877E-01
 18
 8.6680735+01
 19
 .000000E+00
 -1.30890E-08
 1.14215ZE+01
 ã
 1.081809E+00
 .0000000
 -2,425992E-05
 21
 .000000E+00
 1.925365E-03
 2.1657676-01
 Z2
 2.583980E-01
 .000E+00
 2.92540E-03
 23
 -9.87889E-02
 .0000000
 1.7880E-03
Descess resonance integrals
 resolved
Outportion
 1.1377E+03
 fission
 .0000E+00
- elapsed time
 .07 min.
 45105
 temperatures 975.00
0 rh-105
 mt= 102
 temperature: 975.00
 undated 10/13/89
 46105
0 00+105
 RE-102
Orescrence data for this ruclide
 = 975.000
Omesa number (a)
 = 104,004
 temperature(izelvin)
 lurped nuclear density
 = 8.5490719E-06
Opotential scatter signa = 4.069
 = 4.6812201E-01
Ospin factor (g)
 = 15210.000
 lump dimension (a-bar)
 dencoff correction (c)
 = 3.4257251E-01
 = .000000E+00
Othe absorber will be treated by the northein integral method.
Omess of moderator-1 = 15.995 signa(per at
Omoderator-1 will be treated by the nordneim integral method.
 signs(per absorber aton)= 1.9974063E+04
 signs(per absorber atunt)= 2.229/829E+04
Omes of moderator-2 = 257.953
Oncderator-2 will be treated by the norcheim integral method.
Othis rescreme material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding=1.0000
 res scat
Ograp
12
 res abs
 res fiss
 -6.398361E-02
 .00000E+00 -1.985383E-03
```

```
13
 -5.664189E-02
 .00000E+00 -1.451314E-03
 7.759710E-04
 .00000E+00 -8.119541E-05
 Opicess resonance integrals
 resolved
Osbsorotion
 6.118335+01
 .00000E+00
 flesion
 .07 min.
 - elapsed time
0 cd-108
 mt=102
 undated 10/13/89
 46108
 temperature= 975.00
Oresonence data for this nuclide
Oress ruther (a)
 = 106,977
 = 975.000
 temperature(lecivin)
Opotential scatter signs =
 4.146
 lumed nuclear density
 = 2.520524/E-06
 = 21175.100
Ospin factor (g)
 lum dimension (a-bar)
 = 4.6812201E-01
Oinner rectius
 = .000000E+00
 dencoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northern integral method.
Omess of moderator-1 = 15.995
 signa(per absorber aton)= 6.7753003E+04
Omobrator-1 will be treated by the norchein integral method.
Omes of moderator-2 = 237,933 signaper absorbe
Omobrator-2 will be treated by the norchein integral method.
Othis resonance material will be treated as a 2-dimensional object.
 signs(per absorber aton)= 7.5591269E+04
Ovolume fraction of lump in cell used to account for scatial self-shielding-1,0000
 res fiss
Carona
 res abs
 ITES BOOK
 īī
 1.169985E-04
 .000000E+00
 3,5308/0E-04
 12
 -2.278071E+00
 _000000E+00
 -1,67725E+00
 Ĩ
 6.742267E-03
 .000000
 1.87079Œ-03
 8.56100Œ-02
 .000000E+00
 -3.207501E-05
 -1.841239E-01
 15
 -00000E+00
 8.08353E-05
 16
 2.94551E-04
 .000000E+00
 -9.25542ZE-06
Ocuces resonance integrals
 resolved
Osbsorotion
 2.113096+02
 .0000E+00
 fission
 - elacsed time .07 min.
0 silver-109 erclf/b-iv met 1139
 ucubsted 10/13/89
 temeratures 975.00
Oresonence data for this rucilide
Omes runber (a)
 = 107,969
 temperature(kelvin)
 = 975.000
Opotential scatter signs =
 lumped nuclear density
 = 1.725/53:-06
 4.988
Ospin factor (g)
 = 1441.870
 lump dimension (a-ber)
 = 4.6812201E-01
Oirmer redius
 = .000000E+00
 denoff correction (c)
 = 3.4289261E-01
Othe absorber will be treated by the northein integral method.
Drass of moderator-1 = 15.975
 signacper absorber atom> 9.8789094E+04
Omperator-1 will be treated by the northern integral method.
Omes of moderator-2 = 257.933 signs(per al
 signature absorber atomi= 1.1021671E+05
Omoderator-2 will be treated by the northein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for scatial self-shielding-1,0000
(prap
 res abs
 res fiss
 res scat
 -2.004977E-04
 .000000E+00
 -2,26149ZE-04
 10
 -8.00046E-03
 .00000E+00
 11
 -5.85340E-03
 -7.365214E-01
 .000000E+00
 12
 -3.56625 E-02
 .00000E+00
 3.380727E-02
 13
 7.668183E-01
 14
 -1.647573E+01
 .00000E+00
 -1.53112/E+00
Occess resonance integrals
 resolved
Osbsorption
 1.3813/E+03
 fission
 .00000E+00
 .07 min.

 elacsed time

0 sb-124
 ##=102
 undated 10/13/89
 51124
 tenperatures 975.00
 mt=102, 108, 104, 105, 106
0 x=-131
 ubdated 10/13/89
 5431
 temperatures 975.00
Oresonence data for this ruclide
Omese number (a)
 = 129.781
 temperature(kelvin)
 = 975.000
```

```
Opotential scatter signs =
 4.301
 lumbed nuclear density
 = 1.0167540E-05
Ospin factor (g)
 246.825
 lum dimension (a-bar)
 = 4.6812201E-01
 = .000000E+00
Oirmer radius
 dencoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northeim internal method.
Oness of moderator-1 = 15.995
 signs(per absorber atom)= 1.6794592E+04
Oncolerator-1 will be treated by the norcheim integral method.
Oness of moderator-2 = 257.933
 signs(per absorber aton)= 1.873/529E+04
Onchrator-2 will be treated by the northern integral method.
Othis rescrence material will be treated as a 2-dinersicral object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1,0000
 res fiss
Ograp
 res abs
 res scat
 .00000E+00 -3,102342E-05
 -3.35782/E-06
 -2.27300Œ-04
 .00000E+00 -1.970430E-04
 10
 ij
 -2.75318E-03
 .000000=+00
 -2.05069/E-05
 12
 -5.243097E-02
 .000000E+00
 -4.881767E-03
 -1.870293E+02
 .000000E+00
 13
 -7.980322E+01
 1.050253 -02
 1,471501E-02
 _00000E+00
Oceans resorance integrals
 resolved
 7.4744E+02
Oabsorption
fission
 .0000E+00
 .08 min.
- elapsed time
 updated 10/13/89
0 xe-132
 mt=102,103,104,105,106
 54132
 temperature= 975.00
Oresonence data for this nuclide
 = 975.000
Omess runber (a)
 130,771
 temperature(kelvin)
Ocotential scatter signs =
 4.301
 lumped nuclear density
 = 1,9850965E-05
Ospin factor (g)
 = 675,899
 lump dimension (a-bar)
 = 4.6812201E-01
Cimer redius
 = .0000000E+00
 dencoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northern integral method.
 signs(per absorber atom)= 8.5977539E+0B
Ones of moderator-1 .= 15.995
Oncderator-1 will be treated by the norcheim integral method.
Oness of moderator-2 = 257.953
 signs(per absorber atom)= 9.5924121E+0B
Oxederator-2 will be treated by the norchein integral method.
Othis rescripte naterial will be treated as a 2-dimensional object.
Oxolume fraction of lump in call used to account for spatial self-shielding=1.00000
 res abs
 res fiss
Grap
 res scat
 -3.071550E-05
 .000000E+00
 -1.421780E-04
 -9.333992E-03
 .00000E+00 -1.18814/E-01
 10
 11
 3.337750E-08
 .00000E+00 -9.213734E-07
Opposes resonance internals
 resolved
Osbsorption
 9.68480E-01
fission
 .0000E+00
- elapsed time
 .08 min.
 54135
0 xeron-135
 ercli/b-iv met 1254
 updated 10/13/89
 tenterature-
 mt= 102, 108, 104, 105, 107
erut/b-iv met 1141
 54136
 temperature= 975.00
0 xe-136
 temperature: 975.00
0 cesiun-133
 updated 10/13/89
 ऋछ
Orescrence data for this ruclide
 = 975.000
Oness rusber (a)
 = 131.764
 temperature(kelyin)
 = 2,4571029E-05
Opotential scatter signs =
 7.100
 lumped nuclear density
Ospin factor (g)
 = 374.437
 lump dimension (a-bar)
 = 4_6812201E-01
 dencoff correction (c)
Oirner redius
 = .000000E+00
 = 3.4269251E-01
Othe absorber will be treated by the northeirs integral method.
 signs(per absorber aton)= 6.9496348E+03
Oness of moderator-1 = 15.995
Osoxierator-1 will be treated by the norcheim integral method.
 signs(per absorber atom)= 7.4543945E+03
Organs of studerator-2 = 258.051
Orockretor-2 will be treated by the northeim integral method.
Othis resonance material will be treeted as a 2-dimersional object.
Oxcluse fraction of lump in cell used to account for spatial self-shielding=1.00000
(DETOLD)
 res abs
 res fiss
 res scat
```

```
-6.734279E-05
 .000000E+00
 -4.651889E-04
 10
 -3.388013E-03
 -000000E+00
 -6.490357E-03
 -2.20B3//E-01
 11
 -1.250393E-01
 .000000E+00
 -1.956239E-01
 .000000E+00
 -2.720966E-02
 ī
 -3.254:09E-01
 .00000E+00 -1.770940E-02
 -1.40370/E+01
 .000000E+00
 -6.14319EE-01
 15
 5.61942ZE-03
 .000000E+00
 -4.0/377/E-04
 16
 2.777897E-03
 .000000E+00
 -2.21510%E-04
 17
 2.352275E-03
 .0000000=+000
 -1_630948E-04
 18
 .00000E+00 -1.67952ZE-04
 2.215023E-03
 19
 1.317540E-03
 .000000E+00
 -9.4838/4E-05
Operation agreement associated
 resolved
Oabsorption
 3.48530E+02
 fission
 .0000F+00
- elapsed time
 .10 min.
 updated 10/13/89
0 cs-134
 nt=102
 55134
 tamperature:
0 08-175
 at= 102
 55155
 975.00
 terperatures
0 cs-137
 mt=102
 undated 10/13/89
 55137
 termerature:
 975.00
 mt=102
 updated 10/13/89
0 bar 136
 56136
 temperature: 975.00
Oresonence data for this nuclide
Oress number (a)
 temperature(kelvin)
 = 975.000
 = 2.6654541E-07
Ocotential scatter signs =
 4.835
 lumed nuclear density
 = 1247,690
 = 4.6812201E-01
Ospin factor (g)
 lump dimension (a-bar)
Oirner radius
 = .00000E+00
 dencoff correction (c)
 = 3.426926 E-01
Othe absorber will be treated by the northern integral method.
Oress of moderator-1 = 15.995
 signs(per absorber atom)= 6.4064013E+05
Omporestor-1 will be treated by the northein integral method.

Omess of moderator-2 = 257.953 signs(per et
 signature ebsorber atoms 7.1475463E+05
Oncolerator-2 will be treated by the norchelin integral method.
Othis rescrence material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.00000
 res fiss
apres (
 res abs
 res scat
 9.818274E-07
 10
 .000000E+00 4.101368E-07
 -2.649077E-05
 .00000E+00 -2.197929E-05
 11
Occess resonance integrals
 resolved
Osbsorption
 1.38X6E+00
 fission
 .00000E+00

 elamed time .10 min.

 mt=102
 updated 10/13/89
 57139
 temperatures 975.00
0 Le-139
Oresonence dista for this nuclide
Omes runber (a)
 temperature(kelvin)
 = 975.000
 = 2.32/39/7E-05
Opotential scatter signs =
 4.906
 lurped ruclear density
Ospin factor (g)
 = 145.855
 lump dimension (a-bar)
 = 4.6812201E-01
 denoff correction (c)
Oirner radius
 = .0000000E+00
 = 3.4269261E-01
Othe absorber will be treated by the norchein integral method.
Oness of moderator-1 = 15.995 signe(per et Oncerator-1 will be treated by the northeim integral method. Oness of moderator-2 = 257.953 signe(per et
 signs(per absorber atom)= 7.1525449E+03
 signe(per absorber atom)= 7.9800098E+03
Omderator-2 will be treated by the northein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1.00000
(prosp
 res abs
 res fiss
 res scat
 -2.480801E-05
 .000000E+00
 -1.666073E-03
 -4,5/8107E-04
.00000E+00
 -2,495017E-02
 10
 .000000E+00
 11
 .000000=+00
 .00000E+00
 -4.92E36E-02
 -8.164303E-02
 .0000000=+000
Ocioces resonence integrals
```

```
8_05083=+00
Outportion
 fission
 -00000E+00
 .12 min.

 elapsed time

0 œ-144
 mt= 102
 58144
 temperatures 975.00
 mt=102, 103, 104, 105, 106, 107
0 pr-141
 updated 10/13/89
 59141
 temperatures 975.00
Oresonence data for this ruclide
Omess number (a)
 = 975,000
 = 139,697
 temperature(kelvin)
 = 2.08/56/8E-05
Opotential scatter signs # 4.953
 lumed nuclear density
 = 1026,500
 = 4.6812201E-01
 lum disension (a-bar)
Ospin factor (g)
Oirner rectius
 = .0000000E+00
 dencoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northein integral method.
Oness of moderator-1 = 15.995
 signature absorber atumb= 8.191620E+03
Onoderator-1 will be treated by the northein integral method.
 signa(per absorber aton)= 9.1392979E+03
Oress of moderator-2 = 257.953
Omogrator-2 will be treated by the norchein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for scatial self-shielding-1.0000
 res scat
Ograp)
 res abs
 res fiss
 10
 -8.13539E-03
 .00000E+00
 -2.763613E-01
 11
 -1.32633/E-01
 .00000E+00 -1.763402E+00
 12
 -3.073294E-03
 .00000E+00 -3.009180E-04
Ococess resonance integrals
 resolved
Osbsorption
 1.20611E+01
 fission
 .00000E+00
- elapsed time
 .12 min.
0 pr-143
 mt=102
 updated 10/13/89
 temperatures 975.00
EXI450
 mt=102
 undated 10/13/80
 601/3
 tencerature:
Oresonence data for this ruclide
 = 141.682
 temperature(kelvin)
 = 975.000
Omes runber (a)
Opotential scatter signs =
 5.000
 lumped nuclear density
 = 1.8295419E-05
Oscin factor (g)
 = 1964.860
 lump dimension (a-bar)
 = 4,6812201E-01
Oirner radius
 = .COCCE+CO
 dispoff correction (c)
 = 3,4269261E-01
Othe absorber will be treated by the northeim integral method.
Ones of moderator-1 = 15.995
 signaturer absorber atom>= 9.33806/SE+03
Conchrator-1 will be treated by the northein integral method.
 signa(per absorber atom)= 1.0418368E+04
Opens of moderator-2 = 257.953
Oncdarator-2 will be treated by the northeim integral method.
Othis rescrerce material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.0000
(DETOLD)
 res abs
 res fiss
 res scet
 10
 -1.801389E-04
 -00000E+00
 -1_059724E-04
 -4.905/5/E+00
 11
 -4.22490Œ-01
 .000000E+00
 -2.80214/E-01
 .000000E+00
 -1.3780/3E-01
 12
Oscess resonance integrals
 resolved
 5.062982+01
Oubsorption
 fission
 -0000E+00
- elapsed time
 .12 min.
 updated 10/13/89
 terperature: 975.00
0 nd-145
 mt=102
Oresonence data for this nuclide
 = 975.000
Omess number (a)
 temperature(kelvin)
Cootential acatter signa =
 5.047
 lumped nuclear density
 = 1,3633058E-05
Ospin factor (g)
 = 1007.250
 lump dimension (a-bar)
 = 4.681220 E-01
 = .0000000E+00
 dencoff correction (c)
 = 3,4269261E-01
Oirmer radius
Othe absorber will be treated by the norchein integral method.
Omess of anticrator-1 = 15.995 signet per at Omestar-1 will be treated by the northern integral method. Omess of anticrator-2 = 257.933 signet per at
 signs(per absorber atom)= 1,252541/E+04
 signs(per absorber atom)= 1.377456E+04
Oncderator-2 will be treated by the northern integral method.
```

```
Othis rescrerce meterial will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1,0000
(group
 res aba
 res fiss
 res scat
 5.566T3TE-03
 .000000
 10
 -8.73253Æ-02
 .00000E+00
 -8.336893E-02
 -2.531122E-01
 11
 12
 -1.992578E+00
 .00000E+00
 -1.253901E+01
 2.0/5997E-04
 9.566028E-05
 .000000E+00
 13
 14 15 16
 -1.84984ZE+00
 .000000E+00
 -4.850597E-02
 -4_604220E-04
 5.875222E-03
 .000000E+00
 -1.451281E-04
 1.326667E-03
 .000E+00
 17
 -1.033925E-04
 9.642541E-04
 .000000E+00
 8.53738E-04
 -9.31338E-05
 18
 .000000E+00
 19
 7.634191E-04
 .000000=+00
 -8.099647E-05
 -2.92086E-06
 20
 2.839438E-05
 .00000E+00
Opicies resonance integrals
 resolved
Orbeanstian
 2.05303E+02
 fission
 .0000000

 elapsed time

 .13 min.
 updated 10/13/89
0 mt 147
 mt=102
 tenperature 975.00
0 pm-147
 updated 10/13/89
 61147
 bacerature=
 975.00
 mt=102
Crescrence data for this ruclide
Omess runber (a)
 temperature(kelvin)
 = 975.000
Opotential scatter signs = 5.093
 lumped nuclear density
 = 4.3050986E-06
 = 4.6812201E-01
Ospin factor (g)
 = 21589.500
 lump dimension (a-bar)
 = 3.4269261E-01
Oimer radius
 = .000000E+00
 dencoff correction (c)
Othe absorber will be treated by the nurcheim integral method.
 signs(per absorber atom)= 3.966523E+04
Oness of moderator-1 = 15,975
Oncerator-1 will be treated by the northeim integral method.
Oness of moderator-2 = ZS7.933 signs(per al
 signs(per absorber stori)= 4,425242E+04
Ometrator-2 will be treated by the northeim integral aethod.

Othis resonance asterial will be treated as a 2-discretional object.
Oxclume fraction of lump in cell used to account for spatial self-shielding-1.00000
Ograp
 res abs
 res fiss
 res scat
 -2.166141E-01
 -6.935160E-02
 12
 -000000E+00
 ĩ
 -5.533GE-02
 .00000E+00
 -3.134629E-03
 14
 -9.63369E+01
 -000000E+00
 -4.139169E+01
 6.974619E-0B
 15
 4.12516/E-02
 .00000E+00
 16
 1.697905E-02
 .000000E+00
 1.746689E-03
 17
 1.369750E-02
 -00000E+00
 1.15043E-0B
 1.2375E-02
 9.649043E-04
 18
 _000000E+00
 19
 6.999389E-04
 .000000E+00
 5.07070Œ-05
Ococces resonance integrals
 resolved
Osbearption
 1.99739E+03
 -0000E+00
 fission

 elected time

 .13 min.
0 pm 148
 mt= 102
 temperature 1975.00
0 sm-147
 endf/b-v fission product
 updated 10/13/89
 62447
 bencerature 975.00
Orescriptoe data for this nuclide
Omes runber (a)
 temperature(lectvin)
 = 975.000
Opotential scatter signs =
 lumed nuclear density
 = 1.799994/E-06
 5.075
 = 4.6812201E-01
 lump dimension (a-bar)
Dispin factor (g)
 .000
 = .000000E+00
 denoff correction (c)
 = 3.4269261E-01
Oimer radius
Othe absorber will be treated by the norcheim integral method.
Ones of socierator-1 = 15.975
 signe(per absorber atum)= 9.4865766E+04
Omotorator-1 will be treated by the norche in integral method.
Omes of moderator-2 = 257.933 signs par a
 signe(per absorber atom)= 1.058/1735/05
Onchristor-2 will be treated by the norchein integral method.

Othis resonance material will be treated as a 2-dimensional object.
```

•

```
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.0000
(Darrado
 res abs
 res fiss
 res scat
 1.0473445+00
 2.611994E-01
 .000+00
 11 12
 -1.69B698E+00
 7.9632BE-01
 _000+00
 13
 -4.507339E+00
 -2.825725E+00
 .000000E+00
 74 15 16
 .00000E+00
 -7.173979E-03
 -5.416/80E-01
 3.110962E-01
 .000000E+00
 -1.897057E-03
 7.28765E-03
 .000000E+00
 -3.738371E-04
 17
 4.281464E-03
 -00000E+00
 -2.40153 E-04
 18
 3.51041ZE-03
 .00000E+00
 -1.997 D/E-04
 -1,647537E-04
 19
 2.910591E-03
 .000000E+00
 8.434759E-04
 -4.636545E-05
 ã
 .00000E+00
Opposes resonance integrals
 resolved
Ochsorption
 7.20794E+02
 fission
 .0000E+00

 elacoad time

 .15 min.
 thermal scattering matrix number 3 at a temperature of 900.05 was selected.
0 sm-149
 mt=102,103,107
 updated 10/13/89
 62149
 temperatures 975.00
Orescrence data for this ruclide
Omess runber (a)
 temperature(kelvin)
 = 975.000
Ocotential scatter signa =
 3.20
 lumped nuclear density
 = 8.9113627E-08
 = 10407.900
Ospin factor (g)
 lump dimension (a-bar)
 = 4.6812201E-01
 = .000000E+00
 dencoff correction (c)
 = 3.4269261E-01
Oimer rectius
Othe absorber will be treated by the northeim integral method.
Oness of moderator-1 = 15.995
 signe(per absorber atom)= 1,9162018E+06
Omedicator-1 will be treated by the northeir integral method.
 signa(per absorber atom)= 2.13785382+05
Oness of moderator-2 = 257.953
Oncornior-2 will be treated by the norchein integral method.

Othis resonance material will be treated as a 2-dimensional object.
Oxclume fraction of lump in cell used to account for spatial self-shielding-1.0000
Carous
 ाल्ड क्रेड
 res fiss
 res scat
 8.54557E-03
 .00+00
 3,071535-02
 11
 12
 -5.576071E-02
 _000000E+00
 -1,828570E-01
 .0000000
 2.76421ZE-03
 13
 2.267975E-02
 5.02025/E-04
 .000000=+00
 -8.20/3/CE-03
Opicies rescriptoe integrals
 resolved
 8.0432E+02
Oribeanotion
 fission
 -0000E+00

 elamed time

 .15 min.
0 sp-150
 mt=102
 updated 10/13/89
 £2150
 temperatures 975.00
Orescrence data for this ruclide
 temperature(kelvin)
 = 975.000
Omes ruster (a)
Contextial scatter signs =
 5.162
 lunced ruclear density
 = 5.0109784E-06
Ospin factor (g)
 = 4376,420
 lump dimension (a-bar)
 = 4_6812201E-01
 = .0000000E+00
 = 3.4269251E-01
Cimer radius
 dencoff correction (c)
Othe absorber will be treated by the northeim integral method.
Oness of moderator-1 = 15,995 signs(per absorber atom)= 3.4077117E+04 Oncderator-1 will be treated by the northein integral method.
Oness of moderator-2 = 257.955
 signatoer absorber atom= 3.8019438=04
Omogrator-2 will be treated by the norcheim integral method.

Othis resonance material will be treated as a 2-dimensional object.
Oxclume fraction of lump in cell used to account for spatial self-shielding-1.00000
Ograp
 res fiss
 res scat
 nes abs
 -1.602149E-02
 -1,65774 E-03
 .000000E+00
 11
 -3.778702E-02
 .00000F+00
 4.26900E-01
 12
 -1.232369E-01
 .000000E+00
 -3.73/020E-02
 -6.782185E+00
 ช
 -8.618197E+00
 ,000000E+00
 1.064539E-04
 .000000E+00
 ·6.370252E-05
```

```
Opicess resonance integrals
 resolved
Osbsarption
 2.850576+02
fission
 -00000E+00
- elapsed time
 .15 min.
0 sn-151
 mt=102, 105, 104, 105, 106, 107
 updated 10/13/89
 terperature= 975.00
 62151
Oresonance data for this nuclide
 = 975.000
Oness number (a)
 = 149.623
 temperature(kelvin)
Occurrial scatter signs =
 lumped nuclear density
 = 4.3263481E-07
 5.185
 = 75574.703
Ospin factor (g)
 lump dimension (a-bar)
 = 4.6812201E-01
Oimer radius
 = .000000E+00
 denooff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
 signs(per absorber atma)= 3.9469709E+05
Oness of moderator-1 = 15,995
Onceretor-1 will be treated by the northein integral method.
Oness of moderator-2 = 257.533
 signa(per absorber atom)= 4,4035899E+05
Oncderator-2 will be treated by the norcheim integral method.
Othis resorance material will be treated as a 2-dimensional object.
Oxcluse fraction of lump in cell used to account for scatial self-shielding-1,0000
Ograp
14
15
 res fiss
 res abs
 nes scot
 -2.49/37/E-01
 .000000E+00
 -2.305/3E-02
 1.483919E+01
 .000000
 7.504087E-02
 16
 -2.183372E+01
 .000000E+00
 -6.20940E-02
 17
 1.734993E+02
 .00000E+00
 8.26217EE-01
 18
 -3.207909E+02
 -000000E+00
 -1.785116E+00
 ñ
 6.253349E+01
 .000000E+00
 3.86744E-01
 BRR
 1.1410XE+00
 ,000000E+00
 -1.3875295-04
 _000000E+00
 1.244099E-02
 -7.117627E-02
 6.952599E-02
 -00000E+00
 3.839917E-03
 3
 -1.091953E-02
 .000000E+00
 3.374087E-04
Opices regrence integrals
 resolved
 2.05598E+03
Orbearotion
fission
 .0000E+00
- elapsed time
 .17 min.
0 sn-152
 mt=102,103,104,105,106,107
 uzdated 10/13/89
 62162
 temperatures 975.00
Oresonence data for this nuclide
Omes runber (a)
 = 150,615
 temperature(kelvin)
 = 975.000
Opotential acatter signa =
 5.208
 = 2.3631060E-06
 lumped nuclear density
 = 863,594
 = 4.6812201E-01
Ospin factor (g)
 lum dinension (a-bar)
 = .000000E+00
 = 3.426926 E-01
Oimer radius
 denoted correction (c)
Othe absorber will be treated by the northeim integral method.
Orane of moderator-1 = 15,995
 signe(per absorber atom)= 7.280695E+04
Omnirator-1 will be treated by the nurche in integral method.
Omes of moderator-2 = 257,953
 signs(per absorber atom)= 8.0520409E+04
Oxiderator-2 will be treated by the northeim integral method.
Othis resource material will be treated as a 2-dimensional object.
Oxclume fraction of lump in cell used to account for spatial self-shielding-1.0000
(prop
 res abs
 res fiss
 res scat
 2,402629E-06
 ,000000E+00
 1,1585215-04
 10
 -1.917727E-03
 .000000E+00
 -2.963/DE-02
 11
 -2.752391E-02
 .000000E+00
 -1,04743ZE-01
 12
 -1,840857E-01
 .00000E+00
 -5_836282E-01
 13
 4.164582E-02
 _00000E+00
 1.01Z530E-01
 Ž.
 -1.59191Z=+02
 -000000E+00
 -3.072400E+02
Occess resonance integrals
 resolved
 2,7056ZE+03
Osbeonstian
 .0000E+00
fission
```

updated 10/13/89

នស

temperature= 975.00

elapsed time

0 er 123

.17 min.

mt=102, 103, 104, 105, 106, 107

```
Oresonence data for this nuclide
Omess runber (a)
 = 151,607
 temperature(kelvin)
 = 975.000
Cootential scatter signa =
 9.731
 lumed nuclear density
 = 1.5305148E-06
 = 12265.900
 lum dimension (a-bar)
 = 4.6812201E-01
Ospin factor (a)
Cimer radius
 = .000000E+00
 dencoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northeirs integral method.
Oness of moderator-1 = 15.995
 signs(per absorber atom)= 1.1156282E+05
Oncdorator-1 will be treated by the northern integral method.
Omes of moderator-2 = 257.953
 signs(per absorber atom)= 1.246952E+05
Omoderator-2 will be treated by the morchein integral method.

Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for scatial self-shielding-1.0000
Ouron D
 res abs
 res fiss res scat
.00000E+00 -5,96016/E-02
 -3.047509E-01
 Ĩ
 -2.16128/E-01
 .000000E+00
 -8.911425E-05
 -1.044091E+00
 _00000E+00
 -3.93097E-03
 15
 6.289871E-01
 .0000000
 -5.13160E-02
 16
 -3.304040E+00
 .000000=+00
 8.15412XE-03
 17
 1.505573E-01
 -00000E+00
 -3.437618E-03
 .00000E+00
 -2.Z3121ZE-0B
 18
 7.726830E-02
 5.05543Æ-02
 -1.541073E-03
 19
 _000000E+00
 -1.253809E-01
 20
 .00000E+00
 -1.274959E-03
Opposes rescrence integrals
 resolved
Orbearption
 1.33192+03
 fission
 .0000E+00
 .18 min.

 elapsed time

0 ar 154
 mt=102,103,104,105,106,107
 undeted 10/13/89
 6354
 temperatures 975.00
Oresonence data for this ruclide
 = 152,601
 = 975.000
Onnes runber (a)
 terperature(kelvin)
Opotential scatter signs =
 = 3.5946926E-07
 lurbed ructeer density
 = 19135.801
Ospin factor (g)
 lump dimension (a-ber)
 = 4.6812201E-01
 # .000000E+00
 denoted correction (c)
 = 3.4260261E-01
Dirner redius
Othe absorber will be treated by the northein integral method.
Cases of accerator-1 = 15.995
 signa(per absorber atont)= 4.7505416E+05
Oncderator-1 will be treated by the norcheim integral method.
Omess of moderator-2 = 257.953
 signs(per absorber atom)= 5.299000E+05
Oxoderator 2 will be treated by the norchein integral method.
Othis resonance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1.0000
Ograp
12
 res abs
 res fiss
 res scat
 -3.97552E-01
 .000000E+00
 -6.19775E-02
 13
 -3.375991E-01
 .000000E+00
 -2.58X69XE-02
 14
 .000000
 1.397187E-02
 2.938449E-01
 15
 7.538726E-02
 _000000E+00
 2.0530/Æ-02
 7.085/5/E+00
 .00000E+00
 9.1771276-02
 16
 -1.4639/E+02
 .000000E+00
 17
 -1.8992285+00
 1,1326165+02
 .000000E+00
 1.855853E+00
 18
 -00000E+00
 1.187440E+00
 19
 -1.014847E+02
Opcess resonence integrals
 resolved
Cabsorption
 2.133822+03
fission
 .0000E+00
- elapsed time
 .18 min.
 mt=102, 108, 104, 105, 106, 107
 undated 10/13/89
0 eu 155
 6375
 temperatures 975.00
0 計55
 mt=102
 updated 10/13/89
 455
 terperatures
 975.00
Oresonence data for this ruclide
 = 153,592
 temperature(legivin)
 = 975.000
Omes runber (a)
 5.277
 = 2.8352998E-09
Opotential scatter signa =
 lumped ruclear density
Ospin factor (g)
 = 12700,100
 lump dimension (a-bar)
 = 4.6812201E-01
```

```
dencoff correction (c) = 3.4269261E-01
 = .000000E+00
Oirner redius
Othe absorber will be treated by the northeim integral method.
 signs(per absorber atom)= 6.022632/E+07
Oness of acceptor-1 = 15.995
Oroderator-1 will be treated by the northein integral method.
Oness of moderator-2 = 257.953
 signs(per absorber atom)= 6.7195800E+07
Oncorrector-2 will be treated by the northein integral method.

Othis resonence enterial will be treated as a 2-dimensional object.
Oxclure fraction of lump in cell used to account for spatial self-shielding-1.0000
 res abs
-1.439346E+00
 res fiss
Corrord
 res ecst
 12
 .000000E+00
 -1_839517E-01
 1.540958E+00
 _000####
 1.98%82EE-01
 ซ
 141516
 2.188145E-01
 .000000
 9.80275Æ-03
 -3.373/39E-01
 .00000E+00
 -1.646314E-04
 -4.1488XE-03
 .000000
 1,477357E+00
 17
 1,56862E-01
 .000000E+00
 -1,479119E-03
 18 19
 9.60514SE-02
 -00000E+00
 -1.07805E-03
 6.295369E-02
 .000000E+00
 -8.025900E-04
 1.67050E-02
 _000000E+00
 1.62752E-04
 22222404
 .000000E+00
 _00000E+00
 .0000000
 .000000E+00
 .000000E+00
 -00000E+00
 .0000000
 _000000E+00
 ,000000E+00
 .000000E+00
 -000000E+00
 .00000E+00
 -1.6Z2130E+00
 -2.127942E+03
 _000#E+00
 -5.205793E+03
 _000000E+00
 1.961528E+00
 27
 -1.660027E+03
 .000000E+00
 7.39255E-01
Ocuces resonence integrals
 resolved
 3.970195+04
Osbsorption
 fission
 .0000E+00

 elapsed time

 .20 min.
 9234
0.-234 1043 sign-5+4 nauklans p-3 265k f-1/e-st(1.+5)
 temperature 975.00
Oresonence data for this ruclide
 = 252.029
 = 975.000
 temperature(kelvin)
Omes number (a)
 lunped nuclear density
 = 4.28/6223E-06
Contential scatter signs =
 10.021
 lum dinersion (e-bar)
 = 4.6812201E-01
Ospin factor (g)
 = 6948,450
 = .000000E+00
 dencoff correction (c)
 = 3.4269261E-01
Oimer redius
Othe absorber will be treated by the northein integral method.
 signe(per absorber atox)= 3.9854086E+04
Orass of nederator-1 = 15.995
Oncorator-1 will be treated by the nurchein integral method.
Ones of moderator-2 = 27.95 signature d
 signe(per absorber aton)= 4.4451117E+04
Omobrator-2 will be treated by the norchein integral method.
Othis resonance material will be treated as a 2-diameteral object.
Oxclume fraction of lump in cell used to account for spatial self-shielding-1.0000
 res fiss
 res scat
(Daredo
 res abs
 -5.972541E-02
 2.04730XE-02
 .0000000
 11
 -1.670759E-01
 -6.992950E-02
 12
 .000000E+00
 -6.473117E-04
 13
 7.760423E-04
 _00000E+00
 -1.6/5193E+01
 .000000E+00
 -2.674678E+00
Concess resurence integrals
 resolved
 5.84/2Œ+02
Oubscription
 .0000E+00
 fission

 elaced time

 .20 min.
 undated 10/13/89
 9225
 temperature: 975.00
0 uranium 255 erdf/b-iv sest 1261
Oresonence data for this nuclide
 = 975.000
 temperature(kelvin)
Omes runber (a)
Opotential scatter signs = 11.500
 lurped rucleer density
 = 3.646219E-04
 = 4.6812201E-01
Oppin factor (g)
 = 15171.100
 lum dimension (a-ber)
 # .000000E+00
 = 3.4269261E-01
 denoif correction (c)
Dimer radius
Othe absorber will be treated by the norchein integral method.
```

```
signs(per absorber atun)= 4.6653799E+02
Oness of moderator-1 = 15.995
Oncderator-1 will be treated by the northein integral method.
 signe(per absorber atom)= 5.0281970E+02
Omess of moderator-2 = 238.049
Omnimeter-2 will be treated by the northein integral method.
Othis rescreme material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.0000
 res fiss
Ograp
12
 res abs
 res scat
 -1.548013E+00
 -9.642568E-01
 -3.62514E-02
 -2.75046E+00
 -1.197143E-01
 -5.51926E+00
 13
 14
 -4.442442E+00 -2.737241E+00
 -3.041829E-02
Occess resonance integrals
 resolved
Outpearption
 2.14703E+02
 fission
 1.277376+02

 elapsed time .22 min.
 0.-236 1163 sign-5+4 reselacs p-3 298k f-1/e-m(1.+5)

 ወሥለ
 tenterature 975.00
Oresonence data for this ruclide
Omess number (a)
 = 254.017
 temperature(kelvin)
 = 975.000
Occupial scatter signs =
 10,995
 lumped nuclear density
 = 6, 550052E-05
Ospin factor (g)
 = 6328.490
 lum dimension (a-bar)
 = 4.6812201E-01
Cirner redius
 = .000000E+00
 dencoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northeim integral method.
Omes of moderator-1 = 15.995
 signs(per absorber atom)= 2.7739358E+03
Oncerator-1 will be treated by the northein integral method.
 signs(per absorber atom)= 3.09/307/E+03
Oness of moderator-2 = 257.954
Omchrator-2 will be treated by the norcheim integral method.

Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.0000
 res fies
 res scat
Ograp
 nes abs
 11
 -2.9280BE-01
 .0000000
 -7,413376E-01
 -1.598139E+00
 .00000E+00
 -1.08178/E+00
 12
 ĩ
 -6.90828/E-02
 .0000000
 -3.552¥00E-03
 .000000E+00
 4.41418E+00
 14
 -5.03822E+01
Opicess resorance integrals
 resolved
 2.68511E+02
Orbearction
 fission
 -00000E+00

 element time

 .22 min.
0 uranium-238 endf/b-iv met 1262
 undated 10/13/89
 CD7788
 temperatures 975.00
Oresonence data for this ruclide
 256,006
 temperature(kelvin)
 = 975.000
Omes ruster (a)
Quotential scatter signs = 10.599
 lurped nuclear density
 = 2.178033/E-02
 = 656.527
 lum dimension (a-bar)
 = 4.6812201E-01
Oppin factor (g)
 = .000000E+00
 dencoff correction (c)
 = 3.4269261E-01
Oimer rectius
Othe absorber will be treated by the northeim integral method.
 signs(per absorber aton)= 7.8400E0E+00
Oness of anderstor-1 = 15.995
Oncerator-1 will be treated by the northern integral method.
 signs(per absorber atom)= 3,3757189E-01
Oness of suckratur-2 = 255.041
Oncerator-2 will be treated by the norcheim integral method.
Othis resonance material will be treated as a 2-diametral object.
Oxcluse fraction of lusp in cell used to account for spatial self-shielding-1.0000
 res fias
Orrap
 res abs
 res acat
 -3.927211E-02
 .000000E+00
 -4.035207E-01
 10
 -1.023942E+00
 -1.742067E-05
 -6.471673E+00
 -9.702673E+00
 .000000E+00
 -2.68BYBYE+01
 11
 -4.30579X+01
 .000000E+00
 -4.99778E+01
 12
 -1.7688/8E+01
 13
 -5.400409E+01
 .000
 -1.048I3E+02
 .000000E+00
 -6.038750E+00
Opposs resonance integrals
 resolved
```

```
Orbeantian
 1.806635+01
 fission
 5.04119E-04

 elapsed time .25 min.

0 neptunium 237 erdf/b-iv met 1263
 updated 10/13/89
 93257
 temperatures 975.00
Oresonence data for this nuclida
 = 975.000
Omes runber (a)
 = 255.012
 temperature(ke(vin)
 = 4.700886/E-06
Opotential scatter signs = 10.500
 lumped nuclear density
 = 10100,800
 = 4.6812201E-01
Ospin factor (g)
 lump dimension (a-bar)
 = 3.4259261E-01
Oimer radius
 = .00000000:+00
 dencoff correction (c)
Othe absorber will be treated by the norcheim integral method.
Omes of moderator-1 = 15.995
 signs(per absorber atom)= 3.63285930404
Oncderator-1 will be treated by the northeim integral method.
Omes of moderator 2 = 28.051 signs(per absorber atom)= 3.86746
Omoderator 2 will be treated by the norcheim integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.00000
 signa(per absorber aton)= 3.8967465E+04
 res fiss
(Strarb
 res abs
 res acat
 -2.25233E-06
 -7.4475E-03
 11
 -6.394980E-02
 1.017181E-02
 -1.263774E-04
 5.530B1E-03
 12
 -7.820910E-02 8.428399E-05
 -3.687707E-03
 13
 -1.37665XE-01 -1.64624CE-05
 -2.075727E-03
Descess rescrurce integrals
 resolved
Orbearption
 2.92875E+02
 1.35520E-01
 fission

 elapsed time

 .27 min.
Qui 258 1050 sigo-5+4 reaklacs p-3 25% f-1/e-s(1.+5)
 temperatures 975.00
Orescrence data for this nuclide
 = 975.000
Omes runber (a)
 = 256,167
 temperature(kelvin)
 = 8.092BB05E-07
Occtential scatter signs = 10.890
 lumed nuclear density
 = 13130,600
 = 4.6812201E-01
 lump dimension (a-bar)
Ospin factor (g)
 dencoff correction (c)
 = 3.425925 E-01
Oirmer redius
 = .0000000E+00
Othe absorber will be treated by the northeir integral method.
 signe(per absorber atom)= 2.1099988E+05
Owes of moderator-1 = 15,995
Oncderator-1 will be treated by the northeim integral method.
Omes of moderator-2 = 258.051 signs(per absorber atom)= 2.265250
Omoderator-2 will be treated by the norcheim integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.00000
 signa(per absorber atom)= 2.2032503E+05
 res fiss
 res abs
Ograp
 res scat
 11
 -5.18510EE-03
 -8.081053E-04
 -4.9840B9E-03
 -4.077103E-04
 -1,67072ZE-03
 12
 -3.5656E-03
 3.811535E-01
 13
 7.427578E-02 -1.213191E-02
 -3.82964E-01 -7.001112E-02
 8.53917/E-03
Ocicess resonence integrals
 resolved
 8.25002E+01
Oabscrution
 9.08183=+00
 fission
- elapsed time .27 min.
0 plutonium 239 endi/to-ly met 1254
 updated 10/13/89
 9239
 temperatures 975.00
Orescrence data for this nuclide
 = 975.000
Omes runber (a)
 = 256,999
 temperature(kelyin)
 = 1.1655169E-04
Occupial scatter signs = 10,200
 lumped nuclear density
 = 635.710
 lusp dimension (a-bar)
 = 4.6812201E-01
Ospin factor (g)
 = 3.4259261E-01
Oirmer radius
 = .0000000=00
 denotif correction (c)
Othe absorber will be treated by the norcheim integral method.
 signs(per absorber atom)= 1.4613369E+03
Organ of acceptator-1 = 15.995
Oncderator-1 will be treated by the porchaim integral method.
 signs(per absorber atm)= 1.5674750E+0B
Omess of ancierator-2 = 258,051
Onchretor-2 will be treated by the northern integral method.
```

```
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for scatial self-shielding=1.00000
 res fiss
Ograp
 res abs
 res scat
 -9.80580E-02 -7.439817E-02
 11
 -2.4332/TE-01
 -2.148567E+00
 -8.067330E-01 -2.825407E-01
 12
 13
 -7.017735E+00 -4.128114E+00 -1.074359E-01
 -2.25525E+00 -1.15044E+00 -1.97597E-02
Opposes resonance integrals
 resolved
 3.05723=+02
Oubscription
 fission
 1.718050-02

 elapsed time

 .28 min.
0 plutonium 240 endf/b-iv met 1265
 ucdated 10/13/89
 94240
 temerature: 975.00
Orescriptoe data for this ruclide
 = 237,992
 = 975.000
Omess runber (a)
 terperature(kelvin)
Opotential scatter signs = 10.599
 lumped nuclear density
 = 2.5680782E-05
 = 4.6812201E-01
Oppin factor (c)
 = 669.244
 lump dimension (a-bar)
 = .0000000=+00
 = 3.4269261E-01
Oimer radius
 dercoff correction (c)
Othe absorber will be treated by the northeim integral method.
Omes of suderator-1 = 15.995
 signs(per absorber atom)= 6.69/2179E+03
Onoderator-1 will be treated by the northeim integral method.
Oness of moderator-2 = 238.051
 signs(per absorber ston)= 7.1322651E+03
Onoderator-2 will be treated by the northeim integral method.
Othis resonance material will be treated as a 2-diagnosic all chiect.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1,0000
Orrord
 res abs
 res fiss
 res scat
 -2.1130/5E-06 -3.290113E-04
 -6.71148/E-05
 -6.139901E-03
 -3.7829E-04
 -2.8023/3E-02
 10
 11 12
 -1.941598E-01 -1.12520E-03
 -2.5B0B30E-01
 -2.55450E+00
 -2.667729E+00
 -1.456635E-02
 -2.AZXXXX
 -2.040751E-0B
 13 14
 -3.32E218E-01
 .000000E+00
 .00000E+00
 .00000E+00
 3.2%36E-06
 Ħ
 1.726114E-02
 3.385407E-03
 5.19513/E-04
7.70754/E-02
 3.33362/E-01
 16
 2.701083=+00
 4.0BXXX=02
 3.57KBK0E+01
 17
 18
 -8.924690E+03
 -1.703316E+00
 -7,032175E+02
 9.7552XE-02
 19
 5.1113E0E+02
 4.121003E+01
 20
 -9.411130E+01 -1.7%15Æ-02
 1.7382585+00
Ocuces resonance integrals
 resolved
 4.12001E+03
Orbsorption
 fission
 1.771(2E+00
- elapsed time _32 min.
 temperature: 975.00
0 plutonium-241 endf/b-iv met 1266
 undeted 10/13/89
 94241
Oresonence data for this ruclide
 = 258,978
 = 975.000
Omes runber (a)
 temperature(kelvin)
Opotential scatter signs = 10.939
 lumped nuclear density
 = 1.4762393E-05
 = 16402,100
 lum diamsion (a-bar)
 = 4.6812201E-01
Osplin factor (g)
Oimer radius
 = .0000000E+00
 dencoff correction (c)
 = 3.4259261E-01
Othe absorber will be treated by the northeim integral method.
Ornes of moderator-1 = 15.995
 signs/cor absorber atomb= 1.156720X±+04
Oncerstor-1 will be treated by the northern integral asthol.
Ones of soderstor-2 = 258.051 signo(per el
 signatoer absorber atomi= 1.2407349E+04
Oncderator-2 will be treated by the northeirs integral method.
Othis resorance material will be treated as a 2-dimensional object.
Oxolume fraction of lump in cell used to account for spatial self-shielding-1.0000
 res fiss
Ograp
 res abs
 res scat
 -8.58625/E-03
 -8.929748E-03
 5.350622E-04
 Ĩ
 -9.712975E-01 -7.42929E-01
 -2.81858E-02
 -9.65343E-01 -6.85270/E-01
 -2.74136E-03
```

```
1.781677E-02 1.596397E-02 -4.625220E-04
Ococces resonance integrals
 resolved
Orbsorption
 5.058392+02
 fission
 4.25058E+02

 elacued time

 .32 mm.
0 plutonium 2/2 endf/b-iv met 1161
 undated 10/13/89
 94242
 temperature= 975.00
Oresonence data for this ruclide
Oracs number (a)
 = 240,145
 = 975.000
 temperature(kelvin)
Ocotential scatter signa = 10.604
 lumped nuclear density
 = 2.010319E-06
Ospin factor (g)
 = 6606,710
 lum dimension (a-bar)
 = 4.6812201E-01
Oirmor radius
 = .000000E+00
 dencoff correction (c)
 = 3.4269261E-01
Othe absorber will be treated by the northein integral method.
Oress of encirator-1 = 15.995
 signatur absorber atom> 8.4935984E+04
Oncourator-1 will be treated by the norcheim integral method.

Oness of moderator-2 = 258.051 signafor at
 signs(per absorber atom)= 9.110/98/E+04
Oncderator-2 will be treated by the northelm integral method.
Othis resonance material will be treated as a 2-diagnosical object,
Ovolume fraction of lump in cell used to account for spatial self-shielding-1.0000
garan
 nes abs
 res figs
 res scat
 -1.480576E-02
 11
12
 -5.444989E-0B
 .000000E+00
 -1.14488/E-01
 .000000E+00
 -2.216BXE-01
 13 X 15
 .000000
 -2.75755ZE-0%
 9.763989E-07
 8.116283E-02
 .000000E+00
 1.516041E-02
 -3.9865/E+01
 .000000E+00
 -3.216101E+00
 16
 4.027087E-02
 -3.46929E-05
 .000000E+00
 17
 1.55056F-02
 .000000E+00
 -1,8%8117E-03
 1.11254E-02
 .0000000=+00
 -1.43067/E-03
 18
Cencess resonance integrals
 resolved
 1.08:00=+03
Osbsorption
 fission
 .0000E+00

 elsoned time

 .32 min.
0an-241 1056 sigp-544 neuklacs 218mp p-3 253k
 temperatures 975.00
Oresonance data for this nuclide
Omes ruther (a)
 = 258,950
 temperature(kelvin)
 = 975,000
Ocotential scatter signs =
 9.511
 luxped nuclear density
 = 5.1591284E-07
Ospin factor (g)
 × 82058.215
 lump dimension (a-bar)
 = 4_6812201E-01
Oimer radius
 = .00000E+00
 dencoff correction (c)
 = 3.4250251E-01
Othe absorber will be treated by the norcheim integral method.
 signs(per absorber aton)= 3.309553E+05
Oness of accierator-1 = 15,995
Omnistator-1 will be treated by the northein internal method.
Oness of muchantur-2 = 238.051 signs(per absorbe
Oncerator-2 will be treated by the nordrein integral method.
Othis resonance material will be treated as a 2-dimensional object.
 signs(per absorber atom)= 3.5502538E+05
Ovolume fraction of lump in cell used to account for spetial self-shielding-1,0000
 res abs
Obrap
 res fiss
 res scat
 4,83769/E-01
 1.207797E-02 4.45149/E-05
 -4.74361 E-01 -1.14250 E-02 -5.41178 E-03
Descess resorance integrals
 resolved
Oubscription
 1.95410E+02
fission
 1.0756/E+00
- elapsed time .33 min.
Oan-243 1057 218 gp let f-1/e-m 090576 p3 255k
 952/3
 temerature 975.00
Oresonence data for this nuclide
 = 240.940
Omess rustber (a)
 temperature(izelvin)
 = 975.000
 lumed ructeer density
Opotential scatter signs =
 9.511
 = 2.252099/E-07
Ospin factor (g)
 = 82052,602
 lump dimension (arbar)
 = 4.681Z201E-01
 dencoff correction (c)
Oirner ractius
 = 3.4269251E-01
```

```
Othe absorber will be treated by the norcheim integral method.
Oness of moderator-1 = 15.995
 signs(per absorber atunt)= 7.583/49/E+05
Opporator-1 will be treated by the norcheim integral method.
Omess of productor-2 = 258,051
 signa(per absorber atunt)= 8.1331713E+05
Oroderator-2 will be treated by the norcheim integral method.
Othis resonance material will be treated as a 2-dimensional object.
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.00000
 res fiss
 res scat
3.664919E-04
Ottach
 resabs
 -9.1545E-03
 .000000E+00
 13
 1.020618E-02
 .000000E+00
 5.452318E-05
 14
Opicies resonance integrals
 resolved
Oabsorption
 1.60134E+02
fission
 .0000E+00
 .33 min.

 elacsed time

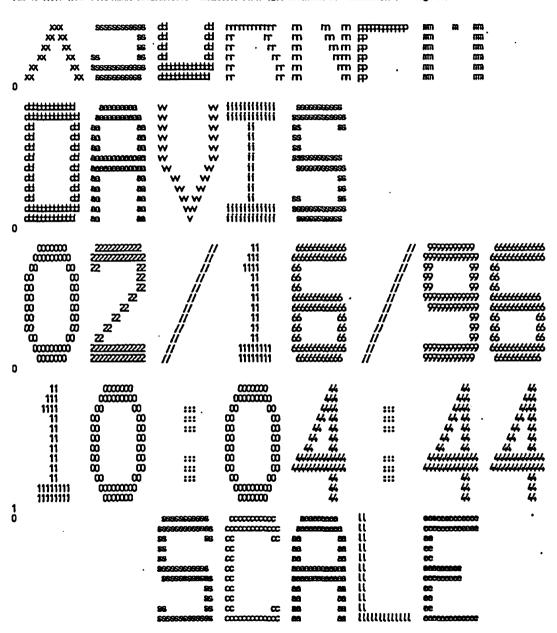
 underted 10/13/89
 96244
 temperatures 975.00
0 curium-24 endf/b-iv met 1162
Oresonence data for this nuclide
 = 975.000
Omes runber (a)
 242.133
 temperature(kelvin)
 = 2.6241885E-08
Occupation scatter signs =
 10.320
 lusped nuclear density
 = 4.6812201E-01
Ospin factor (g)
 = 5251.150
 lum dimension (a-bar)
 = 3.4269251E-01
Oimer radius
 = .0000000E+00
 dencoff correction (c)
Othe absorber will be treated by the northeim integral method.
 signs(per absorber atunt)= 6,5071429E+06
Oness of moderator-1 = 15.995
Oncderator-1 will be treated by the norcheim integral method.
 signs(per absorber atom)= 6.979/600E+05
Oness of moderator-2 = 258.051
Omoderator-2 will be treated by the northein integral method.

Othis resonance material will be treated as a 2-dimensional object.
Oxclume fraction of lump in cell used to account for spatial self-shielding=1.0000
Grap
 res abs
 res fiss
 res scat
 4.906EDE-06
 1.785139E-04
 1.973746E-04
 11
 12
 4.27768TE-04
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|      | sn-149<br>sn-150<br>sn-151<br>sn-152<br>sn-153<br>sn-154<br>sn-155<br>pd-155<br>u-254, 103 sign<br>uraniur-255                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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|      | sn-149<br>sn-150<br>sn-151<br>sn-152<br>sn-153<br>sn-154<br>sn-155<br>pd-155<br>u-254, 103 sign<br>uraniur-255                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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|      | sn-1/9<br>sn-150<br>sn-151<br>sn-152<br>sn-153<br>sn-154<br>sn-155<br>sp-155<br>u-254 103 sign<br>u-254 103 sign<br>u-254 103 sign<br>u-254 105 sign<br>u-258 105 sign<br>putonius-259<br>putonius-260<br>putonius-260                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          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|      | sn-1/9<br>sn-150<br>sn-151<br>sn-152<br>sn-153<br>sn-155<br>sp-155<br>u-254 1165 sig-<br>uraniun-255<br>uraniun-256<br>uraniun-257<br>putoniun-257<br>putoniun-259<br>plutoniun-259<br>plutoniun-250<br>plutoniun-250                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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|      | sn-1/9<br>sn-150<br>sn-151<br>sn-152<br>eu-153<br>eu-154<br>eu-155<br>gd-155<br>u-254 103 sig<br>u-254 1163 sig<br>u-251 1163 sig<br>u-251 1163 sig<br>u-251 1163 sig<br>u-251 1163 sig<br>u-251 1163 sig<br>u-251 1163 sig<br>u-251 1163 sig<br>u-251 1163 sig<br>u-251 1163 sig                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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|      | sn-1/9<br>sn-150<br>sn-151<br>sn-152<br>eu-153<br>eu-154<br>eu-155<br>gd-155<br>u-254 103 sig<br>u-254 1163 sig<br>u-251 1163 sig<br>u-251 1163 sig<br>u-251 1163 sig<br>u-251 1163 sig<br>u-251 1163 sig<br>u-251 1163 sig<br>u-251 1163 sig<br>u-251 1163 sig<br>u-251 1163 sig                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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|      | sn-1/9<br>sn-150<br>sn-151<br>sn-152<br>su-153<br>su-154<br>su-155<br>sp-155<br>u-254 103 sign<br>uraniun-238<br>uraniun-238<br>uraniun-238<br>uraniun-238<br>uraniun-238<br>uraniun-238<br>uraniun-238<br>uraniun-238<br>uraniun-238<br>uraniun-238<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoniun-240<br>plutoni 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| 0    | sn-149<br>sn-150<br>sn-151<br>sn-152<br>sn-153<br>sn-155<br>sp-155<br>u-254 103 sign<br>u-254 1050 sign<br>puturius-235<br>u-236 1050 sign<br>puturius-237<br>puturius-230<br>puturius-240<br>puturius-241<br>puturius-242<br>sn-243 1050 sign<br>puturius-243<br>puturius-243<br>sn-243 1050 sign<br>puturius-243<br>sn-243 1050 sign<br>puturius-243<br>sn-243 1050 sign<br>puturius-243<br>sn-243 1050 sign<br>puturius-243<br>sn-243 1050 sign<br>puturius-243<br>sn-243 1050 sign<br>sn-243 1050 sign<br>puturius-243<br>sn-243 1050 sign<br>sn-243 sign<br>sn-243 sign<br>sn-243                                                                                                                                                                                                                                                                                                                                                                                                                                          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| -    | sn-149<br>sn-150<br>sn-151<br>sn-152<br>eu-153<br>eu-153<br>eu-155<br>gd-155<br>ur-254 103 sig-<br>ur-251 1050 sig-<br>ur-251 1050 sig-<br>plutonius-259<br>plutonius-259<br>plutonius-241<br>plutonius-242<br>plutonius-242<br>sn-241 1056 sig-<br>sn-243 1057 214<br>curium-244<br>tape copy use                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| 1 🛪  | sn-149<br>sn-150<br>sn-151<br>sn-152<br>sn-153<br>sn-155<br>sp-155<br>u-254 1033 sign<br>uraniur-238<br>uraniur-238<br>uraniur-238<br>uraniur-238<br>uraniur-238<br>uraniur-238<br>uraniur-238<br>uraniur-238<br>uraniur-238<br>uraniur-238<br>uraniur-238<br>plutoniur-230<br>plutoniur-230<br>plutoniur-231<br>plutoniur-232<br>sn-231 1055 sign<br>plutoniur-233<br>uraniur-233<br>uraniur-234<br>tape copy sn<br>xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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| 1 🛪  | sn-149<br>sn-150<br>sn-151<br>sn-152<br>sn-153<br>sn-153<br>sn-155<br>sp-155<br>u-234 1033 sign<br>u-231 1030 sign<br>plutonius-237<br>plutonius-237<br>plutonius-231<br>plutonius-242<br>sn-243 1050 sign<br>plutonius-242<br>sn-243 1050 sign<br>plutonius-243<br>sn-243 1050 sign<br>sn-243                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | mb-102,103 mb-102,103 mb-102,103 mb-102,103 mb-102,103 mb-102,103 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IIIIIIIIIII coccecceccocce 

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program verification information
 code system: scale version: 4.2
 DECORPORATE COCOO!
 creation date: 04/27/95
 library: /neutronics/scale/eve
 this is not a scale configuration controlled code
 idrama: davis
 date of execution: 02/16/96
 time of execution: 10:04:44
 1040 d. see2h: beboock wilcox 15x15, 3.00x1X, 20pxd/mtu burn high temp
 1 entries.
 5 entries.
 10 entries.
 12 entries.
 9 entries.
0 Squartey has 12 entries.
Odirect access unit 9 requires 12 blocks of length 704 for cross section mixing.
1 1040 d, see2h: betrook wilcox 15x15, 3.00x20, 20g-c/mtu burn high temp
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isct order of scattering
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ion outer iteration sexinum
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ms mixing table length
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ion volumetric sources (0/n+ro/ves)
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ipm boundary sources (C/THTD/Yes)
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 iai O/I=rure/activities by interval
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isk broad group fluxes
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itkl 0/1/2 buckling geometry
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ican -1/0/1=cell/zone/region weight
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lanf number of broad groups
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 235 locations for mixing
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 3.645ZE-04
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 92238
 2.1780E-02
 5011
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 4.55359E-02
 80%
 2.09710E-02
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 1.62790E-05
 36083
 34065
 7,825/SE-07
 34065
 8
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 1.75089E-05
 38090
 37089
 3000
 1.447 DE-05
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 1.98509E-05
 11234567
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 1,44900E-05
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 1.960ZZE-06
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43099
 1.1977SE-11
 41094
 42075
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|           | 3 3.0000E+06 1.2097E+00 2.12201E+09<br>4 1.6500E+06 1.66740E+00 1.75673E+09<br>5 1.4000E+06 1.96511E+00 1.4653E+09<br>6 9.0000E+05 2.4075E+00 1.06620E+09                                                                                                                                                                                                                                                                                                                                                                                                                    | 2<br>3<br>4<br>5<br>6 | 0                                         | 3<br>4<br>5<br>6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1.0000E+00<br>1.0000E+00<br>1.0000E+00<br>1.0000E+00 |               |
|           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                       |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                      |               |

| 8 1.0000=45 4.65 9 1.7000=45 6.377 10 3.0000=40 6.377 11 5.5000=42 9.818 12 1.0000=42 1.151 13 3.0000=40 1.271 14 1.0000=40 1.381 15 3.0000=40 1.505 16 1.77000=40 1.505 17 1.29990=40 1.505 18 1.12990=40 1.505 19 1.00000=40 1.613 20 8.00000=40 1.633 21 4.00000=40 1.763 22 3.25000=40 1.763 23 2.25000=40 1.763 24 9.99990=40 1.862 25 5.00000=42 1.911 26 3.000000=42 1.922 27 1.000000=42 2.073 28 1.00000=45 2.763 | 88E+00 6.07557E+08 17E+00 2.7547E+08 17E+00 1.1552E+08 75E+00 1.1552E+08 75E+00 2.0542E+07 25E+01 1.052E+05 50E+01 3.2057E+05 50E+01 1.7052E+05 57E+01 1.7052E+05 57E+01 1.7052E+05 57E+01 1.7052E+05 57E+01 1.7052E+05 57E+01 1.5705E+05 57E+01 1.5707E+05 57E+01 3.5776E+05 57E+01 3.577 | 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 25 25 27 15 15 16 17 18 19 20 21 22 23 25 25 25 25 25 25 25 25 25 25 25 25 25 | 00000000000000000000000000000000000000 | 7 8 9 10 11 12 13 14 15 16 17 18 19 20 12 23 24 5 26 27 14 14 15 16 17 18 19 20 12 23 24 5 26 27 14 14 14 15 16 16 16 16 16 16 16 16 16 16 16 16 16 | 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 1.0000E+00 |                                            |
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| 0 injurance older                                                                                                                                                                                                                                                                                                                                                                                                          | p(l) activity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | table                                                                                                                         |                                        | drigaenie ca                                                                                                                                        | retents                                                                                                                                                                                                                                                                                                                        |                                            |
| by zone by z                                                                                                                                                                                                                                                                                                                                                                                                               | one metino.<br>3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | reaction                                                                                                                      | weights<br>O                           | directions<br>-2.7900/E-01                                                                                                                          | reflatirec<br>3                                                                                                                                                                                                                                                                                                                | MEX COS                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                            | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                               | 5.06K3E-02                             | -1.972 <del>0/E-</del> 01                                                                                                                           | 3 2                                                                                                                                                                                                                                                                                                                            | -9.9854E-05                                |
| 2 1<br>3 2<br>4 3<br>5<br>6<br>7<br>8                                                                                                                                                                                                                                                                                                                                                                                      | 3<br>3<br>3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                               | 5.05K3E-02                             | -6.04419E-01                                                                                                                                        | 8                                                                                                                                                                                                                                                                                                                              | 9.96548E-05<br>0                           |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                          | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                               | 5.53751E-02                            | -5.58¥10E+01                                                                                                                                        | 8                                                                                                                                                                                                                                                                                                                              | -3.10\50E-02                               |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                               |                                        | -2.31301E-01                                                                                                                                        | · 7·                                                                                                                                                                                                                                                                                                                           | -1,25575E-02<br>1,25575E-02                |
| 7<br>R                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                               | 5.5555E-02<br>5.5555E-02               | 2.31301E-01<br>5.59410E-01                                                                                                                          | 5                                                                                                                                                                                                                                                                                                                              | 3.10/50E-02                                |
| 9                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                               | 0                                      | -8.50774E-01                                                                                                                                        | 15                                                                                                                                                                                                                                                                                                                             | 0                                          |
| 10 · · · · · · · · · · · · · · · · · · ·                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                               | 5.228/Æ-02                             |                                                                                                                                                     | 15<br>14                                                                                                                                                                                                                                                                                                                       | -4.2000E-02<br>-3.14537E-02                |
| ]]<br>12                                                                                                                                                                                                                                                                                                                                                                                                                   | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                               |                                        | -6.01589E-01<br>-2.20198E-01                                                                                                                        | Ï                                                                                                                                                                                                                                                                                                                              | -1.15128E-02                               |
| ថ្មី                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                               | 5.2284E-02                             | 2.2019Œ-01                                                                                                                                          | 12                                                                                                                                                                                                                                                                                                                             | 1.15128E-02                                |
| 14                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                               | 5.2284E-02                             |                                                                                                                                                     | 11<br>10                                                                                                                                                                                                                                                                                                                       | 3.14537E-02<br>4.236 <del>/DE</del> -02    |
| D<br>K                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                               | 5.228¥Æ-02<br>0                        | -9.83032E-01                                                                                                                                        | 24                                                                                                                                                                                                                                                                                                                             | 0                                          |
| 17                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                               | 4.555E-02                              | -9.64143E-01                                                                                                                                        | 24                                                                                                                                                                                                                                                                                                                             | -4.37099E-02                               |
| 18                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                               |                                        | -8.17361E-01<br>-5.46143E-01                                                                                                                        | <b>25</b><br>22                                                                                                                                                                                                                                                                                                                | -3.70 <del>331.</del> -02<br>-2.4759712-02 |
| 12<br>15<br>16<br>17<br>18<br>18<br>20<br>21<br>22<br>22<br>23<br>24<br>24<br>24<br>24<br>24<br>24<br>24<br>24<br>24<br>24<br>24<br>24<br>24                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                               |                                        | -1.91780E-01                                                                                                                                        | 21                                                                                                                                                                                                                                                                                                                             | -8.6944E-03                                |
| 21                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                               |                                        | 1.91780E-01                                                                                                                                         | 20                                                                                                                                                                                                                                                                                                                             | 8.6944E-03                                 |
| 22<br>71                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                               | 4.5355E-02                             | 5,46143E-01<br>8,17361E-01                                                                                                                          | 19<br>18                                                                                                                                                                                                                                                                                                                       | 2.47597E-02<br>3.70555E-02                 |
| 24                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                               |                                        | 9.64143E-01                                                                                                                                         | ĩ7                                                                                                                                                                                                                                                                                                                             | 4.37099E-02                                |
| Corretants for p( 3) scatt                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <i>l</i>                                                                                                                      | E                                      |                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                |                                            |
| Oargl set 1 set<br>1-2,7900/E-01 8.832                                                                                                                                                                                                                                                                                                                                                                                     | 2 set 3<br>255E-01 6.74143E-02 ·                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | set 4<br>-6.16919E-01                                                                                                         | set 5<br>-1.71701E-02                  |                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                |                                            |
| 2 -1,972865-01 8,852                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4.36228E-01                                                                                                                   | 1.2141 E-02                            |                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                |                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                            | 255E-01 ,00000E+00<br>162E-01 3,16375E-01 •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 4.36223E-01                                                                                                                   |                                        |                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                |                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 7.43201E-01                                                                                                                   |                                        |                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                |                                            |
| 6 -2.31301E-01 4.520                                                                                                                                                                                                                                                                                                                                                                                                       | 76E-01 -2.25713E-01 -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                               | 1,61Z7Œ-01                             |                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                |                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3.07844E-01<br>7.43201E-01                                                                                                    |                                        |                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                |                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                            | 25E-02 6.268/3E-01 -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                               |                                        |                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                |                                            |

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10 -8.2178/E-01 -8.5725/E-02 5.428/2E-01 -1.9169/E-01 -3.442/SE-01
 11 -6.0199E-01 -8.5725E-02 .0000E+00 -1.40830E-01 3.4424/E-01
 12 - 2.2019/E-01 - 8.5725E-02 - 5.4285E-01 - 5.13643E-02 3.44265E-01
 13 2.20196E-01 -8.5725E-02 -5.4285E-01 5.1363E-02 -3.4436E-01
 14 6.01998-01 -8.57258-02 .00000-00 1,48308-01 -3.4838-01 14.601998-01 -8.57258-02 5.4888-01 1,9698-01 -3.4838-01 15 8.21788-01 -4.4928-01 8.36888-01 5.00788-01 -7.51008-01 17 -9.6448-01 -4.4928-01 7.731818-01 4,9088-01 -6.24388-01
 17 -5.4642-01 -4.4522-01 3.2082-01 4.4822-01 1.4642-01 19 -5.4642-01 -4.4522-01 3.2082-01 2.78176-01 7.36572-01 20 -1.91780-01 -4.4522-01 -7.73181-01 9.78826-02 4.17262-01 21 1.91780-01 -4.4522-01 -7.73181-01 -9.78826-02 -4.17262-01
 22 5,4643=01 -4,4532E=01 -3,2033E=01 -2,7817E=01 -7,3357E=01 23 8,1735E=01 -4,4532E=01 3,2033E=01 -4,16330E=01 -1,4654E=01
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 7.182E-01 1.511VE-01 1.0000E-00 1.470EE-00 2.2729E-01 1.0000E-00 2.5594E-00 7.410VE-02 1.0000E-00 2.9430E-00 4.0794E-03 0 2.9500E-00 1.1698E-02 0 2.9500E-00 1.1698E-02 0
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 24 9.9995E-01
 18 3.1125E-05
 24 9.99231-01
 24 5.35801E-05
 9.9998/E-01
 24 4.1087ZE-06
 1.0000E+00
 1.244E-05
 1.00001E+00
 ž
 24 2.1947/E-05
 24 1.00001E+00
 21 1.67941E-05
 24 1.0000E+00
 27
 6.65707E-06
 24 1.00001E+00
 5 292 -1,38947E-05 1.0129E+00 -3,34742E-05 -1,2805E-05 -1,0892E-05 -1,0000E+00
 .0167
 finel manitor
 angular flux on 16
 Lantoh 1.01297E+00
 production/absorption 1.01297E+00
 elacced time
 .02 min.
 1040 d, see2h: beboook wilcox 15x15, 3.00x1X, 20gxd/mtu burn high temp
 100 d, SSSAT: DECOCK INTURE DATA, STANDA DEPARTMENT STANDARD TO DETERMINE THE POINT STANDARD THE POINT STANDARD TO DETERMINE THE POINT STANDARD THE POINT STAN
0 int. zone runber
 2.34061E-01 2.99967E-01 1.47065E+00 2.21297E-01 3.21681E-01
 2.5051E-01 2.505.E-01 1.705E-00 2.225.E-01 3.265E-01 3.5357E-01 3.80512E-01 2.2555E-00 9.3052E-02 1.5057E-01 4.3751E-01 4.3751E-01 4.3751E-01 4.3751E-01 4.3751E-01 4.3751E-01 4.3751E-01 2.7755E-00 7.4105E-02 1.1503E-01 4.6512E-01 4.65507E-01 4.77451E-01 2.5760E+00 1.1505E-02 .0000E+00 4.7555E-01 4.7545E-01 2.5765E+00 1.1555E-02 .0000E+00 4.7545E-01 4.7545
 4.77408E-01 4.7808E-01 2.99962E+00 4.16028E-03
4.7870E-01 4.88199E-01 3.0083E+00 2.6636E-02
 _0000E+00
 1213 14 15 16 17
 .0000E+00
 4.87528-01 4.979878-01 3.08528-00 7.82768-02 5.124/58-01 5.24708-01 3.21778-00 8.217778-02 5.373628-01 5.417318-01 3.376348-00 2.974278-02
 ,00000E+00
 .0000E+00
 .0000E+00
 5,46100E-01 5.535TE-01 3.43125E+00 5.1563TE-02
 _0000E+00
 5.6092E-01 5.7090E-01 3.5240E+00 7.1554E-02 5.8087E-01 5.9617SE-01 3.64974E+00 1.1462E-01
 _0000E+00
 おけるとととなる
 .0000E+00
 6.11475E-01 6.45755E-01 3.84201E-00 2.78165E-01 6.8005/E-01 7.14313E-01 4.27278E-00 3.0770E-01
 _00000E+00
 _0000E+00
 7.48592E-01 7.63883E-01 4.70854E+00 1.46879E-01
 .00000E+00
 7.79193E-01 7.89167E-01 4.89382E+00 9.89116E-02
 .0000E+00
 7.99141E-01 8.08554E-01 5.0215E+00 7.51357E-02 .0000E+00
 8.1396E-01
 5.11/31E+00
 1040 d, ses2h: beboock willook 15k15, 3.00k24, 20g-cl/mtu burn high temp
0 total flux
0 int. grp. 1 grp. 2 grp. 3 grp. 4 grp. 5 grp. 6 grp. 7 grp. 8 1 1.8239E-01 1.3239E-00 1.6357E-00 1.0743E-00 1.5780E-00 3.0519E-00 2.90520E-00 2.05230E-00
 1.3/255E+00 1.693/1E+00 1.0/475E+00 1.5785E+00 3.0552E+00 2.9099E+00 2.0523E+00 1.3/25E+00 1.6855/E+00 1.0/47E+00 1.5777ZE+00 3.0516E+00 2.9059/E+00 2.05277E+00
 1.8244E-01
 1.52389E-01
 1,8198/E-01 1,3394/E+00 1,6532/E+00 1,0417/E+00 1,572/E+00 3,0212/E+00 2,875/E+00 2,0811/E+00
 1.8090E-01 1.3257E-00 1.6694E-00 1.0382E-00 1.5993E-00 2.9959E-00 2.869E-00 2.0784E-00 1.7973E-01 1.31511E-00 1.6583E-00 1.0348E-00 1.5445E-00 2.9669E-00 2.8672E-00 2.07560E-00
 1,7874CE-01 1,3052E+00 1,64175E+00 1,0163E+00 1,53357E+00 2,9746E+00 2,07341E+00
 1.7777E-01 1.25562E+00
 1.63023E+00 1.00960E+00 1.52326E+00 2.9367E+00 2.8336E+00
 2.07(3(E+00)
 1.7724 E-01 1.2004 E-00 1.000 E-00 1.000 E-00 1.5178/E-00 2.9169/E-00 2.85787E-00 2.07027E-00
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| 10.      | 1.77B0E-01                 | 1.2873/E+00                | 1.62277E+00                | 1.005325+00                | 1.516B(E+00                | 2.91516E+00                | 2.836995+00                | 2.07007E+00                |
|----------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| 11       | 1.76969E-01                | 1.28783€+00                | 1.62077E+00                | 1.00(332+00)               | 1.51542E+00                | 2.912625+00                | 2.85549E+00                | 2,05779E+00                |
| 12       | 1.76862E-01                | 1.2858ZE+00                | 1.61980E+00                | 1.00B(8E+00                | 1.51/51E+00                | 2.91100E+00                | 2.83/600+00                | 2.05960E+00                |
| 13       | 1.7665E-01                 | 1.28497E+00                | 1.617576+00                | 1.002/4E+00                | 1.51270E+00                | 2.90/5/E+00                | 2.83267E+00                | 2.057225+00                |
| 14       | 1.761Z3E-01                | 1.2796/E+00                | 1.6110E+00                 | 9.98505E-01                | 1.50690E+00                | 2,896525+00                | 2,83275+00                 | 2.05817E+00                |
| . 15     | 1.75517E-01                | 1.27321E+00                | 1.602625+00                | 9.9325E-01                 | 1,49851E+00                | 2.87971E+00                | 2.81670E+00                | 2.05702E+00                |
| 16       | 1.75221E-01                | 1.2696E+00                 | 1.59758E+00                | 9,89811E-01                | 1,49279E+00                | 2.86817E+00                | 2.80777E+00                | 2.06650E+00                |
| 17       | 1.75078E-01                | 1.26761E+00                | 1.5744E+00                 | 9.87479E-01                | 1,48881E+00                | 2.8 <del>(022E+00</del>    | 2.8053/E+00                | 2.06536E+00                |
| 18       | 1.74891E-01                | 1.25497E+00                | 1.5706E+00                 | 9.8X505E-01                | 1,455762+00                | 2.85026E+00                | 2.797485+00                | 2,06621E+00                |
| 19       | . 1.74657E-01              | 1.26183€+00                | 1.58583E+00                | 9.8113E-01                 | 1.47808=+00                | 2,83912=+00                | 2.792922+00                | 2,05597E+00                |
| zö       | 1.74345E-01                | 1.257/8E+00                | 1.57923=+00                | 9.76919E-01                | 1.47101E+00                | 2.82529E+00                | 2,7847XE+00                | 2.056500                   |
| 21       | 1.74TXXE-01                | 1.2549/E+00                | 1.57578E+00                | 9.73032E-01                | 1.4659E+00                 | 2.815480+00                | 2,779105+00                | 2.0555E+00                 |
| Ž2       | 1.74132E-01                | 1.25482E+00                | 1.5754/E+00                | 9.7354FE-01                | 1,46546E+00                | 2.81447E+00                | 2.77 <del>25/25+</del> 00  | 2.0575E+00                 |
| 3        | 1.74211E-01                | 1.25690                    | 1.576616+00                | 9.74378E-01                | 1.466635+00                | 2,816765+00                | 2.78014E+00                | 2.06605E+00                |
| 24       | 1.74301E-01                | 1.25670E+00                | 1.5773E+00                 | 9.75276E-01                | 1.46809E+00                | 2.819616+00                | 2.78185=100                | 2.0531E+00                 |
| 0 int.   | grp. 9                     | grp. 10                    | grp. 11                    | 972. 12<br>7.9/323E-01     | 6,70087E-01                | grp. 14                    | grp. 15                    | grp. 16                    |
| 1        | 1.539216+00                | 1.44957E+00                | 1,30922E+00                | 7.97525E-01                | 6,700B9E-01                | 5.7X053E-01                | 3.66073E-01                | 2.0007E-01                 |
| 2        | 1,58914E+00                | 1 <i>.44927</i> E+00       | 1.30902E+00                | 7.97092E-01                | 6,69877E-01                | 5.78762E-01                | 3.66058E-01                | 2.00050E-01                |
| 3        | 1.555525+00                | 1,44948E+00                | 1.309485+00                | 7.9764E-01                 | 6.7034EE-01                | 5.7%9 <del>x</del> -01     | 3.66¥Æ-01                  | 2.00105E-01                |
| 4        | 1.5905/E+00                | 1,4509E+00                 | 1.3121Œ+00                 | 8.00739E-01                | 6.73022E-01                | 5.83560E-01                | 3,66607E-01                | 2.00\2ZE-01                |
| 5        | 1.592B9E+00                | 1.45362E+00                | 1,3185/6+00                | 8.083825-01                | 6.79621E-01                | 5.9364AE-01                | 3.67730E-01                | 2.01200E-01                |
| 6        | 1.59573:+00                | 1.45682E+00                | 1.32557E+00                | 8.16797E-01                | 6.8681E-01                 | 6.0482BE-01                | 3.6894 E-01                | 2.020V9E-01                |
| 7        | 1.57789E+00                | 1,459176+00                | 1.33078E+00                | 8.230E/E-01                | 6.9256-01                  | 6.13181E-01                | 3.69813E-01                | 2.02672E-01                |
| 8        | 1.599930+00                | 1.461300+00                | 1.33550E+00                | 8.28765E-01                | 6.97186E-01                | 6.2089E-01                 | 3.7097E-01                 | 2.05239E-01                |
| 9        | 1,60102=+00                | 1.46240E+00                | 1.3379 <del>E+</del> 00    | 8.3174ZE-01                | 6.9974E-01                 | 6.2489E-01                 | 3.7099E-01                 | 2.03533E-01<br>2.03583E-01 |
| 10       | 1.60121E+00                | 1.462585+00                | 1.3385/E+00                | 8.32220E-01                | 7.001655-01                | 6.255%E-01                 | 3.71050E-01                | 2.0565E-01                 |
| 11       | 1.601492+00                | 1.46285E+00                | 1.33850E+00                | 8.3290E-01                 | 7.00761E-01                | 6.2543E-01<br>6.27052E-01  | 3.715Œ-01<br>3.7121Æ-01    | 2.05/02E-01                |
| 12       | 1.601685+00                | 1.46300E+00                | 1.33925+00<br>1.340016+00  | 8.333/5E-01                | 7.0147E-01<br>7.01985E-01  | 6.28239E-01                | 3.713476-01                | 2.05797E-01                |
| 13<br>14 | 1.60205E+00<br>1.60306E+00 | 1.4634E+00<br>1.46442E+00  | 1,3400E+00<br>1,3425/E+00  | 8.3706E-01                 | 7.0402E-01                 | 6.3199XE-01                | 3.715E-01                  | 2.0005E-01                 |
| 5        | 1.604185+00                | 1,4597E+00                 | 1.3457E+00                 | 8.4025E-01                 | 7.0780E-01                 | 6.37174E-01                | 3.72340E-01                | 2.050/E-01                 |
| 16       | 1.60470=+00                | 1.46700E+00                | 1,3479E+00                 | 8.4344E-01                 | 7.0999E-01                 | 6.40507E-01                | 3.7272/E-01                | 2.04772E-01                |
| ĩ7       | 1.60/99E+00                | 1.46777E+00                | 1.3/95/E+00                | 8.4530XE-01                | 7.1157Œ-01                 | 6.4287E-01                 | 3.7287E-01                 | 2.000 E-01                 |
| 18       | 1.60541E+00                | 1.46981E+00                | 1.35180E+00                | 8,478325-01                | 7.13717E-01                | 6,46249E-01                | 3.73173E-01                | 2.05175E-01                |
| 19       | 1,609945+00                | 1.47000E+00                | 1.35/3/2+00                | 8.5075E-01                 | 7.16187E-01                | 6.50067E-01                | 3.75/8528-01               | 2.05440E-01                |
| 20       | 1.6066E+00                 | 1,47151E+00                | 1,35761E+00                | 8.54433E-01                | 7.19332:-01                | 6.54930E-01                | 3.757XE-01                 | 2.05775E-01                |
| 21       | 1.6072/E+00                | 1,472500+00                | 1.359935+00                | 8.57070E-01                | 7.2154Œ-01                 | 6.58373E-01                | 3.73774E-01                | 2.05987E-01                |
| 22       | 1.60730E+00                | 1,47259E+00                | 1.360152+00                | 8.5730 <del>8E</del> -01   | 7.21694E-01                | 6.58541E-01                | 3.73883E-01                | 2.05970E-01                |
| 25       | 1.60715E+00                | 1,472422+00                | 1, <del>33</del> 757E+00   | 8.5661EE-01                | 7.21070E-01                | 6.57712E-01                | 3.7372E-01                 | 2.05877E-01                |
| 24       | 1,60696E+00                | 1,4720E+00                 | 1.3588/2+00                | 8.55773E-01                | 7.20315E-01                | 6.56577E-01                | 3.755GE-01                 | 2.0575E-01                 |
| 0 int.   | grp. 17                    | grp. 18                    | grp. 19                    | grp. 20                    | 9.9276E-02                 | 5p. 22                     | 972. 25<br>631219E-01      | . ST. 24                   |
| 1        | 7.82863E-02                | 2.63570E-02                | 1.13867E-01                | 4.10013E-01                |                            | 1.5797E-01                 |                            | 4.73080E-01                |
| 2        | 7.82533E-02                | 2.695Z5E-02                | 1.0803-01                  | 4.0330E-01                 | 9.9881/E-02                | 1.57891E-01                | 6.30520E-01                | 4.72764E-01<br>4.73561E-01 |
| 3        | 7.85347E-02                | 2.7252XE-02                | 1.1394CE-01                | 4.10122E-01                | 9.94739E-02<br>1.00609E-01 | 1.58559E-01<br>1.61872E-01 | 6.31251E-01<br>6.37561E-01 | 4.78570E-01                |
| 4        | 7.8752E-02                 | 2.847391-02                | 1.1465E-01                 | 4.11365E-01<br>4.14425E-01 | 1.05/52E-01                | 1.70265E-01                | 6.51725E-01                | 4.9077E-01                 |
| 5        | 7.97463E-02                | 3.17259E-02<br>3.56440E-02 | 1,16400E-01<br>1,1830BE-01 | 4.1776SE-01                | 1.05662E-01                | 1.7809E-01                 | 6.67412E-01                | 5.0432E-01                 |
| 6<br>7   | 8.08692E-02<br>8.17081E-02 | 3.89239E-02                | 1.1970Æ-01                 | 4.202125-01                | 1.0905Æ-01                 | 1.87209E-01                | 6.7912E-01                 | 5.14496E-01                |
| á        | 8.2%32E-02                 | 4.23480E-02                | 1.2096Œ-01                 | 4.2341E-01                 | 1.11319E-01                | 1.94259E-01                | 6.8925E-01                 | 5.23925E-01                |
| ş        | 8.2887E-02                 | 4.4072E-02                 | 1.216198-01                | 4.25XE-01                  | 1.12/992-01                | 1.97970E-01                | 6.9351E-01                 | 5.2885E-01                 |
| 10       | 8.29525-02                 | 4.AZ789E-02                | 1,217192-01                | 4.29780E-01                | 1.12676E-01                | 1.984825-01                | 6.96413E-01                | 5.255/32-01                |
| ñ        | 8.30%0E-02                 | 4,4575E-02                 | 1.21857E-01                | 4.24060E-01                | 1.1280E-01                 | 1.99216E-01                | 6.97641E-01                | 5.306ZZE-01                |
| 12       | 8.3105E-02                 | 4.47651E-02                | 1,21963E-01                | 4.24257E-01                | 1.1309/E-01                | 1.99691E-01                | 6.98433E-01                | 5,3129E-01                 |
| 13       | 8.32302E-02                | 4.5153E-02                 | 1.22160E-01                | 4.2/59BE-01                | 1.13429E-01                | 2.0067E-01                 | 7.0005E-01                 | 5.3267XE-01                |
| ũ        | 8.3616E-02                 | 4,63501E-02                | 1,2278E-01                 | 4.25729E-01                | 1.14474E-01                | 2.0 <del>3/20E-</del> 01   | 7.05094E-01                | 5.36930E-01                |
| 15       | 8.41472E-02                | 4.755/SE-02                | 1.2546E-01                 | 4.272EE-01                 | 1.15908E-01                | 2.07717E-01                | 7.1123E-01                 | 5.42633E-01                |
| 16       | 8.44879E-02                | 4.8958/E-02                | 1.24252E-01                | 4.2027E-01                 | 1.16820E-01                | 2.10281E-01                | 7.1634Œ-01                 | 5.46157E-01                |
| 17       | 8.47383E-02                | 4.97102E-02                | 1.266E-01                  | 4.25969E-01                | 1.175215-01                | 2.12276E-01                | 7.19791E-01                | 5.49882E-01                |
| 18       | 8.505285-02                | 5.0750E-02                 | 1.2520E-01                 | 4.29897E-01                | 1.18513E-01                | 2.15121E-01<br>2.18/30E-01 | 7.2502E-01<br>7.31367E-01  | 5.5466E-01<br>5.6060BE-01  |
| 19       | 8.54777E-02                | 5.19561E-02                | 1.258/SE-01                | 4.30982E-01                | 1.1966E-01                 | 2.1000E-01                 | 1.3ISORE-01                | JAME 11                    |

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20 8.59852E-02 5.34785E-02 1.2465E-01 4.32570E-01 1.21129E-01 2.22667E-01 7.39739E-01 5.68909E-01
 21 8.63/60E-02 5.45636E-02 1.2725E-01 4.33315E-01 1.22167E-01 2.25165E-01 7.46050E-01 5.75376E-01
 22 8.63782E-02 5.4456E-02 1.27277E-01 4.33332E-01 1.2229E-01 2.26078E-01 7.46779E-01 5.7660EE-01
 23 8.6257E-02 5,4398E-02 1,2714E-01 4,3300E-01 1,2289E-01 2,2554E-01 7,4699E-01 5,7577E-01
 24 8.6177E-02 5.4061E-02 1.2691E-01 4.32637E-01 1.2171E-01 2.2422E-01 7.44007E-01 5.7414E-01
0 int. grp. 25 grp. 26 grp. 27
1 1.97892E-01 1.2086E-01 1.60894E-02
2 1.97873E-01 1.20878E-01 1.60894E-02
3 1.88198E-01 1.21327E-01 1.62873E-02
 4 2.00612E-01 1.2589E-01 1.68403E-02
 5 2.05762E-01 1.29259E-01 1.84460E-02 6 2.0562E-01 1.35409E-01 2.05164E-02
 7 2.1880BE-01 1.40479E-01 2.18147E-02
 8 2.2566E-01 1.4508/E-01 2.3289E-02 9 2.26160E-01 1.47501E-01 2.4089E-02
 10 2.26525E-01 1.47831E-01 2.41809E-02
 10 2.205E-01 1.4859E-01 2.430E-02 11 2.2759E-01 1.4859E-01 2.4379E-02 12 2.2759E-01 1.4859E-01 2.4399E-02 13 2.2079E-01 1.4767E-01 2.4569E-02 15 2.3079E-01 1.5362E-01 2.5764E-02 15 2.327E-01 1.5480E-01 2.6055E-02 16 2.32479E-01 1.5480E-01 2.6055E-02
 17 2.36121E-01 1.5660E-01 2.6600E-02 18 2.36122E-01 1.59852E-01 2.75966E-02
 19 2.42/20E-01 1.687/E-01 2.876/4E-02 20 2.4667/E-01 1.67670E-01 3.86020E-02 21 2.5027/E-01 1.77590E-01 3.766/4E-02
 22 2.51013E-01 1.72598E-01 3.19426E-02
 23 2.5054E-01 1.77255E-01 3.18971E-02 24 2.49827E-01 1.77622E-01 3.17584E-02
 elapsed time .02 min.
 If ire grap sussery for zone 1 by grap including sun for all graps in line 28
 1 mm grap samery for series 1 by grap including san for set graps in the 20 grp. fix source fiss source in scatter alf scatter out scatter shouthton lesions belonce 1 .0000000 2.3165/6-02 .0000000 1.257600 1.25776-03 1.65300-01 1.0000000 2.3165/6-02 1.65706-02 1.65360-01 1.55760-01 1.65360-01 1.6
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Lestage<br>-7,4505E-09<br>-3,7525E-08<br>-1,4901Z-08<br>-5,2504E-08<br>-2,960ZE-08<br>-5,9604E-08<br>-4,0978ZE-08                                                                                                                                                                                                                                                       | balance<br>1,0000E+00<br>1,0000E+00<br>1,0000E+00<br>1,0000E+00<br>1,0000E+00<br>1,0000E+00<br>1,0000E+00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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                                      | Lesiage<br>-7.4508E-09<br>-3.7529E-08<br>-1.49012E-08<br>-5.2504E-08<br>-5.9604E-08<br>-5.9604E-08<br>-4.09782E-08<br>-4.6664E-08<br>-4.11759E-08<br>-1.11759E-08                                                                                                                                                                                                       | balance<br>1,00000000<br>1,0000000<br>1,0000000<br>1,0000000<br>1,000000<br>1,000000<br>1,000000<br>1,000000<br>1,000000<br>1,000000<br>1,000000<br>1,000000<br>1,000000<br>1,000000                                                                                                                                                                                                                                                                                                                                                                                                                                   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 8.87081E-00 5.19827E-02 -5.12840E-02 9.99967E-01
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1 1.74346-01 3.18765-09 1.751626-01 8.585006-05 4.50776-10
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| 2            | 1.257235+00           | -1.07280E-08                | 1.268YE+00                 | 9.7841E-02                  | .0000E+00                  | .000Œ+00                   | .00000=+00                  | 1.43947E+00                |  |
|--------------|-----------------------|-----------------------------|----------------------------|-----------------------------|----------------------------|----------------------------|-----------------------------|----------------------------|--|
| 3            |                       | -1.82101E-07                | 1.5965E+00                 | 1.32132E-01                 | .0000E+00                  | .00000E+00                 | .00000E+00                  | 1.80807E+00                |  |
| 4            |                       | -1.69335E-0B                | 9.88902E-01                | 8.72503E-02                 | .000002±400                | .00000E+00                 | .00000E+00                  | 1.11792=+00                |  |
| 5            |                       | -6.87630E-10                | 1.49125E+00                | 1.38909E-01                 | .0000E+00                  | .00000E+00                 | .0000E+00                   | 1.68325E+00                |  |
| <u>6</u>     |                       | 1.06336-07                  | 2.86502E+00                | 2.656/4E-01                 | .‱∓∞                       | .000E+00                   | .0000                       | 3.23295±00                 |  |
| 7            |                       | -5.725/FE-08                | 2.8081Æ+00                 | 1.53002E-01                 | .000E+00                   | .0000E+00                  | .00000E+00                  | 3.18702E+00                |  |
| 8            | 2.055/2=00            | 1.45577E-07                 | 2.0661E+00                 | 1.50737E-02<br>-1.50135E-02 | .0000                      | .0000E+00                  | .0000E+00                   | 2.36/39E+00<br>1.8999E+00  |  |
| 9<br>10      |                       | -2.2519/E-08<br>4.32910E-08 |                            | -2.5953E-02                 | .0000E+00                  | .00000E+00                 | .00000                      | 1.68628E+00                |  |
| ñ            |                       | 1.149835-08                 |                            | -5.65051E-02                | .0000E+00                  | .000E+00                   | .0000E+00                   | 1.55/01E+00                |  |
| 12           | 8.5533E-01            | 1.0942BE-08                 |                            | -6.5458XE-02                | .0000E+00                  | .0000E+00                  | .00000=+00                  | 9.78115E-01                |  |
| 13           |                       | -4.60/ZE-09                 |                            | -5.67567E-02                | .0000E+00                  | .000E+00                   | .0000                       | 8.254 DE-01                |  |
| 14           | 6.5598/E-01           | 8.078221-09                 |                            | -8.69679E-02                | .000000                    | .0000E+00                  | .0000E+00                   | 7.49799E-01                |  |
| 15           |                       | -5.2741EE-07                |                            | -9.27574E-0B                | .000 <del>0E+</del> 00     | .00000E+00                 | ,0000E+00                   | 4.27740E-01                |  |
| 16           | 2,0572SE-01           | -8.8799E-08                 |                            | -6.895 <del>36E-</del> 03   | .000002=+00                | .0000E+00                  | .000 <del>0E+</del> 00      | 2_35477E-01                |  |
| 17           |                       | -4.3086E-06                 |                            | -8.93507E-05                | .000 <del>0E+0</del> 0     | .000 <del>0E+</del> 00     | .00000E+00                  | 9.837XE-02                 |  |
| 18           |                       | -6.05267E-05                |                            | -2.6443/E-02                | .0000E+00                  | .0000E+00                  | .0000E+00                   | 6.12879E-02                |  |
| 19           |                       | -6.40948E-06                |                            | -1.48766E-02                | .0000€+00                  | .0000E+00                  | .0000E+00                   | 1.44777E-01                |  |
| 20           |                       | -6.4740/E-07                |                            | -2.6570E-02                 | .000E+00                   | <b>.0000E+0</b> 0          | .00000                      | 4.94870E-01                |  |
| 21           |                       |                             |                            | -2.4821/E-02                | .00000€                    | .000E+00                   | .000E+00                    | 1.3972E-01                 |  |
| 22           | 2.23822-01            | 1.600×2E-06                 |                            | -7.0460E-02                 | .000000                    | .000000                    | .000000                     | 2.55149E-01                |  |
| 25           | 7.4309XE-01           | -1.16/8/E-07                |                            | -1.2560E-01                 | .0000E+00                  | .0000E+00<br>.000E+00      | .0000E+00                   | 8.47536E-01<br>6.52516E-01 |  |
| 24           | 5.7330EE-01           | 3.0000E-06<br>-1.13069E-06  | 5.47018E-01                | -5.37672E-02                | .000000                    | .00000                     | .00000                      | 2.83087E-01                |  |
| න<br>න       | 1.7123E-01            | 7.89560E-05                 |                            | 4.96277E-02                 | .000E+00                   | .000E+00                   | .0000E+00                   | 1.93621-01                 |  |
| 27           | 3.1672E-02            | 3.10201E-07                 |                            | -1.36/50E-02                | -00000                     | .0000E+00                  | .0000=+00                   | 3.50185-02                 |  |
| 28           |                       | -1.47269E-05                |                            | 5.12697E-02                 | 4.50774E-10                | .0000E+00                  | .0000E+00                   | 2.65287E+01                |  |
|              | LOTD STREETA          |                             |                            | J. HOURE OF                 | 713017E 10                 |                            | *******                     |                            |  |
| 0gp          |                       | fiss source                 | in scatter                 | slf scatter                 | aut scatter                | absorption                 | Leeksoe                     | belance                    |  |
| 777          | .0000E+00             |                             | .000000                    | 2.30478E-02                 | 2.18999E-02                | 3.73111E-CB                | 3.18745E-09                 | 9.9853/E-01                |  |
| Ž            | .0000E+00             |                             | 7.58490E-05                | 2.71685E-01                 | 1.8734E-01                 | 1.48171E-02                | -1.07280E-08                | 1.00002E+00                |  |
| 3            | .000E+00              | 2.15975E-01                 | 7.7405 E-02                | 2.81250E-01                 | 2.77729E-01                | 1.5654/XE-02               |                             | 9.99987E-01                |  |
| 4            | _0000E+00             | 1.2374BE-01                 | 1.15077E-01                | 1.938X4E-01                 | 2.3134E-01                 | 7.48549E-03                |                             | 1.0000E+00                 |  |
| 5            | .0000E+00             |                             | 2.09877E-01                | 4.90432E-01                 | 3.69290E-01                | 4.5342/E-05                |                             | 9.999BDE-01                |  |
| <u>6</u>     | .000 <del>0</del>     | 1.76773E-01                 | 4.2305E-01                 | 1.3440E+00                  | 5.98887E-01                | 7.1814£-05                 | 1.06531-07                  | 1.0001E+00                 |  |
| 7            | .0000€+00             |                             | 6.64191E-01                | 1.7750E+00                  | 7.43805E-01                |                            | -5.725/JE-08                | 9.99990E-01                |  |
| 8            | .00000                | 1.344E-02                   | 7.805725-01                | 1.79067E+00                 | 7.8011/E-01                | 1.398825-02                | 1.4857/E-07                 | 9.99920E-01                |  |
| 9            | .00000=000            | 9.757752-04                 | 7,70523E-01                | 1.558250                    | 7.47778E-01                | 2.37053E-02<br>3.62753E-02 | 4.32910E-08                 | 9.99820E-01                |  |
| 10<br>11     | .00000=000            | 7.2479E-05<br>5.70172E-06   | 7.4489E-01<br>7.13209E-01  | 1.4157XE+00<br>1.3104XE+00  | 7.08333E-01<br>6.5374/E-01 |                            | -1.148E-08                  | 9.99942E-01                |  |
| 12           | .0000E+00             |                             | 5.70191E-01                | 7.08725E-01                 | 5.0536/E-01                |                            | 1.09428E-08                 | 9.9974E-01                 |  |
| ű            | .0000=00              | 6.36013E-08                 | 5.01321E-01                | 5.57594E-01                 | 4.40179E-01                | 6.11625E-02                |                             | 9.997/IE-01                |  |
| 14           | .0000E+00             | 1.20041E-08                 | 4.7753Œ-01                 | 5.07576E-01                 | 3.9016/E-01                |                            | 8.07822E-09                 | 9.999BPE-01                |  |
| <del>5</del> | .0000E+00             |                             | 2.581/9E-01                | 2.320/05-01                 | 2.49112E-01                | 8.952BDE-05                |                             | 1.00B3E+00                 |  |
| 16           | .00000=+00            |                             | 1,7500E-01                 | 1.06276E-01                 | 1.6821/E-01                | 7.23219E-05                |                             | 1.00B/E+00                 |  |
| 17           | .00000=+00            |                             | 9.34BE-02                  | 3.22/6E-02                  | 8.3574E-02                 | 9.8550E-05                 |                             | 1.00029E+00                |  |
| 18           | .0000E+00             | 9.6439E-11                  | 8,2699E-02                 | 1.84055E-02                 | 5.22340E-02                | 3.068XE-02                 |                             | 1.00015E+00                |  |
| 19           | .000E+00              | 1.365/SE-10                 | 1,27300E-01                |                             | 1.1440Æ-01                 | 1.28730E-02                |                             | 1.0003/E+00                |  |
| 20           | .000E+00              |                             | 3.03643E-01                | 3,5/578E-01                 | 2.7405Œ-01                 | 2.94967E-02                |                             | 1.0030E+00                 |  |
| 21           | .000 <del>0E+00</del> | 3.2/51/E-11                 | 1.4575Œ-01                 | 6.7K35E-02                  | 1.1893E-01                 |                            | -8.18020E-06                | 1.002/E+00                 |  |
| 22           | .000E+00              |                             | 2.6785E-01                 | 1.643KE-01                  | 1.91959E-01                | 7.58710E-02                | 1.600/2E-06                 | 1.000VE+00                 |  |
| 풀            | .0000E+00             |                             | 4113E-01                   | 8.92552E-01                 | 4.8002/E-01                |                            | -1.16/8/E-07                | 1.00256+00                 |  |
| 24           | .000000               |                             | 6.2858E-01                 | 7.6216E-01                  | 5.08519E-01                | 1.19953E-01                | 3,0030/E-06<br>-1,13063E-06 | 1.00018E+00                |  |
| 2            | .00000=+000           |                             | 4.11941E-01                | 3.08477E-01<br>3.10522E-01  | 2.600B0E-01                | 6.52521E-02<br>5.90505E-02 | 7.8750E-06                  | 1.00076+00                 |  |
| 26<br>27     | .00002+00             | 2.01128E-12<br>4.7328E-13   | 3,19162E-01<br>1,05211E-01 | 6.300/8E-02                 | 8.82227E-02                | 1.678326-02                | 3.1020 E-07                 | 1.0004E+00                 |  |
| æ            | .0000E+00             | 1.0000E+00                  | 9.5919Œ+00                 | 1.5600/2+01                 | 9.591925+00                |                            | -1.4631E-05                 | 1.0007E-00                 |  |
|              | rt bdy flux           |                             | lft bdy flux               |                             | non nata                   | fiss rate                  | fluction 2                  | total flux                 |  |
| 0 grp        | 1.74348E-01           | 3.18745E-09                 | 1.82519E-01                | .000E+00                    | 2.41571E-03                | 2.68/2E-03                 | .0000E+00                   | 3.6735E-01                 |  |
| ż            |                       | -1.07280E-08                |                            |                             |                            | 1.1894/E-02                |                             | 2.650E-00                  |  |
| -            |                       |                             |                            |                             |                            |                            |                             |                            |  |

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.0000E+00 1,4486ZE-02
 .0000E+00 3.35220E+00
.0000E+00 2.07380E+00
 .00000E+00
 3 1,5785E+00 -1,82101E-07 1,68776E+00
 4 ' 9.75745E-01 -1.69666E-08 1.04399E+00
 .00000E+00
 .0000E+00 6.Z335E-05
 .0000E+00 3.1260E+00
 5 1.4685E+00 -6.87630E-10 1.57709E+00
 .000000E+00
 .0000E+00 1.7750EE-08
 6 2.82110-00 1.04532-07 3.68002-00 7 2.782872-00 -5.73492-08 2.905472-00 8 2.06442-00 1.45772-07 2.08202-00 9 1.60602-00 -2.251942-08 1.598312-00 10 1.471912-00 4.329102-08 1.309472-00 11 1.35842-00 -1.14932-08 1.309472-00 12 8.53302-01 1.094282-09 5.796172-01 13 7.197212-01 4.605282-09 5.79628-01 15 3.734922-01 5.254182-07 3.661442-01 16 2.05728-01 5.274182-07 3.661442-01 16 2.05728-01 5.859582-02 16 5.39528-02 -6.05282-06 2.69832-02 19 1.26212-01 -6.400482-06 1.139402-01 20 4.326572-01 -8.180002-06 9.962722-02 12 1.25532-01 -8.180002-06 9.962722-02
 6 2.82110E+00 1,04633E-07 3,08060E+00
 ,0000E+00 1,46352E+0B
 .0000E+00 6.00496E+00
 .0000000
 .0000E+00 1.36982E-05
.0000E+00 1.35738E-05
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 .0000E+00 5.8890EE+00
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 .00000=+00 1.780925-05
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 .0000E+00 3.7X831E-08
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.0000E+00 1.76541E+00
 .0000E+00 8.20207E-08
.0000E+00 1.06675E-02
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.0000E+00 8.87450E-01
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 .0000E+00 2.39470E-01
.0000E+00 4.26248E-01
.0000E+00 1.47651E+00
.0000E+00 1.12807E+00
 21 1.21553E-01 -8.18030E-06 9.94272E-02 22 2.23932E-01 1.60042E-06 1.59213E-01
 _0000E+00
 .0000E+00 1.53/69E-02
 .0000E+00 4.39663E-02
 .0000E+00
 25 7.6309E-01 -1.1668E-07 6.3172E-01 26 5.7330E-01 3.030E-06 4.7350E-01 25 2.4942E-01 -1.1306E-06 1.9800E-01
 .00000E+00
 .0000E+00 7.1986E-02
 .000E+00
 .0000E+00 6.39589E-02
 .0000E+00 4.84839E-01
.0000E+00 3.21498E-01
 .0000E+00 3.61555E-02
 .0000E+00
 26 1.7725E-01 7.8576E-06 1.21127E-01 .0000E+00 .0000E+00 3.31707E-02 27 3.1672E-02 3.1020E-07 1.6976E-02 .0000E+00 .0000E+00 9.39897E-08 28 2.31866E+01 -1.47269E-05 2.3141E+01 .0000E+00 2.4326E-03 3.8245E-01
 .0000E+00 5.45772E-02
 .0000E+00 4.82284E+01
 - elapsed time .02 min.
 Offirect access unit 9 requires 516 blocks of length 1456 for cross section weighting.
 1 transport cross section weighting function
1 2.44\(\text{LE-GS}\) 2.56\(\text{GE-GE}\) 2.75\(\text{LE-GS}\) 2.96\(\text{LE-GS}\) 2.96\(\
02019 979. 9 979. 10 979. 11 979. 12 979. 13 979. 14 979. 15 979. 16
1 4.67308-08 5.65492-08 1.25338-02 1.45697-02 1.26508-02 1.93468-02 2.051108-08 1.53108-08
2 6.93828-03 8.45348-03 1.85348-02 2.19308-02 1.94408-02 2.93888-02 3.04888-03 2.30188-08
 3 5.57/XE-05 7.9525E-05 1.733/XE-02 2.0325E-02 1.7608E-02 2.7020E-02 2.86/XE-05 2.1345E-05 4 1.859XE-05 3.2307E-05 7.0429E-05 8.460E-05 7.1429E-05 1.0860E-02 1.2566E-05 8.8630E-04 5 3.2304E-05 4.59514E-05 1.00371E-02 1.17591E-02 1.025/XE-02 1.56012E-02 1.70112E-03 1.2011E-05
Ozore grp. 17 grp. 18 grp. 19 grp. 20 grp. 21 grp. 22 grp. 23 grp. 24 . 1 1.98568-08 5.33948-08 3.20428-08 5.927428-08 5.33568-08 1.516548-02 2.46508-02 2.38008-02 2.300748-08 8.99568-08 4.92528-08 8.897488-08 8.30578-08 2.37886-02 4.18058-02 3.63598-02
2 3.07/12-03 8.2662-03 4.25262-03 8.85/12-03 8.35/12-03 2.365/2-02 4.165/2-02 3.35/12-02 4.165/2-03 3.25/12-03 8.25/12-03 3.25/12-03 3.25/12-03 3.25/12-03 3.25/12-03 3.25/12-03 3.25/12-03 3.25/12-03 3.25/12-03 3.25/12-03 3.25/12-03 3.25/12-03 3.25/12-03 3.25/12-03 3.25/12-03 1.25/12-03 1.25/12-03 1.25/12-03 1.25/12-02 1.25/12-02 1.25/12-02 1.25/12-02 1.25/12-03
 3 1.675/æ-02 1.5/2078-02 4.2697/8-03 5.4410/8-01
4 6.775/18-03 6.16208-03 1.566088-03 2.185508-01
5 9.67/008-03 8.78078-03 2.320888-03 3.135328-01
 1040 d, ses2n: beboock willow 15x15, 3.00x12, 20pol/mu burn high temp
Ocell averaged fluxes

 Ozore
 orp. 1
 orp. 2
 orp. 3
 orp. 4
 orp. 5
 orp. 6
 orp. 7
 orp. 8

 1
 1.8056E-01
 1.5287E-00
 1.6255E-00
 1.0265E-00
 1.5285E-00
 2.5836E-00
 2.5856E-00
 2.5876E-00
 2.5876E-00
 2.0576E-00
 2.0576
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4 1.743/4E-01 1.25769E+00 1.5797SE+00 9.7674ZE-01 1.4706E+00 2.8666E+00 2.7865/E+00 2.0680E+00 5 1.7652E-01 1.2813/E+00 1.6105ZE+00 9.9652E-01 1.50182E+00 2.8850E+00 2.81969E+00 2.0680E+00
 2 1.6015E+00 1.4627E+00 1.3386E+00 8.3560E+01 7.0066E+01 6.2586E+01 3.7100E+01 2.0361E+01 3 1.6059E+00 1.4652E+00 1.3441E+00 8.3907E+01 7.0658E+01 6.3466E+01 3.7206E+01 2.04307E+01
 4 1.6057E-00 1.775E-00 1.3577E-00 8.565E-01 7.7650E-01 6.55110E-01 3.757ZE-01 2.0575E-01 5 1.60217E-00 1.4652E-00 1.3407E-00 8.3655E-01 7.066ZE-01 6.33821E-01 3.716ZE-01 2.0418E-01
 Ozore gr. 17 gr. 18 gr. 19 gr. 20 gr. 21 gr. 22 gr. 23 gr. 24
1 8.02566-02 3.36676-02 1.17216-01 4.15866-01 1.0466-01 1.76976-01 4.56706-01
 2 8.2997E-02 4.4/25E-02 1.2179E-01 4.2592E-01 1.1280E-01 1.9894E-01 6.9702E-01 5.3009/E-01
 3 8.3500E-02 4.7170E-02 1.2525E-01 4.2652E-01 1.5211E-01 2.0573E-01 7.0800E-01 5.3584E-01 4.86007E-02 5.3548E-02 1.2600E-01 4.3575E-01 1.21207E-01 2.2527E-01 7.4050E-01 5.6973E-01 5.83523E-02 4.61697E-02 1.25120E-01 4.26171E-01 1.5060E-01 2.0476E-01 7.09419E-01 5.41976E-01
 Ozone grp. 25 grp. 25 grp. 27
1 2.09/88E-01 1.320/8E-01 1.5829/E-02
 2 2.2678E-01 1.4806E-01 2.42462E-02
 3 2.315Z/E-01 1.52241E-01 2.5385/EE-02
 4 2.475/E-01 1.650/E-01 3.05/SE-02 5 2.325/E-01 1.5/457E-01 2.6230/E-02
 Of lux disadventage factors (zone average/cell average-flux)
 Corre grp. 1 grp. 2 grp. 3 grp. 4 grp. 5 grp. 6 grp. 7 grp. 8 1 1.0216500 1.0316500 1.0324500 1.0324500 1.0324500 1.0324500 1.0324500 1.032500 1.03
 3 9.9009E-01 9.9209E-01 9.9999E-01 9.9930E-01 1.0004E-00 1.0004E-00 1.0005E-00 9.9934E-01 9.8752E-01 9.8753E-01 9.8955E-01 9.8753E-01 5 1.00050 1.00
 Ozone grp. 25 grp. 26 grp. 27
1 9.00638-01 8.552045-01 7.366065-01
 9.73612E-01 9.5860/E-01 9.36351E-01
 3 9.9373E-01 9.8565E-01 9.6783SE-01
 4 1.05165E+00 1.07096E+00 1.1664/E+00 5 1.0000E+00 1.0000E+00 1.0000E+00
 Ocell averaged currents
 0zore gp. 1 gp. 2 gp. 3 gp. 4 gp. 5 gp. 6 gp. 7 gp. 8
1 2.444z-05 2.5050z-02 3.547z-02 1.5046z-02 2.5050z-02 5.5530z-02 3.428z-02 4.657z-05
2 3.6500z-03 3.9060z-02 4.874z-02 2.94610z-02 4.4734z-02 8.4253z-02 4.7730z-02 7.0133z-05
3 3.1186z-03 3.3074z-02 4.3165z-02 2.717zz-02 4.2234z-02 8.0441z-02 4.5817z-02 5.6104z-05
 4 1,07852-03 1,226162-02 1,66372-02 1,09296-02 1,73972-02 3,32586-02 1,92906-02 2,016366-03
 5 1.782/UE-03 1.5035E-02 2.4779E-02 1.5955/E-02 2.4255E-02 4.62977E-02 2.653/6E-02 3.3410E-03
Ozone gr. 9 gr. 10 gr. 11 gr. 12 gr. 13 gr. 14 gr. 15 gr. 16
1 4.630E-03 5.6342E-03 1.2343E-02 1.5657E-02 1.5660E-02 1.5045E-02 2.05110E-03 1.5310E-03
 2 6.5882E-03 8.8582E-03 1.8582E-02 2.1990E-02 1.91490E-02 2.5988E-02 3.0485E-03 2.3018E-03 3.5.5743E-03 7.9552E-03 1.7397E-02 2.0352E-02 1.7498E-02 2.7050E-02 2.8490E-03 2.1357E-03
 4 1.8597E-03 3.2337E-03 7.0429E-03 8.1650E-03 7.1429C-03 1.0660E-02 1.2566E-03 8.8650E-04 5 3.2336E-03 4.59516E-03 1.00876E-02 1.17597E-02 1.02578E-02 1.5602E-02 1.70112E-03 1.2501E-03
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| Corre grp. 17 grp. 18 1 1.9669E-03 5.33×1E- 2 3.017×E-03 8.9964E- 3 2.767×E-03 8.2669E- 4 1.1169E-03 3.2619E- 5 1.667×E-03 4.557×7- Corre grp. 25 grp. 26 1 1.1692E-02 1.6796E- 2 1.817×E-02 1.6796E- 3 1.674©E-03 6.1620E- 5 9.6740E-03 8.7967E- Corre volume vol. f                                                                                                                                                                                                                                                                                                                                                                                                                    | 85 4.9252E-03 8.8976 B 4.9860E-03 8.2576 B 1.8716E-03 3.3836 B 2.6749E-03 4.8446  972. 27 D 2.6660E-03 D 4.6600E-03 D 4.36971E-03 B 1.5660E-03 | 66:-05 8.30976:-05 2.376<br>55:-05 7.68976:-05 2.197<br>56:-05 3.08576:-05 8.785 | 4E-02 2.74520E-02<br>4E-02 4.18057E-02<br>0E-02 3.8829E-02<br>7E-03 1.57883E-02                    | grp. 24<br>2_38008E-02<br>3_65758E-02<br>3_37608E-02<br>1_38438E-02<br>1_97608E-02 |                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------|
| 2 3.17502-02 1.52 3 2.16724E-01 1.04 4 1.1454E-00 5.49 5 2.0844E-00 1.00 - elapsed time .05 min. Orequested parametal 18, skipcel lipes= 7, evec halts after ps 1 Hittititith coccoccocc hittititith coccoccocc hittitititith coccoccoccocc hittitititith coccoccoccoccoccoccoccoccoccoccoccoccoc | 86 8 9 m m m m m m m m m m m m m m m m m m                                                                                                     | 09 4<br>80<br>80<br>80<br>80<br>80<br>80<br>80<br>80<br>80                       | MA REPORTA PETATERA<br>MA MERA ERRA (MATA ERRA<br>MA METRA CROM METRA ETTA<br>MA METRA METRA METRA |                                                                                    |                                        |
| tt tt as tt dt as tt dt as tt dt as tt dt as tt dt as tt dt as tt dt as                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 8. W W W W W W W W W W W W W W W W W W W                                                                                                       | 96<br>    56<br>    85<br>    850000000000000000000000000000000000               | 5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5                                      |                                                                                    |                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 72   <br>72   <br>72   <br>72                                                                                                                  | 11 66                                                                            |                                                                                                    | \$33333333<br>\$33333333<br>\$33333333<br>\$33333333                               | ###################################### |

| 0 | 000000                                                                 |                                                      |            | #                         |           | 111111<br>111111                                             |             |                |             | #                                       | 99999999999999999999999999999999999999  | (444444444)<br>(44444444444444444444444444 |
|---|------------------------------------------------------------------------|------------------------------------------------------|------------|---------------------------|-----------|--------------------------------------------------------------|-------------|----------------|-------------|-----------------------------------------|-----------------------------------------|--------------------------------------------|
| 1 | 11<br>111<br>1111<br>1111<br>11<br>11<br>11<br>11<br>11<br>11<br>11111 | 888<br>888<br>888<br>888<br>888<br>888<br>888<br>888 | 8888888888 | :::<br>:::                |           | 8888<br>8888<br>8888<br>8888<br>8888<br>8888<br>8888<br>8888 | 88888888888 |                |             | ::<br>::<br>::<br>::                    |                                         | TATATATATATATATATATATATATATATATATATATA     |
| ó |                                                                        |                                                      |            | 99599999                  | _         | 00000000                                                     |             | 800000         |             | ļļ                                      | *************************************** |                                            |
|   |                                                                        |                                                      |            | \$9909999999<br>96        | 365<br>28 | œ                                                            | 330<br>330  | 20000000<br>20 | 2000<br>800 | ll<br>ll                                |                                         |                                            |
|   |                                                                        |                                                      |            | 22                        | _         | œ                                                            |             | 6B)            | 46          | ii                                      | œ                                       |                                            |
|   |                                                                        |                                                      |            | \$5<br>\$39000000000      | <b>.</b>  | 22<br>23                                                     |             | 88<br>80000000 |             | II<br>II                                | ce<br>coccorre                          |                                            |
|   |                                                                        |                                                      |            | \$65656666                | _         | æ                                                            |             | 80000000       |             | ii                                      | 8000000000                              |                                            |
|   |                                                                        |                                                      |            |                           | <b>96</b> | <b>∞</b> `                                                   |             | 86             | 86          | ļļ                                      | œ                                       |                                            |
|   |                                                                        |                                                      |            |                           | 86        | œ                                                            |             | 86             | 80          | !!                                      | ee                                      |                                            |
|   |                                                                        |                                                      |            | 88                        | 95        | œ                                                            | <u> </u>    | 86             | an          | ::::::::::::::::::::::::::::::::::::::: | <br><b>ee</b>                           |                                            |
|   |                                                                        |                                                      |            | \$655555556<br>\$66555555 |           | CCCCCCCCCC                                                   |             | <b>(46</b>     | 86<br>86    | 11111111                                | 0000000000000                           |                                            |

| *****         |                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| *****         |                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| ***           |                                                   | ****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| ***           | program verification information                  | ***                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| plenderforte. | • -                                               | ***                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| ***           | programe alla 1000 B                              | ***                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| ***           | creation date: 04/27/95                           | (Autobale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| -             | James Carte                                       | ***                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| ***           | date of exaction: 02/16/95                        | ***                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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|               | time of executions +10::04:47                     | <b>September</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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2 2 6.73100E-01 6.5000E-02
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Ono nuclides in your problem have borderated factor datar borses will copy from logical 12 to logical 1

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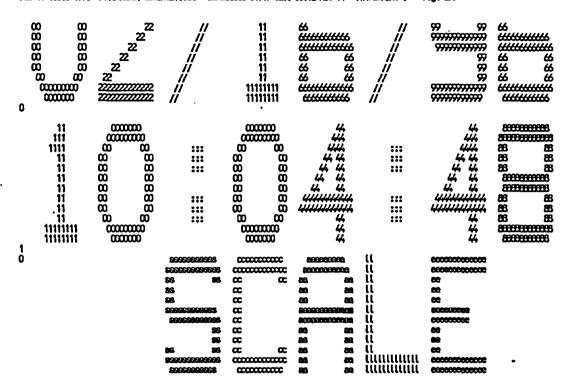
Occupy 1001 hydrogen from log 12 to log 18 borderate trigger 0

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 bandarerlas trigger 0
 $133
$134
 burdarello trigger 0
 bondererko trigger 0
 505
507
 banderenko trigger 0
 borderello trigger 0
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 56136
 bondererico trigger 0
 5709
 bordererko trigger 0
 bardererio trigger 0
 28144
 59141
 barderena trigger 0
 59143
 bordererlos trigger 0
 60143
60145
60147
 bordererko trigger 0
 bodrelo trigger 0
 OCEDA
V
 (CODDA
 bonderentos trigger 0
 61147
 burderales trigger 0
 Ocepy
 bordererlos trigger 0
 61148
 Офу
 62147
 bordererlos trigger 0
 Ocepy
 Ocepy
 6249
 bandererlos trigger 0
 Octy
Octy
 burderario trigger 0
 62150
 bondererlos trigger 0
 62151
 bondererko trigger 0
 62.02
 Офру
 Octy
Octy
 bordererko trigger 0
 ಹವ
 bondererloo trigger 0
 6354
 0xpy
 855
 bandarerko trigger 0
 bondererlos trigger 0
 6455
 Ocepy
 9224
 burderato trigger 0
 Octpy
 9225 uraniur-25 from log 12 to log
9226 uraniur-25 from log 12 to log
9226 uraniur-28 from log 12 to log
9227 reptuniur-27 from log 12 to log
 OCEN
OCEN
 bandererko trigger 0
 bondererico trigger 0
 burderato trigger 0
 0cepy
 bondererico trigger 0
```

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Octable
Octable
 94238 pur 258 1050 sign from log 12 to log 1
 banderenko trigger 0
 0.70
 plutonium-239 from log 12 to log
 bonderento trigger 0
9240
 plutonium 240
 from lag 12 to lag 1
 bondarento trigger 0
 plutonium 241
plutonium 242
 94241
 from lag 12 to lag
 bandarenko trigger 0
 94242 plutanium-242 from lag 12 to lag 1
95241 am-241 1056 sign from lag 12 to lag 1
Oppov
 borderenko triozen 0
Oppy
 bordererko trigger 0
Осфу
 95243 am 243 1057 218 from log 12 to log 1
95244 curium 244 from log 12 to log 1
 burchrerico trigger 0
Octoy
 bondarenko trigger 0
 scale 4.2 - 27 grap neutron turnup library
 based on endi-b version 4 data with endf-b version 5 fission products
 cospiled for me
 1/27/89
 last uzdated
 9/16/93
 Lapetrie - and
 4321
 number of nuclides
 70
 troe id
 ō
 number of neutron groups
 27
 number of gamma groups
 first thermal group
 15
 logical unit
 table of contents
 1/v cross sections normalized to 1.0 at 0.0253 ev
 200070
 endf/b-iv met 1269/thrui1002
 undated 10/13/89
 202
 hydrogen
 ercli/b-iv met 1269/thrm1002
 updated 10/13/89
 200057
 hydrogen
 b-10 1273 218-pp 042575 p-3 25%
b-10 1273 218-pp 042575 p-3 25%
 28
 200058
 204
 baran-11
 endf/b-iv met 1160
 updated 10/13/89
 20059
 baran-11
 endf/b-iv met 1160
 undated 10/13/89
 endf/b-iv mat 1276
 uculatural 10/13/89
 201
 OKVEETY 16
 endf/b-iv mat 1276
 updated 10/13/89
 200010
 aygen-16
 enditorive met 1276
 updated 10/13/89
 200011
 avoan lo
 nt=102,103,103,105,105,107
nt= 102
 200012
 undeted 10/13/89
 kr-83
 200013
 kr-85
 ST-90
 nt=102
 ucdated 10/13/89
 200014
 7-85
21-85
 updated 10/13/89
 200015
 mt=102
 mt= 102
 20017
 21-94
 mt=102
 updated 10/13/89
 200018
 updated 10/13/89
 mt=102
 200019
 27-95
 erdf/b-iv mat 1284
 updated 10/13/89
 205
 zircalloy
 200056
 zircallov
 endf/b-iv met 1284
 undered 10/13/89
 200020
 updated 10/13/89
 rb-94
 mt=102
 80-95
 mt=102
 updated 10/13/89
 200016
 mt=102
 20021
 tc-99
 unisted 10/13/89
 200024
 st=102
 updated 10/13/89
 ru-101
 ru-106
 at-102
 updated 10/13/89
 200025
 200022
 rtr-103
 mt=102
 umbted 10/13/89
 mt= 102
 200023
 rtr-105
 pd-105
 mt=102
 updated 10/13/89
 200026
 200027
 pd-108
 mt=102
 uxistad 10/13/89
 silver-109
 erdf/b-iv mat 1139
 uzdated 10/13/89
 200028
 uzdated 10/13/89
 200029
 sb-124
 mt=102
 mt=102,105,104,105,105
mt=102,105,104,105,105
erulf/b-iv met 1284
 updated 10/13/89
updated 10/13/89
 200030
 xe-131
 200B1
 x=132
 xenon-135
 updated 10/13/89
 200132
 nt= 102, 103, 104, 105, 107
 200033
 xe-136
 cestum 133
 endity-iv met 1141
 200060
 uzdated 10/13/89
 updated 10/13/89
 KKKK
 200084
 CS-134
 mt=102
 mt= 102
 20035
 CB-135
 updated 10/13/89
 200136
 mt×102
 cs-137
 200037
 ba-136
 mt=102
 undeted 10/13/89
 undsted 10/13/89
 g
 200038
 la-139
 mt=102
 mt= 102
 200041
 œ-144
 pr-141
 mt=102,108,104,105,105,107
 200039
 uzdeted 10/13/89
 p~1/3
 undated 10/13/89
 200040
```

|    | nd-143           | mt=102                                                     | updated 1                |                                                  | id 2000/2                                |                                              |
|----|------------------|------------------------------------------------------------|--------------------------|--------------------------------------------------|------------------------------------------|----------------------------------------------|
|    | n± 145           | mt=102 ·                                                   | updated 1                |                                                  | id 2000/3<br>id 2000/6                   |                                              |
|    | nd-147<br>pn-147 | at=102<br>at=102                                           | updated 1<br>updated 1   |                                                  | id 200%<br>id 2000%                      |                                              |
|    | pir 148          | nt= 102                                                    | quades i                 | d Die                                            | id 2000/5                                |                                              |
|    | sn 447           | endi/b-v fission product                                   | updated 1                | 0/13/89                                          | id 200047                                |                                              |
|    | sn 149           | nt=102,105,107                                             | updated 1                |                                                  | id 200048                                |                                              |
|    | sm-150           | mt=102                                                     | updated 1                |                                                  | id 200049                                | •                                            |
|    | sm 151           | nt=102,108,104,105,106,107                                 | updated 1                |                                                  | id 200050                                |                                              |
|    | sm 152           | nt=102,103,104,105,106,107<br>nt=102,103,104,105,106,107   | updated 1                |                                                  | id 200051                                |                                              |
|    | er 123           | at=102,103,104,105,106,107                                 | updated 1                |                                                  | id 20053                                 | •                                            |
|    | ar 154           | mt=102,103,104,105,106,107                                 |                          |                                                  | id 20054                                 |                                              |
|    | 8F 155           | mt=102,103,104,105,105,107                                 | updated 1                |                                                  | id 20005                                 |                                              |
|    | gd-155           | mt=102                                                     | updated 1                | אסאכו או                                         | id 200052<br>id 200007                   |                                              |
|    | urenium-235      | >54 nswlecs p-3 28% (f-1/)<br>endf/b-iv met 1261           | ינייון אוים<br>updated 1 | OM STAN                                          | id 20007<br>id 20006                     |                                              |
|    | 1276 1163 sign   | 254 nexters p.3 25k f-1/                                   | en(1.+5)                 | d man                                            | id 20008                                 | •                                            |
|    | uranium 238      | erchi/to-iv met 1262                                       | updated 1                | 0/13/89                                          | id 200009                                |                                              |
|    |                  | endf/b-iv mat 1263                                         | updated 1                |                                                  | id 200061                                |                                              |
|    |                  | p-64 needlacs p-3 28k f-1                                  |                          | - <b>VV</b>                                      | id 200062                                |                                              |
|    | plutonium 239    | endf/to-iv mat 1264                                        | updated 14               |                                                  | id 200082                                |                                              |
|    |                  | endf/b-iv mat 1265                                         | updated 1                |                                                  | id 200064                                |                                              |
|    |                  | erdf/b-iv nat 1265                                         | updated 1                |                                                  | id 20006                                 |                                              |
|    |                  | ercif/to-iv mat 1161                                       | oru ujzdated 14          | עסענו עו                                         | id 200066<br>id 200067                   |                                              |
|    |                  | \$254 nswikes 2181gp p-3 2<br>3 gp wt f-1/e-m 090576 p5 23 |                          |                                                  | id 2000s                                 |                                              |
|    | curium 244       | endiforivent 1162                                          | updated 1                | 0/13/89                                          | id 2000s9                                |                                              |
| 0  | tape copy use    |                                                            | .00 seconds              | 4 2,00                                           | F                                        |                                              |
| Ť  | LU .             | m iiliiiiiiii m                                            | mmmm                     | 888888888                                        | આ અહી                                    |                                              |
|    | m                | m iiiiiiiiiiii                                             | tttttttttt               | 80000000000                                      | માં માી                                  | •                                            |
|    | वार              |                                                            | tt                       | 88 89                                            | m mil                                    |                                              |
|    | th t             | ••                                                         | tt                       | 86, 66                                           | w will                                   |                                              |
|    | <u>m</u>         | <u>m</u> m !!                                              | tt                       | 88 66                                            | w will                                   | •                                            |
|    | <u>m</u>         | mm.ii                                                      | tt<br>tt                 | 800000000000                                     | W W W L                                  |                                              |
|    | un<br>Un         | mm !!                                                      | tt                       | 88 60                                            | w ww w ll                                |                                              |
|    | m                | mm ii                                                      | tt                       | AB 66                                            | ww ww li                                 |                                              |
|    | in               | im ii                                                      | ŧŧ                       | an an                                            | iiii iiii ii                             |                                              |
|    | m                | m iiiiiiiiiii                                              | tt                       | 80. 80                                           | www tittitititititititititititititititit |                                              |
|    | m                | m iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii                     | tt                       | 88 MB                                            | w willlillillill                         |                                              |
| ÷۵ |                  |                                                            |                          |                                                  |                                          |                                              |
|    |                  |                                                            |                          |                                                  |                                          |                                              |
|    |                  | 20000000 W W                                               |                          | 9696969666<br>\$368666999696                     | •                                        |                                              |
|    | di di sa         | SCHOOLS W W                                                | \$\$                     | 200 200 200 200 200 200 200 200 200 200          |                                          |                                              |
| •  |                  | a w                                                        | ii                       | 26                                               |                                          | •                                            |
|    |                  | as w                                                       | · (š                     | 25                                               |                                          |                                              |
|    |                  | DEPONDENCE W                                               | ii                       | 80000000000                                      |                                          |                                              |
|    | dd dd aene       | 2000000000 W W                                             | <b>!!</b>                | 800000000000                                     |                                          |                                              |
|    | طط طط معم        | aa w w                                                     | ij                       | 26                                               |                                          |                                              |
|    | क्षं क्षं 🕶      | <b>m</b> w w                                               | ij                       | 95                                               |                                          |                                              |
|    |                  | as WW                                                      | 15151555555              | <b>86 83</b>                                     |                                          |                                              |
|    | dilititititi as  | #8 W                                                       | 11111111111111           | 202020202020<br>20202020202                      |                                          |                                              |
| 0  | difficulting as  | <b>86.</b> V                                               |                          |                                                  |                                          |                                              |
| •  |                  |                                                            |                          |                                                  |                                          |                                              |
|    | 000000 222       | mma II                                                     | 11                       | <del>(((((((((((((((((((((((((((((((((((((</del> | // 997777779                             | **********                                   |
|    | 00000000 2222    | mma ii                                                     | 111                      | <b>CHARACTER</b>                                 | ii summin                                | <b>CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC</b> |
|    | 0 0 Z            | <b>2</b> 2 <i>jj</i>                                       | 11]]                     | డ్ల                                              | // 92 92                                 | 66                                           |
| •  | <b>00 00</b>     | <b>22</b> //                                               | 11                       | 66                                               | // 99 99                                 | 66                                           |
|    |                  |                                                            |                          |                                                  |                                          |                                              |



|                                                  |                                            | ******                                                                           |
|--------------------------------------------------|--------------------------------------------|----------------------------------------------------------------------------------|
| <del>AAAAA</del>                                 | program verification information           | Selection .                                                                      |
| <del>harar</del>                                 | • -                                        | ***                                                                              |
|                                                  | code system: scale version: 4.2            | ****                                                                             |
|                                                  | •                                          | Sele-Autori                                                                      |
| <del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del> | <u> </u>                                   |                                                                                  |
|                                                  |                                            | ***                                                                              |
| h-Aut-Aut-                                       | •                                          | -                                                                                |
|                                                  |                                            | ****                                                                             |
| <del>naaar</del>                                 |                                            |                                                                                  |
| Terrende<br>Ordende                              | propriete c0c002                           | And Andre                                                                        |
|                                                  | program: d0d002                            |                                                                                  |
|                                                  | • -                                        | ***                                                                              |
| anani<br>Adalah                                  | program: c0c002<br>creation date: 04/27/95 | ***                                                                              |
| Parkink<br>Rakink<br>Rakink<br>Rakink            | creation date: 04/27/95                    | deli deli<br>deli deli<br>deli deli                                              |
|                                                  | • -                                        | diede dieder<br>diede fleder<br>flede fleder<br>tiede fleder                     |
| e saleski<br>kristrik<br>kristrik                | creation date: 04/27/95                    | dichters<br>dichters<br>dichters<br>dichters<br>dichters<br>dichters<br>dichters |

```
ichneme: davis
 date of execution: 02/16/96
 time of execution: 10:04:48
Ó
 1 entries.
 -1q array has
٥
 Oci array has
 4 entries.
 12 entries.
 1q array has
Oselect 5 nuclides from the master library on logical 1
 65 ructides from the working library on logical 3 o ructides from the working library on logical 0
 to create the new working Library on Logical 4
 1 resonance calculations have been requested
 O cutrust cocion for areas formatted cross section data
Othe storage allocated for this case is 20000 words
O 24 array has 70 entries.
 24 array has
 3q array has
 15 entries.
 40 array hos
 5 entries.
O general information concerning cross section Library
 tace identification number
 number of nuclides on tape
 Б
 Ž7
 number of neutron energy groups
 15
 first thermal neutron energy group
number of gamma energy groups 0
0 direct access unit number 9 requires 72 blocks of length 1484 words

 xsdm tape 4321

 scale 4.2 - 27 group neutron burnup library
based on endi-b version 4 data with endi-b version 5 fission products
 compiled for mc
 1/27/89
 last undated
 9/16/93
 Langetrie - ami
- work table 4349
 xsdm weighted tape-parent case entitled-- 1040 d, sas2n: betook wilcox 15x15,
 3.00.t% 20ad/mu burn high tenp
O nuclides from sectro tape
 888888
 hydrogen
 endf/b-iv mat 1269/th/mi002
 undeted 10/13/89
 b-10 1273 218mp 042575 p-3 253k
 updated 10/13/89 updated 10/13/89
 baran-11
 endf/b-iv mat 1160
 aggen-16
 erchi/o-iv set 1276
 endf/b-iv ant 1284
 updated 10/13/89
 zircalloy
0 nuclides from work tape
 1/v cross sections normalized to 1.0 at 0.0253 ev
 hydroen enti/o-1v nm.
b-10 12/3 218 pp 0/23/5 p-3 2/3k
hydr-11 enti/o-1v ent 11/0
 1001
5010
 erclif/b-iv mat 1269/tirmi002
 updated 10/13/89
 updated 10/13/89
 5011
 erdi/b-iv mat 12/6
 updated 10/13/89
 8016
 avgen-16
 endf/b-iv met 1276
 undsted 10/13/89
 11
 akygen-16
kr-83
 6
 mt=102,108,108,105,106,107
 ucdsted 10/13/89
 36083
```

12

| 13                                     | kr-85                   | nt= 102                                              |                                      |        | 34085               |   |
|----------------------------------------|-------------------------|------------------------------------------------------|--------------------------------------|--------|---------------------|---|
| 17.                                    | £90                     | mx=102                                               | updated 10/13/89                     |        | 38090               |   |
| 16<br>16<br>17                         | y-89                    | mt=102                                               | undated 10/13/89                     |        | 350B9               |   |
| 16                                     | 27-93                   | nt= 102                                              |                                      |        | 40095               |   |
| 17                                     | 27-94                   | mt=102                                               | upplated 10/13/89                    |        | 40094               |   |
| 123                                    | 27-95                   | mt=102                                               | updated 10/13/89                     |        | 40095               |   |
| 19                                     | zircelloy               | erclf/b-iv mat 1284                                  | updated 10/13/89                     |        | 40802               |   |
| 20                                     | rb-94                   | mt=102                                               | updated 10/13/89                     |        | 41094               |   |
| 21                                     | 100-725                 | nt=102                                               | updated 10/13/89                     |        | 42095               |   |
| 22                                     | tc-99                   | nt=102                                               | updated 10/13/89                     |        | 43079               |   |
| 꿇                                      | ru-101                  | mt=102                                               | updated 10/13/89                     |        | 44101               |   |
| <u> </u>                               | ru-106                  | mt=102                                               | updated 10/13/89                     |        | 44105               |   |
| Q                                      | rh-103                  | at=102                                               | updated 10/13/89                     |        | 45105<br>45105      |   |
| 20                                     | rh-105                  | mt≈ 102                                              |                                      |        | 46105               |   |
| 20                                     | <b>吐饭</b>               | st=102<br>st=102                                     | updated 10/13/89<br>updated 10/13/89 |        | 46108               |   |
| 20                                     | pd-108<br>silver-109    | endf/b-iv met 1139                                   | undeted 10/13/89                     |        | 47109               |   |
| 30                                     | sb-124                  | at=102                                               | updated 10/13/89                     |        | 51124               |   |
| รัง                                    | xe-131                  | nt=102,105,104,105,106                               | upplaced 10/13/89                    |        | 54131               |   |
| 39                                     | xe-132                  | mt=102,105,104,105,105                               | uzzleted 10/13/89                    |        | 54132               |   |
| 33                                     | xenor-135               | endif/to-iv met 1254                                 | updated 10/13/89                     |        | 54135               |   |
| 34                                     | xe-136                  | mt= 102, 105, 104, 105, 10                           | 7                                    |        | 54136               |   |
| 35                                     | cesium 133              | endf/b-iv met 1141                                   | updated 10/13/89                     |        | 2202                |   |
| 36                                     | cs-134                  | nt=102                                               | updated 10/13/89                     |        | <b>55134</b>        |   |
| 37                                     | cs-135                  | mt= 102                                              | •                                    |        | 551 <u>35</u>       |   |
| 20000000000000000000000000000000000000 | cs-137                  | mt=102                                               | updated 10/13/89                     |        | 55137               |   |
| 39                                     | ba-136                  | mt=102                                               | updated 10/13/89                     |        | 56136               |   |
| 40                                     | la-139                  | mt=102                                               | updated 10/13/89                     |        | 57139               |   |
| 41                                     | ce-144                  | mt= 102                                              |                                      |        | 58144               |   |
| ************************************** | pr-141                  | mt=102,105,104,105,105,107                           | updated 10/13/89                     |        | 59141<br>50177      |   |
| 49                                     | pr-143                  | mt=102                                               | updated 10/13/89                     |        | 59143<br>60143      |   |
| <b>44</b>                              | 计说                      | nt=102<br>nt=102                                     | updated 10/13/89                     |        | 60145               |   |
| 45                                     | nd 145<br>nd 147        | m=102                                                | updated 10/13/89<br>updated 10/13/89 |        | 60147               |   |
| 47                                     | pn-147                  | mt=102                                               | updated 10/13/89                     |        | 61147               |   |
| ᇩ                                      | FIR-148                 | nt= 102                                              | drawn id nice                        |        | 61148               |   |
| Ĭ,                                     | sn-147                  | endi/b-v fission product                             | updated 10/13/89                     |        | 62147               |   |
| SŐ.                                    | sm 149                  | mt=102,105,107                                       | updated 10/13/89                     |        | 62149               |   |
| 51                                     | sn 50                   | mt=102                                               | updated 10/13/89                     |        | 62150               |   |
| 52                                     | ar 151                  | mt=102,105,104,105,106,107                           | upphoted 10/13/89                    |        | 62151               |   |
| 23                                     | sm 52                   | mt=102,103,104,105,105,107                           | updated 10/13/89                     |        | 62152               |   |
| 54                                     | 빠졌                      | mt=102,105,104,105,106,107                           | updated 10/13/89                     |        | ଷ୍ଟାୟ               |   |
| 55                                     | er E                    | mt=102,103,104,105,106,107                           | updated 10/13/89                     |        | <u>83154</u>        |   |
| <u>≈</u>                               | er. <u>pp</u>           | mt=102,103,104,105,105,107                           | updated 10/13/89                     |        | 8155<br>*****       |   |
| 2/                                     | gd-65                   | mt=102<br>-Fr/                                       | updated 10/13/89                     |        | 64195<br>00784      |   |
| 30<br>59                               | uranius-25              | 54 raklas p-3 25k f-1/en(                            | updated 10/13/89                     |        | 922%<br>9225        |   |
| 60                                     | umiuras<br>uzk 1kt eim  | endi/b-iv met 1261<br>•5•4 maxilacs p-3 235k f-1/en( | 1 251                                |        | 9226                |   |
| 61                                     | uranium 238             | endf/b-iv ant 1262                                   | updated 10/13/89                     |        | 92/38               | Ġ |
| æ                                      |                         | endf/b-iv set 1263                                   | updated 10/13/89                     |        | 93237               |   |
| ā                                      | nu-258 1050 slo         | 0-544 nextlacs p-3 20% f-1/e-s                       | (1.+5)                               |        | 94238               |   |
| 8<br>4                                 | plutonium 239           | erdi/to-iv met 1264                                  | uppleted 10/13/89                    |        | 94239               |   |
| 65                                     | plutonium 240           | endf/b-iv met 1265                                   | undeted 10/13/89                     |        | 94240               |   |
| 66                                     | plutanium 241           | endf/b-Iv met 1266                                   | updated 10/13/89                     |        | 94241               |   |
| 67                                     | plutanium 2/2           | erdi/to-iv.met 1161                                  | updated 10/13/89                     |        | 923/2               |   |
| <i>6</i> 8                             | am-241 1056 sig         | p64 madaca 218mp p-3 20k                             |                                      |        | 95241               |   |
| <i>6</i> 2                             | <b>an 2/3 1(5</b> / 218 | go int 1-1/4-is UVUS/6 po ZXX                        |                                      |        | 9533                |   |
| 70                                     | curium 244              | entif/b-19 max 1162                                  | updated 10/13/89                     | 202    | 96264               |   |
| O phychodiau                           | । वधा/०-१               | v met 1269/thmm1002 updeted                          |                                      |        | 550.00 was selected |   |
|                                        | •                       | thermal acattering metrix                            | INNER COLUMBIA                       | au e u | TANAM MEN SELECTED  | ' |

```
Ob-10 1273 218mp 042375 p-3 258k
 temperature= 607.60
 550.00 ses selected.
 thermal scattering matrix number 2 at a temperature of
 undsted 10/13/89
0 boron-11
 erdf/b-iv net 1160
 204
 temperature: 607.60
 thermal scattering matrix ruster 2 at a temperature of
 550.00 kes selected.
 updated 10/13/89
 201
 temperature= 607.60
0 avgen-16
 endf/b-iv sext 1276
 updated 10/13/89
0 zircalloy
 erdf/b-iv set 1284
 205
 temperature 650.00
Onexamence data for this ruclide
 = 90,436
 = 650,000
Omess runber (a)
 temperature(kelvin)
Opotential scatter signs =
 6.36
 lumped ruclear density
 = 4.25 5602E-02
 1.079
Oppin factor (g)
 lump dimension (a-bar)
 = 6.7309999E-01
 # 6.32/6000E-01
Oimer radius
 denoff correction (c)
 = 1.6805907E-01
Othe absorber will be treated by the norcheim integral method.
Othis resonance asterial will be treated as a 2-diagrational object.

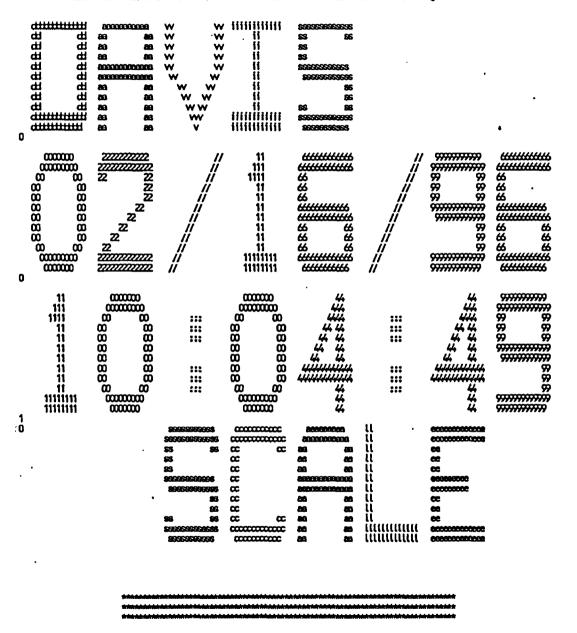
Ovolume fraction of lump in cell used to account for spatial self-shielding=1.00000
Caroup
 res abs
 res fiss
 res scat
 -1.15675ZE-03
 .000000E+00
 -7.806083E-01
 4.625978E-02
 _000000E+00
 -2.075270E+00
 10
 -5.962230E-02
 .000000E+00
 -1.35198/E+00
 11
 -1.761672E-01
 .000000E+00
 -7.350731E-01
Opposs resonance integrals
 resolved
Oabsorption
 2.98402E-01
fission
 .0000E+00

 elapsed time

 .00 min.
 elepsed time
 .02 min.
 this xschn working tape was created 02/16/96 at 10:04:48
 the title of the parent case is as follows
 yadra weighted tape-parent case entitled- 1040 d, seeth; bebook wilcox 15x15,
 3.00xX, 20px/mtu burn high temp
 8670
 70
 number of nuclides
 tape id
 number of neutron groups
 27
 number of genera groups
 first thermal group
 logical unit
 table of contents
 end/b-iv set 1269/thres1002 undated 10/13/89
 202
 b-10 1273 218-pp 042575 p-3 289k
 ũ
 205
 baran-11
 end /b iv set 1160
 updated 10/13/89
 204
 なななななななななななななななななななななななななな
 aggan-16
 undetect 10/13/89
 201
 endf/b-iv nat 1276
 755
755
755
755
755
 erdi/b-iv set 1284
 updated 10/13/89
 zircalloy
 1/V cross sections normalized to 1.0 at 0.0253 eV
 Indrogen erol/o-1v set 1269/thres1002
b-10 12/3 218rpp 0425/5 p-3 288k
 undeted 10/13/89
 5010
 endif/b-iv met 1160
 updated 10/13/89
 5011
 baran-11
 updated 10/13/89
 aygen-16
 endi/b-iv mat 1276
 8016
 erdi/b-iv met 1276
 undeted 10/13/89
 avgarto
kr-83
 mt=102,105,105,105,105,107
mt= 102
 undeted 10/13/89
 360B3
 34085
 kr-85
 nt=102
 updated 10/13/89
 38090
 sr-90
 39089
40025
 updated 10/13/89
 y-89
 nt=102
 zi-95
 102
 nt=
 4005
4005
 27-94
 uccletted 10/13/89
 mt=102
 27-95
 updated 10/13/89
 nt=102
 zircalloy
 undeted 10/13/89
 40B02
 endf/b-iv set 1284
 updated 10/13/89
 410%
 rb-94
 RE=102
 m-95
 st=102
 updated 10/13/89
 42075
43079
 #E=102
 umbted 10/13/89
 tc-99
 mt=102
 undeted 10/13/89
 4101
4106
 ru-101
 ru-106
 #E=102
 umbted 10/13/89
 mt=102
 underted 10/13/89
 4510B
 rh-103
 rh-105
 mt= 102
 45105
```

IRFORMATION UNLI

|   |                       |             |                                          |               |           | •       |            |       |                       |              |   |            |
|---|-----------------------|-------------|------------------------------------------|---------------|-----------|---------|------------|-------|-----------------------|--------------|---|------------|
|   | pd-105                | mt=102      |                                          |               | updated   | 10/13   | <b>V89</b> |       | id                    | 46105        |   |            |
|   | poi-108               | mt=102      |                                          |               | updated   | 10/1    | V89        |       | id                    | 4610B        |   |            |
|   | silver-109            | endf/b-iv   | mat 1139                                 |               | undated   |         |            |       | id                    | 47109        |   |            |
|   | sb-124                | mt=102      |                                          |               | undeted   |         |            |       | id                    | 51124        |   |            |
|   | xe-131                | mt=102,103  | ,104,105,106                             |               | undeted   |         |            |       | id                    | 54131        |   |            |
|   | xe-132                | mt=102,108  | ,104,105,105                             |               | updated   |         |            |       | id                    | 54132        |   |            |
|   | xeror-135             | endf/b-iv   | mt 1294                                  |               | updated   | 10/E    | V89        |       | id                    | 54135        |   |            |
|   | xe-136                |             | 2, 108, 104, 10                          | <b>15. 10</b> | 7         | , 4     |            |       | id                    | 54136        |   |            |
|   | cesium 133            | endf/b-iv   |                                          | -,            | updated   | 10/17   | URO        |       | id<br>id              | 55133        |   |            |
|   | cs-134                | mt=102      |                                          |               | updated   |         |            |       | ដើ                    | 55134        |   |            |
|   | GS-505                | nt= 10      | 2                                        |               | que       | 14 -    | ,0,        |       | id                    | 55135        |   |            |
|   | cs-137                | nt=102      | •                                        |               | undeted   | 10/17   | ./RO       |       | id                    | 3537         |   |            |
|   | ba-136                | mt=102      |                                          |               | ucdited   |         |            |       | id                    | 56136        |   |            |
|   | la-139                |             |                                          |               |           |         |            |       | ũ                     | 57139        |   |            |
|   |                       | mt=102      | 2                                        |               | updated   | M C     | YOY        |       | 2                     | 58144        |   |            |
|   | ce-144                | mt= 10      |                                          | ~             |           | 40.41   |            |       | id                    |              |   |            |
|   | pr-1 <u>41</u>        |             | ,104,105,106,1                           | x             | updated   |         |            |       | id                    | 59141        |   |            |
|   | pr-143                | mt=102      |                                          |               | uppted    |         |            |       | 7<br>7<br>7<br>7      | 57143        |   |            |
|   | m-143                 | mt=102      |                                          |               | updated   |         |            |       | id                    | 60143        |   |            |
|   | nd-145                | mt=102      |                                          |               | updated   |         |            |       | 1d                    | 601/5        |   |            |
|   | nd-147 ·              | nt=102      |                                          |               | uppeted   |         |            |       | id                    | 60147        |   |            |
|   | par 147               | mt=102      | _                                        |               | updated   | 10/13   | <b>√89</b> |       | id                    | 61147        |   |            |
|   | <del>jun-148</del>    | mt= 10      |                                          |               | -         |         |            |       | id                    | 61148        |   |            |
|   | sm-147                | endf/b-v f  | ission product                           |               | updated   | 10/12   | <b>√89</b> |       | id                    | 62147        |   |            |
|   | sm 149                | nx=102,103  | ,107                                     |               | updated   | 10/13   | <b>√89</b> |       | id                    | 62149        |   |            |
|   | sm-150                | nt=102      | <u>-</u>                                 |               | updated   | 10/E    | <b>√89</b> |       | id                    | 62150        |   |            |
|   | sar 151               | m£=102,103  | ,104,105,105,1                           | 77            | updated   | 10/13   | <b>V89</b> |       | id<br>id              | 62151        |   |            |
|   | sm-152                | at=102,103  | ,104,105,106,1                           | 77            | Located   | 10/13   | <b>/89</b> |       | id                    | 62152        |   |            |
|   | er-23                 |             | ,104,105,106,14                          |               | undeted   | 10/13   | <b>/89</b> |       | id                    | හැන          |   |            |
|   | ar 54                 | mt=102,105  | ,104,105,106,14                          | 7             | updated   |         |            |       | id<br>id              | 63154        |   |            |
|   | er- 222               | mt=102,10B  | 104,105,106,1                            | 37            | undeted   | 10/13   | /89        |       | id                    | 63155        |   |            |
|   | gr- 555               | at=102      | ,,,,.                                    | •             | updated   |         |            |       | id<br>id              | 64155        |   |            |
|   | u 234 103 sig         |             | os p-3 28% 作                             | l/e-sr        |           |         | •          |       | id                    | 92234        |   |            |
|   | uranius-25            | endf/b-iv   |                                          | <b>-</b>      | updated   | 10/13   | V89        |       | id                    | 92235        |   |            |
|   | u-256 1163 sig        | 2514 maxia  | cs p-3 20% f-                            | 1/e-st        | 1.85      | ,       | •          |       | id                    | 92236        |   |            |
|   | uranium Z38           | endf/b-iv   |                                          | <b>~~</b>     | undeted   | 10/13   | /89        |       | id                    | 92238        |   |            |
|   | neptunius 257         |             |                                          |               | updated   | 10/13   | /RO        |       | id                    | 98237        |   |            |
|   | pr-238 1050 sig       | TEST DELE   | m p-1 20% f                              | 1/            | (1.45)    |         | ,          |       | id                    | 94238        |   |            |
|   | plutonium 239         |             |                                          | ., c          | umbted    | 10/17   | (AD        |       | id                    | 9/239        |   |            |
|   | plutonius-240         |             |                                          |               | undeted   |         |            |       | id                    | 920          |   |            |
|   | plutonium 241         |             |                                          |               | undated   |         |            |       | Ĭd                    | 9241         |   |            |
|   |                       |             |                                          |               | updated   |         |            |       | ũ                     | 9332<br>9332 |   |            |
|   | plutonium 2/2         | -Eu/U-141   | IBL 1101                                 | 270.          | drawn     | M D     | YUF        |       | ŭ                     | 95341        |   |            |
|   | 877 241 1056 sig      | DOM HEAL    | re signification                         | COUR.         |           |         |            |       | ĭď                    | 9523         |   |            |
|   | <b>83-23 1057</b> 210 |             |                                          | 2             | updated   | 40/17   | /00        |       | id                    | 9624         |   |            |
| ^ | curium24              | endf/b-iv   |                                          | _             | чрении    | . NY 13 | VOY        |       | 10                    | 302344       |   |            |
| Ō | tape copy us          |             | o's, and took                            |               | 0 seconda | -       | _          |       |                       |              |   | _          |
| ı |                       | *********** | dillillillillillillillillillillillillill |               | 11111111  |         | n          |       | <del>ATTITUTE</del>   |              |   |            |
|   |                       | 9696369698  | <del>वेत्रममम</del> ्                    |               | mmi       |         | m_         |       | <del>1111111111</del> |              |   | (100)      |
|   | XX XX 95              | 86          | क्षं क्षं                                | • •           | -         |         | m          |       | PP                    | th was       |   | TANTA      |
|   | XX XX 86              |             | क्षं क्षं                                | П             |           |         | nm         | m     | æ                     | to war       |   |            |
|   | XX XX SS              |             | स स                                      | П             | -         |         | n m        |       | PP                    | th m         |   | MA         |
|   |                       | E3636363    | यं यं                                    |               | mmm       |         | n m        | m     | <del>mmmm</del>       |              |   | RETA       |
|   |                       | 39999999    | यं यं                                    |               | mmm       |         | n m        |       | HHHHH                 |              | m | MUR        |
|   | жx,                   | 86          | क्षं क्षं                                | T             | IL        |         |            | ) III | PP                    | ATT          |   |            |
|   | XX XX                 | <b>26</b>   | क्षं क्षं                                | T             | LL.       | _       |            | nm    | PP                    | <b>ATR</b>   |   |            |
|   | XX XX SS              | \$6         | क्ष क्ष                                  | IL            | r         |         |            | шп    | P                     | Rest.        |   | <b>MAT</b> |
|   | XX XX 8983            | 33036663    | 41111111111111111111111111111111111111   | IL            |           | TT I    | n          | m     | ΪP                    | N.A.         |   |            |
| _ | XX XX 808             | 20022000    | <del>ашши</del>                          | П             |           | tt l    | n          | m     |                       |              |   | MAN.       |
| 0 |                       |             |                                          |               |           |         |            |       | -                     |              |   |            |
|   |                       |             |                                          |               |           |         |            |       |                       |              |   |            |
|   | <del>quinimi</del> «  | 10000000    | w w                                      | / {{{         | (11111111 |         | SCUESDOO.  | 196   |                       |              |   |            |
|   |                       |             |                                          |               |           |         |            |       |                       |              |   |            |



```
program verification information
 code system: scale version: 4.2
 DOODS COOK
 creation date: 04/27/95
 library: /neutronics/scale/exe
 this is not a scale configuration controlled code
 ichrama: davis
 date of execution: 02/16/96
 time of execution: 10:04:49
1
 1040 d, second part of see2h pass to make Library
 -1q array has
 1 entries.
 11 entries.
 Oci array has
Ó
 1q array has
 5 entries.
 20 array has
 10 entries.
 3q array has
 12 entries.
 4q array has
 9 entries.
 50 array has
 12 entries.
Odirect access unit 9 requires 12 blocks of length 704 for cross section mixing.
1 1040 d, second part of sec2n pass to make library Ogeneral problem description data block
 personal problem data
 ian quaristure order
 ige 1/2/3 = plane/cylinder/sphere izm number of zones
 isct order of scattering
 ruster of special intervals
 levt 0/1/2/3/4/5/6-0/k/alpha/c/2/r/h
 2020
 ibl 0/1/2/3 = vacum/refl/per/hite
 im free iteration mexisum
 ibr right burdery condition
 ion outer iteration maximum
 mox runter of mixtures
 iclc -1/0/n--flat res/sr/qpt
 ms mixing table length
ign runter of energy groups
 ith 0/1 = forward/adjoint iflu not used/always word)
 70
27
 iprt -2/-1/0/mixture asec print
idl 0/1/2/3-myprt m/pch nytoth
ipbt -1/0/1-mme/fine/all bal. prt
 -2
14
 my ruster of neutron groups
 · 27
 rgg number of gamma groups
ifty number of first thermal group
 15
 special options
 ifg 0/1 = none/weighting calculation
 ipn 0/1/2 diff. coef. paren
 ign volumetric sources (Q/nero/yes)
 idim 0/1 = none/density factors 38*
 ipm boundary sources (Q/myro/yes) ifn Q/1/2 = input 33*/34*/use last
 isz 0/n = rome/n activities by zone
 14
 iai Q/1=nune/activities by interval
 0
 itms maximum time (mirutes)
 ifct O/1-ro/yes upscatter scaling
```

information only

```
ipyt 0/1/2-ro/k/alpha perametric srch
 0
 idt1 0/1/2/3-rp/xsect/srce/flux-rouk
 isen cuter iteration acceleration
 Ŏ
 isk broad group fluxes
ibln activity data unit
jckl Q/1/2 buckling geometry
 riand band rebally parameter
 Ō
 weighting data (ifgel)
 ihtf total asect pen in brd go tables
 icon -1/0/1=cell/zone/region weight
 rosf pan g-g or file runbar
rusf table length or max order
 ignif number of broad groups
 ito 0/10/20/30/40 0/c/e/ac/a
 macon extra 1-d x-sect positions
 0
 -2/-1/0/magted assect print
 -2
 •1/n anish xsect print
 iap
 floating point parameters
 1.0000E-04
 cyl/pla ht for buckling
 -0000F+000
 ecs overall convergence
 plane depth for buckling 2.0000E+02
 1.0000E-04
 ďε
 point convergence
 void stressing correction .0000E+00
 1.0000E+00
 nomelization factor
 VEC
 ipvt=1/2--k/alpha
 1.0000E+00
 .00000E+00
 eigenvalue guess
 ect ev charge eps for search 1.0000E-05
эгрэг гэм раган яси for search 7.5000E-01
 .000E+00
 eigenvalue modifier
 1.420892+00
 buckling factor=1.420892
 this case will require
 2611 locations for mixing
 this case has been allocated 200000 locations
 1040 d, second part of see2h pass to make Library
 70 entries.
70 entries.
Ó
 13q array has
 14q array has
 70 entries.
 DO array has
 data block 2 (mixing table, etc.)
ŏ
 mixing table
 ectra
 ruct ides
 xsect id's
 identification
 aton density
 on tape
202
203
 mixture
 component
 2.07710E-02
 201
 202
 4.19420E-02
 23
 204
 205
 3.81515E-05
 1.5488 E-05
 204
 201
 205
 4.2515/E-02
 205
 1,2054E-04
 92235
 999
 92234
 1,41715E-05
 1001
 9236
 2.03507E-05
 5010
 92238
 7.20991E-03
 5011
 1.50511E-02
 8016
 10
 8016
 1.15315E-02
 11
 34083
 36083
 5.38X32E-07
 3605
 2.58829E-07
 3605
 38090
 5.92541E-06
 38000
 39089
 37089
 4.78549E-05
 420%
 6.5677E-06
 40093
 400%
400%
 4.79260E-05
 400%
400%
 7.56774E-05
 40095
 40502
4100%
 6.ABVAE-07
 410%
 3.96160E-12
 420%
 43099
 7.4072E-05
 45105
 4.1550E-05
 43099
 45105
 7,8511E-09
 44101
 44106
 6.79292E-05
 1,01922E-06
 45105
45105
 44105
 46105
 2.82763E-05
 8.3360/E-07
 46108
 46105
 47100
 5.71721E-07
 46108
 51124
 1.2722E-10
 47109
 SIGI
 3.3629/E-06
 51124
 $155
$155
 6.56907E-06
 外区
```

2.20% DE-09

INFORKATION ONLY INFORMATION ONLY

|   | 33                                       | 54135             |              |                           | 1                     | 54136          | 1.23871E-05                |             |        |
|---|------------------------------------------|-------------------|--------------|---------------------------|-----------------------|----------------|----------------------------|-------------|--------|
|   | 34                                       | 54136             |              |                           | i                     | 55134          | 4.233XE-07                 |             |        |
|   | 3.53.33.33.33.33.33.33.33.33.33.33.33.33 | 55133             |              |                           | i                     | 55135          | 4.11148E-06                |             |        |
|   | 36                                       | 5513%             |              |                           | i                     | \$ 5           | 7.98229E-06                |             |        |
|   | $\tilde{\nabla}$                         | 55136             |              |                           | j .                   | 56136          | 8.81609E-08                |             |        |
|   | <b>~</b>                                 | <b>35137</b>      |              |                           | i                     | 57 <b>13</b> 9 | 7.89639E-06                | •           |        |
|   | £0                                       | 3036<br>3036      |              |                           | i                     | 59141          | 6.89476E-06                |             |        |
|   | 40                                       | 57139             |              |                           | i                     | 59143          | 1,208/0E-07                |             |        |
|   | 41                                       | 58144             |              |                           |                       |                |                            |             |        |
|   | 41                                       | 20144             |              |                           | 1                     | 58144          | 2.27216E-06                |             |        |
|   | 12                                       | 59141             |              |                           | 1                     | 60143          | 6.0%228E-06                |             |        |
|   | 345                                      | 59143             |              |                           | 1                     | 60145          | 4.50917E-06                |             |        |
|   | 44                                       | 601/3             |              |                           | 1                     | 61147          | 1.AZ592E-06                |             |        |
|   | 45                                       | 60145             |              |                           | 1                     | 61148          | 4.2/5/RE-09                |             |        |
|   | 46                                       | 60147             |              |                           | 1                     | 60147          | 4.27517E-08                |             |        |
|   | 47                                       | 61147             |              |                           | 1                     | 62147          | 5.9555E-07                 |             |        |
|   | 48                                       | 61148             |              |                           | 1                     | 62149          | 2.9474£-0B                 |             |        |
|   | 49                                       | 62147             |              |                           | 1                     | 62150          | 1.65740E-06                |             |        |
|   | 50                                       | 62149             |              |                           | 1                     | 62151          | 1.43095E-07                |             |        |
|   | 51                                       | 62150             |              |                           | 1                     | 62152          | 7.81604E-07                |             |        |
|   | 52                                       | 62151             |              |                           | i                     | 64155          | 9.37789E-10                |             |        |
|   | 53                                       | 62152             |              |                           | i                     | 63153          | 5.06250E-07                |             |        |
|   | ₹.                                       | छांछ              |              |                           | i                     | 63154          | 1.18895E-07                |             |        |
|   | Œ                                        | ଊ୕୲ଽ              |              |                           | i                     | 63155          | 5.54693E-08                |             |        |
|   | Ñ                                        | ଞ୍ଚାଞ୍ଚି          |              |                           | i                     | 40502          | 4,4261E-05                 |             |        |
|   | 쯝                                        | 64155             |              |                           | i                     | 1001           | 2.30630E-02                |             |        |
|   | 2/                                       | 92234             |              |                           | i                     | 5010           | 2.097876-06                |             |        |
|   | *************                            | 9225              |              |                           |                       | 2010<br>E011   |                            |             |        |
|   | 77                                       | 92236             |              |                           | 1                     | 5011<br>55133  | 8.51673E-06                |             |        |
|   | ά'n                                      |                   |              |                           | 1                     | 20177          | 8.1259/E-05                |             |        |
|   | 61                                       | 92238             |              |                           | 1                     | 95237          | 1.556675-05                |             |        |
|   | 8                                        | 93237             |              |                           | 1                     | 94238          | 2.67674E-07                |             |        |
|   | 63                                       | 9238              |              |                           | 1                     | 94239          | 3.86470E-05                |             |        |
|   | 2888                                     | 94239             |              |                           | 1                     | 84340          | 8.4 <del>/25/7E-</del> 05  |             |        |
|   | 85                                       | 94340             |              |                           | 1                     | 94241          | 4.88270E-06                |             |        |
|   | 66                                       | 94241             |              |                           | 1                     | 92/2           | 6.64962E-07                |             |        |
|   | 67                                       | 94242             |              |                           | 1                     | 95241          | 1.705/0E-07                |             |        |
|   | æ                                        | 95241             |              |                           | 1                     | 9523           | 7, <del>//8/8E</del> -08   |             |        |
|   | 69                                       | 95243             |              |                           | 1                     | 96244          | 8.6793E-09                 |             |        |
|   | 70                                       | 96244             |              |                           | 1                     | 999            | 3.30753E-21                |             |        |
| - |                                          |                   | 00 min.      |                           | •                     |                |                            |             |        |
| 0 |                                          | 99 locations      |              |                           |                       |                |                            |             |        |
| 0 |                                          | 35q array he      |              | ies.                      |                       |                |                            |             |        |
| Õ |                                          | 360 array ha      |              |                           |                       |                |                            |             |        |
| Ō |                                          | 39q array he      |              |                           |                       |                |                            |             |        |
| Õ |                                          | 400 array ha      |              |                           |                       |                |                            |             |        |
| ŏ |                                          | 47g array he      |              |                           |                       |                |                            |             |        |
| ŏ |                                          | 51g array he      |              |                           |                       |                |                            |             |        |
| ĭ |                                          | 2 cd at 1 cd 1 cd |              | condigent of a            | cac'th rece to        | a malaa I ibaa | ·~                         |             |        |
| • |                                          |                   |              |                           |                       | O NEWE LIME    | -7                         |             |        |
| 0 | -                                        |                   | lathorns     | n group penem<br>Heighted | prosed do             | calc           | arm n                      | right       | left   |
| U | ф                                        | araby             | lethergy     | velocities                |                       |                | a corb                     | albedo      | albedo |
|   | 4                                        | burderies         | burderies    |                           | unipers               | D DE           | ਇਕ <b>ਪ</b><br>1           | 1.0000E+00  | amon   |
|   | 4                                        |                   | -6.93147E-01 | 4.60816-09                |                       | ă              |                            |             |        |
|   | 2                                        | 6.43400E+06       | 4.40989E-01  | 2.85737E+09               | 1                     | ŭ              | Ę                          | 1.000000    |        |
|   | 3                                        | 3.0000E+05        | 1.20397E+00  | 2.12201E+09               | 1                     | 0              | 2<br>3<br>4<br>5<br>6<br>7 | 1.00000=+00 |        |
|   | 4                                        | 1.85000E+06       | 1.68740€+00  | 1.756735-09               | 1                     | Ó              | 2                          | 1.0000E+00  |        |
|   | 5                                        | 1.40000E+06       | 1.96611E+00  | 1,4555                    | 1                     | 0              | >                          | 1.0000E+00  |        |
|   | 6                                        | 9.0000E+05        | 2,40795E+00  | 1.05520E+09               | 2                     | ū              | 6                          | 1.0000E+00  |        |
|   | 7                                        | 4.0000E+05        | 3.218##E+CO  | 6.0757E+08                | Z                     | 0<br>0<br>0    | 7                          | 1.0000E+00  |        |
|   | 8                                        |                   | 4.60517E+00  | 2.724192+08               | 2<br>2<br>2<br>2<br>2 | Ō              | 8                          | 1.00000=+00 |        |
|   | 9                                        | 1.70000E+04       | 6.37713E+00  | 1,1352/11+08              | 2                     | 0              | 9                          | 1.0000E+00  |        |
|   | 10                                       | 3.0000E+05        | 8.11179E+00  | 4.5212XE+07               | 2                     | Ö              | 10                         | 1.0000E+00  |        |

|     | 11254547862222222222                               | 5.5000402<br>1,0000402<br>1,0000401<br>3,0000401<br>3,0000400<br>1,7000400<br>1,2000400<br>1,2000400<br>1,2000400<br>1,0000400<br>4,0000400<br>2,2000401<br>2,2000401<br>2,2000401<br>2,2000401<br>2,2000401<br>2,2000401<br>2,2000401<br>2,2000401<br>3,2000401<br>3,2000401<br>3,2000401 | 1.15126-01<br>1.27166-01<br>1.38156-01<br>1.50000-01<br>1.556716-01<br>1.55676-01<br>1.55676-01<br>1.611816-01<br>1.76246-01<br>1.7626-01<br>1.7626-01<br>1.9126-01<br>1.9126-01 | 2.054.6407<br>1.0105.6407<br>5.69978+05<br>3.20978+05<br>2.105078+05<br>1.752.8405<br>1.52548+05<br>1.35028+05<br>8.17978-05<br>6.900708+05<br>4.85338+05<br>4.85338+05<br>2.71898+05<br>1.872838+05<br>1.872838+05<br>8.882018+04 | 2222222223333333         | 000000000000000000000000000000000000000 | 11<br>12<br>13<br>14<br>15<br>16<br>17<br>18<br>19<br>20<br>20<br>20<br>20<br>20<br>20<br>20<br>20<br>20<br>20<br>20<br>20<br>20 | 1.00000+00<br>1.00000+00<br>1.00000+00<br>1.00000+00<br>1.00000+00<br>1.00000+00<br>1.00000+00<br>1.00000+00<br>1.00000+00<br>1.00000+00<br>1.00000+00<br>1.00000+00<br>1.00000+00<br>1.00000+00<br>1.00000+00 |                                           |
|-----|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 1   |                                                    |                                                                                                                                                                                                                                                                                            | 1040 d, se                                                                                                                                                                       | condipart of                                                                                                                                                                                                                       |                          | o previona Library                      |                                                                                                                                  |                                                                                                                                                                                                                |                                           |
| Ò   |                                                    | mixture                                                                                                                                                                                                                                                                                    | order p(l)                                                                                                                                                                       | activity                                                                                                                                                                                                                           | table                    |                                         | ductature or                                                                                                                     |                                                                                                                                                                                                                |                                           |
|     | _                                                  | by zone                                                                                                                                                                                                                                                                                    | by zone<br>3                                                                                                                                                                     | antino.                                                                                                                                                                                                                            | reaction                 | Heights                                 | directions                                                                                                                       | refl_direc                                                                                                                                                                                                     | MC X cos                                  |
|     | 1                                                  | 3                                                                                                                                                                                                                                                                                          | ş                                                                                                                                                                                |                                                                                                                                                                                                                                    |                          | 2 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | -2.75004E-01<br>-1.97286E-01                                                                                                     | 3<br>3                                                                                                                                                                                                         | 0<br>-9.98548E-03                         |
|     | 3                                                  | Ž<br>3                                                                                                                                                                                                                                                                                     | 3<br>3<br>3                                                                                                                                                                      |                                                                                                                                                                                                                                    |                          | 5.05 KE-02                              |                                                                                                                                  | ž                                                                                                                                                                                                              | 9.98548E-03                               |
|     | 4                                                  | 1                                                                                                                                                                                                                                                                                          | 3                                                                                                                                                                                |                                                                                                                                                                                                                                    |                          | 0                                       | -6.0419E-01                                                                                                                      | 8                                                                                                                                                                                                              | 0                                         |
|     | 5                                                  |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                  |                                                                                                                                                                                                                                    |                          |                                         | -5.58×10E-01                                                                                                                     | 8                                                                                                                                                                                                              | -3.1030E-02                               |
|     | ٩                                                  |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                  |                                                                                                                                                                                                                                    |                          | 5.55953E-02                             | -2.31301E-01                                                                                                                     | 7<br>6                                                                                                                                                                                                         | -1,26575E-02<br>1,26575E-02               |
|     | 234567891011                                       |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                  |                                                                                                                                                                                                                                    |                          | 5.5575E-02                              | 5.58410E-01                                                                                                                      | 5                                                                                                                                                                                                              | 3.1030E-02                                |
|     | ğ                                                  |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                  |                                                                                                                                                                                                                                    |                          | 0                                       | -8.50774E-01                                                                                                                     | 15                                                                                                                                                                                                             | 0                                         |
|     | 10                                                 |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                  |                                                                                                                                                                                                                                    |                          |                                         | -8.2178/E-01                                                                                                                     | 15                                                                                                                                                                                                             | -4.2065E-02                               |
|     | 11                                                 |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                  |                                                                                                                                                                                                                                    |                          |                                         | -6.0158BE-01                                                                                                                     | ¥.                                                                                                                                                                                                             | -3.14537E-02<br>-1.1512 <del>5E</del> -02 |
|     | K                                                  |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                  |                                                                                                                                                                                                                                    |                          | 5.225/E-02                              | -2.20199E-01<br>2.20199E-01                                                                                                      | 13<br>12                                                                                                                                                                                                       | 1.1512E-02                                |
|     | 13 14 14 13 14 14 14 14 14 14 14 14 14 14 14 14 14 |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                  |                                                                                                                                                                                                                                    |                          | 5.2284E-02                              | 6,01589E-01                                                                                                                      | រា                                                                                                                                                                                                             | 3.14537E-02                               |
|     | 15                                                 |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                  |                                                                                                                                                                                                                                    |                          | 5.2284E-02                              | 8.2178/E-01                                                                                                                      | 10                                                                                                                                                                                                             | 4.206E-02                                 |
|     | 16                                                 |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                  |                                                                                                                                                                                                                                    |                          | , _0                                    | -9.8305XE-01                                                                                                                     | 24                                                                                                                                                                                                             | , 3700                                    |
|     | 17                                                 |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                  |                                                                                                                                                                                                                                    |                          |                                         | -9,64143E-01<br>-8,17361E-01                                                                                                     | 24<br>25<br>27<br>27                                                                                                                                                                                           | -4.37099E-02<br>-3.7088E-02               |
|     | 10                                                 |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                  |                                                                                                                                                                                                                                    |                          |                                         | -5.46143E-01                                                                                                                     | <b>2</b> 2                                                                                                                                                                                                     | -2.47597E-02                              |
|     | ä                                                  |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                  |                                                                                                                                                                                                                                    |                          |                                         | -1.91780E-01                                                                                                                     | 21                                                                                                                                                                                                             | -8.6944E-03                               |
|     | 21                                                 |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                  |                                                                                                                                                                                                                                    |                          | 4.5336E-02                              | 1.917802-01                                                                                                                      | 20                                                                                                                                                                                                             | 8.69WE-03                                 |
|     | BPRKKK                                             |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                  |                                                                                                                                                                                                                                    |                          | 4,53355-02                              | 5,46143E-01<br>8,17361E-01                                                                                                       | 19<br>18                                                                                                                                                                                                       | 2,47597E-02<br>3,70555E-02                |
|     | 2                                                  |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                  |                                                                                                                                                                                                                                    |                          |                                         | 9.641436-01                                                                                                                      | 17                                                                                                                                                                                                             | 4.37099E-02                               |
| Occ |                                                    | nts for p(3)                                                                                                                                                                                                                                                                               | ecetterina                                                                                                                                                                       |                                                                                                                                                                                                                                    |                          | 71.XXX. 42                              | 73017-01                                                                                                                         | ••                                                                                                                                                                                                             | 727.07.2                                  |
| Çar | ol                                                 | set 1                                                                                                                                                                                                                                                                                      | set 2                                                                                                                                                                            | set 3                                                                                                                                                                                                                              | set 4                    | set 5                                   |                                                                                                                                  |                                                                                                                                                                                                                |                                           |
|     |                                                    | -2.7900Æ-01                                                                                                                                                                                                                                                                                |                                                                                                                                                                                  |                                                                                                                                                                                                                                    | -6.16919E-01             |                                         |                                                                                                                                  |                                                                                                                                                                                                                |                                           |
|     | 2                                                  | -1.97289E-01                                                                                                                                                                                                                                                                               | 8.8325E-01<br>8.8325E-01                                                                                                                                                         |                                                                                                                                                                                                                                    | 4.3622E-01<br>4.3622E-01 | 1,21/11E-02<br>-1,21/11E-02             |                                                                                                                                  |                                                                                                                                                                                                                |                                           |
|     | 4                                                  | -6.0419E-01                                                                                                                                                                                                                                                                                | 4.52016E-01                                                                                                                                                                      |                                                                                                                                                                                                                                    | -8.04430E-01             |                                         |                                                                                                                                  |                                                                                                                                                                                                                |                                           |
|     | 3                                                  | -5.58410E-01                                                                                                                                                                                                                                                                               | 4.520KE-01                                                                                                                                                                       | 2,257VE-01                                                                                                                                                                                                                         | -7.43201E-01             | -6.6802E-02                             |                                                                                                                                  |                                                                                                                                                                                                                |                                           |
|     | 6                                                  | -2.31301E-01                                                                                                                                                                                                                                                                               | 4.52016E-01                                                                                                                                                                      | •2.25/13E-01<br>•2.25/13E-01                                                                                                                                                                                                       | -3.078/4E-01             | 1.6127Œ-01                              |                                                                                                                                  |                                                                                                                                                                                                                |                                           |
|     | 7<br>8                                             | 2.31301E-01<br>5.58410E-01                                                                                                                                                                                                                                                                 | 4.52016E-01                                                                                                                                                                      | 2.2713-01                                                                                                                                                                                                                          | 7.43201E-01              | 6.68028E-02                             |                                                                                                                                  |                                                                                                                                                                                                                |                                           |
|     |                                                    | -8.50774E-01                                                                                                                                                                                                                                                                               |                                                                                                                                                                                  |                                                                                                                                                                                                                                    |                          | -4.86EE-01                              |                                                                                                                                  |                                                                                                                                                                                                                |                                           |
|     | 10                                                 | -8.2178/E-01                                                                                                                                                                                                                                                                               | -8.5725E-02                                                                                                                                                                      | 5.42862E-01                                                                                                                                                                                                                        | -1.91694E-01             | -3.44265E-01                            |                                                                                                                                  |                                                                                                                                                                                                                |                                           |
|     | 11                                                 | -6.0150E-01                                                                                                                                                                                                                                                                                | -8.5725E-02                                                                                                                                                                      | 0000E+00                                                                                                                                                                                                                           | -1.40530E-01             | 3.4434E-01                              |                                                                                                                                  |                                                                                                                                                                                                                |                                           |
|     | 12                                                 | -2.2019/E-01                                                                                                                                                                                                                                                                               | -6.3/25E-02                                                                                                                                                                      | -5.428XE-01                                                                                                                                                                                                                        | 7.13XE-12                | 3.4424SE-01                             |                                                                                                                                  |                                                                                                                                                                                                                |                                           |
|     | ٠                                                  | LWIKEVI                                                                                                                                                                                                                                                                                    | THE TE                                                                                                                                                                           | VI                                                                                                                                                                                                                                 | ~                        |                                         |                                                                                                                                  |                                                                                                                                                                                                                |                                           |

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 16 -9.83082E-01 -4.4952E-01 8.368EE-01 5.00708E-01 -7.51008E-01
 17 -9.64 K3E-01 -4.49528E-01 7.73181E-01 4.91083E-01 -6.2433E-01
 18 - 8, 1736 E-01 - 4,4452 E-01 3,203 E-01 4,162 E-01 1,461 E-01 19 - 5,461 E-01 - 4,4452 E-01 - 3,203 E-01 2,781 RE-01 7,367 E-01
 20 -1,9170E-01 -4,49528E-01 -7,73181E-01 9,76524E-02 4,17256E-01 1,91700E-01 -4,49528E-01 -7,73181E-01 -9,76524E-02 -4,17256E-01
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 2,79549E+00 1,10567E-01
 3.052556+00 1.196925-01
 2.57062-00 2.6825-00 1.6558-01 3.27221-00 1.28923-01 2.76523-00 2.81658-00 1.75781-01 1.75878-00 6.78678-02 2.86348-00 2.91220-00 1.76918-01 1.76578-00 7.0808-02
 28
 2.96100E+00
 1,85065E+01
 1040 d, second part of see2h pass to make Library
O total flux
0 int. gp. 1 gp. 2 gp. 3 gp. 4 gp. 5 gp. 6 gp. 7 gp. 8
1 1,3063ie-02 9,11126e-02 1,127/0e-01 6,5055e-02 1,0278e-01 1,5285e-01 1,5106e-01 1,5785e-01 2 1,30578e-02 9,10612e-02 1,1265e-01 6,5087e-02 1,0273e-01 1,5278e-01 1,5206e-01 1,5788e-01
 3 1,30366-02 9,10703-02 1,1266-01 6,90332-02 1,027676-01 1,92768-01 1,93176-01 1,7038-01 4 1,30638-02 9,16538-02 1,12780-01 6,91336-02 1,02878-01 1,930316-01 1,98278-01 1,7068-01
 5 1.3077E-02 9.1277E-02 1.1275E-01 6.9266E-02 1.08115E-01 1.9530E-01 1.9521E-01 1.47112E-01
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| 6         | . 1.30%Æ-02       | 9.1 <del>493(E</del> -02 | 1,133/52-01  | 6.94497E-02             | 1.03410E-01                             | 1.93978E-01              | 1.95859E-01              | 1,47169E-01             |
|-----------|-------------------|--------------------------|--------------|-------------------------|-----------------------------------------|--------------------------|--------------------------|-------------------------|
| 7         | 1.31160E-02       | 9.174XX=02               | 1.135991E-01 | 6.96879E-02             | 1.037893-01                             | 1.94694E-01              | 1.94300E-01              | 1.47238E-01             |
| 8         | 1.31417E-02       | 9.20575E-02              | 1.14081E-01  | 6.99753E-02             | 1.0/30E-01                              | 1.95633E-01              | 1.94877E-01              | 1.47521E-01             |
| ģ         | 1.3163/E-02       | 9.2330E-02               | 1.14426E-01  | 7.02773E-02             | 1.0477 E-01                             | 1.96495E-01              | 1.95411E-01              | 1,47391E-01             |
| 10        | 1.31782E-02       | 9.25480E-02              | 1.1475XE-01  | 7.0525/E-02             | 1.0519XE-01                             | 1.972525-01              | 1.958981-01              | 1.47439E-01             |
| . ii      | 1.31909E-02       | 9.27279E-02              | 1.150B1E-01  | 7.07340E-02             | 1.0545E-01                              | 1.97957E-01              | 1.963192-01              | 1.4748/E-01             |
|           | 1.32041E-02       | 9.28511E-02              | 1.520E-01    | 7.08/2/E-02             | 1.0571SE-01                             | 1.98294E-01              | 1.96518E-01              | 1,475295-01             |
| £ 15      | 1.323XE-02        | 9.31039E-02              | 1.15479E-01  | 7.09799E-02             | 1.05904E-01                             | 1.98532E-01              | 1.96709E-01              | 1.4759XE-01             |
| ŭ         | 1.32739E-02       | 9.3%00E-02               | 1.5980E-01   | 7.1252-02               | 1.05278E-01                             | 1.99290E-01              | 1.97089 01               | 1.47689E-01             |
| 윰         | 1.33229E-02       | 9.398825-02              | 1.16555      | 7.162185-02             | 1.06874E-01                             | 2.00661E-01              | 1.977192-01              | 1.47790E-01             |
| 16        | 1.337895-02       | 9.47851E-02              | 1.175735-01  | 7.22 <del>60E</del> -02 | 1.07888E-01                             | 2.02200E-01              | 1.98805E-01              | 1,47960E-01             |
| <b>17</b> | 1.3473E-02        | 9.5577SE-02              | 1.18590E-01  | 7.29151E-02             | 1.089176-01                             | 2.04091E-01              | 1.9994Œ-01               | 1.48157E-01             |
| 18        | 1.35352E-02       | 9.62197E-02              | 1.1942/E-01  | 7.3/50E-02              | 1.097825-01                             | 2.05724E-01              | 2.00960E-01              | 1,48361E-01             |
| 19        | 1.35850E-02       | 9.67892E-02              | 1.201725-01  | 7.373/25-02             | 1.10571E-01                             | 2.07248E-01              | 2.09252-01               | 1.48573E-01             |
| ž         | 1.3615/E-02       | 9.71309E-02              | 1.20628E-01  | 7.425XE-02              | 1.1105/E-01                             | 2.08229E-01              | 2.02562E-01              | 1.487285-01             |
| ะสั       | 1.36343E-02       | 9.7505E-02               | 1.20927E-01  | 7.428/E-02              | 1.11392E-01                             | 2.0889E-01               | 2.0300Æ-01               | 1.4884E-01              |
| 22        | 1.346/E-02        | 9.74953E-02              | 1.21125E-01  | 7.45592E-02             | 1.11613E-01                             | 2.075625-01              |                          |                         |
| 2         | 1.366/E-02        | 9.75851E-02              | 1.212×E-01   |                         |                                         |                          | 2.033192-01              | 1.48931E-01             |
|           |                   |                          |              | 7,46/SOE-02             | 1.11760E-01                             | 2.09678E-01              | 2.08536E-01              | 1.48935E-01             |
| 24        | 1.368XE-02        | 9.76397E-02              | 1.21332E-01  | 7.4075E-02              | 1.11851E-01                             | 2.09879E-01              | 2.06676E-01              | 1,490BBE-01             |
| 2         | 1.360E-02         | 9.76647E-02              | 1.21369E-01  | 7.4725E-02              | 1.11899E-01                             | 2.077825-01              | 2.057492-01              | 1.49050E-01             |
| <u>~</u>  | 1.36598E-02       | 9.7651/E-02              | 1.21367E-01  | 7.47212E-02             | 1.11879E-01                             | 2.07770E-01              | 2.057565-01              | 1.49057E-01             |
| 27        | 1.3681E-02        | 9.76412=-02              | 1.2134E-01   | 7.47057E-02             | 1.1186E-01                              | 2.0 <del>7730E</del> -01 | 2.05719E-01              | 1.4903E-01              |
|           | 1.36555E-02       | 9.76115E-02              | 1.21301E-01  | 7. <i>H8TTZ</i> E-02    | 1.11822 - 01                            | 2.0984E-01               | 2.08656E-01              | 1.49023E-01             |
| 0 int.    | gp. 9             | grp. 10                  | grp. 11      | gp. 12                  | gp. 13                                  | grp. 14                  | grp. 15                  | grp. 16                 |
| 1         | 1.15991E-01       | 1.07257E-01              | 1.01033E-01  | 6.5513XE-02             | 5.57119E-02                             | 5.31478E-02              | 2.87529E-02              | 1.5 <del>056E</del> -02 |
| 2         | 1.15971E-01       | 1,07239E-01              | 1.01039E-01  | 6.55185E-02             | 5.59168E-02                             | 5.31550E-02              | 2.8853E-02               | 1.5989E-02              |
| 3         | 1.15989E-01       | 1.07230E-01              | 1.01019E-01  | 6.5404E-02              | 5.58941E-02                             | 5.31213E-02              | 2.89265E-02              | 1.59829E-02             |
| 4         | 1.15980E-01       | 1.07209E-01              | 1.0097Œ-01   | 6.50371E-02             | 5.50373E-02                             | 5,3000E-02               | 2.89120E-02              | 1.59735E-02             |
| 5         | 1.15979E-01       | 1.07176E-01              | 1.00879E-01  | 6.534/SE-02             | 5.575 <del>64E</del> -02                | 5.2016E-02               | 2.89973E-02              | 1.5959/E-02             |
| 6         | 1.15969E-01       | 1.07132E-01              | 1.00793E-01  | 6.52501E-02             | 5.5544E-02                              | 5.274XE-02               | 2.85548E-02              | 1.59X05E-02             |
| 7         | 1.15958E-01       | 1.07074E-01              | 1.0058E-01   | 6.50757E-02             | 5.54981E-02                             | 5,25300E-02              | 2.88136E-02              | 1.5916EE-02             |
| 8         | 1.59X5-01         | 1.08996E-01              | 1.00×80E-01  | 6,48677E-02             | 5.5306/E-02                             | 5.23×26E-02              | 2.87618E-02              | 1.58556E-02             |
| 9         | 1.595E-01         | 1.039225-01              | 1.00313E-01  | 6,46753E-02             | 5.512EE-02                              | 5.1974E-02               | 2.8752 - 02              | 1.58573=-02             |
| 10        | 1.1575Œ-01        | 1.06853E-01              | 1.00758E-01  | 6.ASODE-02              | 5.4967Æ-02                              | 5.1730E-02               | 2.86745E-02              | 1.58520E-02             |
| 11        | 1.15%ZE-01        | 1.05799E-01              | 1.005Æ-01    | 6.43630E-02             | 5.483XE-02                              | 5.1538E-02               | 2.86380E-02              | 1.5810E-02              |
| 12        | 1.157585-01       | 1.0577E-01               | 9.9988E-02   | 6.4309/E-02             | 5.A7870E-02                             | 5.16KE-02                | 2.8519/E-02              | 1.5800E-02              |
| 13        | 1.158838-01       | 1.05753E-01              | 9.99274E-02  | 6.AZZZOE-02             | 5.47117E-02                             | 5.1346E-02               | 2.85027E-02              | 1.57901E-02             |
| 14        | 1.58235-01        | 1.06690E-01              | 9.97850E-02  | 6.40480E-02             | 5.4553/E-02                             | 5.11008E-02              | 2.85% E-02               | 1.57695E-02             |
| 5         | 1.15748E-01       | 1.03587E-01              |              | 6.37679E-02             | 5.4305/E-02                             | 5.07K8E-02               | 2.53332-02               | 1.57373E-02             |
| 16        | 1.1564/E-01       | 1.06416E-01              | 9.91649E-02  | 6.33054E-02             | 5.38918E-02                             | 5.00737E-02              | 2.8576E-02               | 1.56825E-02             |
| 17        | 1.1555 E-01       | 1.062/8E-01              | 9.8778/E-02  | 6.2831E-02              | 5.3X747E-02                             | 4.9236E-02               | 2.867E-02                | 1.56230E-02             |
| 18        | 1.54898-01        | 1.06105E-01              | 9.847XE-02   | 6.2%8/E-02              | 5.31103E-02                             | 4.85787E-02              | 2.82707E-02              | 1.5565/E-02             |
| 19        | 1.1533E-01        | 1.05973E-01              | 9.8139Œ-02   | 6.20809E-02             | 5.276XE-02                              | 4.8365 E-02              | 2.8168/E-02              | 1.55071E-02             |
| 20        | 1.15409E-01       | 1.05890E-01              | 9.7X0E-02    | 6.18437E-02             | 5.ZXXE-02                               | 4.80529E-02              | 2,80916E-02              | 1.54651E-02             |
| <u>21</u> | 1.15397E-01       | 1.058338-01              | 9.78018E-02  | 6.1678XE-02             | 5.2780E-02                              | 4.7801SE-02              | 2.833ZE-02               | 1,5339E-02              |
| 22        | 1.539E-01         | 1.0578E-01               | 9.77051E-02  | 6.15616E-02             | 5.23927E-02                             | 4.7636ZE-02              | 2.79888 -02              | 1.54105E-02             |
| 23        | 1.5386-01         | 1.05765E-01              | 9.76331E-02  | 6.14782E-02             | 5.21803E-02                             | 4.75187E-02              | 2.775CE-02               | 1.5385E-02              |
| 24        | 1.538E-01         | 1.05746E-01              | 9.7585/E-02  | 6.1421KE-02             | 5.21Z39E-02                             | 4.74387E-02              | 2.7936E-02               | 1.53818E-02             |
| 25        | 1.538/E-01        | 1.0573/E-01              | 9.7569E-02   | 6.13576E-02             | 5.2090Œ-02                              | 4.73912E-02              | 2.79210E-02              | 1.53752E-02             |
| 24        | 1.5381E-01        | 1.057306-01              | 9.7547E-02   | 6.13767E-02             | 5.2000000000000000000000000000000000000 | 4.737602-02              | 2.79191E-02              | 1.53741E-02             |
| Z         | 1.537E-01         | 1.057525-01              | 9.755E-02    | 6.1383/E-02             | 5.20887E-02                             | 4.738STE-02              | 2.798Æ-02                | 1.5376XE-02             |
| 28        | 1.537E-01         | 1.05730E-01              | 9.7500000    | 6.14018E-02             | 5.21083E-02                             | 4.74137E-02              | 2.735472-02              | 1.538205-02             |
| 0 int     | grp. 17           | 5,1567/E-05              | gp. 19       | 572. 20<br>3.48008E-02  | gp. 21                                  | 37.22 m                  | gp. 23                   | 6.11489E-02             |
| 1         | 6.9469E-0B        |                          | 1.03522-02   | JACOUS-UZ               | 1.077598-02                             | 2.19647E-02              | 7.43973E-02              | 0.1 MOXE-U2             |
| 2         | 6.928E-03         | 5.19839E-05              | 1.0557E-02   | 3.48631E-02             | 1.0772Œ-02                              | 2.1966E-02               | 7.43925E-02              | 6.11342E-02             |
| ş         | 6.9300E-03        | 5.14951E-05              | 1.047E-02    | 3.488E-02               | 1.07613E-02                             | 2.19309E-02              | 7.42767E-02              | 6.101 DE-02             |
|           | 6.95057E-03       | 5.12816E-05              | 1.031/E-02   | 3.45537E-02             | 1.07553E-02                             | 2.18//BE-02              | 7.40220E-02              | 6.07472E-02             |
| 5         | 6.91774E-03       | 5.095326-05              | 1.04077E-02  | 3.47810E-02             | 1.05961E-02                             | 2.172786-02              | 7.364XE-02               | 6.05635-02              |
| 6         | <b>6.5083E-03</b> | 5.05026E-05              | 1.037548-02  | 3.47125-02              | 1.06429E-02                             | 2.15630E-02              | 7.3141E-02               | 5.98368E-02             |
| 7         | 6.8775TE-03       | 4.99051E-03              | i.wxx.w      | 3.46253E-02             | 1.05750E-02                             | 2.134826-02              | 7.2 <del>//</del> 98E-02 | 5.91743E-02             |

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8 6.87XE-03 4.91057E-03 1.0279E-02 3.4508E-02 1.0482E-02 2.1057E-02 7.1687E-02 5.85441E-02 9 6.819XE-03 4.853E-03 1.0279E-02 3.4408E-02 1.0877E-02 2.087XE-02 5.7603E-02 5.85441E-02 10 6.773YE-03 4.7657E-03 1.0477E-02 3.423YE-02 1.087XE-02 2.057XE-02 7.083XE-02 5.65XE-02 11 6.773YE-03 4.7507E-03 1.0477E-02 3.423YE-02 1.027XE-02 2.057XE-02 6.986XE-02 5.65XF-02 12 6.7657E-03 4.6944E-03 1.01527E-02 3.423YE-02 1.027XE-02 2.057XE-02 6.972XE-02 5.643YE-02 1.01527E-02 1.027XE-02 2.057XE-02 6.972XE-02 5.643YE-02 1.01527E-02 3.443YE-02 1.027XE-02 2.057XE-02 6.972XE-02 5.643YE-02 1.072XE-03 4.583YE-03 1.009XE-02 3.443YE-02 1.027XE-02 1.977XE-03 6.853YE-02 5.543YE-02 1.6647YE-03 4.55YYE-03 1.009XE-02 3.3757YE-02 1.000XE-02 1.977XE-02 6.853YE-02 5.543YE-02 16 6.6199XE-03 4.257YE-03 9.873XE-03 3.3757YE-02 9.797YE-03 1.865YE-02 6.517XE-02 5.325YE-02 17 6.553YE-03 4.015XE-03 9.77XXE-03 3.350YE-02 9.797YE-03 1.865YE-02 6.517XE-02 5.187XE-02 18 6.477YE-03 3.865YE-03 9.873XE-03 3.350YE-02 9.979YE-03 1.855YE-02 6.517XE-02 5.187XE-02 18 6.477YE-03 3.865YE-03 9.575XE-03 3.350YE-02 9.579XE-03 1.735XE-02 6.517XE-02 5.08YE-02 19 6.447YE-03 3.647YE-03 9.575XE-03 3.30YE-02 9.27YYXE-03 1.735XE-02 6.250YE-02 4.87YYE-02 1.477YE-03 1.735XE-02 6.250YE-02 4.87YYE-02 1.47YYE-03 1.735XE-02 6.35YXE-02 5.08YYE-02 19 6.447YE-03 3.647YE-03 9.575XE-03 3.30YYE-02 9.27YYXE-03 1.735XE-02 6.250YE-02 4.87YYE-02 10 6.447YYE-03 3.647YE-03 9.575XE-03 3.30YYE-02 9.27YYXE-03 1.735XE-02 6.250YE-02 4.87YYE-02 10 6.447YYE-03 3.647YYE-03 9.575XE-03 3.30YYE-02 9.27YYXE-03 1.73YXE-02 6.250YE-02 4.87YYE-02 10 6.447YYE-03 3.647YYE-03 9.575XE-03 3.30YYYE-02 9.27YYXE-03 1.73YYXE-02 6.250YE-02 4.87YYE-02 10 6.447YYE-03 3.647YYE-03 9.575XE-03 3.30YYYE-02 9.27YYXE-03 1.73YYE-02 6.250YE-02 4.87YYE-02 10 6.447YYE-03 3.647YYE-03 3.647YYE-03 3.289YYE-02 9.27YYXE-03 1.73YYE-02 6.250YE-02 4.87YYE-02 10 6.447YYE-03 1.747YYE-03 20 6.407/7E-03 3.64197E-03 9.5089E-03 3.2898E-02 9.1704E-03 1.7080E-02 6.1549/E-02 4.8350E-02
 20 6.400.x=03 3.64195E-05 9.5050E-05 3.2839E-02 9.090.x=03 1.6617E-02 6.0503E-02 4.7632E-02 26.3502E-03 3.5950E-05 9.4270E-05 3.2839E-02 9.090.x=03 1.6617E-02 6.0503E-02 4.7632E-02 26.3502E-03 3.5970E-05 9.4270E-05 3.2839E-02 9.0603E-03 1.6650E-02 5.9859E-02 4.7071E-02 26.3502E-03 3.5370E-05 9.4000E-03 3.2839E-02 9.01177E-03 1.6650E-02 5.9859E-02 4.5702E-02 26.3502E-03 3.5371E-05 9.3502E-03 3.2637E-02 8.9603E-03 1.6600E-02 5.9859E-02 4.6302E-02 26.3502E-03 3.5102IE-05 9.3752E-03 3.2607E-02 8.9603E-03 1.6000E-02 5.9850E-02 4.63102E-02 27 6.3362E-03 3.5102IE-05 9.3753E-03 3.2607E-02 8.9603E-03 1.6000E-02 5.9850E-02 4.63102E-02 27 6.3362E-03 3.5102IE-05 9.3770E-03 3.2607E-02 8.9603E-03 1.6000E-02 5.9850E-02 4.6300E-02 28 6.3607E-03 3.51057E-05 9.3770E-03 3.2607E-02 8.9603E-03 1.6000E-02 5.9850E-02 4.6300E-02 28 6.3607E-03 3.51057E-03 9.3770E-03 3.2607E-02 8.9700E-03 1.6000E-02 5.9850E-02 4.6300E-02 28 6.3607E-03 3.51057E-03 9.3770E-03 3.2607E-02 8.9700E-03 1.6000E-02 5.9850E-02 4.6300E-02 28 6.3607E-03 3.51057E-03 9.3770E-03 3.2607E-02 8.9700E-03 1.6000E-02 5.9800E-02 4.6300E-02 28 6.3607E-03 3.51057E-03 9.3770E-03 3.2607E-02 8.9700E-03 1.6000E-02 5.9800E-02 4.6300E-02 28 6.3607E-03 3.51057E-03 9.3770E-03 3.2600E-02 8.9700E-03 1.6000E-02 5.9800E-02 4.6300E-02 28 6.3607E-03 3.5100E-02 8.9700E-03 1.6000E-02 5.9800E-02 4.6300E-02 28 6.3607E-03 3.5100E-02 8.9700E-03 1.6000E-02 5.9800E-02 4.6300E-02 28 6.3607E-03 3.5100E-02 8.9700E-03 1.6000E-02 5.9800E-02 4.6300E-02 28 6.3600E-03 8.9700E-03 1.6000E-02 5.9800E-02 4.6300E-02 28 6.3600E-03 8.9700E-03 1.6000E-02 5.9800E-02 4.6300E-02 28 6.3600E-03 8.9700E-03 1.6000E-02 5.9800E-02 4.6300E-02 28 6.3600E-03 8.9700E-03 1.6000E-02 5.9800E-02 4.6300E-02 28 6.3600E-03 8.9700E-03 1.6000E-02 5.9800E-02 4.6300E-02 8.9700E-03 1.6000E-02 5.9800E-02 4.6300E-02 8.9700E-03 1.6000E-02 5.9800E-02 4.6300E-02 8.9700E-03 1.6000E-02 5.9800E-02 4.6300E-02 8.9700E-03 1.6000E-02 5.9800E-02 4.6300E-02 8.9700E-03 1.6000E-02 5.9800E-02 4.6300E-02 8.9700E-03 1.6000E-02 5.9800E-02 5.9800E-02 4.6300E-
28 6.3427E-03 3.5157E-03 9.379/E-03 0 int. 95p. 25 9p. 26 9p. 27 1 2.768/E-02 1.990/E-02 3.769/E-03 2 2.763/E-02 1.990/E-02 3.769/E-03 3 2.768/E-02 1.990/E-02 3.769/E-03 3 2.768/E-02 1.990/E-02 3.769/E-03 5 2.768/E-02 1.969/E-02 3.769/E-03 6 2.669/E-02 1.969/E-02 3.769/E-03 6 2.669/E-02 1.969/E-02 3.769/E-03 6 2.600/E-02 1.896/E-02 3.516/E-03 6 2.600/E-02 1.896/E-02 3.336/E-03 11 2.526/E-02 1.896/E-02 3.336/E-03 11 2.526/E-02 1.769/E-02 3.325/E-03 12 2.5217/E-02 1.769/E-02 3.325/E-03 12 2.5217/E-02 1.769/E-02 3.25/E-03 14 2.476/E-02 1.769/E-02 3.25/E-03 14 2.476/E-02 1.769/E-02 3.25/E-03 14 2.476/E-02 1.769/E-02 3.25/E-03 15 2.420/E-02 1.65/E-02 3.05/0/E-03 16 2.346/E-02 1.65/E-02 2.65/E-03 18 2.716/E-02 1.465/E-02 2.65/E-03 18 2.716/E-03 1.465/E-02 2.65/E-03 18 2.716/E-03 1.465/E-02 2.65/E-03 18 2.716/E-03 1.465/E-02 2.65/E-03 18 2.716/E-03 1.465/E-02 2.65/E-03 18 2.716/E-03 1.465/E-02 2.65/E-03 18 2.716/E-03 1.465/E-02 2.65/E-03 18 2.716/E-03 1.465/E-02 2.65/E-03 18 2.716/E-03 1.465/E-03 1.465/E-03 18 2.716/E-03 1
 19 2.486±02 1.455±02 2.4315±03
20 2.0767±02 1.3867±02 2.5575±03
21 2.0654±02 1.3672±02 2.3105±03
 21 2.0556-02 1.36926-02 2.37656-03 2 2.0608-02 1.3696-02 2.27665-03 2.01638-02 1.3368-02 2.25896-03 2.00276-02 1.31736-02 2.25896-03 2.158756-02 1.31736-02 2.27846-03 2.158756-02 1.31736-02 2.27846-03 2.158756-02 1.31736-02 2.27846-03 2.27846
 28 1,98661E-02 1.31221E-02 2.21593E-03
 - elapsed time .02 min.
 If ire grap smary for zone 1 by grap including sun for all graps in line 28
 1 mg grap summy for zero 1 by grap including sum for all graps in the 20 gp., fix source fiss source in scatter all scatter all scatter absorption leakage balance
1 .00000000 .000000000 5.0000000 5.0000000 8.1254000 1.7675200 -7.254200 9.99950000
2 .00000000 .00000000 3.8546000 6.1852700 8.12540000 1.7675200 -7.9194200 9.9996000
3 .00000000 .00000000 3.8546000 5.4755000 1.2545000 9.2547700 -1.047600 9.999780000
4 .0000000 .0000000 5.00190000 3.854500 1.2545000 9.2547700 -1.047600 9.99978000
5 .00000000 .0000000 1.0284000 1.0284000 2.09978000 9.999780000000 9.9997800 9.9997800 9.9
 .0000E+00 2.1530/E-02 3.4506/E-02 4.1011/E-02 8.4313/E-05 -1.956/E-02 9.9999/E-01
 .0000E+00
 .0000E+00 4.22619E-02 6.09831E-02 5.4148/E-02 6.125/4E-05 -1.1947/E-02 9.99987E-01
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8 0000-00 0000-00 5,877E-02 7,877E-02 5,877E-02 1,467E-02 5,477E-02 5,877E-02 1,467E-03 5,877E-03 1,477E-03 5,477E-03 8 .00000E+00
 .0000E+00 5.6377E-02 7.8379E-02 5.8770E-02 3.64181E-05 -2.42432E-03 9.99912E-01
 .0000E+00 6.745E-04 1.25776E-02 6.3522E-05 2.6822E-05 5.8430E-04 9.9999E-01
 .0000E+00 1.1764/E-04 9.2114/E-08 4.4355/E-04 2.21210E-05 -3.4807/E-04 1.0000E+00
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9 .00018-0 .00018-0 .4.6008-0 .6.2598-0 5.3008-0 7.6898-0 1.5008-0 9.9998-0 1 0.00018-0 .00018-0 5.3168-0 4.9908-0 5.5008-0 5.908-0 5.908-0 5.0008-0 1 0.0008-0 .0008-0 5.0008-0 5.2608-0 5.2608-0 5.6
 .0000E+00 4.4540Æ-04 6.3659Æ-03 5.3050Æ-05 7.6762Æ-05 3.5607E-04 9.9997Æ-01 .0000E+00 5.3116Æ-05 4.9940Œ-03 4.9549Æ-05 5.941Æ-05 -5.5246Æ-05 1.0000Œ+00
 .0000E+00
 .0000F+00
 .00000e+00 3.04366E-02 3.80164E-02 3.01069E-02 1.53275E-05 3.1929E-04 9.9980E-01
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.0000E+00
 .0000E+00 2.97K6E-02 3.6K53E-02 2.90K8E-02 1.88K6E-05 8.5200E-04 9.9990E-01 "
 .0000E+00 2.92117E-02 3.41197E-02 2.77397E-02 2.86907E-05 1.9490E-03 9.9994/E-01
 .00000E+00
 .00000+00 2.3627E-02 1.8728E-02 2.1388E-02 3.1218E-05 2.2857E-03 9.5998E-01 .00000+00 2.1027E-02 1.47218E-02 1.8877E-02 4.36108E-05 2.0800E-03 9.5997E-01 .0000E+00 2.0870E-02 1.4358E-02 1.7128E-02 6.9833E-05 3.17721E-03 9.5999TE-01 .0000E+00 1.1072E-02 5.62012E-03 1.0528E-02 5.8313E-05 4.8642E-04 1.0000E+00
 .0000E+00
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.0000E+00 9.7602E-04 6.7656E-01 1.3730E+00 6.580E-01 2.1539E-02 -8.7692E-04 9.9989E-01 .0000E+00 7.21551E-05 6.5589E-01 1.2508E+00 6.2579E-01 3.24757E-02 -2.2398E-03 9.9990E-01
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11 .00000E+00 5.67662E-06 6.2978/E-01 1.16619E+00 5.81763E-01 5.33410E-02 -5.27941E-03 9.999/SE-01
 .0000E+00 3.9877&-07 5.0666E-01 6.3755E-01 4.5447E-01 5.8540EE-02 -6.3366E-03 9.9977&E-01
$\frac{1}{1}$\frac{1}$\frac{1}{1}$\frac{1}{1}$\frac{1}{1}$\frac{1}{1}$\frac{1}
 .0000E+00 6.33213E-08 4.49136E-01 5.05960E-01 3.5944E-01 5.56927E-02 -5.59567E-03 9.5996E-01
 1,554E-05
1,000E-00
1,500E-02
1,855E-05
1,859E-05
 3 1.2127E-01 -5.16775E-08 1.16978E-01 -1.6694E-02 4.7.4667E-02 -2.17850E-08 7.16607E-02 -1.0568E-02 5 1.1794E-01 -5.4647E-08 1.07250E-01 -1.6703E-02 6 2.0787E-01 -1.0628E-07 2.01008E-01 -2.9725E-02 7 2.05616E-01 -1.4685E-06 1.9807E-01 -1.75125E-02 8 1.49016E-01 -1.8677E-07 1.7574E-01 8.7827E-03 1.5576E-01 8.9787E-05 1.5576E-01 8.7827E-03 1.5576E-01 8.9787E-05 1.5576E-01 8.7827E-03 1.5576E-01 8.9787E-05 5.4784E-01 2.2530E-03 11 9.7576E-02 -2.2683E-05 9.911E-02 5.27774E-03 12.5476E-02 1.2576E-03 5.2121E-02 1.1256E-05 5.41550E-02 5.9576E-03 14 4.7637E-02 3.7720E-03 5.6856E-02 8.9456E-03 1.7576E-03 1.7
 5 2.7922-02 -8.13858-06 2.65108-02 1.73748-05 16 1.53658-02 4.8658-06 1.5788-02 1.02188-05 1.7588-02 1.02188-05 1.7588-03 1.0218-05 17 6.3351578-03 4.105728-07 4.38594-03 2.45108-05 1.7528-07 9.93348-03 1.6728-05 1.7528-07 9.93348-03 1.6728-05 1.7528-05 1.7528-05 1.6728-05 1.6728-05 1.7528-05 1.
 28 1.72X3E+00 -3.226XE-05 1.7337E+00 -9.7588E-05 2.2775E-03 3.8528E-01 1.1920E-02 4.3925E+01
 If ine group suspery for system
 1,4900E+00 7,4660E+01 2,16579E+02 8,94787E+06 9,99880E+01
 .0000E+00 9.71502E-04 7.6720EE-01
 .0000E+00 7.2551E-05 7.42587E-01 1.36120E+00 7.10544E-01 3.25901E-02 -9.75025E-07 9.95901E-01 .0000E+00 5.67662E-06 7.14975E-01 1.27047E+00 6.61507E-01 5.35151E-02 -2.26843E-06 9.95944E-01
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12 .000000-00 3.98772E-07 5.75835E-01 6.93397E-01 5.17212E-01 5.86390E-02 -6.68124E-07 9.99774E-01 13 .000000-00 6.33215E-08 5.16817E-01 5.51628E-01 4.55005E-01 5.58274E-02 1.12594E-06 9.99967E-01
 .00000+00 1.25465-08 4.91285-01 5.15045-01 4.3055-01 8.91855-05 2.97865-01 .00005+00 1.416765-09 2.87656-01 2.37556-01 2.26385-01 8.50185-03 -8.18355-05 1.00005+00 1.416765-00 1.25756-01 1.05716-01 1.75846-01 6.8535-03 -4.86585-05 1.00055+00 .00005+00 1.341655-10 9.70998-02 3.21778-02 8.78560-02 9.21285-03 -4.41678-05 1.00055+00
13.000000 1.34/050-10 9.0995-02 3.24950-02 5.76540-02 9.21840-03 4.44690-03 1.000500 1.35765-11 8.61230-02 1.90146-02 5.76540-02 1.22186-02 4.41690-03 1.000500 1.35765-10 1.33530-01 6.121716-02 1.21890-01 1.22180-02 1.77280-07 1.000500 1.35765-10 1.33530-01 6.121716-02 1.21890-01 1.22180-02 1.77280-07 1.000500 1.35765-10 1.33530-01 6.121716-02 1.21890-01 1.22180-02 1.77280-07 1.000600 1.0000600 1.58680-11 1.58620-01 1.58620-01 1.22180-02 1.47748-05 1.000500 1.000500 1.000500 1.35765-11 1.58620-01 1.36620-01 1.38720-01 1.24620-06 1.000500 1.000500 1.35760-11 1.58620-01 1.36620-02 4.77990-06 1.000500 1.36620-02 4.79900-06 1.000500 1.36620-02 4.79900-06 1.000500 1.36620-02 4.79900-06 1.36620-02 4.79900-06 1.36620-02 4.79900-06 1
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 9 1.5376E-01 8.9476E-05 1.5970E-01 10 1.6574E-01 -9.7502E-07 1.0724E-01 11 9.7576E-02 -2.2694E-05 1.0026E-01 12 6.4443E-02 -6.68124E-07 6.5504E-02 15 5.2121E-02 1.12594E-05 5.5908E-02 14 4.74376E-02 3.7720E-08 5.3150E-02 14 4.74376E-02 3.7720E-08 5.3150E-02
 .0000E+00 1.56926E-08 5.09350E-04 3.17976E+00
 .0000E+00 3.3512E-08 4.6814E-04 2.91707E+00 .0000E+00 7.2880E-08 4.1233E-04 2.6832E+00 .0000E+00 9.76411E-08 2.46807E-04 1.70421E+00
 .00000E+00
 .000E+00
 .0000E+00 1.1576E-02 2.1010E-04 1.4474Z+00 .0000E+00 7.25150E-08 1.8777Z=04 1.3240E+00
 .0000E+00
 15 2.74/25E-02 -6.138/2E-05 2.8730E-02
16 1.5287E-02 -4.865E-05 1.598/2E-02
17 6.3/5/4E-03 -4.4/6/7E-05 6.590/2E-03
18 3.515/7E-03 4.105/2E-07 5.535/E-03
19 9.33/4E-03 1.77/2E-07 1.04/7E-02
 .0000E+00 1.64382E-05 1.18243E-04 7.72978E-01 .0000E+00 1.17001E-05 6.07455E-05 4.25717E-01
 .00000E+00
 .000E+00
 .0000=00 1.7800E-05 8.0782E-05 4.2577E-01 .0000E-00 1.2810E-05 2.2142E-05 1.7668E-01 .0000E-00 8.355E-04 8.83057E-05 1.07551E-01 .0000E-00 1.3669E-02 1.2840E-04 9.0478E-01 .0000E-00 1.4820E-02 2.7123E-05 2.5283E-01 .0000E-00 4.4830E-02 4.6183E-05 4.7199E-01 .0000E-00 4.4830E-02 4.6183E-05 4.7199E-01 .0000E-00 4.4830E-02 4.6183E-05 4.7199E-01
 00+3000
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00+3000
 20 3.26/35-02 -1,474/2-05 3.46/6-02
21 8.9/62/6-08 1.12/35-06 1.0/600-02
22 1.6/37/6-02 -4.77/90-06 2.19/32-02
 ,0000E+00
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 .0000E+00 7.5117XE-02 1.75189E-04 1.696XE+00 .0000E+00 6.625XE-02 1.0780E-04 1.3261E+00
 25 5.95809E-02 2.2660BE-05 7.4376/E-02
 24 4.6149ZE-02 -6.00261E-07 6.1134CE-02
 Z 1,9857E-02 -3,2580E-06 2,7679E-02
 .00000E+00
 .0000E+00 3.60690E-02 3.71587E-05 5.75039E-01
 26 1.3125E-02 -1.3166E-07 1.590E-02
27 2.2165E-08 2.2664E-08 3.780E-08
28 1.7263E-00 -3.2666E-05 1.7425E-00
 .00000E+00
 .0000E+00 3.5722E-02 1.8719E-05 3.8440E-01
 _00000E+00
 .0000E+00 1.00907E-02 2.01209E-06 6.57572E-02
 .0000E+00 2.30360E+03 3.86281E+01 1.29259E+02 4.75410E+01
 - elepsed time .02 min.
Odirect access unit 9 requires 556 blocks of length 216 for cross section weighting.
 1 transport cross section weighting function
 1 1.16/32-03 5.03/02-03 5.31692-03 2.513/22-03 3.16/27-03 5.52/92-03 3.715/92-03 1.74/32-03 2.7123/22-04 5.02/02-03 5.81692-03 3.46/712-03 5.52/92-03 5.52/92-03 3.715/92-03 1.74/32-03 2.7123/22-04 5.02/02-03 5.81692-03 3.46/712-03 4.30/62-03 6.46/62-03 4.30/92-03 2.46/712-03 3.16/92-03 6.77/372-03 4.30/92-03 2.86/92-03 3.86/92-03 6.77/372-03 4.30/92-03 1.82/92-03 4.96/92-03 2.36/92-03 2.86/92-03 4.86/92-03 3.37/92-03 1.74/92-03 5.47/92-03 2.47/92-03 2.46/92-03 4.86/92-03 3.37/92-03 1.74/92-03 5.47/92-03 2.47/92-03 2.46/92-03 4.86/92-03 3.37/92-03 1.74/92-
 02000 979. 9 979. 10 979. 11 979. 12 979. 13 979. 14 979. 15 979. 16
1 1.11576E-05 1.0746E-06 1.07576E-06 8.7525E-06 8.0050E-06 1.0257E-06 3.2577E-06 1.7657E-06 2 1.7755E-06 1.0557E-06 1.
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5 1.1947æ-03 1.09624æ-03 1.04609æ-03 7.05757æ-04 6.28769æ-04 6.93699æ-04 3.15782æ-04 1.64261æ-04
Ozore grp. 17 grp. 18 grp. 19 grp. 20 grp. 21 grp. 22 grp. 23 grp. 24 1 1.12105E-04 2.4554E-04 2.00417E-04 4.9698E-04 2.8785E-04 2.1082E-05 1.78516E-05 :
 2 1.9768E-04 3.77700E-04 3.3257E-04 8.8523/E-04 4.5655E-04 1.265/E-08 3.254/E-08 2.75062E-08
 3 1,70826-04 4,19466-04 3,08116-04 6,85906-04 4,61946-04 1,34796-05 3,21866-05 2,75796-05 4 7,30706-05 8,185746-05 1,25196-04 3,85126-04 1,36986-04 3,43806-04 1,04636-05 8,170176-04
 5 7.77419E-05 9.90734E-05 1.32221E-04 3.9985E-04 1.55418E-04 3.99054E-04 1.15980E-03 9.19800E-04
Ozore grp. 25 grp. 26 grp. 27 grp. 28
1 8.031265-04 5.661145-04 8.622765-05 4.222345-02
2 1.25378-03 9.09058-04 1.562845-04 5.528545-02
 1.2734E-03 9.49299E-04 1.77229E-04 5.21734E-02
 4 3.3977/E-04 2.0627/E-04 2.5643/E-05 3.45620E-02 5 3.88540E-04 2.44704E-04 3.28211E-05 3.54578E-02
Ecrosed group persnetters
 grp upper energy mid energy
1 2.0000E+07 2.6627E+06
 velocity
1.9701E+09
 fies spec
7.223/E-01
 9.000E+05
 1.516/E+05
 2.776E-01
 1.0141E+07
 4,0000E-01
 1.2480E-01
 3.643E+05
 1.2072E-10
 4
 1.0000E-05
 10% d, second part of sas2h pass to make Library
Ocell averaged flues
Ozore grp. 1 grp. 2 grp. 3
1 3.9226E-01 1.1346E-00 2.1252E-01
2 3.9753E-01 1.1357E-02 2.0525E-01
 3 4.0069E-01 1.1358EE+00 1.99177E-01
 4 4.1769/E-01 1.13730E+00 1.7003E-01 5 4.1599E-01 1.1374/E+00 1.7289/E-01
Offux disadventace factors (zone average/cell average-flux)
Ozone grp. 1 grp. 2 grp. 3
1 9.4259E-01 9.9780E-01 1.2789E-00
 2 9.5561E-01 9.98743E-01 1.17575E-00 3 9.62742E-01 9.98897E-01 1.15218E-00
 4 1.00407E+00 1.00015E+00 9.85650E-01
 5 1.0000E+00 1.0000E+00 1.0000E+00
Coell averaged currents
 57. 1 57. 2 57. 3
1.7299E-02 1.840BE-02 6.4632E-03
 1,98002E-02 2,59569E-02 1,0028/E-02
 1.998/E-02 2.26012E-02 1.017/0E-02
 1.5335E-02 1.63107E-02 2.9177Æ-03
1.55425E-02 1.66189E-02 3.29605E-03
 vol. fraction
 Volume
(borne
 4.5625Œ-02
 1.25650E+00
 1.66687E-01
 6.0516E-03
 6.5826E-01
 2.38987E-02
 2.5462/EH01
 9.24420E-01
 1.0000E+00
 2.75440E+01
 elapsed time .02 min.
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