

METHODOLOGY TEST PROBLEMS
SONGS 1 LONG TERM SERVICE SEISMIC PROGRAM

VOLUME 1

Prepared by:

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1.0 INTRODUCTION

During the April 2, 3 1983 meeting between the NRC, SCE and Impell, the NRC staff asked the SONGS 1 team to perform five sample test problems. The test problems were developed by the NRC's expert consultants to evaluate the proposed Long Term Service methodologies for seismic analysis contained in Impell's computer codes. The objective to be achieved by the performance of this work is for the NRC to validate the proposed methodologies for use in SONGS-1 LTS seismic analysis by a comparison of these results with independent solutions calculated by the NRC's consultants.

The CLASSI, SASSI, FLORA and SUPERPIPE Codes will be used during the seismic analysis of the SONGS-1 Long Term Service program and the methodologies contained in these codes are used for these test problems. Test problem one involves soil-structure interaction with the SASSI and CLASSI programs; test problem two involves the complete quadratic combination (CQC) method for modal combinations of piping responses using SUPERPIPE, test problems three and five demonstrate the direct generation of secondary response spectra using FLORA, and test problem four demonstrates the effects of primary/ secondary interaction with FLORA and SUPERPIPE.

Section 2 of this report contains a detailed description of each test problem, deliverables and a summary of Impell's results, including input and output computer listings.

Appendix A contains four of the five sample problems as provided by Lawrence Livermore National Laboratory and NCT Engineering, Inc. on April 2, 1985.

2.0 METHODOLOGY TEST PROBLEMS

2.1 Soil-Structure Interaction by CLASSI

Test Problem I

This problem involved the generation of floor response spectra for the building model provided by the NRC by performing a soil-structure interaction analysis. The input data for this analysis, including properties for the structure, soil and the input time history are given in Appendix A of this submittal.

The NRC's request involved the generation of the site impedances using the SASSI Code and placing them into the CLASSI program to perform the soil-structure interaction (SSI) analysis. This is the proposed methodology for application to SONGS-1. Impell has generated the site impedances for a rigid circular disk using SASSI and in addition, Impell has generated impedances directly from the CLASSI Code. Comparisons of the two sets of generated impedances functions are provided in the results section.

For the SSI analysis, the input acceleration time history is applied at the ground surface in the free-field. A duration of 10 seconds was used with a time step of 0.005 seconds. The time history was scaled to a peak acceleration of 0.5g.

Deliverables

The input and output listings from the CLASSI and SASSI computer codes are required as well as 2% floor response spectra at the base level and nodes 4, 7, and 11. The spectra will be presented numerically and in plots using a linear-linear scale. Spectral values are calculated at the 25 frequencies (Hz) listed below:

0.3, 0.4, 0.7, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 9, 10, 12, 15, 20, 25, 30

Comparison curves of the soil impedances will be provided for the SASSI and CLASSI programs for a rigid disk on a half-space.

Results

The following results are presented for this test problem.

2.0 METHODOLOGY TEST PROBLEMS

- a) Fixed-base dynamic properties of the structure were calculated. These properties included the frequencies, mode shapes and modal damping ratio generated by Impell's linear analysis program, EDSGAP. The EDSGAP input and output listing for this model is included in this submittal. The generated dynamic properties were subsequently used by CLASSI to perform the SSI analysis.
- b) Site impedances were generated by both SASSI and CLASSI. The SASSI impedances were generated by using the finite element model shown in Figure I.1. Impedances were generated for frequencies up to 30 Hz using the CLASSI code and up to 20 Hz using the SASSI code. Higher frequencies impedances were not calculated with SASSI in order to expedite the completion of the problem, and their inclusion would not significantly affect the solutions to the test problem. The two sets of impedances were then input in CLASSI and two separate soil-structure interaction analyses were performed.

A comparison of the real part (stiffness terms) of the horizontal, rocking and coupling impedances is shown in Figures I.2, I.3, and I.4, respectively for both methods. Similar comparisons between CLASSI and SASSI for the imaginary part (damping terms) of the impedances is shown in Figures I.5, I.6, and I.7. These figures show a good comparison between the two methods. Where differences exist, they were minor and they occurred primarily in the high frequency range, which is above the range of significance for SSI analysis.

These figures also show that for two components of the impedance matrix (real part of the translational and rocking components), some differences exist between the SASSI and CLASSI results at very high frequencies. This result is strictly attributed to the fact that a more refined mesh of the SASSI finite element disk is needed in order to obtain more accurate comparisons at a high frequency. However, as shown by a comparison of the SSI spectra results in part (c), the differences observed in the impedances were not significant for purposes of soil-structure interaction analysis.

2.0 METHODOLOGY TEST PROBLEMS

Computer output for the SASSI (Subprogram COMIMP) and CLASSI (Subprogram CLAF) impedances are included with this submittal.

For the development of site impedances under the LTS load generation effort, an adequate basemat mesh will be used to obtain accurate impedance coefficients.

- c. A CLASSI soil-structure interaction analysis was performed twice using the impedances generated in (b) and the fixed-base dynamic properties of the structural model generated in (a). The first 10 seconds of the input motion, scaled to 0.5g, was used as input in the free-field. Computer output for the CLASSI (Subprogram SSIN) analyses is included with this submittal.

Response spectra were generated for two percent damping at the following locations in the structural model:

Elevation 0.0' (Basemat Level)
Elevation 83.8' (Node 4)
Elevation 143.8' (Node 7)
Elevation 207.0' (Node 11)

Numerical listings of the spectral accelerations can be found in the attached RESPEC computer listings for both cases.

Response spectra generated at 25 frequency points is shown in Figures I.8, I.9, I.10 and I.11 for the CLASSI results using impedances from SASSI. Figures I.12, I.13, I.14 and I.15 show response spectra from CLASSI using CLASSI generated impedances. A comparison of both results indicates good agreement between both parametric test problems.

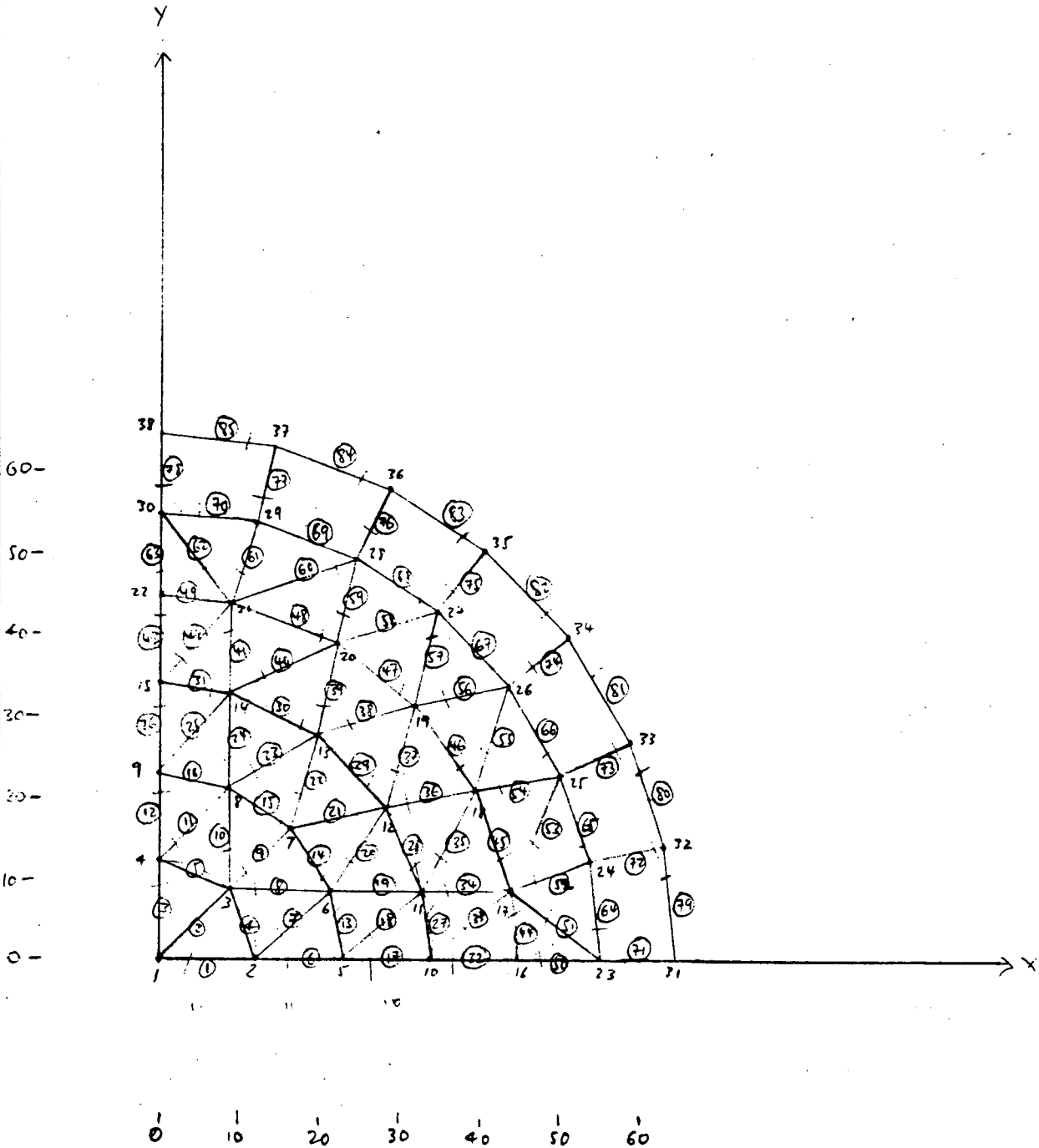


Figure I.1 : SASSI MODEL OF RIGID CIRCULAR DISK
TO GENERATE IMPEDANCES.

$R = 65'$

NRC TEST PROBLEMS

| | | | | | | | |
|-----|-----|--------|---------|---------|--|-----------------|------|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
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| REV | BY | DATE | CHECKED | DATE | | CALC NO | OF |
| | | | | | | NRC TEST - 1 | |



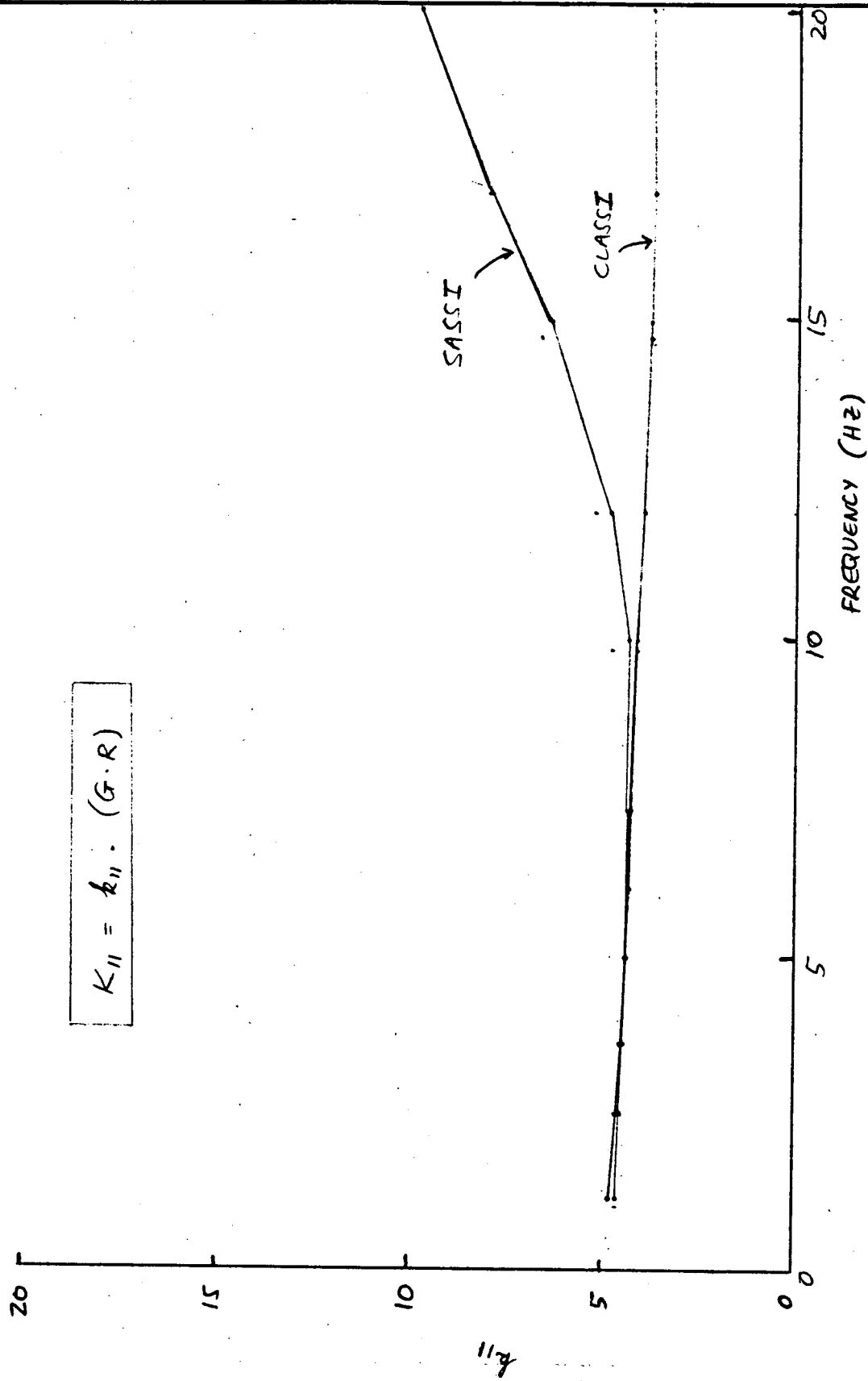


Figure I.2 - Translational Impedances (Real Part)

NRC Test Problems

| | | | | |
|-----|-----|--------|---------|---------|
| 0 | SND | 2/9/85 | KH | 4/12/85 |
| REV | BY | DATE | CHECKED | DATE |



JOB NO 020-088-155
 CALC NO
 NRC-7657-1

PAGE
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| CALC NO | 111 |

PAGE OF

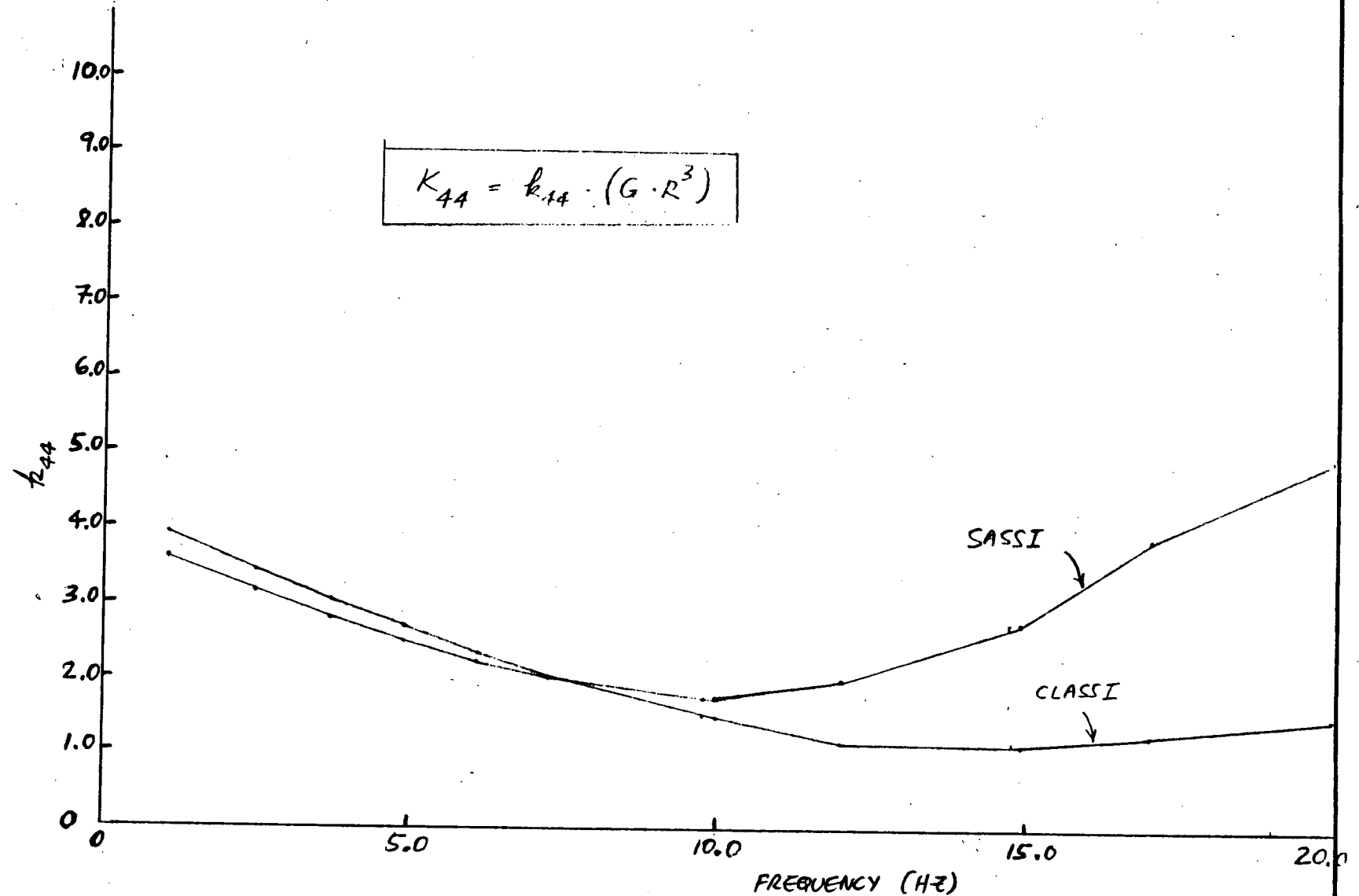


Figure I.3 — Rocking Impedances (Real part)

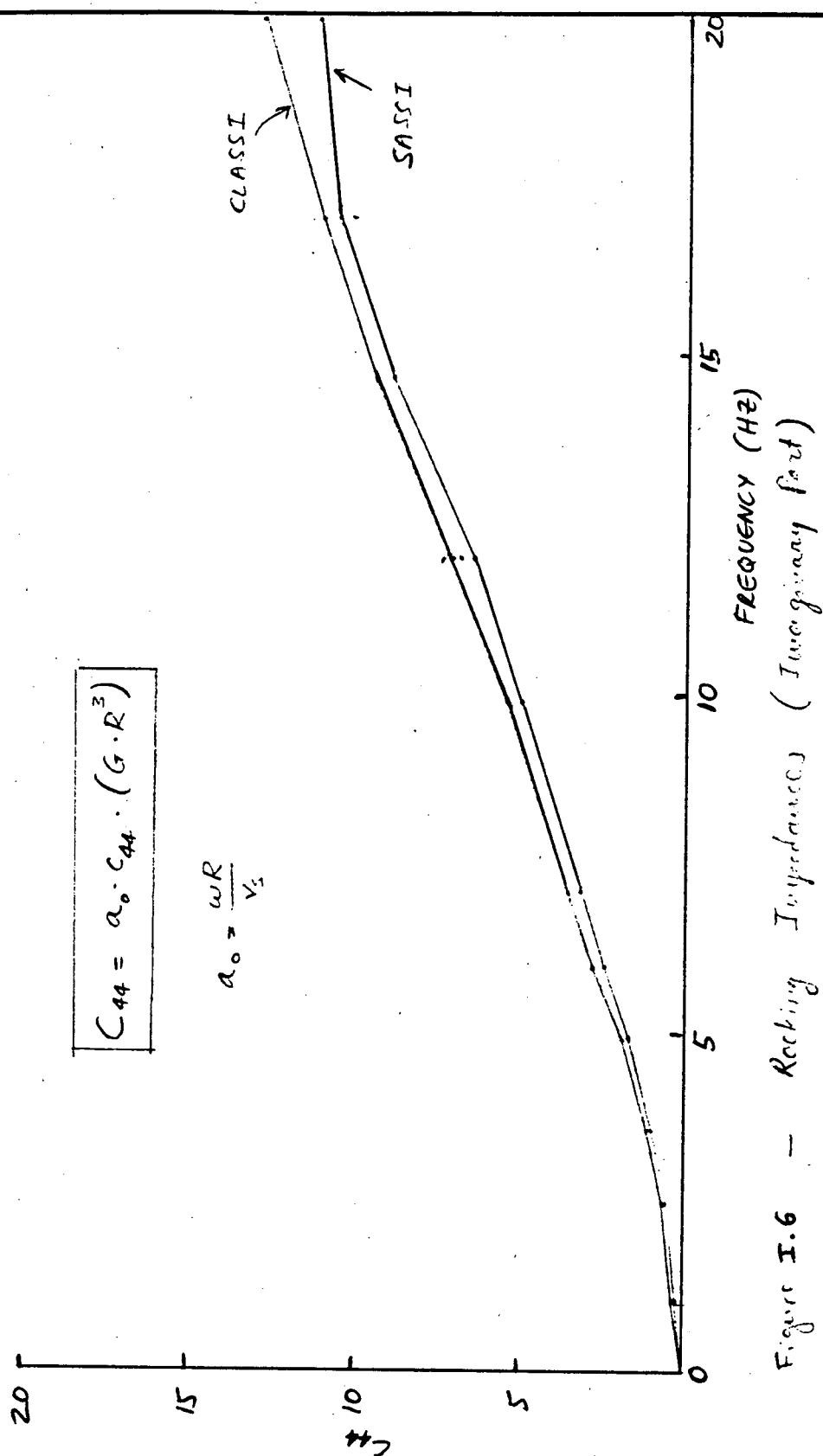


Figure I.6 - Rocking Impedances (Imaginary Part)

| | | | | |
|-----|-----|--------|---------|---------|
| 0 | SND | 4/9/85 | KH | 4/12/85 |
| REV | BY | DATE | CHECKED | DATE |



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| CALC NO | ABC TEST-1 | OF |

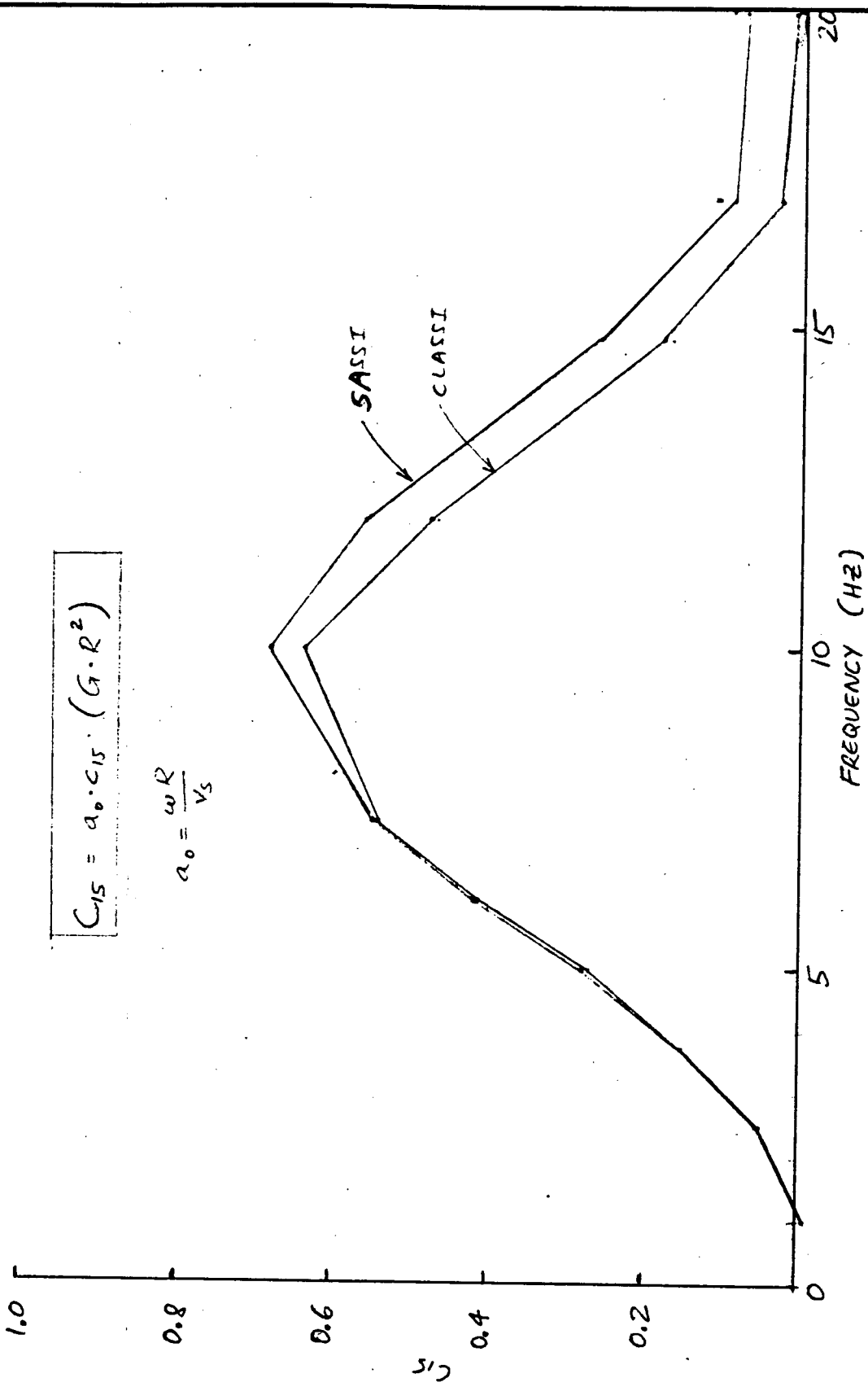
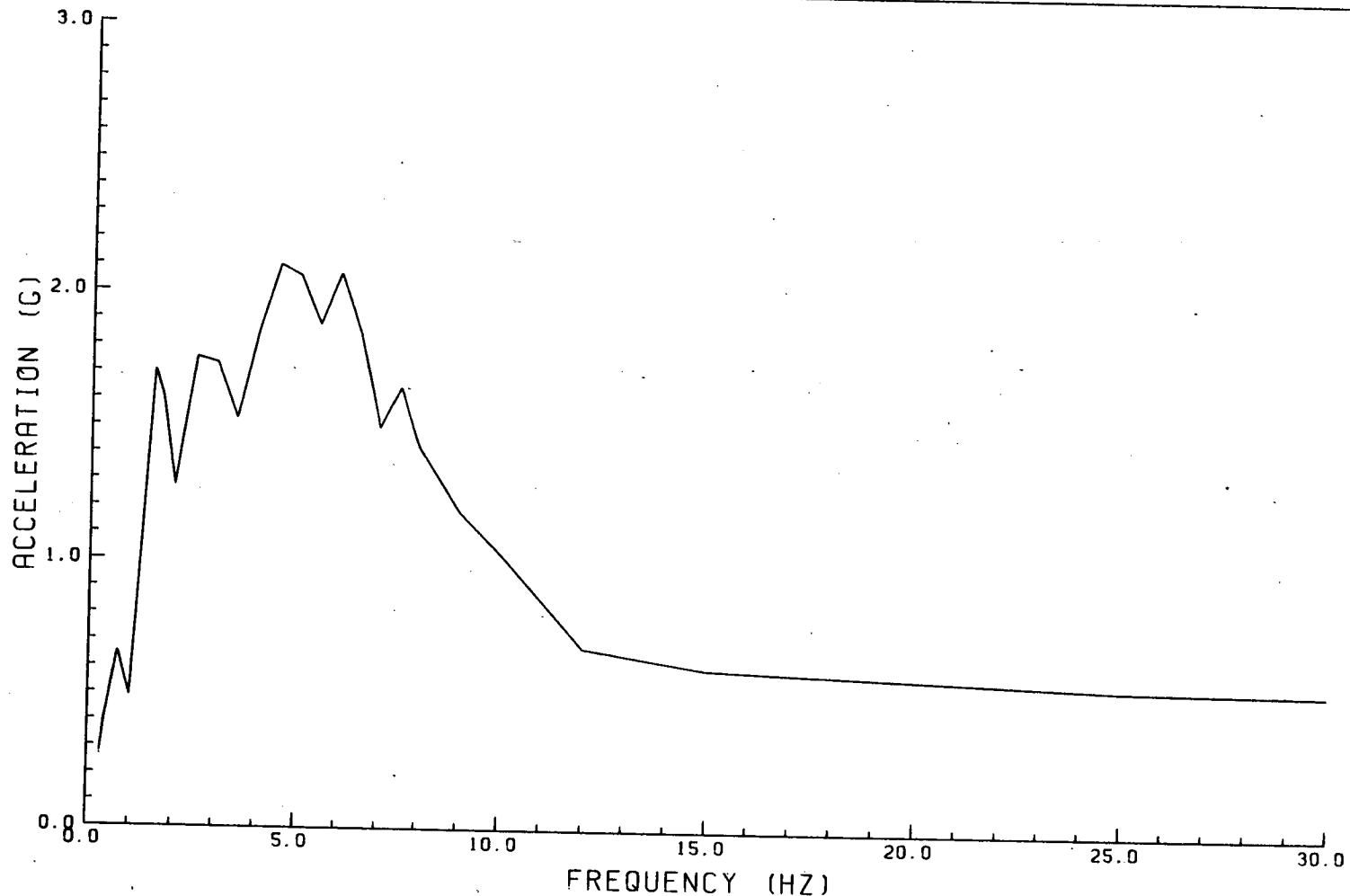


Figure I.7 - Coupling Impedances (Imaginary Part)

| | | | | | | | | |
|-----|-----|--------|---------|---------|--|--|---------------------|------|
| | | | | | | | | |
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| REV | BY | DATE | CHECKED | DATE | | | JOB NO 0210-068-011 | PAGE |
| | SND | 4/9/85 | KH | 4/12/85 | | | CALC NO | OF |
| | | | | | | | M/C TEST - 1 | |



ELEVATION 0.0 FT. (BASEMAT)
2% DAMPING RESPONSE SPECTRUM.

NRC TEST PROBLEM 1A
CLASSI ANALYSIS W/SASSI IMPEDANCES

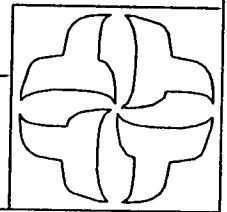
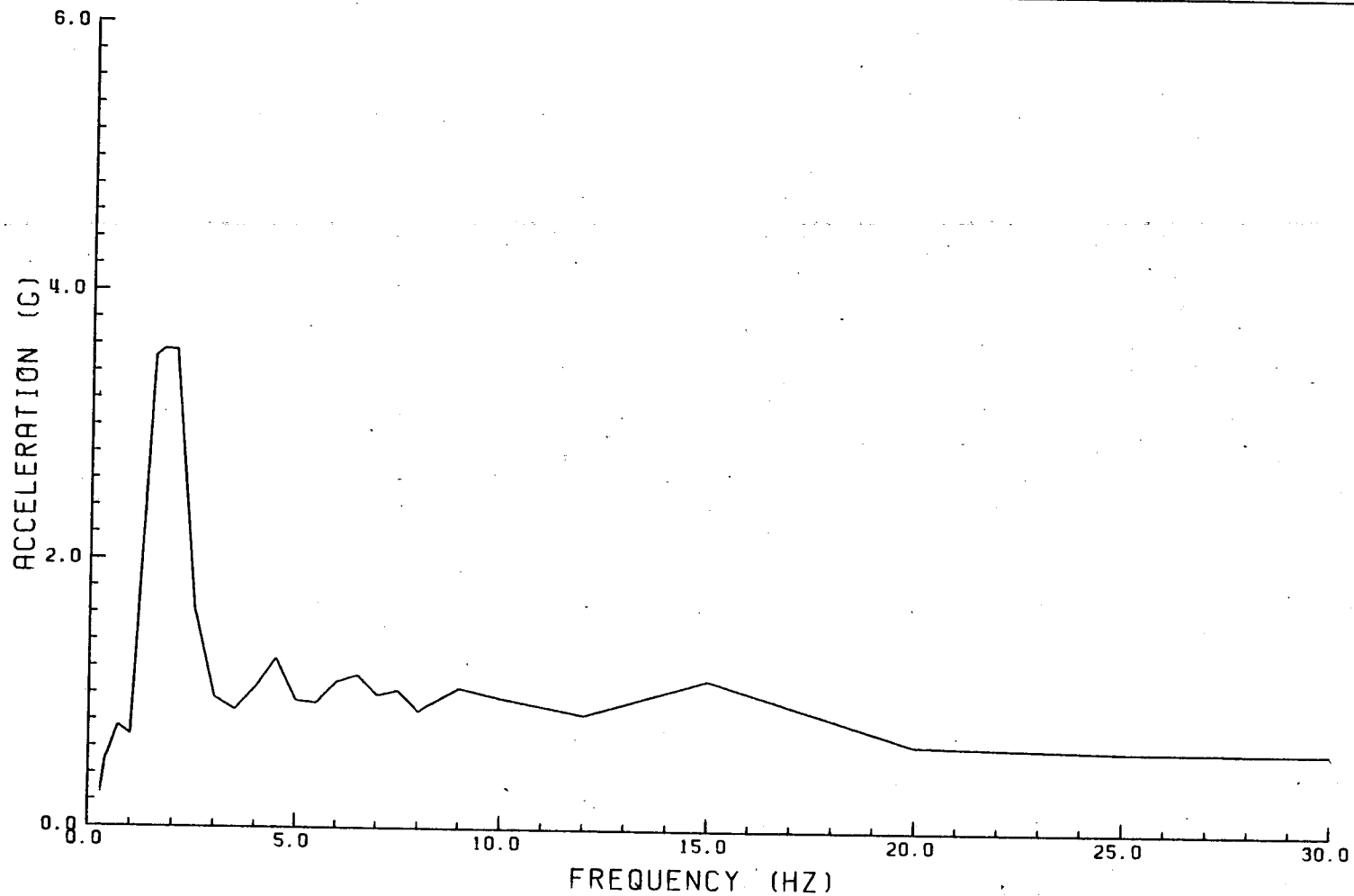


Figure I.8



ELEVATION 83.8 FT. (NODE 4)
 2% DAMPING RESPONSE SPECTRUM

NRC TEST PROBLEM 1A
 CLASSI ANALYSIS W/SASSI IMPEDANCES

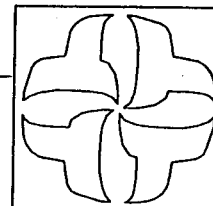
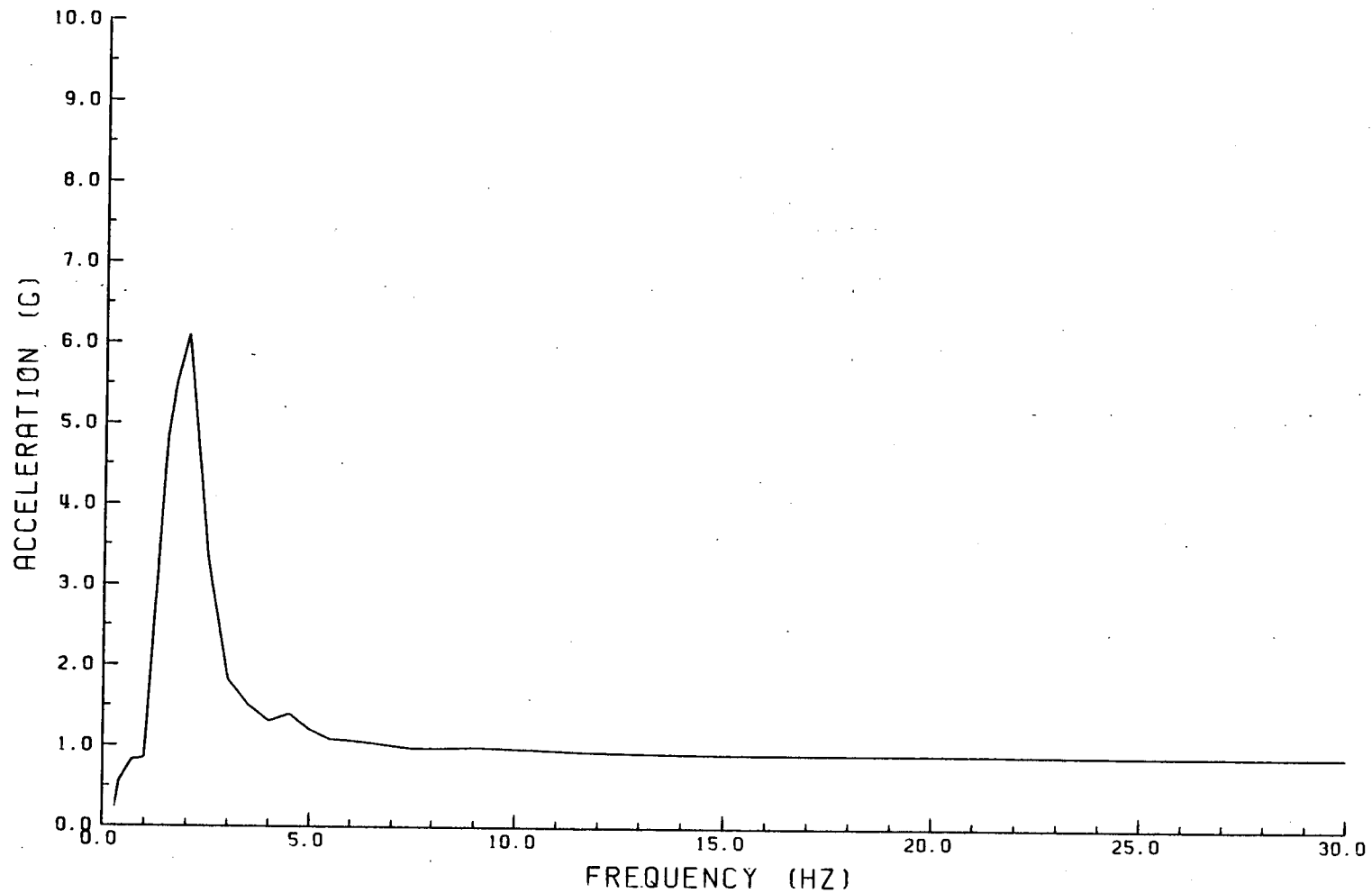


Figure I.9



ELEVATION 143.8 FT. (NODE 7)
2% DAMPING RESPONSE SPECTRUM

NRC TEST PROBLEM 1A
CLASSI ANALYSIS W/SASSI IMPEDANCES

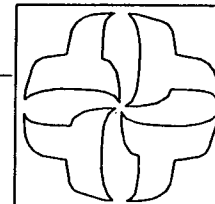
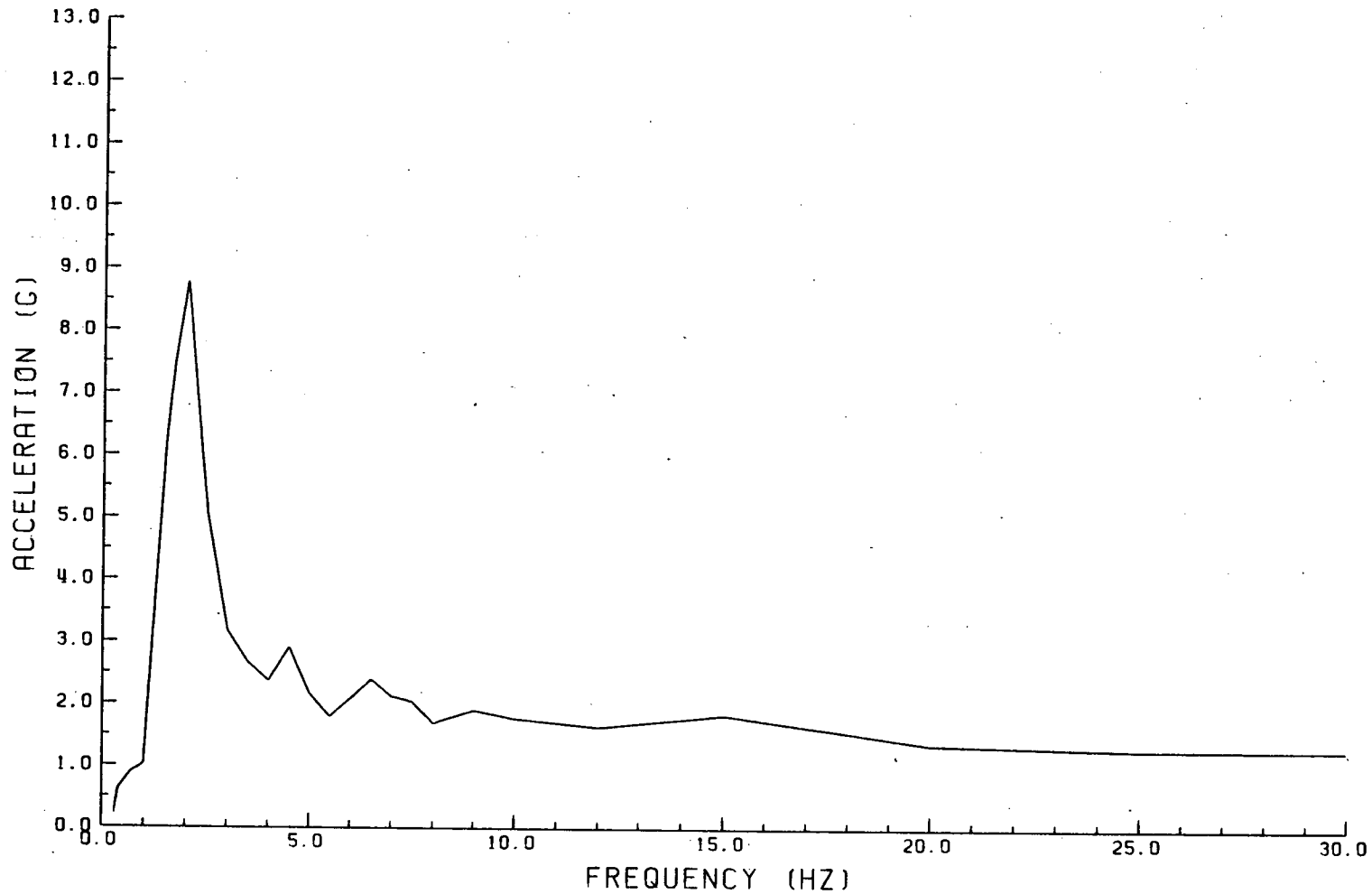


Figure I.10



ELEVATION 207.0 FT. (NODE 11)
2% DAMPING RESPONSE SPECTRUM

NRC TEST PROBLEM 1A
CLASSI ANALYSIS W/SASSI IMPEDANCES

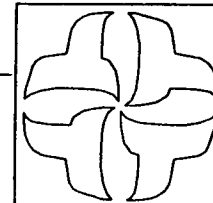
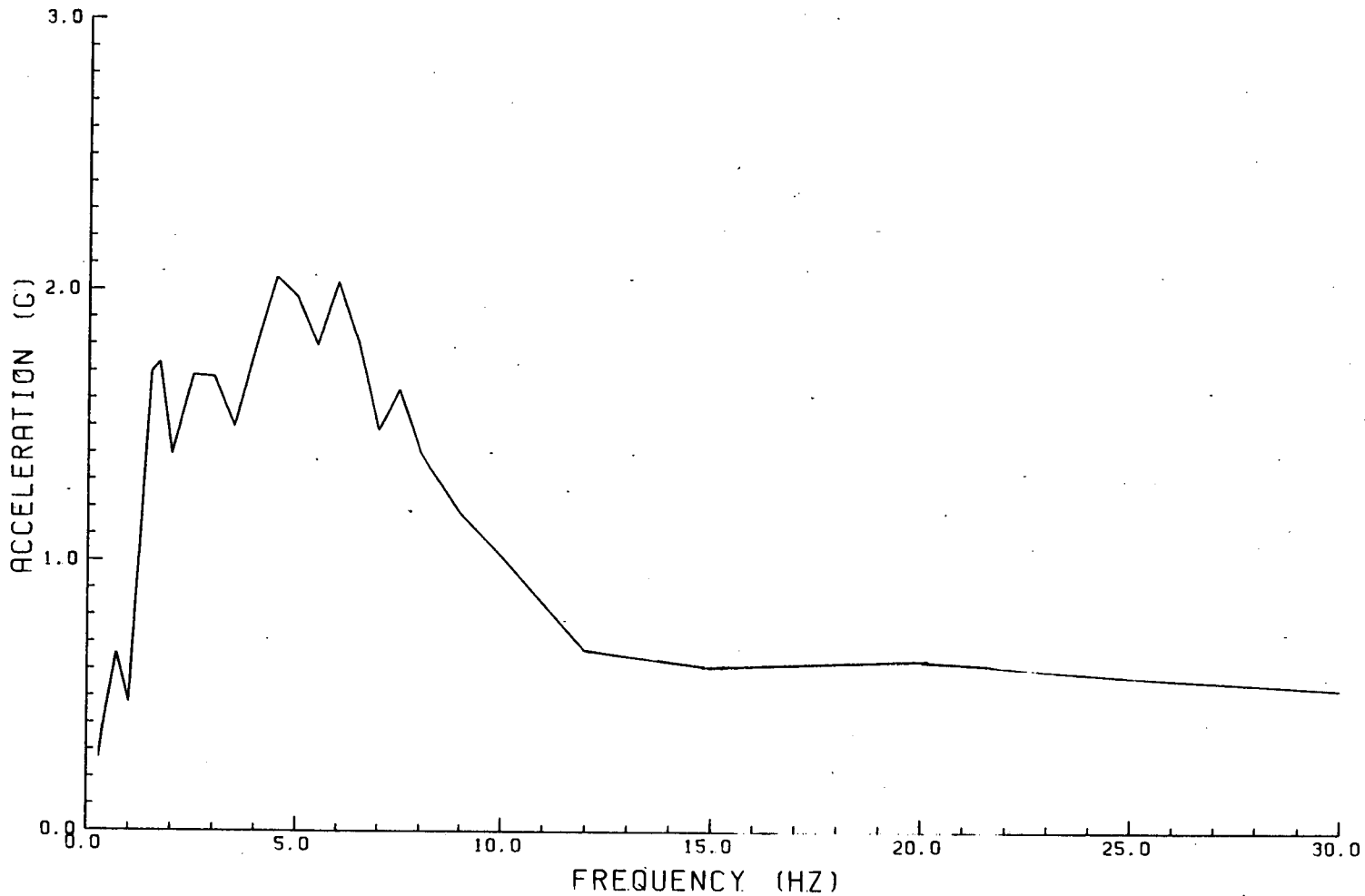


Figure I.11



ELEVATION 0.0 FT. (BASEMAT)
2% DAMPING RESPONSE SPECTRUM

NRC TEST PROBLEM 1
CLASSI ANALYSIS

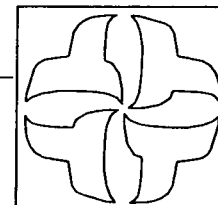
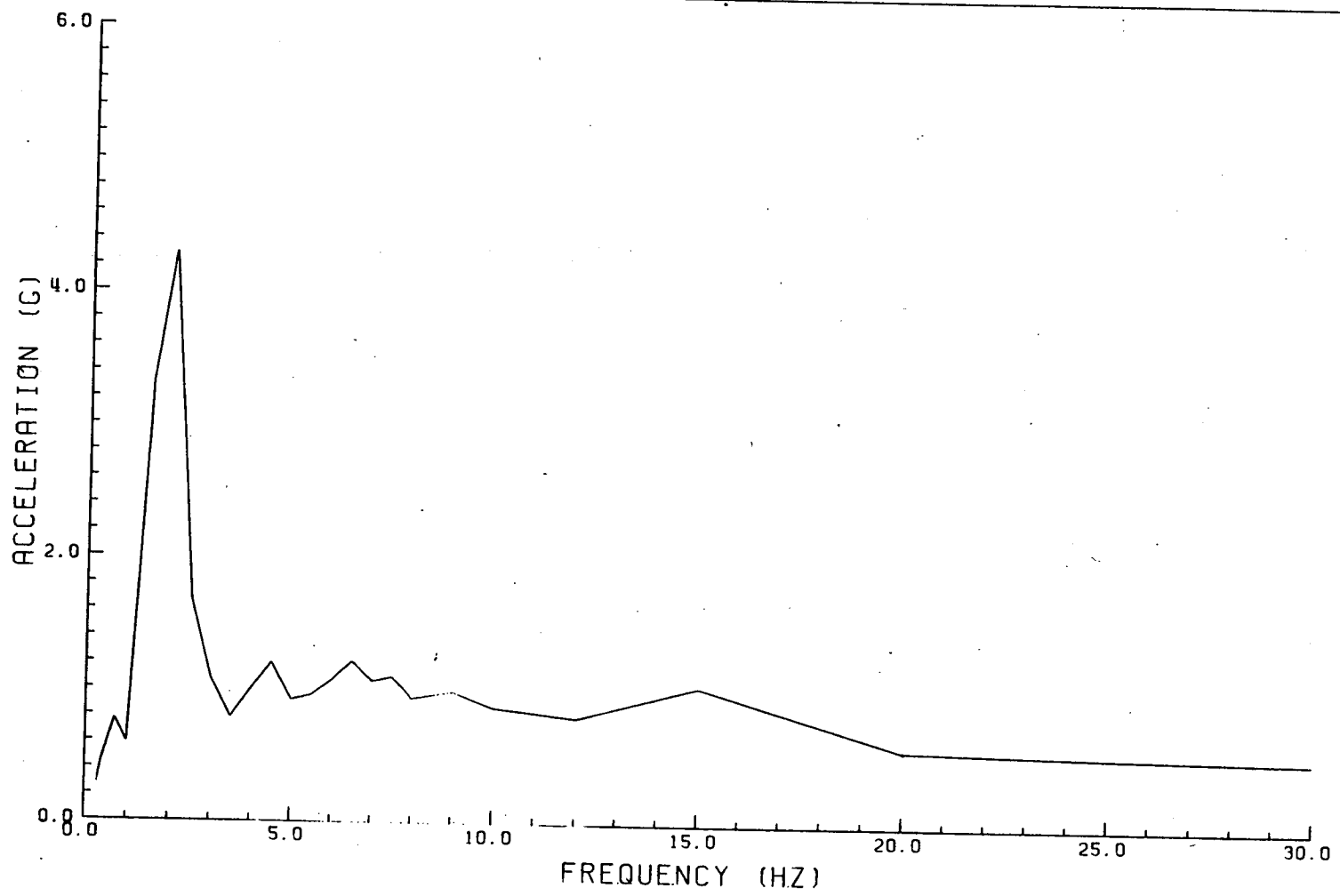


Figure I.12



ELEVATION 83.8 FT. (NODE 4)
2% DAMPING RESPONSE SPECTRUM

NRC TEST PROBLEM 1
CLASSI ANALYSIS

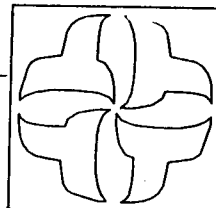
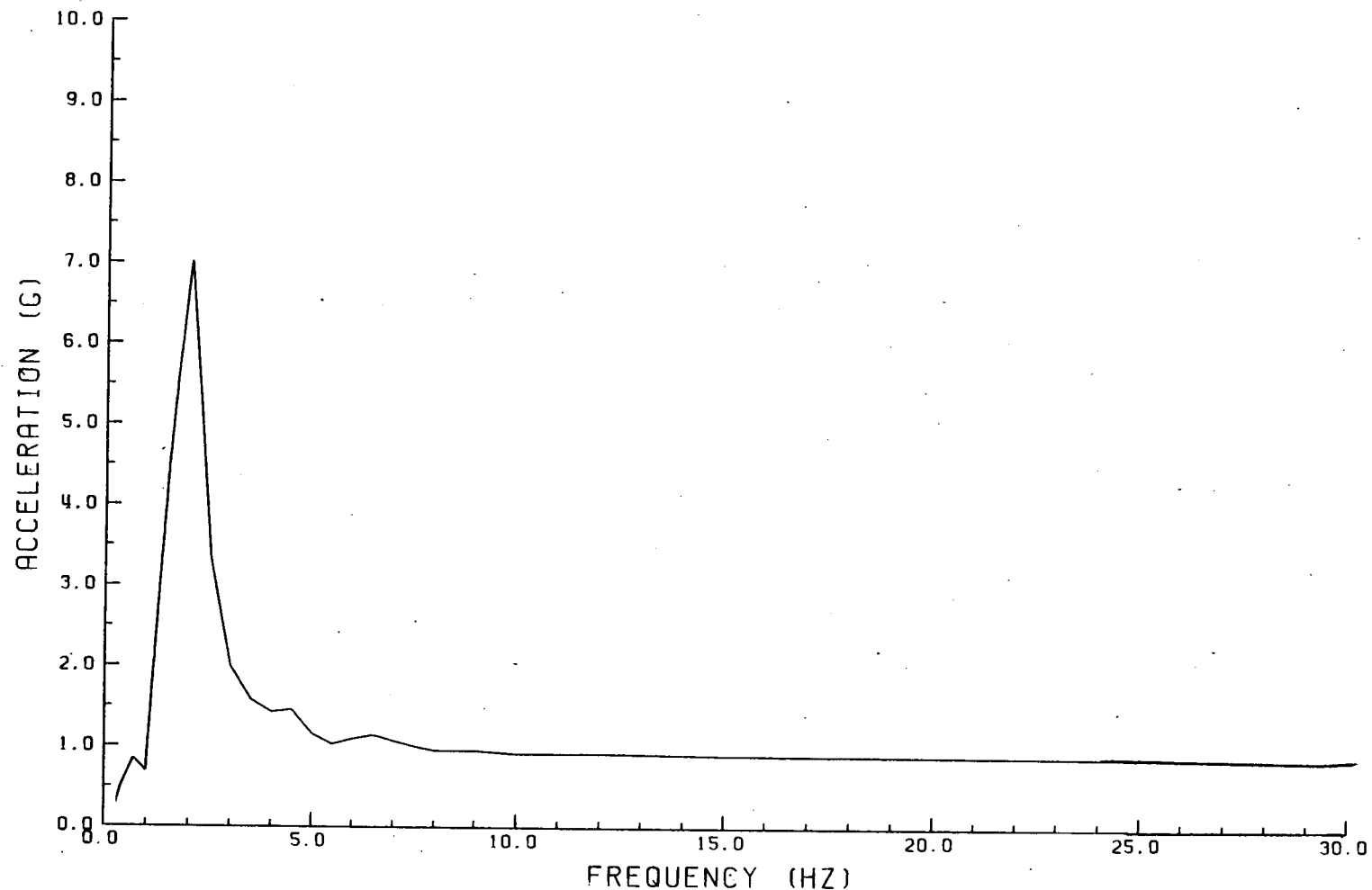


Figure I.13



ELEVATION 143.8 FT. (NODE 7)
2% DAMPING RESPONSE SPECTRUM

NRC TEST PROBLEM 1
CLASSI ANALYSIS

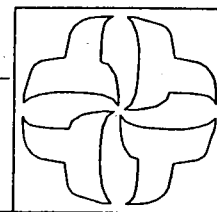
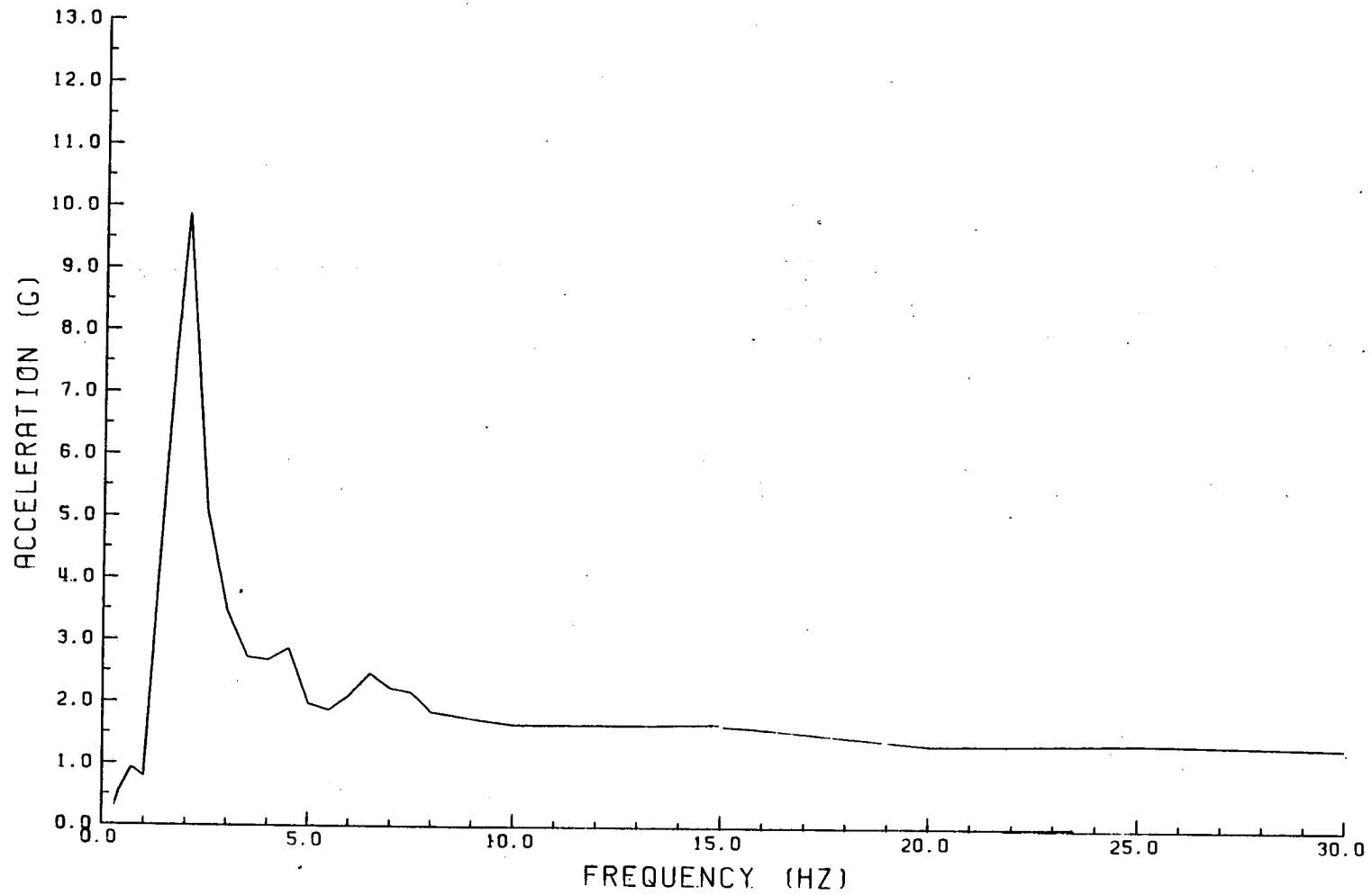


Figure I.14



ELEVATION 207.0 FT. (NODE. 11)
2% DAMPING RESPONSE SPECTRUM.

NRC TEST PROBLEM 1
CLASSI ANALYSIS

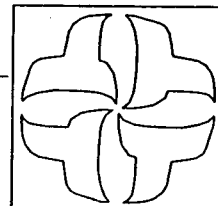


Figure I.15

SYSTEM BULLETIN

IMPELL WALNUT CREEK COMPUTER CENTER OPERATIONS HOURS (PACIFIC TIME)

MONDAY AND FRIDAY 0600 TO 2130
TUESDAY TO THURSDAY 0600 TO 2330
SATURDAY AND SUNDAY 0700 TO 1700

OPERATORS WILL NOT BE ON SITE AT ALL OTHER TIMES. EXTENDED OPERATOR COVERAGE MAY BE ARRANGED BY CONTACTING BOB EARL AT (415) 943-4663/4666

THE CYBER SYSTEM WILL BE UNAVAILABLE TO USERS AS FOLLOWS:

| | | | | |
|-----------|------|----|------|-------------------------|
| MONDAY | 2000 | TO | 2100 | SYSTEM BACKUP |
| TUESDAY | 1930 | TO | 2300 | MAINTENANCE + BACKUP |
| WEDNESDAY | 2200 | TO | 2300 | SYSTEM BACKUP |
| THURSDAY | 2200 | TO | 2300 | SYSTEM BACKUP |
| FRIDAY | 2000 | TO | 2230 | SYSTEM BACKUP + TESTING |
| SATURDAY | 1600 | TO | 1700 | SYSTEM BACKUP |
| SUNDAY | 1400 | TO | 1700 | SYSTEM BACKUP |

HOLIDAY HOURS.

MONDAY, MAY 27, 1985. NO OPERATORS ON SITE. SYSTEM AVAILABLE TO USERS.

SPECIAL CYBER UPGRADE BLOCK TIME.

THE CYBER WILL BE UNAVAILABLE FOR PRODUCTION USE THURSDAYS FROM 2000 HRS. TO 2400 HRS. BEGINNING APRIL 11, 1985 THROUGH MAY 30, 1985. COMPUTER SERVICES WILL BE TESTING NOS VERSION 2.3. ANY USERS WISHING TO TEST THEIR CODES DURING THIS PERIOD WILL NEED TO CONTACT COMPUTER SERVICES AT (415) 943-4666.

GENERAL INFORMATION.

DO NOT RELEASE MAGNETIC TAPES WHEN OPERATORS ARE NOT ON SITE.

USER ADVISORY. MAGNETIC TAPE BACKUPS.

MAGNETIC TAPES ARE SUSCEPTIBLE TO PHYSICAL DAMAGE. BACKUP TAPES ARE RECOMMENDED WHENEVER THE INFORMATION ON THE TAPE WOULD BE EXPENSIVE OR TIME CONSUMING TO RECREATE. PLEASE NOTE THAT IMPELL, CDC, AND UCC DO NOT GIVE REFUNDS FOR JOBS NECESSARY TO RECREATE A TAPE IF NO BACKUP EXISTS.

AS PER THE MEMO DISTRIBUTED TO DIVISIONS OVER A WEEK AGO, THE OLD OVERHEAD JOB NUMBERS BEGINNING WITH 0622 AND 0627 WILL NOT BE VALID AFTER 2/15/85. NEW NUMBERS (BEGINNING WITH 0525004 OR 0623004) MUST BE REQUESTED. A CONSOLIDATED LIST OF OLD VERSUS SUGGESTED NEW NUMBERS WAS DISTRIBUTED TO EACH DIVISION TO EXPEDITE THE REVIEW. THESE CHANGES ARE BEING MADE TO SUIT ACCOUNTING DEPT. NUMBER CHANGES.

DIAL-IN PHONE NUMBERS

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CHARGE,PROJWC,03100681355.  
RJUTE,OUTPUT,JC=PR,UJN=VAX,FC=CP,UN=CSHVAX1,DEF.  
REWIND,INPUT.  
COPYSBF.  
REWIND,INPUT.  
SKIPR,INPUT,1.  
GET,GAPPRO/UN=IMPLIB.  
PURGE,EIGEN/NA.  
DEFINE,EIGEN.  
BEGIN,GAPLOAD,GAPPRO,MODALI,BEAM,TRUSS,BOUND,NSTART=2.  
REWIND,EIGEN.  
REWIND,OUTFILE.  
COPYBF,OUTFILE,EIGEN,7.  
REWIND,OUTPUT.  
PURGE,GAPOUT/NA.  
DEFINE,GAPOUT.  
COPYBF,OUTPUT,GAPOUT,99.  
DAYFILE.  
EXIT.  
REWIND,OUTPUT.  
PURGE,GAPOUT/NA.  
DEFINE,GAPOUT.  
COPYBF,OUTPUT,GAPOUT,99.  
PURGE,MDAY/NA.  
DAYFILE,L=MDAY.  
SAVE,MDAY.
```


| | | | | | | | | | |
|----|---|----|---|----|---|----|-----|-------|-------|
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| 2 | | | | | | | | | 43.8 |
| 3 | | | | | | | | | 61.3 |
| 4 | | | | | | | | | 83.8 |
| 5 | | | | | | | | | 103.4 |
| 6 | | | | | | | | | 123.9 |
| 7 | | | | | | | | | 143.8 |
| 8 | | | | | | | | | 155.3 |
| 9 | | | | | | | | | 184.4 |
| 10 | | | | | | | | | 198.5 |
| 11 | | | | | | | | | 207.9 |
| 12 | | | | | | | | | |
| 13 | 1 | | 1 | | 1 | | 1.0 | | |

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|-------------|----|------|------|------|----|-----------|----------|----------|--|
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| 11400.00000 | | 700. | | 700. | | 99999999. | 2800000. | 2800000. | |
| 2 990. | | 500. | | 500. | | 99999999. | 1900000. | 1900000. | |
| 1 990. | | 500. | | 500. | | 99999999. | 1500000. | 1500000. | |
| 4 990. | | 500. | | 500. | | 99999999. | 800000. | 800000. | |
| 5 990. | | 500. | | 500. | | 99999999. | 200000. | 200000. | |

| | | | | | | | | | |
|----|----|----|--------|---|---|--------|--|--|--|
| 1 | 1 | 2 | 13 | 1 | 1 | | | | |
| 2 | 2 | 3 | 13 | 1 | 1 | | | | |
| 3 | 3 | 4 | 13 | 1 | 1 | | | | |
| 4 | 4 | 5 | 13 | 1 | 1 | | | | |
| 5 | 5 | 6 | 13 | 1 | 1 | | | | |
| 6 | 6 | 7 | 13 | 1 | 1 | | | | |
| 7 | 7 | 8 | 13 | 1 | 1 | | | | |
| 8 | 8 | 9 | 13 | 1 | 2 | | | | |
| 9 | 9 | 10 | 13 | 1 | 3 | | | | |
| 10 | 10 | 11 | 13 | 1 | 4 | | | | |
| 11 | 11 | 12 | 13 | 1 | 5 | | | | |
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| 3 | | | 130.43 | | | 130.43 | | | |
| 4 | | | 130.43 | | | 130.43 | | | |
| 5 | | | 130.43 | | | 130.43 | | | |
| 6 | | | 130.43 | | | 130.43 | | | |
| 7 | | | 130.43 | | | 130.43 | | | |
| 8 | | | 143.17 | | | 143.17 | | | |
| 9 | | | 93.79 | | | 93.79 | | | |
| 10 | | | 76.71 | | | 76.71 | | | |
| 11 | | | 65.84 | | | 65.84 | | | |
| 12 | | | 5.90 | | | 5.9 | | | |

| | | | | | | | | | | | | | | |
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| .05 | | .05 | | .05 | | .05 | | .05 | | .05 | | .05 | | .05 |
| .05 | | .05 | | .05 | | | | | | | | | | |

1
2
1.
100.

TIME HISTORY ONLY TO FORCE OUTPUT OF PART FACTOR 0

VERIFIED - ALL PROJECTS

NOTICE

THIS PROGRAM HAS BEEN VERIFIED ACCORDING TO IMPELL QUALITY
PROGRAM REQUIREMENTS AND IS ACCEPTABLE FOR USE ON:

ALL PROJECTS

```
* * * * *  
* I M P E L L C O R P O R A T I O N *  
* P R O G R A M E D S G A P *  
* V E R S I O N *  
* M A R C H 1 , 1 9 8 0 *  
* * * * *
```

NUMBER OF NODAL POINTS = 13 ✓
NUMBER OF ELEMENT TYPES = 1 ✓
NUMBER OF LOAD CASES = 1
NUMBER OF FREQUENCIES = 11 ✓
ANALYSIS TYPE CODE = 2 ✓
BLANK COMMON STORAGE SPECIFIED = 5000 ✓
RESTART CODE = 2 ✓
NUMBER OF FREQUENCIES/BLOCK = 0
MODES (EIGEN VALUE) ANALYSIS CODE = 2 ✓

REQUIRED BLANK COMMON = 199
AVAILABLE BLANK COMMON = 5000

NODAL POINT DATA AS INPUT

| NODE NUMBER | BOUNDARY CONDITION CODES | | | | | | NODAL POINT COORDINATES | | | |
|----------------|--------------------------|----|---|----|----|----|-------------------------|-------|---------|---|
| | X | Y | Z | XX | YY | ZZ | X | Y | Z | |
| 1 | 1 | -1 | 1 | -1 | 1 | -1 | 0.000 | 0.000 | 0.000 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 23.500 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 43.800 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 53.800 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 83.800 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 103.800 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 123.800 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 143.800 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 165.300 | 0 |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 184.400 | 0 |
| 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 198.500 | 0 |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 207.000 | 0 |
| 13 | 1 | 0 | 1 | 0 | 1 | 0 | 1.000 | 0.000 | 0.000 | 0 |

NUMBER OF NODE CARDS READ = 13

| NODE NUMBER | DEGREE OF FREEDOM NUMBERS | | | | YY | ZZ | NODAL POINT COORDINATES | | |
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| | X | Y | Z | XX | | | X | Y | Z |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0000 | 0.0000 | 0.0000 ✓ |
| 2 | 1 ✓ | 0 | 2 ✓ | 0 | 3 ✓ | 0 | 0.0000 | 0.0000 | 23.5000 ✓ |
| 3 | 4 | 0 | 5 | 0 | 6 | 0 | 0.0000 | 0.0000 | 43.8000 ✓ |
| 4 | 7 | 0 | 8 | 0 | 9 | 0 | 0.0000 | 0.0000 | 63.8000 ✓ |
| 5 | 10 | 0 | 11 | 0 | 12 | 0 | 0.0000 | 0.0000 | 83.8000 ✓ |
| 6 | 13 | 0 | 14 | 0 | 15 | 0 | 0.0000 | 0.0000 | 103.8000 ✓ |
| 7 | 16 | 0 | 17 | 0 | 18 | 0 | 0.0000 | 0.0000 | 123.8000 ✓ |
| 8 | 19 | 0 | 20 | 0 | 21 | 0 | 0.0000 | 0.0000 | 143.8000 ✓ |
| 9 | 22 | 0 | 23 | 0 | 24 | 0 | 0.0000 | 0.0000 | 165.3000 ✓ |
| 10 | 25 | 0 | 26 | 0 | 27 | 0 | 0.0000 | 0.0000 | 184.4000 ✓ |
| 11 | 28 | 0 | 29 | 0 | 30 | 0 | 0.0000 | 0.0000 | 198.5000 ✓ |
| 12 | 31 | 0 | 32 | 0 | 33 | 0 | 0.0000 | 0.0000 | 207.0000 ✓ |
| 13 | 0 | 0 | 0 | 0 | 0 | 0 | 1.0000 | 0.0000 | 0.0000 ✓ |

REQUIRED BLANK COMMON = 233
AVAILABLE BLANK COMMON = 5000

.....THREE DIMENSIONAL BEAM ELEMENTS

NUMBER OF BEAMS = 11 ✓
NUMBER OF GEOMETRIC PROPERTY SETS = 5 ✓
NUMBER OF FIXED END FORCE SETS = 3 ✓
NUMBER OF MATERIALS = 1 ✓

1

5.9000E+05 ✓

2.78000E-01 ✓

0.

0.

| ELEMENT TYPE | AREA | | | INERTIA | | |
|-----------------|-------------|-------------|-------------|-----------|-------------|-------------|
| | X | Y | Z | X | Y | Z |
| 1 | 1.400E+03 ✓ | 7.000E+02 ✓ | 7.000E+02 | 1.000E+09 | 2.800E+06 ✓ | 2.800E+06 |
| 2 | 9.900E+02 | 5.000E+02 | 5.600E+02 ✓ | 1.000E+09 | 1.700E+06 ✓ | 1.900E+06 |
| 3 | 9.900E+02 ✓ | 5.000E+02 ✓ | 5.000E+02 | 1.000E+09 | 1.500E+06 ✓ | 1.500E+06 ✓ |
| 4 | 9.900E+02 | 5.000E+02 | 5.000E+02 | 1.000E+09 | 9.000E+05 ✓ | 8.000E+05 |
| 5 | 9.900E+02 | 5.000E+02 | 5.000E+02 | 1.000E+09 | 2.000E+05 ✓ | 2.000E+05 |

ELEMENT LOAD MULTIPLIERS

| | A | B | C | D |
|-------|----|----|----|----|
| X-DIR | 0. | 0. | 0. | 0. |
| Y-DIR | 0. | 0. | 0. | 0. |
| Z-DIR | 0. | 0. | 0. | 0. |

| NO | I | J | K | MI | MJ | A | B | C | D | I | J | BAND |
|----|----|----|----|----|----|---|---|---|---|---|---|------|
| 1 | 1 | 2 | 13 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 2 | 2 | 3 | 13 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 3 | 3 | 4 | 13 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 4 | 4 | 5 | 13 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 5 | 5 | 6 | 13 | 1 | 1✓ | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 6 | 6 | 7 | 13 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 7 | 7 | 8 | 13 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 8 | 8 | 9 | 13 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 9 | 9 | 10 | 13 | 1 | 3✓ | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 10 | 10 | 11 | 13 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 11 | 11 | 12 | 13 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |

ELEMENT BANDWIDTH IS 6

NUMBER OF EQUILIBRIUM EQUATIONS = 33
MAXIMUM HALF BAND WIDTH = 6
COMPACTED VECTOR LENGTH OF STIF. MATRIX = 156
STORAGE PROVIDED FOR MATRIX BLOCKING = 4020
STORAGE ALLOCATED FOR A MATRIX BLOCK = 222
NUMBER OF MATRIX BLOCKS = 1

| NODE NO | LOAD CASE | APPLIED LOADS OR MASSES | | | | | |
|------------|--------------|-------------------------|----|-----------|----|----|----|
| | | PX | RY | RZ | MX | MY | MZ |
| 2 | 0 | 1.429E+02 ✓ | 0. | 1.429E+02 | 0. | 0. | 0. |
| 3 | 0 | 1.304E+02 ✓ | 0. | 1.304E+02 | 0. | 0. | 0. |
| 4 | 0 | 1.304E+02 ✓ | 0. | 1.304E+02 | 0. | 0. | 0. |
| 5 | 0 | 1.304E+02 ✓ | 0. | 1.304E+02 | 0. | 0. | 0. |
| 6 | 0 | 1.304E+02 ✓ | 0. | 1.304E+02 | 0. | 0. | 0. |
| 7 | 0 | 1.304E+02 ✓ | 0. | 1.304E+02 | 0. | 0. | 0. |
| 8 | 0 | 1.432E+02 ✓ | 0. | 1.432E+02 | 0. | 0. | 0. |
| 9 | 0 | 7.379E+01 ✓ | 0. | 7.379E+01 | 0. | 0. | 0. |
| 10 | 0 | 7.671E+01 ✓ | 0. | 7.671E+01 | 0. | 0. | 0. |
| 11 | 0 | 6.584E+01 ✓ | 0. | 6.584E+01 | 0. | 0. | 0. |
| 12 | 0 | 5.900E+00 ✓ | 0. | 5.900E+00 | 0. | 0. | 0. |

1

0.000

0.000

0.000

0.000



1 - RAYLEIGH RITZ METHOD
2 - GENERALIZED EIGENVALUE METHOD

METHOD CHOSEN - 2

| NO. | ITERATIONS | EIGENVALUE | 1ST BOUND | 2ND BOUND |
|-----|------------|-------------------|-------------------|-------------------|
| 1 | 8 | .109426879993E+04 | .109425148013E+04 | .109428611983E+04 |
| 2 | 15 | .965974502905E+04 | .960666881150E+04 | .971282124659E+04 |
| 3 | 10 | .104177205658E+05 | .984906595952E+04 | .109863751722E+05 |
| 4 | 11 | .336137237633E+05 | .333249527259E+05 | .339024948016E+05 |
| 5 | 14 | .686137641251E+05 | .685510523431E+05 | .686764759070E+05 |
| 6 | 10 | .765332960671E+05 | .748928537235E+05 | .781837384105E+05 |
| 7 | 12 | .113322259372E+05 | .113222510343E+06 | .113422008400E+06 |
| 8 | 12 | .151169701725E+05 | .151106848049E+06 | .151230555401E+06 |
| 9 | 13 | .138074124322E+05 | .188074385370E+06 | .188113863274E+06 |
| 10 | 10 | .191172703710E+05 | .189401155613E+06 | .192944251807E+06 |
| 11 | 12 | .238705562250E+05 | .237509722211E+06 | .239901402350E+06 |

NJDE MDDF X Y Z XX YY ZZ

| | | | | | | | |
|----|----|------------|----|------------|----|-----------|----|
| 13 | 1 | 0. | 0. | 0. | 0. | 0. | 0. |
| | 2 | 0. | 0. | 0. | 0. | 0. | 0. |
| | 3 | 0. | 0. | 0. | 0. | 0. | 0. |
| | 4 | 0. | 0. | 0. | 0. | 0. | 0. |
| | 5 | 0. | 0. | 0. | 0. | 0. | 0. |
| | 6 | 0. | 0. | 0. | 0. | 0. | 0. |
| | 7 | 0. | 0. | 0. | 0. | 0. | 0. |
| | 8 | 0. | 0. | 0. | 0. | 0. | 0. |
| | 9 | 0. | 0. | 0. | 0. | 0. | 0. |
| | 10 | 0. | 0. | 0. | 0. | 0. | 0. |
| | 11 | 0. | 0. | 0. | 0. | 0. | 0. |
| 12 | 1 | -5.059E-02 | 0. | -5.350E-17 | 0. | -1.74E-04 | 0. |
| | 2 | -4.302E-10 | 0. | -4.144E-02 | 0. | -3.50E-12 | 0. |
| | 3 | -5.282E-02 | 0. | 6.201E-11 | 0. | -4.43E-04 | 0. |
| | 4 | 4.619E-02 | 0. | -4.203E-13 | 0. | 3.12E-04 | 0. |
| | 5 | 3.573E-02 | 0. | 7.191E-12 | 0. | 2.99E-04 | 0. |
| | 6 | 3.406E-11 | 0. | -4.955E-02 | 0. | 3.18E-13 | 0. |
| | 7 | -3.900E-02 | 0. | -1.892E-15 | 0. | -3.65E-04 | 0. |
| | 8 | -4.465E-02 | 0. | -3.670E-14 | 0. | -5.30E-04 | 0. |
| | 9 | 1.762E-13 | 0. | -4.447E-02 | 0. | 2.29E-15 | 0. |
| | 10 | 2.415E-02 | 0. | 4.984E-13 | 0. | 3.24E-04 | 0. |
| | 11 | -1.195E-02 | 0. | 2.091E-16 | 0. | -1.30E-04 | 0. |
| 11 | 1 | -4.908E-02 | 0. | -5.360E-17 | 0. | -1.74E-04 | 0. |
| | 2 | -3.979E-10 | 0. | -4.141E-02 | 0. | -3.50E-12 | 0. |
| | 3 | -4.895E-02 | 0. | 6.196E-11 | 0. | -4.42E-04 | 0. |
| | 4 | 4.293E-02 | 0. | -4.180E-13 | 0. | 3.10E-04 | 0. |
| | 5 | 3.229E-02 | 0. | 7.151E-12 | 0. | 2.95E-04 | 0. |
| | 6 | 2.994E-11 | 0. | -4.928E-02 | 0. | 3.12E-13 | 0. |
| | 7 | -3.427E-02 | 0. | -1.350E-15 | 0. | -3.58E-04 | 0. |
| | 8 | -3.767E-02 | 0. | -3.618E-14 | 0. | -5.19E-04 | 0. |
| | 9 | 1.444E-13 | 0. | -4.386E-02 | 0. | 2.24E-15 | 0. |
| | 10 | 1.970E-02 | 0. | 3.988E-13 | 0. | 3.16E-04 | 0. |
| | 11 | -9.374E-03 | 0. | 1.307E-16 | 0. | -1.75E-04 | 0. |
| 10 | 1 | -4.623E-02 | 0. | -5.351E-17 | 0. | -1.73E-04 | 0. |
| | 2 | -3.162E-10 | 0. | -4.082E-02 | 0. | -3.54E-12 | 0. |
| | 3 | -3.882E-02 | 0. | 6.108E-11 | 0. | -4.34E-04 | 0. |
| | 4 | 2.779E-02 | 0. | -3.709E-13 | 0. | 2.39E-04 | 0. |
| | 5 | 1.154E-02 | 0. | 6.340E-12 | 0. | 2.63E-04 | 0. |
| | 6 | 1.438E-13 | 0. | -4.369E-02 | 0. | 2.63E-13 | 0. |
| | 7 | -6.127E-05 | 0. | -1.725E-15 | 0. | -3.92E-04 | 0. |
| | 8 | 1.257E-02 | 0. | -2.590E-14 | 0. | -4.36E-04 | 0. |
| | 9 | -9.539E-14 | 0. | -3.153E-02 | 0. | 1.33E-15 | 0. |
| | 10 | -1.324E-02 | 0. | 2.072E-13 | 0. | 2.51E-04 | 0. |
| | 11 | 1.008E-02 | 0. | -3.707E-16 | 0. | -1.42E-04 | 0. |
| 9 | 1 | -4.184E-02 | 0. | -1.915E-16 | 0. | -1.71E-04 | 0. |
| | 2 | -1.719E-10 | 0. | -3.917E-02 | 0. | -3.36E-12 | 0. |
| | 3 | -2.111E-02 | 0. | 5.351E-11 | 0. | -4.12E-04 | 0. |
| | 4 | -2.139E-03 | 0. | -2.434E-13 | 0. | 2.29E-04 | 0. |
| | 5 | -2.410E-02 | 0. | 4.204E-12 | 0. | 1.40E-04 | 0. |
| | 6 | -3.886E-11 | 0. | -2.495E-02 | 0. | 1.52E-13 | 0. |
| | 7 | 4.400E-02 | 0. | -4.731E-15 | 0. | -1.75E-04 | 0. |
| | 8 | 5.757E-02 | 0. | -6.152E-15 | 0. | -2.74E-04 | 0. |
| | 9 | -2.303E-13 | 0. | -2.302E-03 | 0. | 1.17E-15 | 0. |

| | | | | | | | |
|----|------------|------------|------------|------------|-----------|-----------|----|
| 4 | -3.292E-02 | 0. | -4.832E-14 | 0. | 1.19E-04 | 0. | |
| 5 | -3.723E-02 | 0. | 3.457E-13 | 0. | 6.03E-05 | 0. | |
| 6 | -1.453E-11 | 0. | -5.814E-03 | 0. | 4.45E-14 | 0. | |
| 7 | 1.637E-02 | 0. | -1.527E-15 | 0. | -5.14E-05 | 0. | |
| 8 | -2.500E-02 | 0. | 2.431E-14 | 0. | -1.35E-04 | 0. | |
| 9 | 3.052E-13 | 0. | 3.199E-02 | 0. | 1.10E-15 | 0. | |
| 10 | 3.746E-02 | 0. | -4.242E-13 | 0. | 1.55E-04 | 0. | |
| 11 | -2.553E-02 | 0. | -5.996E-16 | 0. | -1.07E-04 | 0. | |
| 7 | 1 | -3.117E-02 | 0. | -1.894E-16 | 0. | -1.59E-04 | 0. |
| | 2 | 1.419E-10 | 0. | -3.321E-02 | 0. | -2.60E-12 | 0. |
| | 3 | 1.743E-02 | 0. | 4.959E-11 | 0. | -3.19E-04 | 0. |
| | 4 | -3.554E-02 | 0. | 9.135E-14 | 0. | 2.76E-05 | 0. |
| | 5 | -6.083E-03 | 0. | -1.555E-12 | 0. | 3.29E-06 | 0. |
| | 6 | 2.719E-11 | 0. | 1.072E-02 | 0. | 3.62E-14 | 0. |
| | 7 | -3.126E-02 | 0. | 6.062E-16 | 0. | -4.22E-05 | 0. |
| | 8 | -2.190E-02 | 0. | 3.020E-14 | 0. | -1.90E-04 | 0. |
| | 9 | -2.277E-13 | 0. | 3.671E-02 | 0. | 9.45E-16 | 0. |
| | 10 | -2.791E-02 | 0. | -1.624E-13 | 0. | 1.33E-04 | 0. |
| | 11 | 4.416E-02 | 0. | 1.136E-15 | 0. | -7.17E-05 | 0. |
| 5 | 1 | -2.575E-02 | 0. | -1.876E-16 | 0. | -1.48E-04 | 0. |
| | 2 | 2.429E-10 | 0. | -2.935E-02 | 0. | -2.08E-12 | 0. |
| | 3 | 2.982E-02 | 0. | 4.392E-11 | 0. | -2.56E-04 | 0. |
| | 4 | -1.996E-02 | 0. | 2.125E-13 | 0. | -4.50E-05 | 0. |
| | 5 | 3.121E-02 | 0. | -3.635E-12 | 0. | 2.40E-05 | 0. |
| | 6 | 2.604E-11 | 0. | 2.504E-02 | 0. | 5.92E-14 | 0. |
| | 7 | -2.955E-02 | 0. | 2.063E-15 | 0. | -7.98E-05 | 0. |
| | 8 | 2.672E-02 | 0. | 2.055E-14 | 0. | -1.52E-04 | 0. |
| | 9 | -1.525E-13 | 0. | 2.278E-02 | 0. | 3.78E-16 | 0. |
| | 10 | -1.844E-02 | 0. | 2.184E-13 | 0. | 5.04E-05 | 0. |
| | 11 | -3.276E-02 | 0. | 2.330E-15 | 0. | -4.59E-05 | 0. |
| 5 | 1 | -2.020E-02 | 0. | -1.853E-16 | 0. | -1.32E-04 | 0. |
| | 2 | 2.979E-10 | 0. | -2.473E-02 | 0. | -1.50E-12 | 0. |
| | 3 | 3.657E-02 | 0. | 3.700E-11 | 0. | -1.34E-04 | 0. |
| | 4 | 6.632E-03 | 0. | 2.901E-13 | 0. | -8.25E-05 | 0. |
| | 5 | 3.809E-02 | 0. | -4.963E-12 | 0. | 8.41E-05 | 0. |
| | 6 | -1.620E-11 | 0. | 3.419E-02 | 0. | 5.23E-14 | 0. |
| | 7 | 1.883E-02 | 0. | 2.639E-15 | 0. | -7.13E-05 | 0. |
| | 8 | 1.829E-02 | 0. | 7.325E-16 | 0. | -3.04E-05 | 0. |
| | 9 | 3.308E-13 | 0. | -2.713E-03 | 0. | 3.76E-16 | 0. |
| | 10 | 4.066E-02 | 0. | 3.571E-13 | 0. | 5.31E-05 | 0. |
| | 11 | -1.424E-03 | 0. | 1.200E-15 | 0. | -6.58E-05 | 0. |
| 4 | 1 | -1.471E-02 | 0. | -9.286E-18 | 0. | -1.11E-04 | 0. |
| | 2 | 2.982E-10 | 0. | -1.946E-02 | 0. | -9.18E-13 | 0. |
| | 3 | 3.661E-02 | 0. | 2.912E-11 | 0. | -1.13E-04 | 0. |
| | 4 | 2.949E-02 | 0. | 3.090E-13 | 0. | -7.35E-05 | 0. |
| | 5 | 7.766E-03 | 0. | -5.267E-12 | 0. | 1.24E-04 | 0. |
| | 6 | -3.229E-11 | 0. | 3.627E-02 | 0. | 4.41E-16 | 0. |
| | 7 | 3.686E-02 | 0. | 3.502E-15 | 0. | -1.37E-07 | 0. |
| | 8 | -2.929E-02 | 0. | -2.171E-14 | 0. | -6.59E-05 | 0. |
| | 9 | -6.701E-14 | 0. | -2.543E-02 | 0. | 4.79E-16 | 0. |
| | 10 | -7.932E-03 | 0. | 1.429E-13 | 0. | 5.34E-05 | 0. |
| | 11 | 3.641E-02 | 0. | 2.765E-16 | 0. | -2.42E-05 | 0. |
| 3 | 1 | -9.496E-03 | 0. | -6.372E-18 | 0. | -3.34E-05 | 0. |
| | 2 | 2.447E-10 | 0. | -1.358E-02 | 0. | -4.26E-13 | 0. |
| | 3 | 3.005E-02 | 0. | 2.047E-11 | 0. | -9.23E-05 | 0. |
| | 4 | 3.874E-02 | 0. | 2.629E-13 | 0. | -3.52E-05 | 0. |

| | | | | | | |
|----|------------|----|------------|----|-----------|----|
| 10 | -3.495E-02 | 0. | 5.75E-02 | 0. | 1.51E-17 | 0. |
| 11 | -4.393E-02 | 0. | -1.803E-13 | 0. | 7.06E-06 | 0. |
| | | | -3.906E-15 | 0. | -2.44E-05 | 0. |
| 2 | | | | | | |
| 1 | -4.685E-03 | 0. | -3.435E-18 | 0. | -4.38E-05 | 0. |
| 2 | 1.463E-10 | 0. | -7.456E-03 | 0. | -7.54E-14 | 0. |
| 3 | 1.796E-02 | 0. | 1.116E-11 | 0. | -1.17E-05 | 0. |
| 4 | 2.907E-02 | 0. | 1.610E-13 | 0. | 1.33E-06 | 0. |
| 5 | -3.865E-02 | 0. | -2.742E-12 | 0. | 3.81E-05 | 0. |
| 6 | 3.441E-11 | 0. | 1.838E-02 | 0. | -2.03E-14 | 0. |
| 7 | -3.940E-02 | 0. | 1.540E-15 | 0. | 2.32E-05 | 0. |
| 8 | 3.131E-02 | 0. | -2.313E-14 | 0. | -5.50E-05 | 0. |
| 9 | 2.587E-13 | 0. | -2.373E-02 | 0. | -1.40E-16 | 0. |
| 10 | 3.240E-02 | 0. | -2.442E-13 | 0. | -1.47E-05 | 0. |
| 11 | 2.410E-02 | 0. | -3.579E-15 | 0. | -3.59E-05 | 0. |
| 1 | | | | | | |
| 1 | 0. | 0. | 0. | 0. | 0. | 0. |
| 2 | 0. | 0. | 0. | 0. | 0. | 0. |
| 3 | 0. | 0. | 0. | 0. | 0. | 0. |
| 4 | 0. | 0. | 0. | 0. | 0. | 0. |
| 5 | 0. | 0. | 0. | 0. | 0. | 0. |
| 6 | 0. | 0. | 0. | 0. | 0. | 0. |
| 7 | 0. | 0. | 0. | 0. | 0. | 0. |
| 8 | 0. | 0. | 0. | 0. | 0. | 0. |
| 9 | 0. | 0. | 0. | 0. | 0. | 0. |
| 10 | 0. | 0. | 0. | 0. | 0. | 0. |
| 11 | 0. | 0. | 0. | 0. | 0. | 0. |

| MODE | FREQ. (RAD/SEC) | FREQ. (CPS) | PERIOD |
|------|-----------------|-------------|---------|
| 1 | .330797E+02 | .525481E+01 | .189940 |
| 2 | .982840E+02 | .155424E+02 | .063929 |
| 3 | .102067E+03 | .162445E+02 | .061559 |
| 4 | .183340E+03 | .291796E+02 | .034271 |
| 5 | .251942E+03 | .416694E+02 | .023987 |
| 6 | .276656E+03 | .440311E+02 | .022711 |
| 7 | .336634E+03 | .535770E+02 | .018665 |
| 8 | .38805E+03 | .618804E+02 | .016160 |
| 9 | .433698E+03 | .690253E+02 | .014487 |
| 10 | .437233E+03 | .695879E+02 | .014370 |
| 11 | .488575E+03 | .777592E+02 | .012860 |

19.19.55.JOB,T2000,P2.
19.19.55.USER,SUMGS1.
19.19.55.CHARGE,PKUJNC,03100681355.
19.19.55.\$PROLOG,PROCL,.
19.19.56.\$SETFS,PROCL/FS=AD.
19.19.56.PROCL.
19.19.56.//LOADLP 587 .004 CP .074 RT//LOADER 014472/040000-040000 CM 1 TM
19.19.56.IFE,DT.EQ.TXD,FLASHIT.
19.19.56.ENDIF,FLASHIT.
19.19.56.IFE,DT.EQ.BCD,BULLIT.
19.19.56.CHGFTN.
19.19.57. END CHGFTN
19.19.57. 15600 MAXIMUM EXECUTION FL.
19.19.57. 0.002 CP SECONDS EXECUTION TIME.
19.19.57.GET,SYSBULL/UN=EDSOPER,NA.
19.19.57.IFE,FILE(SYSBULL,ASI),OUTIT.
19.19.57.COPY,SYSBULL.
19.19.57.EDI ENCOUNTERED.
19.19.57.ENDIF,OUTIT.
19.19.57.ENDIF,BULLIT.
19.19.57.RETURN,PROCL.
19.19.57.REVERT.
19.19.58.ROUTE,OUTPUT,DC=PR,UJN=YAX,FC=CP,UN=CSDVAX1,DEF.
19.19.58. ROUTE COMPLETE.
19.19.58.REWIND,INPUT.
19.19.58.COPYSBF.
19.19.58. COPY COMPLETE.
19.19.58.REWIND,INPUT.
19.19.58.SKIPR,INPUT,1.
19.19.58.GET,GAPPRO/UN=IMPLIB.
19.19.58.PURGE,EIGEN/NA.
19.19.59.DEFINI,EIGEN.
19.19.59.BEGIN,GAPLOAD,GAPPRO,MODALI,BEAM,TRUSS,BOUND,NSTART=2.
19.20.00.COMMENT.
19.20.00.COMMENT. GAPLOAD PROCEDURE VERSION 1.1
19.20.00.COMMENT. RELEASED MARCH, 1981
19.20.00.COMMENT.
19.20.00.GET,ACCESSP/UN=IMPLIB.
19.20.01.REGIV,ACCESSP,ACCESSP,GAPG.
19.20.01.NOTE(CODEX) GAPG ABS
19.20.01.REWIND,CODEX.
19.20.01.GET,ACCESSB/UN=QAERLIN.
19.20.02.ACCESSB.
19.20.02.//LOADER 587 .006 CP .068 RT//LOADER 014472/040000-040000 CM 1 TM
19.20.04. END ACCESS
19.20.04. 37600 MAXIMUM EXECUTION FL.
19.20.04. 0.412 CP SECONDS EXECUTION TIME.
19.20.04.REVERT.
19.20.04.*ATTACH,ABS=TEMPLGO/UN=SAFAIF.
19.20.04.IFE,\$MODALI.EQ.\$STATIC,\$NOSTAT.
19.20.04.ENDIF,NOSTAT.
19.20.04.IFE,\$MODALI.EQ.\$MODALI,\$NOMODL.
19.20.04.*
19.20.04.* MODAL TIME HISTORY 1
19.20.04.*
19.20.04.FILE,TAPE2,BT=C,RT=S,FD=SQ,USE.
19.20.04.FILE,TAPE7,BT=C,RT=S,FD=SQ,USE.
19.20.04.FILE,TAPE11,BT=C,RT=S,FD=SQ,USE.

19.20.04.*
19.20.04.SKIPF,ABS,2.
19.20.05.COPYBR,ABS,TEMPLGO,39.
19.20.07.COPY COMPLETE.
19.20.07.SET,R1=3.
19.20.07.SKIP,ENDANAL.
19.20.07.ENDIF,ENDANAL.
19.20.07.IFE,AND1.EQ.1RESCU1,NORESCU.
19.20.08.ENDIF,NORESCU.
19.20.08.IFE,TRUS1.EQ.1TRUS1,NOTRUS.
19.20.08.SET,R2=7-R1.
19.20.08.SET,R1=7.
19.20.08.BEGIN,SKIPFIL,GAPPRD.
19.20.08.SET,R3=1.
19.20.08.WHILE,R3.LE.R2,LOOP.
19.20.08.SKIPF,ABS.
19.20.08.SET,R3=R3+1.
19.20.08.ENDW,LOOP.
19.20.07.WHILE,R3.LE.R2,LOOP.
19.20.07.SKIPF,ABS.
19.20.07.SET,R3=R3+1.
19.20.07.ENDW,LOOP.
19.20.07.WHILE,R3.LE.R2,LOOP.
19.20.09.SKIPF,ABS.
19.20.09.SET,R3=R3+1.
19.20.09.ENDW,LOOP.
19.20.10.WHILE,R3.LE.R2,LOOP.
19.20.10.SKIPF,ABS.
19.20.10.SET,R3=R3+1.
19.20.10.ENDW,LOOP.
19.20.10.WHILE,R3.LE.R2,LOOP.
19.20.10.ENDW,LOOP.
19.20.10.REVERT.
19.20.10.COPYBR,ABS,TEMPLGO,2.
19.20.10.COPY COMPLETE.
19.20.10.ENDIF,NOTRUS.
19.20.10.IFE,BEA1.EQ.1BEA1,NOBEAM.
19.20.10.SET,R2=8-R1.
19.20.10.SET,R1=8.
19.20.11.BEGIN,SKIPFIL,GAPPRD.
19.20.11.SET,R3=1.
19.20.11.WHILE,R3.LE.R2,LOOP.
19.20.11.SKIPF,ABS.
19.20.11.SET,R3=R3+1.
19.20.11.ENDW,LOOP.
19.20.11.WHILE,R3.LE.R2,LOOP.
19.20.11.ENDW,LOOP.
19.20.11.REVERT.
19.20.12.COPYBR,ABS,TEMPLGO,4.
19.20.12.COPY COMPLETE.
19.20.12.ENDIF,NOBLAM.
19.20.12.IFE,END1.EQ.1PLAN1,NOPLANE.
19.20.12.ENDIF,NOPLANE.
19.20.12.IFE,END1.EQ.1SILL1,NO SOLLID.
19.20.12.ENDIF,NO SOLLID.
19.20.12.IFE,END1.EQ.1SHELL1,NO SHELL.
19.20.12.ENDIF,NO SHELL.
19.20.12.IFE,END1.EQ.1BOUND1,NOBOUND.

19.20.12.SET,R2=12-R1.
19.20.12.SET,R1=12.
19.20.12.BEGIN,SKIPFIL,GAPPRO.
19.20.13.SET,R3=1.
19.20.13.WHILE,R3.LE.R2,LOOP.
19.20.13.SKIPF,ABS.
19.20.13.SET,R3=R3+1.
19.20.13.ENDW,LOOP.
19.20.13.WHILE,R3.LE.R2,LOOP.
19.20.13.SKIPF,ABS.
19.20.13.SET,R3=R3+1.
19.20.13.ENDW,LOOP.
19.20.14.WHILE,R3.LE.R2,LOOP.
19.20.14.SKIPF,ABS.
19.20.14.SET,R3=R3+1.
19.20.14.ENDW,LOOP.
19.20.14.WHILE,R3.LE.R2,LOOP.
19.20.14.SKIPF,ABS.
19.20.14.SET,R3=R3+1.
19.20.14.ENDW,LOOP.
19.20.14.WHILE,R3.LE.R2,LOOP.
19.20.14.SKIPF,ABS.
19.20.14.SET,R3=R3+1.
19.20.14.ENDW,LOOP.
19.20.14.WHILE,R3.LE.R2,LOOP.
19.20.14.ENDW,LOOP.
19.20.14.REVERT.
19.20.14.COPYBE,ABS,TEMPLGD,2.
19.20.15.COPY COMPLETE.
19.20.15.ENDIF,NOROUND.
19.20.15.IFE,1EQ.3,FLUID,NOFLUID.
19.20.15.ENDIF,NOFLUID.
19.20.15.IFE,128.NE.1NOSTAR,GOLOAD.
19.20.15.REWIND,INFILE.
19.20.15.IFE,2.EQ.4,ENDNS4.
19.20.15.ENDIF,ENDNS4.
19.20.15.IFE,2.EQ.5.OR.2.EQ.-5,ENDNS5.
19.20.15.ENDIF,ENDNS5.
19.20.15.IFE,2.EQ.3,ENDNS3.
19.20.15.ENDIF,ENDNS3.
19.20.15.ENDIF,GOLOAD.
19.20.15.REWIND,TEMPLGD.
19.20.15.ATTACH,IMPLIB/JN=IMPLIF.
19.20.16.MAP,JFF.
19.20.16.LDSET,PFSET=NGINDEF,LIB=IMPLIB,MAP=/OUTPUT.
19.20.16.LDSET,STAT=TAPE1/TAPE2/TAPE3/TAPE4/TAPE5/TAPE6/TAPE7.
19.20.16.LDSET,STAT=TAPE8/TAPE9/TAPE10/TAPE11/TAPE12/TAPE13/TAPE14.
19.20.16.TEMPLGD,INPUT,OUTPUT.
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- DYNAM
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- FLUD2D
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- MSPLIT
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- PLANE
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- RESPEC
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- RSPACT
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- SHELL

19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- SSPACB
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- STATIC
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- STEP
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- THREEED
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- USOL
19.20.23. CM LWA+1 =134117B, LOADER USED 146400R
19.20.23.//LOADER 537 2.577 CP 6.922 RT//LOADER 146304/040000-150000 CM 161 TM
19.20.23.
19.20.23. * * * * *
19.20.23. *
19.20.23. * I M P E L L C O R P O R A T I O N *
19.20.23. *
19.20.23. * P R O G R A M E U S G A P *
19.20.23. *
19.20.23. * V E R S I O N *
19.20.23. *
19.20.23. * M A R C H 1 , 1 9 8 0 *
19.20.23. *
19.20.23. * * * * *
19.20.23.
19.20.27. EXIT
19.20.27. 136100 FINAL EXECUTION FL.
19.20.27. 1.712 CP SECONDS EXECUTION TIME.
19.20.27.RETURN,ABS,IMPLIB,UNIPL0T,UNIPLOT,TEMPLGO.
19.20.27.RETURN,ABS,IMPLIB,TEMPLGO.
19.20.27.IFE,\$2\$.NE,\$NOSTAR1,ENDPRO.
19.20.27.REWIND,OUTFILE.
19.20.27.IFE,2.F0.2,ENDMS2.
19.20.27.REWIND,TAPE1,TAPE2,TAPE3,TAPE4,TAPE7,TAPE8,TAPE9.
19.20.27.COPY3F,TAPE1,OUTFILE.
19.20.27.EDI ENCOUNTERED.
19.20.27.COPY3F,TAPE2,OUTFILE.
19.20.28. COPY COMPLETE.
19.20.28.COPY3F,TAPE3,OUTFILE.
19.20.28.EDI ENCOUNTERED.
19.20.28.COPY3F,TAPE4,OUTFILE.
19.20.28.EDI ENCOUNTERED.
19.20.28.COPY3F,TAPE7,OUTFILE.
19.20.28. COPY COMPLETE.
19.20.28.COPY3F,TAPE8,OUTFILE.
19.20.28.EDI ENCOUNTERED.
19.20.28.COPY3F,TAPE9,OUTFILE.
19.20.28.EDI ENCOUNTERED.
19.20.28.REWIND,OUTFILE.
19.20.28.SKIP,ENDPRO.
19.20.28.ENDIF,ENDPRO.
19.20.28.\$REVERT,CCL
19.20.27.REWIND,IFIGN.
19.20.27.REWIND,OUTFILE.
19.20.27.COPY3F,OUTFILE,IFIGN,7.
19.20.27. COPY COMPLETE.

19.20.29.REWIND,OUTPUT.
19.20.29.PURGE,GAPOUTD/NA.
19.20.29.DEFINE,GAPOUTD.
19.20.30.COPYBF,OUTPUT,GAPOUTD,99.
19.20.30.FOI ENCOUNTERED.
19.20.30.DAYFILE.

19.19.55.JOB,T2000,P2.
19.19.55.USER,SONGS1.
19.19.55.CHARGE,PROJWC,03100691355.
19.19.55.\$PROLDC,PROCL,,.
19.19.55.\$SETFS,PROCL/FS=AD.
19.19.55.PROCL.
19.19.55.//LOADER 587 .004 CP .074 RT//LOADER 014472/040000-040000 CM 1 TM
19.19.55.IFE,\$T.EQ.TX0,FLASHIT.
19.19.55.ENDIF,FLASHIT.
19.19.55.IFE,\$T.EQ.BC0,BULLIT.
19.19.55.CHGFTN.
19.19.57. END CHGFTN
19.19.57. 15600 MAXIMUM EXECUTION FL.
19.19.57. 0.007 CP SECONDS EXECUTION TIME.
19.19.57.GET,SYSBULL/UN=EDSOPER,NA.
19.19.57.IFE,FILE(SYSBULL,AS),OUTIT.
19.19.57.COPY,SYSBULL.
19.19.57.EDI ENCOUNTERED.
19.19.57.ENDIF,OUTIT.
19.19.57.ENDIF,PULLIT.
19.19.57.RETURN,PROCL.
19.19.57.REVERT.
19.19.58.ROUTE,OUTPUT,DC=PR,UJN=VAX,FC=CP,UN=CSOVAX1,DEF.
19.19.58.ROUTE COMPLETE.
19.19.58.REWIND,INPUT.
19.19.58.COPYSB.
19.19.58.COPY COMPLETE.
19.19.58.REWIND,INPUT.
19.19.58.SKIPR,INPUT,1.
19.19.58.GET,GAPPRO/UN=IMPLIB.
19.19.58.PURGE,EIGEN/NA.
19.19.59.DEFINE,EIGEN.
19.19.59.BEGIN,GAPLOAD,GAPPRO,MODAL1,BEAM,TRUSS,BBOUND,NSTART=2.
19.20.00.COMMENT.
19.20.00.COMMENT. GAPLOAD PROCEDURE VERSION 1.1
19.20.00.COMMENT. RELEASED MARCH, 1981
19.20.00.COMMENT.
19.20.00.GET,ACCESSP/UN=IMPLIB.
19.20.01.BEGIN,ACCESSP,ACCESSP,GAPG.
19.20.01.NOTE(CODEX) GAPG ABS
19.20.01.REWIND,CODEX.
19.20.01.GET,ACCESSB/UN=QAERLIF.
19.20.02.ACCESSB.
19.20.02.//LOADER 587 .006 CP .063 RT//LOADER 014472/040000-040000 CM 1 TM
19.20.04. END ACCESS
19.20.04. 37600 MAXIMUM EXECUTION FL.
19.20.04. 0.412 CP SECONDS EXECUTION TIME.
19.20.04.REVERT.
19.20.04.*ATTACH,ABS=TEMPLG0/UN=SAFEATIF.
19.20.04.IFE,\$MODAL13.EQ.\$STATIC6,NOSTAT.
19.20.04.ENDIF,NOSTAT.
19.20.04.IFE,\$MODAL13.EQ.\$MODAL13,NOMOD1.
19.20.04.*
19.20.04.* MODAL TIME HISTORY 1
19.20.04.*
19.20.04.FILE,TAPE2,BT=C,RT=S,FD=S0,USE.
19.20.04.FILE,TAPE7,BT=C,RT=S,FD=S0,USE.
19.20.04.FILE,TAPE11,BT=C,RT=S,FD=S0,USE.
19.20.04.*
19.20.04.SKIPF,ABS,2.

19.20.07. IFE, &NOT, EQ, &RESCO, NIRESCO.
19.20.08. IFE, &TRUSS, EQ, &TRUSS, NOTRUSS.
19.20.08. SET, R2=7-R1.
19.20.08. SET, R1=7.
19.20.08. BEGIN, SKIPFIL, GAPPRO.
19.20.08. SET, R3=1.
19.20.08. WHILE, R3.LE.R2, LOOP.
19.20.08. SKIPF, ABS.
19.20.08. SET, R3=R3+1.
19.20.08. ENDW, LOOP.
19.20.09. WHILE, R3.LE.R2, LOOP.
19.20.09. SKIPF, ABS.
19.20.09. SET, R3=R3+1.
19.20.09. ENDW, LOOP.
19.20.09. WHILE, R3.LE.R2, LOOP.
19.20.09. SKIPF, ABS.
19.20.09. SET, R3=R3+1.
19.20.09. ENDW, LOOP.
19.20.10. WHILE, R3.LE.R2, LOOP.
19.20.10. SKIPF, ABS.
19.20.10. SET, R3=R3+1.
19.20.10. ENDW, LOOP.
19.20.10. WHILE, R3.LE.R2, LOOP.
19.20.10. ENDW, LOOP.
19.20.10. REVERT.
19.20.10. COPY3F, ABS, TEMPLG0, 2.
19.20.10. COPY COMPLETE.
19.20.10. ENDIF, NOTRUS.
19.20.10. IFE, &BEAM, EQ, &BEAM, NOBEAM.
19.20.10. SET, R2=8-R1.
19.20.10. SET, R1=8.
19.20.11. BEGIN, SKIPFIL, GAPPRO.
19.20.11. SET, R3=1.
19.20.11. WHILE, R3.LE.R2, LOOP.
19.20.11. SKIPF, ABS.
19.20.11. SET, R3=R3+1.
19.20.11. ENDW, LOOP.
19.20.11. WHILE, R3.LE.R2, LOOP.
19.20.11. ENDW, LOOP.
19.20.11. REVERT.
19.20.12. COPY3F, ABS, TEMPLG0, 4.
19.20.12. COPY COMPLETE.
19.20.12. ENDIF, NOBEAM.
19.20.12. IFE, &NOB, EQ, &PLANE, NOPLANE.
19.20.12. ENDIF, NOPLANE.
19.20.12. IFE, &NOI, EQ, &SOLID, NOSOLID.
19.20.12. ENDIF, NOSOLID.
19.20.12. IFE, &NOB, EQ, &SHELL, NOSHELL.
19.20.12. ENDIF, NOSHELL.
19.20.12. IFE, &BOUN, EQ, &BOUN, NOBOUND.
19.20.12. SET, R2=12-R1.
19.20.12. SET, R1=12.
19.20.12. BEGIN, SKIPFIL, GAPPRO.
19.20.13. SET, R3=1.
19.20.13. WHILE, R3.LE.R2, LOOP.
19.20.13. SKIPF, ABS.
19.20.13. SET, R3=R3+1.
19.20.13. ENDW, LOOP.
19.20.13. WHILE, R3.LE.R2, LOOP.
19.20.13. SKIPF, ABS.

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19.20.14.ENDW,LOOP.
19.20.14.WHILE,R3.LE.R2,LOOP.
19.20.14.SKIP,ABS.
19.20.14.SET,R3=R3+1.
19.20.14.ENDW,LOOP.
19.20.14.WHILE,R3.LE.R2,LOOP.
19.20.14.ENDW,LOOP.
19.20.14.REVERT.
19.20.14.COPYR,ABS,TEMPLG0,2.
19.20.15. COPY COMPLETE.
19.20.15. ENDIF,NOBOUND.
19.20.15. IFE, $NOS.EQ. $FLUID,NOFLUID.
19.20.15. ENDIF,NOFLUID.
19.20.15. IFE, $Z$.NE. $MSTARS,SOLOAD.
19.20.15. REWIND,INFILE.
19.20.15. IFE, 2.EQ.4,ENDNS4.
19.20.15. ENDIF,ENDNS4.
19.20.15. IFE, 2.LO.5.UR.2.EQ.-5,ENDNS5.
19.20.15. ENDIF,ENDNS5.
19.20.15. IFE, 2.EQ.3,ENDNS3.
19.20.15. ENDIF,ENDNS3.
19.20.15. ENDIF,SOLOAD.
19.20.15. REWIND,TEMPLG0.
19.20.15. ATTACH,IMPLIB/UN=IMPLIB.
19.20.15. MAP,JFF.
19.20.16. LDSET,PRESET=NGINDEF,LIB=IMPLIB,MAP=/OUTPUT.
19.20.16. LDSET,STAT=TAPE1/TAPE2/TAPE3/TAPE4/TAPE5/TAPE6/TAPE7.
19.20.16. LDSET,STAT=TAPE8/TAPE9/TAPE10/TAPE11/TAPE12/TAPE13/TAPE14.
19.20.16. TEMPLG0,INPUT,OUTPUT.
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- DYNAM
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- FLUD20
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- MSPLOT
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- PLANE
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- RESPEC
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- RSPECT
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- SHELL
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- SSPACED
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- STATIC
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- STEP
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- THREED
19.20.23. NON-FATAL LOADER ERRORS -
19.20.23. UNSATISFIED EXTERNAL REF -- USUL
19.20.23. CM LVA+1 =1341176, LOADER USED 146900R
19.20.23. //LOADER 587 2.577 CP 5.922 RT//LOADER 145304/040000-150000 CM 161 TM
19.20.23.
19.20.23.
19.20.23. * * * * *
19.20.23. *
19.20.23. * I M P O L L C O R P O R A T I O N *
19.20.23. *

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19.20.21. *
19.20.23. * * * * *
19.20.23.
19.20.23.
19.20.27. EXIT
19.20.27.      L36100  FINAL EXECUTION FL.
19.20.27.      1.717 CP SECONDS EXECUTION TIME.
19.20.27.RETURN,ABS,IMPLIB,UNIPLUT,UNIPLUT,TEMPLGD.
19.20.27.RETURN,ABS,IMPLIB,TEMPLGD.
19.20.27.IFE,42$,NE,ENDSTAR$,ENDPRO.
19.20.27.REWIND,OUTFILE.
19.20.27.IFE,2,LC,2,ENDNS2.
19.20.27.REWIND,TAPE1,TAPE2,TAPE3,TAPE4,TAPE7,TAPER,TAPE9.
19.20.27.COPY3F,TAPE1,OUTFILE.
19.20.27.EDI ENCOUNTED.
19.20.27.COPY3F,TAPE2,OUTFILE.
19.20.28. COPY COMPLETE.
19.20.28.COPY3F,TAPE3,OUTFILE.
19.20.28.EDI ENCOUNTED.
19.20.28.COPY3F,TAPE4,OUTFILE.
19.20.28.EDI ENCOUNTED.
19.20.28.COPY3F,TAPE7,OUTFILE.
19.20.28. COPY COMPLETE.
19.20.28.COPY3F,TAPE8,OUTFILE.
19.20.28.EDI ENCOUNTED.
19.20.28.COPY3F,TAPE9,OUTFILE.
19.20.28.EDI ENCOUNTED.
19.20.28.REWIND,OUTFILE.
19.20.28.SKIP,ENDPRO.
19.20.28.ENDIF,ENDPRO.
19.20.28.PREVEPT,CCL
19.20.28.PENIAD,EIGEN.
19.20.28.PERTIME,OUTFILE.
19.20.28.COPY3F,OUTFILE,FILE,7.
19.20.28. COPY COMPLETE.
19.20.28.EDI ENCOUNTED.
19.20.28.EDI ENCOUNTED.

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19.20.31. $OUT(*?OP=E)
19.20.31. $EXIT.
19.20.31. $DEAD,      0.002KUNS.
19.20.31. $DEPT,     9.155KUNS.
19.20.31. $DMS,     11.858KUNS.
19.20.31. $ECP,      6.866SECS.
19.20.31. $ESR,     16.062UNTS.
19.20.31. $OUT(*?OP=E)
19.20.31. NO FILES PROCESSED.
19.20.31. $DAYFILE(OUTPUT,JT=0)
19.21.21. UCLP, LB, HSOILP2,      2.167KLNS.

```

NT 11

UJN = VAX
CREATING JSN = XJWP

FAMILY = SYSTEM
USER NAME = SONGSI

JOB ORIGIN = BATCH.
SERVICE CLASS = INSTALLATION CLASS 0.

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AAAAAAAAAA 000000000 3333333333 IIIIIIIIIIII X X 000000 0 WW WW 0000000000
AAAAAAAAAAAA 0000000000 33333333333 IIIIIIIIIIII XX XX 000000000 WW WW 00000000000
AA AA 00 00 3 33 II XX XX 00 00 WW WW 00 00
AA AA 00 00 33 II XX XX 00 0 00 WW WW 00 00
AA AA 00 00 33 II XX XX 00 0 00 WW WW 00 00
AA AA 00 00 33 II XXXX 00 0 00 WW 44 44 00 00
AAAAAAAAAAAA 00 00 33 II X 00 0 00 WW 44 44 00 00
AAAAAAAAAAAA 00 00 333 II XX 00 0 00 WW WWW WW 00 00
AA AA 00 00 33 II XXXX 00 0 00 WW W W WW 00 00
AA AA 00 00 33 II XX XX 00 0 00 WW WW WW WW 00 00
AA AA 00 00 33 II XX XX 00 0 00 WW W W WW 00 00
AA AA 00 00 33 II XX XX 000 00 WWW WWW 00 0000
AA AA 0000000000 3333333333 IIIIIIIIIIII XX XX 000000000 WW WW 0000000000000
AA AA 0000000000 3333333333 IIIIIIIIIIII X X 0 000000 WW WW 00000000000
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SASSI
House

(MS)

X-

| DESIGN VERIFICATION | |
|---------------------|--------------|
| CLIENT | SCE |
| JOB NO. | 0310-068-BSE |
| CALC/PROG NO. | NRC TEST-1 |
| BY: SLD | DATE: 4/1/87 |
| CHRD: LANA | DATE: 4/1/87 |

SYSTEM BULLETIN

IMPELL WALNUT CREEK COMPUTER CENTER OPERATIONS HOURS (PACIFIC TIME)

| | | | | | |
|----------|-----|----------|------|----|------|
| MONDAY | AND | FRIDAY | 0600 | TO | 2130 |
| TUESDAY | TO | THURSDAY | 0600 | TO | 2330 |
| SATURDAY | AND | SUNDAY | 0700 | TO | 1700 |

OPERATORS WILL NOT BE ON SITE AT ALL OTHER TIMES. EXTENDED OPERATOR COVERAGE MAY BE ARRANGED BY CONTACTING BOB EARL AT (415) 943-4653/4666

THE CYBER SYSTEM WILL BE UNAVAILABLE TO USERS AS FOLLOWS:

| | | | | |
|-----------|------|----|------|-------------------------|
| MONDAY | 2000 | TO | 2100 | SYSTEM BACKUP |
| TUESDAY | 1930 | TO | 2300 | MAINTENANCE + BACKUP |
| WEDNESDAY | 2200 | TO | 2300 | SYSTEM BACKUP |
| THURSDAY | 2200 | TO | 2300 | SYSTEM BACKUP |
| FRIDAY | 2000 | TO | 2230 | SYSTEM BACKUP + TESTING |
| SATURDAY | 1600 | TO | 1700 | SYSTEM BACKUP |
| SUNDAY | 1400 | TO | 1700 | SYSTEM BACKUP |

HOLIDAY HOURS.

MONDAY, MAY 27, 1985. NO OPERATORS ON SITE. SYSTEM AVAILABLE TO USERS.

SPECIAL CYBER UPGRADE BLOCK TIME.

THE CYBER WILL BE UNAVAILABLE FOR PRODUCTION USE THURSDAYS FROM 2000 HRS. TO 2400 HRS. BEGINNING APRIL 11, 1985 THROUGH MAY 30, 1985. COMPUTER SERVICES WILL BE TESTING NOS VERSION 2.3. ANY USERS WISHING TO TEST THEIR CODES DURING THIS PERIOD WILL NEED TO CONTACT COMPUTER SERVICES AT (415) 943-4666.

GENERAL INFORMATION.

DO NOT RELEASE MAGNETIC TAPES WHEN OPERATORS ARE NOT ON SITE.

USER ADVISORY. MAGNETIC TAPE BACKUPS.

MAGNETIC TAPES ARE SUSCEPTIBLE TO PHYSICAL DAMAGE. BACKUP TAPES ARE RECOMMENDED WHENEVER THE INFORMATION ON THE TAPE WOULD BE EXPENSIVE OR TIME CONSUMING TO RECREATE. PLEASE NOTE THAT IMPELL, CDC, AND JCC DO NOT GIVE REFUNDS FOR JOBS NECESSARY TO RECREATE A TAPE IF NO BACKUP EXISTS.

AS PER THE MEMO DISTRIBUTED TO DIVISIONS OVER A WEEK AGO, THE OLD OVERHEAD JOB NUMBERS BEGINNING WITH 0622 AND 0627 WILL NOT BE VALID AFTER 2/15/85. NEW NUMBERS (BEGINNING WITH 062004 OR 0623004) MUST BE REQUESTED. A CONSOLIDATED LIST OF OLD VERSUS SUGGESTED NEW NUMBERS WAS DISTRIBUTED TO EACH DIVISION TO EXPEDITE THE REVIEW. THESE CHANGES ARE BEING MADE TO SUIT ACCOUNTING DEPT. NUMBER CHANGES.

DIAL-IN PHONE NUMBERS

100/1200 - (415) 947-1970

CHARGE,VR003AC,05100051955.
ROUTE,OUTPUT,DC=PR,UN=CSOVAX1,FC=CP,DEF,UJN=VAX.
REWIND,INPUT.
COPYSBF,INPUT,OUTPUT.
REWIND,INPUT.
GET,INPUT=N5HD.
REWIND,INPUT.
COPYSBF,INPUT,OUTPUT.
REWIND,INPUT.
ATTACH,HOUSEA2/UN=SASSIMP.
HOUSEA2.
REWIND,TAPE4.
PURGE,N5T4/NA.
DEFINE,N5T4.
COPYBF,TAPE4,N5T4.
DAYFILE.
PURGE,S1OUT1/NA.
DEFINE,S1OUT1/M=W.
REWIND,OUTPUT.
COPYEI,OUTPUT,S1OUT1.
EXIT.
PURGE,AA/NA.
DAYFILE,L=AA.
SAVE,AA.
PURGE,S1OUT1/NA.
DEFINE,S1OUT1/M=W.
REWIND,OUTPUT.
COPYEI,OUTPUT,S1OUT1.

| | | | | | |
|----|----|----|----|---|---|
| 17 | 5 | 10 | 39 | 1 | 1 |
| 18 | 5 | 11 | 39 | 1 | 1 |
| 19 | 6 | 11 | 39 | 1 | 1 |
| 20 | 6 | 12 | 39 | 1 | 1 |
| 21 | 7 | 12 | 39 | 1 | 1 |
| 22 | 7 | 13 | 39 | 1 | 1 |
| 23 | 8 | 13 | 39 | 1 | 1 |
| 24 | 8 | 14 | 39 | 1 | 1 |
| 25 | 9 | 14 | 39 | 1 | 1 |
| 26 | 9 | 15 | 39 | 1 | 1 |
| 27 | 10 | 11 | 39 | 1 | 1 |
| 28 | 11 | 12 | 39 | 1 | 1 |
| 29 | 12 | 13 | 39 | 1 | 1 |
| 30 | 13 | 14 | 39 | 1 | 1 |
| 31 | 14 | 15 | 39 | 1 | 1 |
| 32 | 10 | 16 | 39 | 1 | 1 |
| 33 | 10 | 17 | 39 | 1 | 1 |
| 34 | 11 | 17 | 39 | 1 | 1 |
| 35 | 11 | 18 | 39 | 1 | 1 |
| 36 | 12 | 18 | 39 | 1 | 1 |
| 37 | 12 | 19 | 39 | 1 | 1 |
| 38 | 13 | 19 | 39 | 1 | 1 |
| 39 | 13 | 20 | 39 | 1 | 1 |
| 40 | 14 | 20 | 39 | 1 | 1 |
| 41 | 14 | 21 | 39 | 1 | 1 |
| 42 | 15 | 21 | 39 | 1 | 1 |
| 43 | 15 | 22 | 39 | 1 | 1 |
| 44 | 16 | 17 | 39 | 1 | 1 |
| 45 | 17 | 18 | 39 | 1 | 1 |
| 46 | 18 | 19 | 39 | 1 | 1 |
| 47 | 19 | 20 | 39 | 1 | 1 |
| 48 | 20 | 21 | 39 | 1 | 1 |
| 49 | 21 | 22 | 39 | 1 | 1 |
| 50 | 16 | 23 | 39 | 1 | 1 |
| 51 | 17 | 23 | 39 | 1 | 1 |
| 52 | 17 | 24 | 39 | 1 | 1 |
| 53 | 17 | 25 | 39 | 1 | 1 |
| 54 | 18 | 25 | 39 | 1 | 1 |
| 55 | 18 | 26 | 39 | 1 | 1 |
| 56 | 19 | 26 | 39 | 1 | 1 |
| 57 | 19 | 27 | 39 | 1 | 1 |
| 58 | 20 | 27 | 39 | 1 | 1 |
| 59 | 20 | 28 | 39 | 1 | 1 |
| 60 | 21 | 28 | 39 | 1 | 1 |
| 61 | 21 | 29 | 39 | 1 | 1 |
| 62 | 21 | 30 | 39 | 1 | 1 |
| 63 | 22 | 30 | 39 | 1 | 1 |
| 64 | 23 | 24 | 39 | 1 | 1 |
| 65 | 24 | 25 | 39 | 1 | 1 |
| 66 | 25 | 26 | 39 | 1 | 1 |
| 67 | 25 | 27 | 39 | 1 | 1 |
| 68 | 27 | 28 | 39 | 1 | 1 |
| 69 | 28 | 29 | 39 | 1 | 1 |
| 70 | 29 | 30 | 39 | 1 | 1 |
| 71 | 23 | 31 | 39 | 1 | 1 |
| 72 | 24 | 32 | 39 | 1 | 1 |
| 73 | 25 | 33 | 39 | 1 | 1 |
| 74 | 26 | 34 | 39 | 1 | 1 |
| 75 | 27 | 35 | 39 | 1 | 1 |
| 76 | 28 | 36 | 39 | 1 | 1 |
| 77 | 29 | 37 | 39 | 1 | 1 |

| | | | | | |
|----|----|----|----|---|---|
| 82 | 34 | 35 | 39 | 1 | 1 |
| 83 | 35 | 36 | 39 | 1 | 1 |
| 84 | 36 | 37 | 39 | 1 | 1 |
| 85 | 37 | 36 | 39 | 1 | 1 |

GENERAL CONTROL INFORMATION

| | | |
|---------------------------------------|---|---------|
| OPERATION MODE | = | 1 ✓ |
| MAXIMUM NUMBER OF COLUMNS IN A BLOCK | = | 0 |
| MAXIMUM NUMBER OF TERMS IN A BLOCK | = | 0 |
| CORE SPACE TO BE USED IN BLANK COMMON | = | 70000 ✓ |
| TOTAL NUMBER OF NODAL POINTS | = | 39 ✓ |
| TOTAL NUMBER OF INTERACTION NODES | = | 38 ✓ |
| TOTAL NUMBER OF ELEMENT TYPES | = | 1 ✓ |
| TOTAL NUMBER OF SOIL LAYERS | = | 0 |
| TOTAL NUMBER OF LUMPED MASSES | = | 0 |
| TOTAL NUMBER OF SYM/ANTI-SYM PLANES | = | 2 ✓ |
| METHOD OF FORMING IMPEDANCE MATRIX | = | 1 ✓ |
| DIMENSION OF ANALYSIS | = | 3 ✓ |
| ACCELERATION OF GRAVITY | = | 32.20 ✓ |
| Z-COORDINATE OF GROUND SURFACE | = | 0.00 |

SYM. / ANTI-SYM. PLANE(S) / LINE DATA

| PLANE NO. | PLANE TYPE CODE | NI | NJ | NK |
|--------------|--------------------|----|----|------|
| 1 | 1 | 1 | 31 | 39 ✓ |
| 2 | -1 | 1 | 38 | 39 ✓ |

NODAL POINT INPUT DATA

| NODE NUMBER | BOUNDARY CONDITION CODES | | | | | | | NODAL POINT COORDINATES | | | |
|-------------|--------------------------|---|---|----|----|----|--------|-------------------------|-------|---|--|
| | X | Y | Z | XX | YY | ZZ | X | Y | Z | | |
| 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0.000 | 0.000 | 0.000 | 0 | |
| 2 | 0 | 1 | 0 | 1 | 0 | 1 | 12.000 | 0.000 | 0.000 | 0 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 9.000 | 9.000 | 0.000 | 0 | |
| 4 | 0 | 1 | 1 | 1 | 0 | 0 | 0.000 | 12.000 | 0.000 | 0 | |
| 5 | 0 | 1 | 0 | 1 | 0 | 1 | 23.000 | 0.000 | 0.000 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 21.000 | 9.000 | 0.000 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 16.000 | 15.000 | 0.000 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 9.000 | 21.000 | 0.000 | 0 | |
| 9 | 0 | 1 | 1 | 1 | 0 | 0 | 0.000 | 23.000 | 0.000 | 0 | |
| 10 | 0 | 1 | 0 | 1 | 0 | 1 | 34.000 | 0.000 | 0.000 | 0 | |
| 11 | 0 | 0 | 0 | 0 | 0 | 0 | 33.000 | 9.000 | 0.000 | 0 | |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 | 28.000 | 19.000 | 0.000 | 0 | |
| 13 | 0 | 0 | 0 | 0 | 0 | 0 | 19.000 | 28.000 | 0.000 | 0 | |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0.000 | 33.000 | 0.000 | 0 | |
| 15 | 0 | 1 | 1 | 1 | 0 | 0 | 0.000 | 34.000 | 0.000 | 0 | |
| 16 | 0 | 1 | 0 | 1 | 0 | 1 | 45.000 | 0.000 | 0.000 | 0 | |
| 17 | 0 | 0 | 0 | 0 | 0 | 0 | 44.000 | 9.000 | 0.000 | 0 | |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | 39.000 | 21.000 | 0.000 | 0 | |
| 19 | 0 | 0 | 0 | 0 | 0 | 0 | 32.000 | 32.000 | 0.000 | 0 | |
| 20 | 0 | 0 | 0 | 0 | 0 | 0 | 21.000 | 37.000 | 0.000 | 0 | |
| 21 | 0 | 0 | 0 | 0 | 0 | 0 | 9.000 | 44.000 | 0.000 | 0 | |
| 22 | 0 | 1 | 1 | 1 | 0 | 0 | 0.000 | 45.000 | 0.000 | 0 | |
| 23 | 0 | 1 | 0 | 1 | 0 | 1 | 55.000 | 9.000 | 0.000 | 0 | |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 53.000 | 12.000 | 0.000 | 0 | |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 50.000 | 23.000 | 0.000 | 0 | |
| 26 | 0 | 0 | 0 | 0 | 0 | 0 | 43.000 | 34.000 | 0.000 | 0 | |
| 27 | 0 | 0 | 0 | 0 | 0 | 0 | 34.000 | 43.000 | 0.000 | 0 | |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 23.000 | 50.000 | 0.000 | 0 | |
| 29 | 0 | 0 | 0 | 0 | 0 | 0 | 12.000 | 53.000 | 0.000 | 0 | |
| 30 | 0 | 1 | 1 | 1 | 0 | 0 | 0.000 | 55.000 | 0.000 | 0 | |
| 31 | 0 | 1 | 0 | 1 | 0 | 1 | 65.000 | 0.000 | 0.000 | 0 | |
| 32 | 0 | 0 | 0 | 0 | 0 | 0 | 63.000 | 14.000 | 0.000 | 0 | |
| 33 | 0 | 0 | 0 | 0 | 0 | 0 | 58.000 | 27.000 | 0.000 | 0 | |
| 34 | 0 | 0 | 0 | 0 | 0 | 0 | 50.000 | 40.000 | 0.000 | 0 | |
| 35 | 0 | 0 | 0 | 0 | 0 | 0 | 40.000 | 50.000 | 0.000 | 0 | |
| 36 | 0 | 0 | 0 | 0 | 0 | 0 | 27.000 | 58.000 | 0.000 | 0 | |
| 37 | 0 | 0 | 0 | 0 | 0 | 0 | 14.000 | 63.000 | 0.000 | 0 | |
| 38 | 0 | 1 | 1 | 1 | 0 | 0 | 0.000 | 65.000 | 0.000 | 0 | |
| 39 | 1 | 1 | 1 | 1 | 1 | 1 | 0.000 | 0.000 | 1.000 | 0 | |

NODAL POINT INPUT DATA

| NODE NUMBER | BOUNDARY CONDITION CODES | | | | | | | NODAL POINT COORDINATES | | | |
|-------------|--------------------------|---|---|----|----|----|--------|-------------------------|-------|---|--|
| | X | Y | Z | XX | YY | ZZ | X | Y | Z | | |
| 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0.000 | 0.000 | 0.000 | 0 | |
| 2 | 0 | 1 | 0 | 1 | 0 | 1 | 12.000 | 0.000 | 0.000 | 0 | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 9.000 | 9.000 | 0.000 | 0 | |
| 4 | 0 | 1 | 1 | 1 | 0 | 0 | 0.000 | 12.000 | 0.000 | 0 | |
| 5 | 0 | 1 | 0 | 1 | 0 | 1 | 23.000 | 0.000 | 0.000 | 0 | |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 21.000 | 9.000 | 0.000 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 16.000 | 15.000 | 0.000 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 9.000 | 21.000 | 0.000 | 0 | |
| 9 | 0 | 1 | 1 | 1 | 0 | 0 | 0.000 | 23.000 | 0.000 | 0 | |
| 10 | 0 | 1 | 0 | 1 | 0 | 1 | 34.000 | 0.000 | 0.000 | 0 | |
| 11 | 0 | 0 | 0 | 0 | 0 | 0 | 33.000 | 9.000 | 0.000 | 0 | |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 | 28.000 | 19.000 | 0.000 | 0 | |
| 13 | 0 | 0 | 0 | 0 | 0 | 0 | 19.000 | 28.000 | 0.000 | 0 | |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | 9.000 | 33.000 | 0.000 | 0 | |
| 15 | 0 | 1 | 1 | 1 | 0 | 0 | 0.000 | 34.000 | 0.000 | 0 | |
| 16 | 0 | 1 | 0 | 1 | 0 | 1 | 45.000 | 0.000 | 0.000 | 0 | |
| 17 | 0 | 0 | 0 | 0 | 0 | 0 | 44.000 | 9.000 | 0.000 | 0 | |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | 39.000 | 21.000 | 0.000 | 0 | |
| 19 | 0 | 0 | 0 | 0 | 0 | 0 | 32.000 | 32.000 | 0.000 | 0 | |
| 20 | 0 | 0 | 0 | 0 | 0 | 0 | 21.000 | 39.000 | 0.000 | 0 | |
| 21 | 0 | 0 | 0 | 0 | 0 | 0 | 9.000 | 44.000 | 0.000 | 0 | |
| 22 | 0 | 1 | 1 | 1 | 0 | 0 | 0.000 | 45.000 | 0.000 | 0 | |
| 23 | 0 | 1 | 0 | 1 | 0 | 1 | 55.000 | 0.000 | 0.000 | 0 | |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 53.000 | 12.000 | 0.000 | 0 | |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 50.000 | 23.000 | 0.000 | 0 | |
| 26 | 0 | 0 | 0 | 0 | 0 | 0 | 43.000 | 34.000 | 0.000 | 0 | |
| 27 | 0 | 0 | 0 | 0 | 0 | 0 | 34.000 | 43.000 | 0.000 | 0 | |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 23.000 | 50.000 | 0.000 | 0 | |
| 29 | 0 | 0 | 0 | 0 | 0 | 0 | 12.000 | 53.000 | 0.000 | 0 | |
| 30 | 0 | 1 | 1 | 1 | 0 | 0 | 0.000 | 55.000 | 0.000 | 0 | |
| 31 | 0 | 1 | 0 | 1 | 0 | 1 | 65.000 | 0.000 | 0.000 | 0 | |
| 32 | 0 | 0 | 0 | 0 | 0 | 0 | 63.000 | 14.000 | 0.000 | 0 | |
| 33 | 0 | 0 | 0 | 0 | 0 | 0 | 58.000 | 27.000 | 0.000 | 0 | |
| 34 | 0 | 0 | 0 | 0 | 0 | 0 | 50.000 | 40.000 | 0.000 | 0 | |
| 35 | 0 | 0 | 0 | 0 | 0 | 0 | 40.000 | 50.000 | 0.000 | 0 | |
| 36 | 0 | 0 | 0 | 0 | 0 | 0 | 27.000 | 58.000 | 0.000 | 0 | |
| 37 | 0 | 0 | 0 | 0 | 0 | 0 | 14.000 | 63.000 | 0.000 | 0 | |
| 38 | 0 | 1 | 1 | 1 | 0 | 0 | 0.000 | 65.000 | 0.000 | 0 | |
| 39 | 1 | 1 | 1 | 1 | 1 | 1 | 0.000 | 0.000 | 1.000 | 0 | |

GENERATED NODAL DATA

| NODE NUMBER | BOUNDARY CONDITION CODES | | | | | | NODAL POINT COORDINATES | | |
|-------------|--------------------------|---|---|----|----|----|-------------------------|--------|-------|
| | X | Y | Z | XX | YY | ZZ | X | Y | Z |
| 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0.000 | 0.000 | 0.000 |
| 2 | 0 | 1 | 0 | 1 | 0 | 1 | 12.000 | 0.000 | 0.000 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 9.000 | 7.000 | 0.000 |
| 4 | 0 | 1 | 1 | 1 | 0 | 0 | 0.000 | 12.000 | 0.000 |
| 5 | 0 | 1 | 0 | 1 | 0 | 1 | 23.000 | 0.000 | 0.000 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 21.000 | 9.000 | 0.000 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 16.000 | 19.000 | 0.000 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 9.000 | 21.000 | 0.000 |
| 9 | 0 | 1 | 1 | 1 | 0 | 0 | 0.000 | 23.000 | 0.000 |
| 10 | 0 | 1 | 0 | 1 | 0 | 1 | 34.000 | 0.000 | 0.000 |
| 11 | 0 | 0 | 0 | 0 | 0 | 0 | 33.000 | 9.000 | 0.000 |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 | 28.000 | 19.000 | 0.000 |
| 13 | 0 | 0 | 0 | 0 | 0 | 0 | 19.000 | 29.000 | 0.000 |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | 9.000 | 33.000 | 0.000 |
| 15 | 0 | 1 | 1 | 1 | 0 | 0 | 0.000 | 34.000 | 0.000 |
| 16 | 0 | 1 | 0 | 1 | 0 | 1 | 45.000 | 0.000 | 0.000 |
| 17 | 0 | 0 | 0 | 0 | 0 | 0 | 44.000 | 9.000 | 0.000 |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | 34.000 | 21.000 | 0.000 |
| 19 | 0 | 0 | 0 | 0 | 0 | 0 | 32.000 | 32.000 | 0.000 |
| 20 | 0 | 0 | 0 | 0 | 0 | 0 | 21.000 | 39.000 | 0.000 |
| 21 | 0 | 0 | 0 | 0 | 0 | 0 | 9.000 | 44.000 | 0.000 |
| 22 | 0 | 1 | 1 | 1 | 0 | 0 | 0.000 | 45.000 | 0.000 |
| 23 | 0 | 1 | 0 | 1 | 0 | 1 | 55.000 | 0.000 | 0.000 |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 53.000 | 12.000 | 0.000 |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 50.000 | 23.000 | 0.000 |
| 26 | 0 | 0 | 0 | 0 | 0 | 0 | 43.000 | 34.000 | 0.000 |
| 27 | 0 | 0 | 0 | 0 | 0 | 0 | 34.000 | 43.000 | 0.000 |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 23.000 | 50.000 | 0.000 |
| 29 | 0 | 0 | 0 | 0 | 0 | 0 | 12.000 | 53.000 | 0.000 |
| 30 | 0 | 1 | 1 | 1 | 0 | 0 | 0.000 | 55.000 | 0.000 |
| 31 | 0 | 1 | 0 | 1 | 0 | 1 | 65.000 | 0.000 | 0.000 |
| 32 | 0 | 0 | 0 | 0 | 0 | 0 | 63.000 | 14.000 | 0.000 |
| 33 | 0 | 0 | 0 | 0 | 0 | 0 | 58.000 | 27.000 | 0.000 |
| 34 | 0 | 0 | 0 | 0 | 0 | 0 | 50.000 | 40.000 | 0.000 |
| 35 | 0 | 0 | 0 | 0 | 0 | 0 | 40.000 | 50.000 | 0.000 |
| 36 | 0 | 0 | 0 | 0 | 0 | 0 | 27.000 | 58.000 | 0.000 |
| 37 | 0 | 0 | 0 | 0 | 0 | 0 | 14.000 | 63.000 | 0.000 |
| 38 | 0 | 1 | 1 | 1 | 0 | 0 | 0.000 | 65.000 | 0.000 |
| 39 | 1 | 1 | 1 | 1 | 1 | 1 | 0.000 | 0.000 | 1.000 |

EQUATION NUMBERS (STRUCTURE)

| N | X | Y | Z | XX | YY | ZZ |
|----|-----|-----|-----|-----|-----|-----|
| 1 | 1 | 0 | 0 | 0 | 2 | 0 |
| 2 | 3 | 0 | 0 | 0 | 5 | 0 |
| 3 | 6 | 7 | 8 | 9 | 10 | 11 |
| 4 | 12 | 0 | 0 | 0 | 13 | 14 |
| 5 | 15 | 0 | 15 | 0 | 17 | 0 |
| 6 | 18 | 19 | 20 | 21 | 22 | 23 |
| 7 | 24 | 25 | 26 | 27 | 28 | 29 |
| 8 | 30 | 31 | 32 | 33 | 34 | 35 |
| 9 | 35 | 0 | 0 | 0 | 37 | 38 |
| 10 | 39 | 0 | 0 | 0 | 41 | 0 |
| 11 | 42 | 43 | 44 | 45 | 46 | 47 |
| 12 | 48 | 49 | 50 | 51 | 52 | 53 |
| 13 | 54 | 55 | 56 | 57 | 58 | 59 |
| 14 | 60 | 51 | 62 | 63 | 64 | 65 |
| 15 | 65 | 0 | 0 | 0 | 67 | 68 |
| 16 | 69 | 0 | 70 | 0 | 71 | 0 |
| 17 | 72 | 73 | 74 | 75 | 76 | 77 |
| 18 | 78 | 79 | 80 | 81 | 82 | 83 |
| 19 | 84 | 85 | 86 | 87 | 88 | 89 |
| 20 | 90 | 91 | 92 | 93 | 94 | 95 |
| 21 | 96 | 97 | 98 | 99 | 100 | 101 |
| 22 | 102 | 0 | 0 | 0 | 103 | 104 |
| 23 | 105 | 0 | 106 | 0 | 107 | 0 |
| 24 | 108 | 109 | 110 | 111 | 112 | 113 |
| 25 | 114 | 115 | 116 | 117 | 118 | 119 |
| 26 | 120 | 121 | 122 | 123 | 124 | 125 |
| 27 | 126 | 127 | 128 | 129 | 130 | 131 |
| 28 | 132 | 133 | 134 | 135 | 136 | 137 |
| 29 | 138 | 139 | 140 | 141 | 142 | 143 |
| 30 | 144 | 0 | 0 | 0 | 145 | 146 |
| 31 | 147 | 0 | 148 | 0 | 149 | 0 |
| 32 | 150 | 151 | 152 | 153 | 154 | 155 |
| 33 | 156 | 157 | 158 | 159 | 160 | 161 |
| 34 | 162 | 163 | 164 | 165 | 166 | 167 |
| 35 | 168 | 169 | 170 | 171 | 172 | 173 |
| 36 | 174 | 175 | 176 | 177 | 178 | 179 |
| 37 | 180 | 181 | 182 | 183 | 184 | 185 |
| 38 | 186 | 0 | 0 | 0 | 187 | 188 |
| 39 | 0 | 0 | 0 | 0 | 0 | 0 |

EQUATION NUMBERS (IMPEDANCE)

| N | X | Y | Z |
|----|----|----|----|
| 1 | 1 | 0 | 0 |
| 2 | 2 | 0 | 1 |
| 3 | 4 | 5 | 2 |
| 4 | 7 | 8 | 3 |
| 5 | 8 | 8 | 4 |
| 6 | 10 | 11 | 12 |
| 7 | 13 | 14 | 15 |
| 8 | 15 | 17 | 18 |
| 9 | 17 | 0 | 0 |
| 10 | 20 | 0 | 21 |
| 11 | 22 | 23 | 24 |
| 12 | 25 | 26 | 27 |
| 13 | 28 | 29 | 30 |
| 14 | 31 | 32 | 33 |
| 15 | 34 | 0 | 0 |
| 16 | 35 | 0 | 36 |
| 17 | 37 | 38 | 39 |
| 18 | 40 | 41 | 42 |
| 19 | 43 | 44 | 45 |
| 20 | 46 | 47 | 48 |
| 21 | 49 | 50 | 51 |
| 22 | 52 | 0 | 0 |
| 23 | 53 | 0 | 54 |
| 24 | 55 | 55 | 57 |
| 25 | 58 | 59 | 60 |
| 26 | 61 | 62 | 64 |
| 27 | 64 | 65 | 65 |
| 28 | 67 | 68 | 69 |
| 29 | 70 | 71 | 72 |
| 30 | 73 | 0 | 0 |
| 31 | 74 | 0 | 75 |
| 32 | 76 | 77 | 78 |
| 33 | 79 | 80 | 81 |
| 34 | 82 | 83 | 84 |
| 35 | 85 | 85 | 87 |
| 36 | 88 | 89 | 90 |
| 37 | 91 | 92 | 93 |
| 38 | 94 | 0 | 0 |

BEAM ELEMENT CONTROL DATA

NUMBER OF BEAM ELEMENTS = 65
 NUMBER OF DIFFERENT MATERIAL TYPES = 1
 NUMBER OF DIFFERENT GEOMETRIC PROPERTY TYPES = 1

BEAM MATERIAL PROPERTY DATA

| MAT NO. | A | NU | E | G | M | VS | VP | DS | DP |
|---------|----|-----------|-----------|-----------|-----------|-----------|-----------|----|----|
| 1 | 0. | .2000E+00 | .5000E+09 | .2083E+09 | .5556E+09 | .1443E+11 | .2357E+11 | 0. | 0. |

BEAM GEOMETRIC PROPERTY DATA

| GED NO. | A | S-2 | S-3 | J | I-22 | I-33 |
|---------|-----------|-----|-----|-----------|-----------|-----------|
| 1 | .1000E+04 | 0. | 0. | .1000E+04 | .1000E+04 | .1000E+04 |

BEAM ELEMENT DATA

| ELEMENT NO. | I | J | K | MATERIAL PRO. NO. | GEOMETRIC PRO. NO. |
|-------------|----|----|----|-------------------|--------------------|
| 1 | 1 | 2 | 39 | 1 | 1 |
| 2 | 1 | 3 | 39 | 1 | 1 |
| 3 | 1 | 4 | 39 | 1 | 1 |
| 4 | 2 | 3 | 39 | 1 | 1 |
| 5 | 3 | 4 | 39 | 1 | 1 |
| 6 | 2 | 5 | 39 | 1 | 1 |
| 7 | 2 | 6 | 39 | 1 | 1 |
| 8 | 3 | 6 | 39 | 1 | 1 |
| 9 | 3 | 7 | 39 | 1 | 1 |
| 10 | 3 | 8 | 39 | 1 | 1 |
| 11 | 4 | 6 | 39 | 1 | 1 |
| 12 | 4 | 9 | 39 | 1 | 1 |
| 13 | 5 | 6 | 39 | 1 | 1 |
| 14 | 6 | 7 | 39 | 1 | 1 |
| 15 | 7 | 8 | 39 | 1 | 1 |
| 16 | 8 | 9 | 39 | 1 | 1 |
| 17 | 5 | 10 | 39 | 1 | 1 |
| 18 | 5 | 11 | 39 | 1 | 1 |
| 19 | 6 | 11 | 39 | 1 | 1 |
| 20 | 5 | 12 | 39 | 1 | 1 |
| 21 | 7 | 12 | 39 | 1 | 1 |
| 22 | 7 | 13 | 39 | 1 | 1 |
| 23 | 8 | 13 | 39 | 1 | 1 |
| 24 | 8 | 14 | 39 | 1 | 1 |
| 25 | 9 | 14 | 39 | 1 | 1 |
| 26 | 9 | 15 | 39 | 1 | 1 |
| 27 | 10 | 11 | 39 | 1 | 1 |

| | | | | | |
|----|----|----|----|---|---|
| 34 | 10 | 17 | 39 | 1 | 1 |
| 35 | 11 | 18 | 39 | 1 | 1 |
| 35 | 12 | 18 | 39 | 1 | 1 |
| 37 | 12 | 19 | 39 | 1 | 1 |
| 38 | 13 | 19 | 39 | 1 | 1 |
| 39 | 13 | 20 | 39 | 1 | 1 |
| 40 | 14 | 20 | 39 | 1 | 1 |
| 41 | 14 | 21 | 39 | 1 | 1 |
| 42 | 15 | 21 | 39 | 1 | 1 |
| 43 | 15 | 22 | 39 | 1 | 1 |
| 44 | 16 | 17 | 39 | 1 | 1 |
| 45 | 17 | 18 | 39 | 1 | 1 |
| 46 | 18 | 19 | 39 | 1 | 1 |
| 47 | 19 | 20 | 39 | 1 | 1 |
| 48 | 20 | 21 | 39 | 1 | 1 |
| 49 | 21 | 22 | 39 | 1 | 1 |
| 50 | 16 | 23 | 39 | 1 | 1 |
| 51 | 17 | 23 | 39 | 1 | 1 |
| 52 | 17 | 24 | 39 | 1 | 1 |
| 53 | 17 | 25 | 39 | 1 | 1 |
| 54 | 18 | 25 | 39 | 1 | 1 |
| 55 | 18 | 26 | 39 | 1 | 1 |
| 55 | 19 | 26 | 39 | 1 | 1 |
| 57 | 19 | 27 | 39 | 1 | 1 |
| 58 | 20 | 27 | 39 | 1 | 1 |
| 59 | 20 | 28 | 39 | 1 | 1 |
| 60 | 21 | 28 | 39 | 1 | 1 |
| 61 | 21 | 29 | 39 | 1 | 1 |
| 62 | 21 | 30 | 39 | 1 | 1 |
| 63 | 22 | 30 | 39 | 1 | 1 |
| 64 | 23 | 24 | 39 | 1 | 1 |
| 65 | 24 | 25 | 39 | 1 | 1 |
| 65 | 25 | 26 | 39 | 1 | 1 |
| 67 | 26 | 27 | 39 | 1 | 1 |
| 68 | 27 | 28 | 39 | 1 | 1 |
| 69 | 28 | 29 | 39 | 1 | 1 |
| 70 | 29 | 30 | 39 | 1 | 1 |
| 71 | 23 | 31 | 39 | 1 | 1 |
| 72 | 24 | 32 | 39 | 1 | 1 |
| 73 | 25 | 33 | 39 | 1 | 1 |
| 74 | 26 | 34 | 39 | 1 | 1 |
| 75 | 27 | 35 | 39 | 1 | 1 |
| 75 | 28 | 36 | 39 | 1 | 1 |
| 77 | 29 | 37 | 39 | 1 | 1 |
| 78 | 30 | 38 | 39 | 1 | 1 |
| 79 | 31 | 32 | 39 | 1 | 1 |
| 80 | 32 | 33 | 39 | 1 | 1 |
| 81 | 33 | 34 | 39 | 1 | 1 |
| 82 | 34 | 35 | 39 | 1 | 1 |
| 83 | 35 | 36 | 39 | 1 | 1 |
| 84 | 36 | 37 | 39 | 1 | 1 |
| 85 | 37 | 38 | 39 | 1 | 1 |

BLOCK STORAGE INFORMATION

| | | |
|---|---|-------|
| A. AVAILABLE CORE SPACE IN BLANK COMMON | = | 70000 |
| B. REQ. CORE SPACE FOR PERMANENT DATA | = | 770 |
| C. AVAIL. CORE SPACE FOR EXECUTION (A-B) | = | 69230 |
| D. NUMBER OF EQUATIONS IN STRUCTURAL SYSTEM | = | 188 |
| E. NUMBER OF TERMS IN STIFFNESS OF STRUCTURE | = | 12189 |
| F. NUMBER OF EQUATIONS IN EXCAVATED SOIL SYSTEM | = | 0 |
| G. NUMBER OF TERMS IN STIFFNESS OF EXCAVATED SOIL | = | 0 |
| I. NUMBER OF TERMS IN K21 OF EXCAVATED SOIL | = | 0 |
| J. MAXIMUM NUMBER OF COLUMNS IN A BLOCK | = | 188 |
| K. MAXIMUM NUMBER OF TERMS IN A BLOCK | = | 12189 |
| L. REQ. CORE SPACE FOR EXFC. $(4*K+2*J+2*MAX(D,F))$ | = | 49508 |
| M. ACTUAL CORE SPACE USED IN BLANK COMMON $(L+B)$ | = | 50278 |
| N. NUMBER OF BLOCKS IN STIFFNESS OF STRUCTURE | = | 1 |
| O. NUMBER OF BLOCKS IN STIFFNESS OF EXCAVATED SOIL | = | 0 |
| P. NUMBER OF BLOCKS IN K21 OF EXCAVATED SOIL | = | 0 |

O V E R A L L T I M E L O G

| | | |
|---|---|------|
| INPUT AND REORDER NODAL POINTS | = | .40 |
| FORM ELEMENT MASS AND COMPLEX STIFFNESS | = | 4.32 |
| ASSEMBLE MASS AND STIFFNESS OF SOIL AND STRUCTURE | = | .78 |
| TOTAL SOLUTION TIME | = | 5.50 |

OUTPUT TAPE INFORMATION

| | | |
|--------------------------|---|--------|
| LOGICAL TAPE WRITTEN | = | TAPE 4 |
| TOTAL NO. OF LOGS | = | 5777 |
| TOTAL NO. OF LOG SECTORS | = | 91 |
| TOTAL NO. OF SECTORS | = | 156 |

03.07.15.USER,SUNGS1,,
08.07.15.CHARGE,PROJWC,03100681355.
08.07.16.3PROLOG,PROCL,,,
08.07.17.3SETFS,PROCL/FS=AD.
09.07.17.PROCL.
09.07.17.//LOADER 587 .005 CP .081 RT//LOADER 014472/040000-040000 CM L TM
08.07.17.IFE,DT,EQ,FLASHIT.
08.07.17.ENDIF,FLASHIT.
08.07.17.IFE,DT,EQ,BCD,BULLIT.
08.07.18.CHGFTN.
08.07.18. END CHGFTN
08.07.18. 15600 MAXIMUM EXECUTION FL.
08.07.18. 0.002 CP SECONDS EXECUTION TIME.
08.07.18.GET,SYSBULL/UN=EDSOPER,NA.
08.07.18.IFE,FILE(SYSBULL,ASI),OUTIT.
08.07.18.COPY,SYSBULL.
08.07.18. EOT ENCOUNTERED.
08.07.18.ENDIF,OUTIT.
08.07.19.ENDIF,BULLIT.
08.07.19.RETURN,PROCL.
08.07.19.REVERT.
08.07.19.ROUTE,OUTPUT,DC=PR,UN=CSUOYAXI,FC=CP,DEF,UJN=VAX.
08.07.20.ROUTE COMPLETE.
08.07.20.REWIND,INPUT.
08.07.20.COPYSBF,INPUT,OUTPUT.
08.07.20. COPY COMPLETE.
08.07.20.REWIND,INPUT.
08.07.20.GET,INPUT=N540.
08.07.20.REWIND,INPUT.
08.07.20.COPYSBF,INPUT,OUTPUT.
08.07.20. EOT ENCOUNTERED.
08.07.20.REWIND,INPUT.
08.07.20.ATTACH,HOUSEA2/UN=SASSIMP.
08.07.21.HOUSEA2.
08.07.21.//LOADER 587 .005 CP .087 RT//LOADER 014472/040000-040000 CM L TM
08.07.30. STOP
08.07.30. 277200 FINAL EXECUTION FL.
08.07.30. 5.528 CP SECONDS EXECUTION TIME.
08.07.30.REWIND,TAPL4.
08.07.30.PURGE,N5T4/NA.
08.07.30. N5T4 NOT FOUND.
08.07.30.DEFINE,N5T4.
08.07.31.COPYBT,TAPE4,N5T4. ✓
08.07.31. EOT ENCOUNTERED.
08.07.32.DAYFILE.

08.07.15.HOUSE,T7777,P2.
08.07.15.USER,SONGSI.,
08.07.15.CHARGE,PKUJWC,03100681355.
08.07.15.%PROJG,PROCL.,.
08.07.17.%SETFS,PROCL/FS=AD.
08.07.17.PROCL.
08.07.17.//LOADER 587 .005 CP .081 RT//LOADER 014472/040000-040000 CM 1 TM
08.07.17.IFE,DT.EQ.TX0,FLASHIT.
08.07.17.ENDIF,FLASHIT.
08.07.17.IFE,DT.EQ.BCU,BULLIT.
08.07.18.CHGFTN.
08.07.18. END CHGFTN
08.07.18. 15600 MAXIMUM EXECUTION FL.
08.07.18. 0.002 CP SECONDS EXECUTION TIME.
08.07.18.GET,SYSBULL/UN=EDSOPEF,NA.
08.07.18.IFE,FILE(SYSBULL,AS),OUTIT.
08.07.18.COPY,SYSBULL.
08.07.18. EOI ENCOUNTERED.
08.07.18.ENDIF,OUTIT.
08.07.18.ENDIF,BULLIT.
08.07.19.RETURN,PROCL.
08.07.19.REVERT.
08.07.19.ROUTE,OUTPUT,DC=PR,UN=CSQVAX1,FC=CP,DEF,UJN=VAX.
08.07.20.ROUTE COMPLETE.
08.07.20.REWIND,INPUT.
08.07.20.COPYSBF,INPUT,OUTPUT.
08.07.20. COPY COMPLETE.
08.07.20.REWIND,INPUT.
08.07.20.GET,INPUT=NSHD.
08.07.20.REWIND,INPUT.
08.07.20.COPYSBF,INPUT,OUTPUT.
08.07.20. EOI ENCOUNTERED.
08.07.20.REWIND,INPUT.
08.07.20.ATTACH,HOUSEA2/UN=SASSIMP.
08.07.21.HOUSEA2.
08.07.21.//LOADER 587 .005 CP .087 RT//LOADER 014472/040000-040000 CM 1 TM
08.07.30. STOP
08.07.30. 277200 FINAL EXECUTION FL.
08.07.30. 5.528 CP SECONDS EXECUTION TIME.
08.07.30.REWIND,TAPE4.
08.07.30.PURGE,NST4/NA.
08.07.30. NST4 NOT FOUND.
08.07.30.DEFINE,NST4.
08.07.31.COPYBF,TAPE4,NST4.
08.07.31. EOI ENCOUNTERED.
08.07.32.DAYFILE.
08.07.32. USER DAYFILE PROCESSED.
08.07.32.PURGE,SIOU1/NA.
08.07.32.DEFINE,SIOU1/A=W.
08.07.32.REWIND,OUTPUT.
08.07.32.COPYE1,OUTPUT,SIOU1.
08.07.32. EOI ENCOUNTERED.
08.07.32.EXIT.
08.07.33.UEAD, 0.902KUNS.
08.07.33.UEPF, 0.071KUNS.
08.07.33.UEMS, 5.871KUNS.
08.07.33.UICP, 5.101SECS.
08.07.33.AESR, 13.259UNTS.
08.07.33.ROUT(*/*P=*)
08.07.33. NO FILLS PROCESSED.

SYSTEM BULLETIN

INPELL WALNUT CREEK COMPUTER CENTER OPERATIONS HOURS (PACIFIC TIME!)

MONDAY AND FRIDAY 0600 TO 2130
TUESDAY TO THURSDAY 0600 TO 2130
SATURDAY AND SUNDAY 0700 TO 1700

OPERATORS WILL NOT BE ON SITE AT ALL OTHER TIMES. EXTENDED OPERATOR COVERAGE MAY BE ARRANGED BY CONTACTING BOB EARL AT (415) 943-4653/4566

THE CYBER SYSTEM WILL BE UNAVAILABLE TO USERS AS FOLLOWS:

| | | | | |
|-----------|------|----|------|-------------------------|
| MONDAY | 2000 | TO | 2100 | SYSTEM BACKUP |
| TUESDAY | 1930 | TO | 2300 | MAINTENANCE + BACKUP |
| WEDNESDAY | 2200 | TO | 2300 | SYSTEM BACKUP |
| THURSDAY | 2200 | TO | 2300 | SYSTEM BACKUP |
| FRIDAY | 2000 | TO | 2230 | SYSTEM BACKUP + TESTING |
| SATURDAY | 1600 | TO | 1700 | SYSTEM BACKUP |
| SUNDAY | 1400 | TO | 1700 | SYSTEM BACKUP |

HOLIDAY HOURS:

MONDAY, MAY 27, 1985. NO OPERATORS ON SITE. SYSTEM AVAILABLE TO USERS.

SPECIAL CYBER UPGRADE SCHEDULE:

THE CYBER WILL BE UNAVAILABLE FOR PRODUCTION USE THURSDAYS FROM 2000 HRS. TO 2400 HRS. BEGINNING APRIL 11, 1985 THROUGH MAY 30, 1985. COMPUTER SERVICES WILL BE TESTING NOS VERSION 2.3. ANY USERS WISHING TO TEST THEIR CODES DURING THIS PERIOD WILL NEED TO CONTACT COMPUTER SERVICES AT (415) 943-8996.

GENERAL INFORMATION:

DO NOT RELEASE MAGNETIC TAPES WHEN OPERATORS ARE NOT ON SITE.

USER ADVISORY. MAGNETIC TAPE BACKUPS.

MAGNETIC TAPES ARE SUSCEPTIBLE TO PHYSICAL DAMAGE. BACKUP TAPES ARE RECOMMENDED WHENEVER THE INFORMATION ON THE TAPE WOULD BE EXPENSIVE OR TIME CONSUMING TO RECREATE. PLEASE NOTE THAT INPELL, CDC, AND UCC DO NOT GIVE REFUNDS FOR JOBS NECESSARY TO RECREATE A TAPE IF NO BACKUP EXISTS.

AS PER THE MEMO DISTRIBUTED TO DIVISIONS OVER A WEEK AGO, THE OLD OVERHEAD JOB NUMBERS BEGINNING WITH 0622 AND 0627 WILL NOT BE VALID AFTER 2/15/85. NEW NUMBERS (BEGINNING WITH 0625004 OR 0623004) MUST BE REQUESTED. A CONSOLIDATED LIST OF OLD VERSUS SUGGESTED NEW NUMBERS WAS DISTRIBUTED TO EACH DIVISION TO EXPEDITE THE REVIEW. THESE CHANGES ARE BEING MADE TO SUIT ACCOUNTING DEPT. NUMBER CHANGES.

DIAL-IN PHONE NUMBERS

```
ROUTE,OUTPUT,JC=PR,UN=CSQVAX1,DLF,UJN=VAX,FC=CP.  
REWIND,INPUT.  
COPYSBF,INPUT,OUTPUT.  
REWIND,INPUT.  
GET,INPUT=NS6CD.  
REWIND,INPUT.  
COPYSBF,INPUT,OUTPUT.  
REWIND,INPUT.  
TRS,OP=R,SYM=NRC2,LEN=TT.  
REWIND,TT.  
SKIPF,TT,4.  
COPYBF,TT,TAPE1.  
COPYBF,TT,TAPE2.  
UNLOAD,TT.  
REWIND,TAPE1,TAPE2.  
ATTACH,COMINPA/UN=SASSIMP.  
COMINPA.  
DAYFILE.  
PURGE,SIDUT1/NA.  
DEFINE,SIDUT1/M=W.  
REWIND,OUTPUT.  
COPYEI,OUTPUT,SIDUT1.  
EXIT.  
PURGE,AA/NA.  
DAYFILE,L=AA.  
SAVE,AA.  
PURGE,SIDUT1/NA.  
DEFINE,SIDUT1/M=W.  
REWIND,OUTPUT.  
COPYEI,OUTPUT,SIDUT1.
```

TITLES OF TAPES B (SEQUENCE IN IMPEDANCE MATRIX)

- 1- PRG ANALYS // NRC EXMPL // IMP. CALC. X-LOADING
- 2- PRG ANALYS // NRC EXMPL // IMP. CALC. YY-LOADING

GENERAL CONTROL INFORMATION

ACCELERATION OF GRAVITY = 32.2000
 NO. OF NODAL POINTS IN SYSTEM = 39 ✓
 TOTAL NO. OF FREQUENCIES = 11 ✓
 FREQUENCY STEP = .02441 ✓
 NFFT = 0
 TIME STEP = 0.00000
 NO. OF EQUATION IN THE SYSTEM = 158 ✓
 TYPE OF ANALYSIS = 2 ✓

FREQUENCY NUMBERS OF ANALYSIS ARE

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-------------|
| 50 | 100 | 150 | 200 | 251 | 301 | 401 | 492 | 602 | 696 | 819 | |
| 0.5 | 1 | 1.5 | 2 | 2.5 | 3 | 4 | 4.9 | 6 | 6.9 | 8.17 | → a. values |

SELECTED NODES AND D.O.F. ARE AS FOLLOWS:

1 1 1 5

REAL PART OF COMPLIANCE MATRIX FOR FREQ. NO. 50 IS

| | | |
|---|--------------|--------------|
| | 1 | 2 |
| 1 | .9031473E-06 | .1631955E-08 |
| 2 | .1631954E-08 | .3073161E-09 |

IMAG. PART OF COMPLIANCE MATRIX FOR FREQ. NO. 50 IS

| | | |
|---|---------------|---------------|
| | 1 | 2 |
| 1 | -.2729889E-06 | -.4951155E-09 |
| 2 | -.4951154E-09 | -.1384624E-10 |

REAL PART OF IMPEDANCE MATRIX FOR FREQ. NO. 50 IS

| | | |
|---|---------------|---------------|
| | 1 | 2 |
| 1 | .1025262E+07 | -.5928170E+07 |
| 2 | -.5928165E+07 | .3279570E+10 |

IMAG. PART OF IMPEDANCE MATRIX FOR FREQ. NO. 50 IS

| | | |
|---|---------------|---------------|
| | 1 | 2 |
| 1 | .3070947E+06 | -.2450801E+06 |
| 2 | -.2450785E+06 | .1395181E+09 |

2 .1323953E-03 .3353150E-09

IMAG. PART OF COMPLIANCE MATRIX FOR FREQ. NO. 100 IS

| | 1 | 2 |
|---|---------------|---------------|
| 1 | -.4485810E-06 | -.1433874E-08 |
| 2 | -.1433874E-08 | -.5700337E-10 |

REAL PART OF IMPEDANCE MATRIX FOR FREQ. NO. 100 IS

| | 1 | 2 |
|---|---------------|---------------|
| 1 | .1038730E+07 | -.6704980E+07 |
| 2 | -.6704975E+07 | .2926228E+10 |

IMAG. PART OF IMPEDANCE MATRIX FOR FREQ. NO. 100 IS

| | 1 | 2 |
|---|--------------|--------------|
| 1 | .6054394E+06 | .7831773E+06 |
| 2 | .7831512E+06 | .4656931E+09 |

REAL PART OF COMPLIANCE MATRIX FOR FREQ. NO. 150 IS

| | 1 | 2 |
|---|--------------|--------------|
| 1 | .5330604E-05 | .2918783E-09 |
| 2 | .2918783E-09 | .3341352E-09 |

IMAG. PART OF COMPLIANCE MATRIX FOR FREQ. NO. 150 IS

| | 1 | 2 |
|---|---------------|---------------|
| 1 | -.5124347E-05 | -.1952005E-08 |
| 2 | -.1952004E-08 | -.1303714E-09 |

REAL PART OF IMPEDANCE MATRIX FOR FREQ. NO. 150 IS

| | 1 | 2 |
|---|---------------|---------------|
| 1 | .9864104E+06 | -.7096577E+07 |
| 2 | -.7096570E+07 | .2606390E+10 |

IMAG. PART OF IMPEDANCE MATRIX FOR FREQ. NO. 150 IS

| | 1 | 2 |
|---|--------------|--------------|
| 1 | .9210577E+06 | .2189074E+07 |
| 2 | .2189083E+07 | .9735645E+09 |

REAL PART OF COMPLIANCE MATRIX FOR FREQ. NO. 200 IS

IMAG. PART OF COMPLIANCE MATRIX FOR FREQ. NO. 200 IS

| | 1 | 2 |
|---|---------------|---------------|
| 1 | -.4952549E-06 | -.1632713E-08 |
| 2 | -.1632712E-08 | -.1990191E-09 |

REAL PART OF IMPEDANCE MATRIX FOR FREQ. NO. 200 IS

| | 1 | 2 |
|---|---------------|---------------|
| 1 | .9723953E+06 | -.7185039E+07 |
| 2 | -.7185030E+07 | .2341033E+10 |

IMAG. PART OF IMPEDANCE MATRIX FOR FREQ. NO. 200 IS

| | 1 | 2 |
|---|--------------|--------------|
| 1 | .1254798E+07 | .3956681E+07 |
| 2 | .3956688E+07 | .1575513E+10 |

REAL PART OF COMPLIANCE MATRIX FOR FREQ. NO. 251 IS

| | 1 | 2 |
|---|---------------|---------------|
| 1 | .2737893E-05 | -.1296777E-08 |
| 2 | -.1296777E-08 | .2187343E-09 |

IMAG. PART OF COMPLIANCE MATRIX FOR FREQ. NO. 251 IS

| | 1 | 2 |
|---|---------------|---------------|
| 1 | -.4487861E-06 | -.8130808E-09 |
| 2 | -.8130784E-09 | -.2334134E-09 |

REAL PART OF IMPEDANCE MATRIX FOR FREQ. NO. 251 IS

| | 1 | 2 |
|---|---------------|---------------|
| 1 | .9733096E+06 | -.6641154E+07 |
| 2 | -.6641142E+07 | .2103144E+10 |

IMAG. PART OF IMPEDANCE MATRIX FOR FREQ. NO. 251 IS

| | 1 | 2 |
|---|--------------|--------------|
| 1 | .1694313E+07 | .6042400E+07 |
| 2 | .6042409E+07 | .2255420E+10 |

REAL PART OF COMPLIANCE MATRIX FOR FREQ. NO. 301 IS

1 1 2
1 -.4030512E-06 -.7078995E-10
2 -.7078742E-10 -.2345026E-09

REAL PART OF IMPEDANCE MATRIX FOR FREQ. NO. 301 IS

1 1 2
1 .9912785E+06 -.5288468E+07
2 -.5288451E+07 .1303134E+10

IMAG. PART OF IMPEDANCE MATRIX FOR FREQ. NO. 301 IS

1 1 2
1 .1946919E+07 .8018684E+07
2 .8018694E+07 .3002344E+10

REAL PART OF COMPLIANCE MATRIX FOR FREQ. NO. 401 IS

1 1 2
1 .1346349E-05 -.5014700E-09
2 -.5014686E-09 .6880817E-10

IMAG. PART OF COMPLIANCE MATRIX FOR FREQ. NO. 401 IS

1 1 2
1 -.3230159E-05 .4932041E-09
2 .4932058E-09 -.1880602E-09

REAL PART OF IMPEDANCE MATRIX FOR FREQ. NO. 401 IS

1 1 2
1 .1052087E+07 -.5839811E+06
2 -.5839502E+06 .1699054E+10

IMAG. PART OF IMPEDANCE MATRIX FOR FREQ. NO. 401 IS

1 1 2
1 .2626742E+07 .9934625E+07
2 .9934630E+07 .4729288E+10

REAL PART OF COMPLIANCE MATRIX FOR FREQ. NO. 492 IS

1 1 2
1 .9806281E-07 -.8561496E-10
2 -.8561496E-10 .3111111E-10

| | 1 | 2 |
|---|--------------|---------------|
| 1 | -.272354E-06 | .3709920E-09 |
| 2 | .3709927E-09 | -.1428698E-09 |

REAL PART OF IMPEDANCE MATRIX FOR FREQ. NO. 492 IS

| | 1 | 2 |
|---|--------------|--------------|
| 1 | .1176147E+07 | .3508530E+07 |
| 2 | .3508572E+07 | .1915942E+10 |

IMAG. PART OF IMPEDANCE MATRIX FOR FREQ. NO. 492 IS

| | 1 | 2 |
|---|--------------|--------------|
| 1 | .3250391E+07 | .8132103E+07 |
| 2 | .8132092E+07 | .6455193E+10 |

REAL PART OF COMPLIANCE MATRIX FOR FREQ. NO. 602 IS

| | 1 | 2 |
|---|--------------|--------------|
| 1 | .8034100E-07 | .3452971E-10 |
| 2 | .3453122E-10 | .3570781E-10 |

IMAG. PART OF COMPLIANCE MATRIX FOR FREQ. NO. 602 IS

| | 1 | 2 |
|---|---------------|---------------|
| 1 | -.2209333E-06 | .1559448E-09 |
| 2 | .1559445E-09 | -.1031455E-09 |

REAL PART OF IMPEDANCE MATRIX FOR FREQ. NO. 502 IS

| | 1 | 2 |
|---|--------------|--------------|
| 1 | .1464649E+07 | .4628485E+07 |
| 2 | .4628522E+07 | .2761279E+10 |

IMAG. PART OF IMPEDANCE MATRIX FOR FREQ. NO. 602 IS

| | 1 | 2 |
|---|--------------|--------------|
| 1 | .3772258E+07 | .3760906E+07 |
| 2 | .3760663E+07 | .3339021E+10 |

REAL PART OF COMPLIANCE MATRIX FOR FREQ. NO. 696 IS

| | 1 | 2 |
|---|--------------|--------------|
| 1 | .7874624E-07 | .2065460E-10 |
| 2 | .2065664E-10 | .3579502E-10 |

2 .6030941E-10 -.9163615E-10

REAL PART OF IMPEDANCE MATRIX FOR FREQ. NO. 595 IS

| | 1 | 2 |
|---|--------------|--------------|
| 1 | .1318715E+07 | .2751590E+07 |
| 2 | .2751599E+07 | .3700418E+10 |

IMAG. PART OF IMPEDANCE MATRIX FOR FREQ. NO. 696 IS

| | 1 | 2 |
|---|--------------|--------------|
| 1 | .4447426E+07 | .1427523E+07 |
| 2 | .1427462E+07 | .9467549E+10 |

REAL PART OF COMPLIANCE MATRIX FOR FREQ. NO. 819 IS

| | 1 | 2 |
|---|---------------|---------------|
| 1 | .7964422E-07 | -.1605303E-10 |
| 2 | -.1605289E-10 | .3544291E-10 |

IMAG. PART OF COMPLIANCE MATRIX FOR FREQ. NO. 819 IS

| | 1 | 2 |
|---|---------------|---------------|
| 1 | -.1731749E-06 | .1795715E-10 |
| 2 | .1795628E-10 | -.7935676E-10 |

REAL PART OF IMPEDANCE MATRIX FOR FREQ. NO. 819 IS

| | 1 | 2 |
|---|--------------|--------------|
| 1 | .2192045E+07 | .1763915E+06 |
| 2 | .1763591E+06 | .4692094E+10 |

IMAG. PART OF IMPEDANCE MATRIX FOR FREQ. NO. 819 IS

| | 1 | 2 |
|---|--------------|--------------|
| 1 | .4766529E+07 | .1443239E+07 |
| 2 | .1443195E+07 | .1050609E+11 |

2 .2441406E-01 11

| | | | |
|--------------|--------------|--------------|--|
| 1 | 1 | | |
| .1220703E+01 | .1025252E+07 | .3070947E+05 | |
| .2441406E+01 | .1003730E+07 | .5054394E+05 | |
| .3662109E+01 | .9864194E+06 | .9210577E+05 | |
| .4882812E+01 | .9723953E+06 | .1254798E+07 | |
| .5127929E+01 | .9733076E+06 | .1694313E+07 | |
| .7348632E+01 | .9912785E+06 | .1946919E+07 | |
| .9790038E+01 | .1062087E+07 | .2626742E+07 | |
| .1201172E+02 | .1176147E+07 | .3260391E+07 | |
| .1469726E+02 | .1464649E+07 | .3992258E+07 | |
| .1699219E+02 | .1818715E+07 | .4447426E+07 | |
| .1999512E+02 | .2192045E+07 | .4766539E+07 | |

MAX. OF REAL PART= .2192045E+07
 MIN. OF REAL PART= .9723953E+06
 MAX. OF IMAG PART= .4766539E+07
 MIN. OF IMAG PART= .3070947E+05

| | | | |
|--------------|--------------|--------------|--|
| 1 | 5 | | |
| .1220703E+01 | .3279570E+10 | .1395181E+09 | |
| .2441406E+01 | .2926228E+10 | .4656931E+09 | |
| .3662109E+01 | .2696350E+10 | .9735646E+09 | |
| .4882812E+01 | .2341033E+10 | .1575513E+10 | |
| .5127929E+01 | .2103144E+10 | .2255420E+10 | |
| .7348632E+01 | .1903134E+10 | .3002344E+10 | |
| .9790038E+01 | .1599054E+10 | .4720238E+10 | |
| .1201172E+02 | .1915942E+10 | .6455193E+10 | |
| .1469726E+02 | .2761279E+10 | .8339021E+10 | |
| .1699219E+02 | .3700418E+10 | .9467549E+10 | |
| .1999512E+02 | .4692054E+10 | .1050603E+11 | |

MAX. OF REAL PART= .4692054E+10
 MIN. OF REAL PART= .1699054E+10
 MAX. OF IMAG PART= .1050603E+11
 MIN. OF IMAG PART= .1395181E+09

| | | | |
|--------------|--------------|---------------|--|
| 1 | 1 | | |
| .1220703E+01 | .9031473E-06 | -.2729889E-06 | |
| .2441406E+01 | .7297943E-06 | -.4485810E-06 | |
| .3662109E+01 | .5330604E-06 | -.5124347E-06 | |
| .4882812E+01 | .3769012E-06 | -.4952549E-06 | |
| .5127929E+01 | .2737393E-06 | -.4437861E-06 | |
| .7348632E+01 | .2100723E-06 | -.4030512E-06 | |
| .9790038E+01 | .1346349E-06 | -.3280159E-06 | |
| .1201172E+02 | .9805231E-07 | -.2723541E-06 | |
| .1469726E+02 | .8034100E-07 | -.2209333E-06 | |
| .1699219E+02 | .7874024E-07 | -.1926559E-06 | |
| .1999512E+02 | .7964422E-07 | -.1731749E-06 | |

| | | | |
|--------------|--------------|---------------|--|
| 1 | 5 | | |
| .1220703E+01 | .3073161E-09 | -.1384624E-10 | |
| .2441406E+01 | .3353150E-09 | -.5700337E-10 | |
| .3662109E+01 | .3341352E-09 | -.1383714E-09 | |
| .4882812E+01 | .2537445E-09 | -.1980191E-09 | |
| .5127929E+01 | .2197343E-09 | -.2334134E-09 | |
| .7348632E+01 | .1517973E-09 | -.2345026E-09 | |
| .9790038E+01 | .6880817E-10 | -.1386602E-09 | |
| .1201172E+02 | .4231037E-10 | -.1428693E-09 | |
| .1469726E+02 | .3570731E-10 | -.1041455E-09 | |
| .1699219E+02 | .3579549E-10 | -.9163615E-10 | |

10.40.58.USER,SUNGS1.
10.40.58.CHARGE,PROJWC,03109631355.
10.40.59.1PROJWG,PROCL,.
10.40.59.1SETFS,PROCL/FS=AD.
10.40.59.PROCL.
10.40.59.77/LOADER 587 .004 CP .087 RT//LOADER 014472/040000-040000 CM 1 TM
10.41.00.IFE,BT.EQ.TXD,FLASHIT.
10.41.00.ENDIF,FLASHIT.
10.41.00.IFE,BT.EQ.BCJ,BULLIT.
10.41.00.CHGFTN.
10.41.00. END CHGFTN
10.41.00. 15600 MAXIMUM EXECUTION FL.
10.41.00. 0.001 CP SECONDS EXECUTION TIME.
10.41.00.GET,SYSBULL/UN=EDSHPER,NA.
10.41.01.IFE,FILL(SYSBULL,AS),OUTIT.
10.41.01.COPY,SYSBULL.
10.41.01.EDI ENCOUNTERED.
10.41.01.ENDIF,OUTIT.
10.41.01.ENDIF,BULLIT.
10.41.01.RETURN,PROCL.
10.41.01.REVERT.
10.41.02.ROUTE,OUTPUT,DC=PR,UN=CS9VAX1,DEF,UJN=VAX,FC=CP.
10.41.02.ROUTE COMPLETE.
10.41.02.REWIND,INPUT.
10.41.02.COPYSEF,INPUT,OUTPUT.
10.41.02. COPY COMPLETE.
10.41.02.REWIND,INPUT.
10.41.02.GET,INPUT=N56CD.
10.41.02.REWIND,INPUT.
10.41.02.COPYSEF,INPUT,OUTPUT.
10.41.02.EDI ENCOUNTERED.
10.41.02.REWIND,INPUT.
10.41.03.TRS,BF=R,SYM=NRC2,LEN=TT.
10.41.03.*TRS* 85/04/10 10.41.03
10.41.05.*BEGIN,ZZZTRS,ZZZTRS.
10.41.05.*RETRN(ZZZTRS)
10.41.05.*VSHITT=E00929)
10.41.05.*LABEL(TT,PU=R,D=PE,NT)
10.42.26.NT041, ASSIGNED TO TT, VSN=E00929.
10.42.26.*REVERT.
10.42.26.REWIND,TT.
10.42.27.SKIPF,TT,4.
10.43.15.COPY3F,TT,TAPE1.
10.43.15.NT,C13-0-01,E00929,RJ, 040,50,6541031640
10.43.15.NT,C13,00000002320040012200000000007406
10.43.15.NT,C13,F07,100,0002362,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-0-01,E00929,RJ, 040,50,6541036650
10.43.15.NT,C13,00000002320040012200000000007406
10.43.15.NT,C13,F07,100,0002363,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-0-01,E00929,RJ, 040,50,6541034370
10.43.15.NT,C13,00000002320040012200000000007406
10.43.15.NT,C13,F07,100,0002364,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-0-01,E00929,RJ, 040,50,6541033110
10.43.15.NT,C13,00000002320040012200000000007406

10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-0-01,E00929,PD, 040,S0,GS41033660
10.43.15.NT,C13,0000000032004001220000000007406
10.43.15.NT,C13,F07,I00,B002366,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-0-01,E00929,RD, 040,S0,GS410332070
10.43.15.NT,C13,000000002320040012200000000007406
10.43.15.NT,C13,F07,I00,B002367,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-0-01,E00929,RD, 040,S0,GS41032620
10.43.15.NT,C13,000000002320040012200000000007406
10.43.15.NT,C13,F07,I00,B002370,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-0-01,E00929,RD, 040,S0,GS41036270
10.43.15.NT,C13,000000002320040012200000000007406
10.43.15.NT,C13,F07,I00,B002371,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-0-01,E00929,RD, 040,S0,GS41035220
10.43.15.NT,C13,000000002320040012200000000007406
10.43.15.NT,C13,F07,I00,B002372,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-0-01,E00929,RD, 040,S0,GS41037450
10.43.15.NT,C13,000000002320040012200000000007406
10.43.15.NT,C13,F07,I00,B002373,L0047,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.16.NT,C13-0-01,E00929,RD, 040,S0,GS41031510
10.43.15.NT,C13,0000000032004001220000000000006
10.43.16.NT,C13,F07,I00,B002374,L0004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15. COPY COMPLETE.
10.43.15. COPY IF, TT, TAPEZ.
10.43.15.NT,C13-0-01,E00929,RD, 040,S0,GS41030030
10.43.15.NT,C13,000000002320040012200000000007406
10.43.16.NT,C13,F07,I00,B002375,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.16.NT,C13-0-01,E00929,RD, 040,S0,GS41034370
10.43.15.NT,C13,000000002320040012200000000007406
10.43.15.NT,C13,F07,I00,B002376,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.16.NT,C13-0-01,E00929,RD, 040,S0,GS41034520
10.43.15.NT,C13,000000002320040012200000000007406
10.43.15.NT,C13,F07,I00,B002377,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.16.NT,C13-0-01,E00929,RD, 040,S0,GS41037520
10.43.15.NT,C13,000000002320040012200000000007406
10.43.15.NT,C13,F07,I00,B002400,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.16.NT,C13-0-01,E00929,RD, 040,S0,GS41032760
10.43.15.NT,C13,000000002320040012200000000007406
10.43.16.NT,C13,F07,I00,B002401,L5004,P00000000.
10.43.16.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-0-01,E00929,RD, 040,S0,GS41030600
10.43.15.NT,C13,000000003200400122000000000007406
10.43.16.NT,C13,F07,I00,B002402,L5004,P00000000.
10.43.16.NT,C13,E25,H42616646, ON THE FLY.
10.43.16.NT,C13-0-01,E00929,RD, 040,S0,GS41033500
10.43.15.NT,C13,000000002320040012200000000007406

10.43.16.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-0-01,E00929,RJ, 040,S0,GS41031320
10.43.16.NT,C13,D00000002320040012200000000097406
10.43.15.NT,C13,F07,I00,B002404,L5004,P00000000.
10.43.16.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-0-01,E00929,RJ, 040,S0,GS41035410
10.43.16.NT,C13,D00000002320040012200000000007406
10.43.15.NT,C13,F07,I00,B002405,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-0-01,E00929,RJ, 040,S0,GS41035000
10.43.15.NT,C13,D0000000232004001220000000000074
10.43.15.NT,C13,F07,I00,P002406,L0047,P00000000.
10.43.16.NT,C13,E25,H42616646, ON THE FLY.
10.43.16.NT,C13-0-01,E00929,RJ, 040,S0,GS41032750
10.43.16.NT,C13,D00000000320040012200000000000006
10.43.15.NT,C13,F07,I00,B002407,L0004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15. COPY COMPLETE.
10.43.15.UNLOAD,IT.
10.43.15.REWIND,TAPE1,TAPE2.
10.43.16.ATTACH,CUMIPA/UN=SASSIMP.
10.43.17.CUMIPA.
10.43.17.//LOADER 587 .005 CP .072 RT//LOADER 014472/040000-040000 CM 1 TM
10.43.25. STOP
10.43.25. 200200 MAXIMUM EXECUTION FL.
10.43.25. 4.671 CP SECONDS EXECUTION TIME.
10.43.25.DAYFILE.

10.40.58.COMT,TCO,P2.
10.40.58.USER,SONGS1.
10.40.59.CHARGE,PEJWC,03100681355.
10.40.59.3PROLDC,PROCL,,.
10.40.59.4SETFS,PROCL/FS=AD.
10.40.59.PROCL.
10.40.59.77/LOADER 597 .004 CP .087 RT//LOADER 014472/040000-040000 CM 1 TM
10.41.00.IFE,DT.EQ.TXU,FLASHIT.
10.41.00.ENDIF,FLASHIT.
10.41.00.IFE,DT.EQ.HCU,BULLIT.
10.41.00.CHGFTN.
10.41.00. END CHGFTN
10.41.00. 15600 MAXIMUM EXECUTION FL.
10.41.00. 0.001 CP SECONDS EXECUTION TIME.
10.41.00.GET,SYSBULL/UN=FDSUPER,NA.
10.41.01.IFE,FILE(SYSBULL,AS),OUTIT.
10.41.01.COPY,SYSBULL.
10.41.01. EOI ENCOUNTERED.
10.41.01.ENDIF,OUTIT.
10.41.01.ENDIF,BULLIT.
10.41.01.RETURN,PROCL.
10.41.01.REVERT.
10.41.02.ROUTE,OUTPUT,DC=PR,UN=CSOYAX1,DEF,UJN=VAX,FC=CP.
10.41.02. ROUTE COMPLETE.
10.41.02.REWIND,INPUT.
10.41.02.COPYSBF,INPUT,OUTPUT.
10.41.02. COPY COMPLETE.
10.41.02.REWIND,INPUT.
10.41.02.GET,INPUT=N55CD.
10.41.02.REWIND,INPUT.
10.41.02.COPYSBF,INPUT,OUTPUT.
10.41.02. EOI ENCOUNTERED.
10.41.02.REWIND,INPUT.
10.41.03.TRS,JP=R,SYM=NRC2,LEN=TT.
10.41.03.*TRS* 85/04/10 10.41.03
10.41.05.3BEGIN,ZZZTRS,ZZZTRS.
10.41.05.4RETJPN(ZZZTRS)
10.41.05.4VSN(TT=E00929)
10.41.06.3LABEL(TT,FO=R,D=PE,NT)
10.42.25.NT041, ASSIGNED TO TT, VSN=E00929.
10.42.25.3REVERT.
10.42.25.REWIND,TT.
10.42.27.SKIPF,TT,4.
10.43.15.COPY4F,TT,TAPEL.
10.43.15.NT,C13-G-01,E00929,R), 040,50,GS41031640
10.43.15.NT,C13,D00000002320040012200000000007406
10.43.15.NT,C13,F07,100,0002362,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-G-01,E00929,R), 040,50,GS41036650
10.43.15.NT,C13,D00000002320040012200000000007406
10.43.15.NT,C13,F07,100,0002363,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-G-01,E00929,R), 040,50,GS41034370
10.43.15.NT,C13,D0000000320040012200000000007406
10.43.15.NT,C13,F07,100,0002364,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-G-01,E00929,R), 040,50,GS41033110
10.43.15.NT,C13,D00000002320040012200000000007406
10.43.15.NT,C13,F07,100,0002365,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-G-01,E00929,R), 040,50,GS41031660

10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-0-01,E00929,R0, 040,S0,GS41032620
10.43.15.NT,C13,D0000000232004001220000000007406
10.43.15.NT,C13,F07,I00,B002370,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-0-01,E00929,R0, 040,S0,GS41036270
10.43.15.NT,C13,D0000000232004001220000000007406
10.43.15.NT,C13,F07,I00,B002371,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-0-01,E00929,R0, 040,S0,GS41035220
10.43.15.NT,C13,D0000000232004001220000000007406
10.43.15.NT,C13,F07,I00,B002372,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-0-01,E00929,R0, 040,S0,GS41037450
10.43.15.NT,C13,D0000000232004001220000000007406
10.43.15.NT,C13,F07,I00,B002373,L0047,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-0-01,E00929,R0, 040,S0,GS41031510
10.43.15.NT,C13,D000000032004001220000000000006
10.43.15.NT,C13,F07,I00,B002374,L0004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.16. COPY COMPLETE.
10.43.16.COPYHF,TT,TAPE2.
10.43.15.NT,C13-0-01,E00929,R0, 040,S0,GS41030030
10.43.15.NT,C13,D0000000232004001220000000007406
10.43.15.NT,C13,F07,I00,B002375,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-0-01,E00929,R0, 040,S0,GS41034370
10.43.15.NT,C13,D0000000232004001220000000007406
10.43.16.NT,C13,F07,I00,B002376,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.16.NT,C13-0-01,E00929,R0, 040,S0,GS41034520
10.43.15.NT,C13,D0000000232004001220000000007406
10.43.16.NT,C13,F07,I00,B002377,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.16.NT,C13-0-01,E00929,R0, 040,S0,GS41037520
10.43.15.NT,C13,D0000000232004001220000000007406
10.43.16.NT,C13,F07,I00,B002400,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-0-01,E00929,R0, 040,S0,GS41032760
10.43.15.NT,C13,D0000000232004001220000000007406
10.43.15.NT,C13,F07,I00,B002401,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.15.NT,C13-0-01,E00929,R0, 040,S0,GS41030600
10.43.15.NT,C13,D000000032004001220000000007406
10.43.15.NT,C13,F07,I00,B002402,L5004,P00000000.
10.43.16.NT,C13,E25,H42616646, ON THE FLY.
10.43.16.NT,C13-0-01,E00929,R0, 040,S0,GS41033560
10.43.15.NT,C13,D0000000232004001220000000007406
10.43.16.NT,C13,F07,I00,B002403,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.16.NT,C13-0-01,E00929,R0, 040,S0,GS41031320
10.43.15.NT,C13,D0000000232004001220000000007406
10.43.15.NT,C13,F07,I00,B002404,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.16.NT,C13-0-01,E00929,R0, 040,S0,GS41035410
10.43.15.NT,C13,D0000000232004001220000000007406
10.43.16.NT,C13,F07,I00,B002405,L5004,P00000000.
10.43.15.NT,C13,E25,H42616646, ON THE FLY.
10.43.16.NT,C13-0-01,E00929,R0, 040,S0,GS41035000

10.43.16.NT,C13,E07,I00,B002407,C0004,P0000000.
10.43.16.NT,C13,E25,H42616646, ON THE FLY.
10.43.16. COPY COMPLETE.
10.43.16.UNLOAD,TT.
10.43.16.REWIND,TAPE1,TAPE2.
10.43.16.ATTACH,COMIMPA/UN=SASSIMP.
10.43.17.COMIMPA.
10.43.17.//LOADER 587 .005 CP .072 RT//LOADER 014472/040000-040000 CM 1 TM
10.43.25. STOP
10.43.25. 200200 MAXIMUM EXECUTION FL.
10.43.25. 4.671 CP SECONDS EXECUTION TIME.
10.43.25.DAYFILE.
10.43.25. USER DAYFILE PROCESSED.
10.43.25.PURGE,SIOU1/NA.
10.43.25.DEFINE,SIOU1/M=W.
10.43.25.REWIND,OUTPUT.
10.43.25.COPYE1,OUTPUT,SIOU1.
10.43.25. EOI ENCOUNTERED.
10.43.26.EXIT.
10.43.26.DEAD, 0.004KUNS.
10.43.26.DEPF, 0.106KUNS.
10.43.26.UEMT, 2.371KUNS.
10.43.26.UEMS, 5.251KUNS.
10.43.26.UFCP, 5.585SECS.
10.43.26.AESR, 14.752UNTS.
10.43.26.\$OUT(*//OP=E)
10.43.26. NO FILES PROCESSED.
10.43.26.\$DAYFILE(OUTPUT,JT=D)
10.44.05.UCLP, LB, HS01LP2, 1.419KUNS.

SYSTEM BULLETIN

IMPELL WALNUT CREEK COMPUTER CENTER OPERATIONS HOURS (PACIFIC TIME)

| | | | | | |
|----------|-----|----------|------|----|------|
| MONDAY | AND | FRIDAY | 0600 | TO | 2130 |
| TUESDAY | TO | THURSDAY | 0600 | TO | 2330 |
| SATURDAY | AND | SUNDAY | 0700 | TO | 1700 |

OPERATORS WILL NOT BE ON SITE AT ALL OTHER TIMES. EXTENDED OPERATOR COVERAGE MAY BE ARRANGED BY CONTACTING BOB EARL AT (415) 943-4663/4666

THE CYBER SYSTEM WILL BE UNAVAILABLE TO USERS AS FOLLOWS:

| | | | | |
|-----------|------|----|------|-------------------------|
| MONDAY | 2000 | TO | 2100 | SYSTEM BACKUP |
| TUESDAY | 1930 | TO | 2300 | MAINTENANCE + BACKUP |
| WEDNESDAY | 2200 | TO | 2300 | SYSTEM BACKUP |
| THURSDAY | 2200 | TO | 2300 | SYSTEM BACKUP |
| FRIDAY | 2000 | TO | 2230 | SYSTEM BACKUP + TESTING |
| SATURDAY | 1600 | TO | 1700 | SYSTEM BACKUP |
| SUNDAY | 1400 | TO | 1700 | SYSTEM BACKUP |

HOLIDAY HOURS.

MONDAY, MAY 27, 1985. NO OPERATORS ON SITE. SYSTEM AVAILABLE TO USERS.

SPECIAL CYBER UPGRADE BLOCK TIME.

THE CYBER WILL BE UNAVAILABLE FOR PRODUCTION USE THURSDAYS FROM 2000 HRS. TO 2400 HRS. BEGINNING APRIL 11, 1985 THROUGH MAY 30, 1985. COMPUTER SERVICES WILL BE TESTING NDS VERSION 2.3. ANY USERS WISHING TO TEST THEIR CODES DURING THIS PERIOD WILL NEED TO CONTACT COMPUTER SERVICES AT (415) 943-4666.

GENERAL INFORMATION.

DO NOT RELEASE MAGNETIC TAPES WHEN OPERATORS ARE NOT ON SITE.

USER ADVISORY. MAGNETIC TAPE BACKUPS.

MAGNETIC TAPES ARE SUSCEPTIBLE TO PHYSICAL DAMAGE. BACKUP TAPES ARE RECOMMENDED WHENEVER THE INFORMATION ON THE TAPE WOULD BE EXPENSIVE OR TIME CONSUMING TO RECREATE. PLEASE NOTE THAT IMPELL, CDC, AND JCC DO NOT GIVE REFUNDS FOR JOBS NECESSARY TO RECREATE A TAPE IF NO BACKUP EXISTS.

AS PER THE MEMO DISTRIBUTED TO DIVISIONS OVER A WEEK AGO, THE JLD OVERHEAD JOB NUMBERS BEGINNING WITH 0622 AND 0627 WILL NOT BE VALID AFTER 2/15/85. NEW NUMBERS (BEGINNING WITH 0625004 OR 0623004) MUST BE REQUESTED. A CONSOLIDATED LIST OF OLD VERSUS SUGGESTED NEW NUMBERS WAS DISTRIBUTED TO EACH DIVISION TO EXPEDITE THE REVIEW. THESE CHANGES ARE BEING MADE TO SUIT ACCOUNTING DEPT. NUMBER CHANGES.

DIAL-IN PHONE NUMBERS

```
CHARGE,PRHJHC,03100631355.  
ROUTE,OUTPUT,JC=PR,UN=CSHMAXL,UJN=VAX,FC=CP,DEF.  
REWIND,INPUT.  
COPYSBF,INPUT,OUTPUT.  
REWIND,INPUT.  
SKIPR,INPUT.  
GET,OCLAF.  
REWIND,JCLAF.  
COPYBF,JCLAF,TAPE10.  
REWIND,TAPE10.  
ATTACH,T15.  
ATTACH,T16.  
ATTACH,T17.  
COMMENT. TAPE15 IS STRUCTURE NODE DATA  
COPYBF,T15,TAPE15.  
COMMENT. TAPE16 IS STRUCTURE MASS MATRIX  
COPYBF,T16,TAPE16.  
COMMENT. TAPE17 IS FREQUENCIES, MODAL DAMPINGS, AND MODE SHAPES  
COPYBF,T17,TAPE17.  
ATTACH,TAPE18.  
REWIND,TAPE18.  
REWIND,TAPE15,TAPE16,TAPE17,TAPE18.  
ATTACH,SSIN/UN=SONGSL.  
SSIN.  
REWIND,TAPE2.  
PURGE,NRCL/NA.  
DEFINE,NRCL/F=W.  
COPYBF,TAPE2,NRCL.  
EXIT.  
PURGE,SIOU1/NA.  
DEFINE,SIOU1/F=W.  
REWIND,OUTPUT.  
COPYEI,OUTPUT,SIOU1.
```


1 6 0
1 2 3 4 5 5
021.1

021.1

021.1

1.397E6

1.397E6

2.79E6

0
11 9 1 2 3 4 5 6
9
1 15 16 17 33 13 1
6
10 11 19 20 31 32
1 1 1 1 0 13
0.005 .4984 2001 2048
1.22 20.0

```
*****  
* IMPELL CORP. *  
* PROGRAM CLASSI *  
* SJPROGRAM SSIN *  
* *  
* VERSION 0 *  
*****
```

SOIL AND FOUNDATION DATA

REFERENCE SHILAR MODULUS : .342E+04
REFERENCE SHEAR VELOCITY : .100E+04
CHARACTERISTIC LENGTH : .650E+02

NUMBER OF FOUNDATIONS : 1
TOTAL NUMBER OF STRUCTURES : 1

FOUNDATION NUMBER 1
NUMBER OF SUPERSTRUCTURES ON TOP : 1
NUMBER OF DEGREES OF FREEDOM : 6
FOUNDATION DOF'S (ITDOF) : 1 2 3 4 5 6

IMPEDANCE TRANSFORMATION PARAMETERS

ITIMP : 0
XF : 0.
YF : 0.
ZF : 0.
OF : 0.

MASS MATRIX OF FOUNDATION NUMBER 1, 6 D.O.F.

| | | | | | |
|----------|----------|----------|----------|----------|----------|
| .621E+03 | 0. | 0. | 0. | 0. | 0. |
| 0. | .621E+03 | 0. | 0. | 0. | 0. |
| 0. | 0. | .621E+03 | 0. | 0. | 0. |
| 0. | 0. | 0. | .140E+07 | 0. | 0. |
| 0. | 0. | 0. | 0. | .140E+07 | 0. |
| 0. | 0. | 0. | 0. | 0. | .279E+07 |

NUMBER OF STRUCTURAL MODES : 11
NUMBER OF DOF (BASE EXCITATION) : 6
ACTIVE DOF OF BASE EXCITATION ARE : 1 2 3 4 5 6

COORDINATE TRANSFORM DATA

ITRAN : 0
X : 0.
Y : 0.
Z : 0.
0 : 0.

STRUCTURAL PARAMETERS FOR STRUCTURE NUMBER 1 WERE CALCULATED BY SSI, IFCAL=1

NUMBER OF DOF FOR RESPONSE (NKEEP): 6
DOF FOR RESPONSE (KPCOM): 10 11 19 20 31 32

(FLOOR (J => FREE; I => FIXED))

| | | | | | | | | |
|---------|---------|-----------|---|---|---|---|---|---|
| 0.00000 | 0.00000 | 0.00000 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0.00000 | 0.00000 | 23.50000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0.00000 | 0.00000 | 43.80000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0.00000 | 0.00000 | 63.80000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0.00000 | 0.00000 | 83.80000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0.00000 | 0.00000 | 103.80000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0.00000 | 0.00000 | 123.80000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0.00000 | 0.00000 | 143.80000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0.00000 | 0.00000 | 165.30000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0.00000 | 0.00000 | 184.40000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0.00000 | 0.00000 | 198.50000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0.00000 | 0.00000 | 207.00000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 1.00000 | 0.00000 | 0.00000 | 1 | 1 | 1 | 1 | 1 | 1 |

| | | | | | | | | | |
|----|--------|---------|-------|-----------|----|-----------|----|-----------|----|
| 1 | 15.645 | 98.300 | .0500 | -.300E+02 | 0. | -.129E-12 | 0. | -.401E+04 | 0. |
| 2 | 16.234 | 102.000 | .0500 | .113E-05 | 0. | -.317E+02 | 0. | .543E-05 | 0. |
| 3 | 29.125 | 183.000 | .0500 | .138E+02 | 0. | .474E-07 | 0. | .656E+02 | 0. |
| 4 | 41.698 | 262.000 | .0500 | .692E+01 | 0. | .865E-10 | 0. | .875E+02 | 0. |
| 5 | 44.036 | 277.000 | .0500 | -.457E+01 | 0. | -.146E-08 | 0. | -.394E+01 | 0. |
| 6 | 53.635 | 337.000 | .0500 | .243E-08 | 0. | .101E+02 | 0. | .123E-07 | 0. |
| 7 | 61.911 | 389.000 | .0500 | -.280E+01 | 0. | .822E-12 | 0. | -.147E+02 | 0. |
| 8 | 69.073 | 434.000 | .0500 | .171E+01 | 0. | -.502E-11 | 0. | -.356E+01 | 0. |
| 9 | 69.551 | 437.000 | .0500 | .112E-10 | 0. | -.627E+01 | 0. | .750E-10 | 0. |
| 10 | 77.827 | 489.000 | .0500 | .140E+01 | 0. | -.247E-10 | 0. | .124E+02 | 0. |
| 11 | | | | .840E+00 | 0. | -.444E-12 | 0. | -.167E+01 | 0. |

| | | | | | |
|----------|----|----------|----|----------|----|
| .118E+04 | 0. | 0. | 0. | .122E+06 | 0. |
| 0. | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | .118E+04 | 0. | 0. | 0. |
| 0. | 0. | 0. | 0. | 0. | 0. |
| .122E+06 | 0. | 0. | 0. | .161E+08 | 0. |
| 0. | 0. | 0. | 0. | 0. | 0. |

PARAMETERS FOR RESPONSE CALCULATION (CARD 5)

LEF : 1
NCYM : 1
NCASE : 1
NSTART : 1
EXTRP : 0
SSIB : 18

PARAMETERS FOR REAL TIME ANALYSIS (CARD 6)

DT = .500E-02
SCALE = .498E+00
NP0INT = 2001
NEFT = 2048
FMIN = .122E+01
FMAX = .200E+02

| TIME | ACCEL | TIME | ACCEL | TIME | ACCEL | TIME | ACCEL |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| .005 | -.118E+00 | .010 | -.111E+00 | .015 | -.105E+00 | .020 | -.967E-01 |
| .025 | -.847E-01 | .030 | -.678E-01 | .035 | -.473E-01 | .040 | -.276E-01 |
| .045 | -.112E-01 | .050 | .172E-02 | .055 | .131E-01 | .060 | .252E-01 |
| .065 | .375E-01 | .070 | .489E-01 | .075 | .588E-01 | .080 | .673E-01 |
| .085 | .773E-01 | .090 | .902E-01 | .095 | .104E+00 | .100 | .117E+00 |
| .105 | .125E+00 | .110 | .127E+00 | .115 | .123E+00 | .120 | .113E+00 |
| .125 | .972E-01 | .130 | .758E-01 | .135 | .538E-01 | .140 | .305E-01 |
| .145 | .957E-02 | .150 | -.618E-02 | .155 | -.168E-01 | .160 | -.229E-01 |
| .165 | -.259E-01 | .170 | -.262E-01 | .175 | -.233E-01 | .180 | -.173E-01 |
| .185 | -.372E-02 | .190 | -.678E-03 | .195 | .390E-02 | .200 | .345E-02 |
| .205 | -.147E-02 | .210 | -.673E-02 | .215 | -.932E-02 | .220 | -.703E-02 |
| .225 | -.118E-03 | .230 | .817E-02 | .235 | .157E-01 | .240 | .192E-01 |
| .245 | .152E-01 | .250 | .141E-01 | .255 | .832E-02 | .260 | .318E-02 |
| .265 | -.116E-02 | .270 | -.454E-02 | .275 | -.703E-02 | .280 | -.872E-02 |
| .285 | -.907E-02 | .290 | -.802E-02 | .295 | -.528E-02 | .300 | -.653E-03 |
| .305 | .553E-02 | .310 | .128E-01 | .315 | .200E-01 | .320 | .263E-01 |
| .325 | .312E-01 | .330 | .356E-01 | .335 | .383E-01 | .340 | .415E-01 |
| .345 | .453E-01 | .350 | .488E-01 | .355 | .528E-01 | .360 | .533E-01 |
| .365 | .528E-01 | .370 | .528E-01 | .375 | .528E-01 | .380 | .538E-01 |
| .385 | .543E-01 | .390 | .528E-01 | .395 | .485E-01 | .400 | .394E-01 |
| .405 | .245E-01 | .410 | .678E-02 | .415 | -.138E-01 | .420 | -.353E-01 |
| .425 | -.553E-01 | .430 | -.728E-01 | .435 | -.827E-01 | .440 | -.852E-01 |
| .445 | -.797E-01 | .450 | -.673E-01 | .455 | -.445E-01 | .460 | -.306E-01 |
| .465 | -.127E-01 | .470 | .159E-02 | .475 | .107E-01 | .480 | .150E-01 |
| .485 | .117E-01 | .490 | .482E-02 | .495 | -.357E-02 | .500 | -.116E-01 |
| .505 | -.158E-01 | .510 | -.199E-01 | .515 | -.208E-01 | .520 | -.196E-01 |
| .525 | -.172E-01 | .530 | -.147E-01 | .535 | -.133E-01 | .540 | -.156E-01 |
| .545 | -.239E-01 | .550 | -.389E-01 | .555 | -.598E-01 | .560 | -.797E-01 |
| .565 | -.952E-01 | .570 | -.106E+00 | .575 | -.108E+00 | .580 | -.108E+00 |
| .585 | -.104E+00 | .590 | -.997E-01 | .595 | -.962E-01 | .600 | -.907E-01 |
| .605 | -.312E-01 | .610 | -.633E-01 | .615 | -.368E-01 | .620 | -.177E-02 |
| .625 | .336E-01 | .630 | .753E-01 | .635 | .102E+00 | .640 | .107E+00 |
| .645 | .847E-01 | .650 | .552E-01 | .655 | .233E-01 | .660 | .648E-02 |
| .665 | .126E-01 | .670 | .391E-01 | .675 | .748E-01 | .680 | .102E+00 |
| .685 | .117E+00 | .690 | .110E+00 | .695 | .857E-01 | .700 | .523E-01 |
| .705 | .142E-01 | .710 | -.181E-01 | .715 | -.436E-01 | .720 | -.583E-01 |
| .725 | -.603E-01 | .730 | -.523E-01 | .735 | -.384E-01 | .740 | -.271E-01 |
| .745 | -.245E-01 | .750 | -.322E-01 | .755 | -.461E-01 | .760 | -.628E-01 |
| .765 | -.758E-01 | .770 | -.857E-01 | .775 | -.937E-01 | .780 | -.992E-01 |
| .785 | -.106E+00 | .790 | -.109E+00 | .795 | -.104E+00 | .800 | -.882E-01 |
| .805 | -.579E-01 | .810 | -.248E-01 | .815 | .112E-01 | .820 | .417E-01 |
| .825 | .543E-01 | .830 | .648E-01 | .835 | .496E-01 | .840 | .251E-01 |
| .845 | -.294E-02 | .850 | -.283E-01 | .855 | -.411E-01 | .860 | -.481E-01 |
| .865 | -.425E-01 | .870 | -.288E-01 | .875 | -.137E-01 | .880 | -.239E-02 |
| .885 | .146E-02 | .890 | -.256E-02 | .895 | -.140E-01 | .900 | -.317E-01 |
| .905 | -.573E-01 | .910 | -.827E-01 | .915 | -.110E+00 | .920 | -.136E+00 |
| .925 | -.156E+00 | .930 | -.156E+00 | .935 | -.156E+00 | .940 | -.154E+00 |
| .945 | -.131E+00 | .950 | -.101E+00 | .955 | -.718E-01 | .960 | -.460E-01 |
| .965 | -.275E-01 | .970 | -.157E-01 | .975 | -.902E-02 | .980 | -.548E-02 |
| .985 | .179E-02 | .990 | .733E-02 | .995 | .109E-01 | 1.000 | .131E-01 |
| 1.005 | .508E-02 | 1.010 | .987E-02 | 1.015 | .109E-01 | 1.020 | .114E-01 |
| 1.025 | .128E-01 | 1.030 | .115E-01 | 1.035 | .135E-01 | 1.040 | .118E-01 |
| 1.045 | .713E-02 | 1.050 | .101E-02 | 1.055 | -.543E-02 | 1.060 | -.129E-01 |
| 1.065 | -.207E-01 | 1.070 | -.280E-01 | 1.075 | -.325E-01 | 1.080 | -.280E-01 |
| 1.085 | -.229E-01 | 1.090 | -.109E-01 | 1.095 | .523E-02 | 1.100 | .226E-01 |
| 1.105 | .499E-01 | 1.110 | .578E-01 | 1.115 | .703E-01 | 1.120 | .737E-01 |
| 1.125 | .367E-01 | 1.130 | .733E-01 | 1.135 | .643E-01 | 1.140 | .538E-01 |

1.225 -.102E-01
1.245 -.149E-01
1.265 -.480E-02
1.285 -.211E-01
1.305 -.344E-01
1.325 -.423E-01
1.345 -.779E-01
1.365 -.103E+00
1.385 -.111E+00
1.405 -.302E-01
1.425 -.683E-01
1.445 -.903E-02
1.465 .101E+00
1.485 .130E+00
1.505 .812E-01
1.525 .528E-01
1.545 .559E-01
1.565 .175E-02
1.585 -.397E-02
1.605 -.191E-01
1.625 -.149E-01
1.645 -.613E-01
1.665 -.152E+00
1.685 -.334E-01
1.705 -.942E-01
1.725 -.982E-01
1.745 .321E-01
1.765 .196E-01
1.785 -.743E-02
1.805 .156E-01
1.825 .100E+00
1.845 .291E-01
1.865 .392E-01
1.885 .145E+00
1.905 .102E+00
1.925 -.553E-02
1.945 -.291E-01
1.965 .453E-02
1.985 -.320E-01
2.005 -.376E-01
2.025 -.872E-02
2.045 .153E-01
2.065 .792E-02
2.085 -.738E-02
2.105 .322E-01
2.125 .311E-01
2.145 -.330E-01
2.165 -.508E-01
2.185 -.673E-02
2.205 -.100E-01
2.225 .161E-02
2.245 .114E-01
2.265 .726E-02
2.285 -.277E-01
2.305 -.349E-01
2.325 -.270E-01
2.345 -.857E-02
2.365 -.230E-01
2.385 -.395E-01
2.405 -.732E-01
2.425 -.143E+00
2.445 -.157E+00

1.230 .613E-02
1.250 .126E-01
1.270 -.872E-02
1.290 -.253E-01
1.310 -.333E-01
1.330 -.618E-01
1.350 -.832E-01
1.370 -.116E+00
1.390 -.101E+00
1.410 -.762E-01
1.430 -.508E-01
1.450 .214E-01
1.470 .120E+00
1.490 .116E+00
1.510 .683E-01
1.530 .543E-01
1.550 .446E-01
1.570 -.932E-02
1.590 -.122E-01
1.610 -.453E-01
1.630 -.942E-02
1.650 -.111E+00
1.670 -.120E+00
1.690 -.335E-01
1.710 -.104E+00
1.730 -.603E-01
1.750 .396E-01
1.770 .105E-01
1.790 -.155E-01
1.810 .355E-01
1.830 .987E-01
1.850 .113E-01
1.870 .703E-01
1.890 .155E+00
1.910 .907E-01
1.930 -.292E-01
1.950 -.215E-01
1.970 .134E-02
1.990 -.382E-01
2.010 -.355E-01
2.030 .277E-02
2.050 .191E-01
2.070 .646E-03
2.090 -.428E-02
2.110 .325E-01
2.130 .119E-01
2.150 -.388E-01
2.170 -.508E-01
2.190 .102E-01
2.210 -.276E-02
2.230 -.145E-01
2.250 .583E-03
2.270 -.174E-02
2.290 -.359E-01
2.310 -.354E-01
2.330 -.157E-01
2.350 -.280E-02
2.370 -.288E-01
2.390 -.414E-01
2.410 -.872E-01
2.430 -.158E+00
2.450 -.157E+00

1.235 .887E-02
1.255 .892E-02
1.275 -.121E-01
1.295 -.231E-01
1.315 -.349E-01
1.335 -.628E-01
1.355 -.110E+00
1.375 -.118E+00
1.395 -.962E-01
1.415 -.733E-01
1.435 -.480E-01
1.455 .623E-01
1.475 .129E+00
1.495 .106E+00
1.515 .598E-01
1.535 .638E-01
1.555 .244E-01
1.575 -.152E-01
1.595 -.174E-01
1.615 -.445E-01
1.635 -.399E-02
1.655 -.126E+00
1.675 -.802E-01
1.695 -.435E-01
1.715 -.114E+00
1.735 -.239E-01
1.755 .320E-01
1.775 .528E-02
1.795 -.183E-01
1.815 .643E-01
1.835 .787E-01
1.855 .140E-01
1.875 .104E+00
1.895 .154E+00
1.915 .613E-01
1.935 -.341E-01
1.955 -.215E-02
1.975 -.733E-02
1.995 -.426E-01
2.015 -.282E-01
2.035 .708E-02
2.055 .236E-01
2.075 -.548E-02
2.095 .231E-02
2.115 .359E-01
2.135 -.417E-02
2.155 -.573E-01
2.175 -.448E-01
2.195 .229E-01
2.215 -.613E-02
2.235 .136E-01
2.255 .608E-02
2.275 -.115E-01
2.295 -.377E-01
2.315 -.332E-01
2.335 -.189E-01
2.355 -.253E-01
2.375 -.246E-01
2.395 -.543E-01
2.415 -.101E+00
2.435 -.179E+00
2.455 -.121E+00

1.240 .129E-01
1.260 .110E-02
1.280 -.165E-01
1.300 -.293E-01
1.320 -.383E-01
1.340 -.693E-01
1.360 -.104E+00
1.380 -.128E+00
1.400 -.942E-01
1.420 -.693E-01
1.440 -.315E-01
1.460 .802E-01
1.480 .149E+00
1.500 .942E-01
1.520 .583E-01
1.540 .638E-01
1.560 .142E-01
1.580 -.227E-02
1.600 -.271E-01
1.620 -.327E-01
1.640 -.221E-01
1.660 -.158E+00
1.680 -.472E-01
1.700 -.588E-01
1.720 -.114E+00
1.740 .992E-02
1.760 .245E-01
1.780 .188E-02
1.800 -.125E-01
1.820 .887E-01
1.840 .533E-01
1.860 .183E-01
1.880 .122E+00
1.900 .147E+00
1.920 .249E-01
1.940 -.334E-01
1.960 .220E-02
1.980 -.250E-01
2.000 -.447E-01
2.020 -.182E-01
2.040 .120E-01
2.060 .159E-01
2.080 -.528E-02
2.100 .987E-01
2.120 .371E-01
2.140 -.208E-01
2.160 -.513E-01
2.180 -.214E-01
2.200 .282E-01
2.220 -.768E-02
2.240 .199E-01
2.260 .265E-02
2.280 -.157E-01
2.300 -.381E-01
2.320 -.298E-01
2.340 -.151E-01
2.360 -.188E-01
2.380 -.548E-01
2.400 .678E-01
2.420 -.121E+00
2.440 -.173E+00
2.460 -.113E+00

2.545 .104E+00
2.555 .907E-01
2.585 .603E-01
2.605 -.523E-01
2.625 -.774E-01
2.645 -.877E-01
2.665 -.161E+00
2.685 .444E-01
2.705 .139E+00
2.725 .159E+00
2.745 .204E+00
2.765 .523E-01
2.785 -.383E-01
2.805 -.523E-01
2.825 .225E-01
2.845 -.110E+00
2.865 -.142E+00
2.885 -.125E+00
2.905 -.173E+00
2.925 -.205E+00
2.945 -.902E-01
2.965 -.372E-01
2.985 -.231E-01
3.005 .295E-01
3.025 .744E-01
3.045 .842E-01
3.065 .374E-01
3.085 .246E-01
3.105 .157E+00
3.125 .233E+00
3.145 .332E+00
3.165 .334E+00
3.185 .325E+00
3.205 .643E-01
3.225 -.491E-01
3.245 -.271E-01
3.265 .152E-01
3.285 .077E-01
3.305 .145E+00
3.325 .186E+00
3.345 .141E+00
3.365 .967E-01
3.385 .357E-01
3.405 .122E+00
3.425 .116E+00
3.445 .143E+00
3.465 .183E+00
3.485 .134E+00
3.505 .683E-01
3.525 .792E-01
3.545 .115E+00
3.565 .937E-01
3.585 .140E+00
3.605 .133E+00
3.625 .207E+00
3.645 .109E+00
3.665 -.446E-01
3.685 -.463E-01
3.705 -.243E+00
3.725 -.103E+00
3.745 -.201E+00

2.550 .117E+00
2.570 .852E-01
2.590 .441E-01
2.610 -.603E-01
2.630 -.538E-01
2.650 -.130E+00
2.670 -.115E+00
2.690 .693E-01
2.710 .113E+00
2.730 .208E+00
2.750 .195E+00
2.770 .121E-01
2.790 -.503E-01
2.810 -.245E-01
2.830 -.180E-01
2.850 -.146E+00
2.870 -.122E+00
2.890 -.124E+00
2.910 -.151E+00
2.930 -.151E+00
2.950 -.578E-01
2.970 -.344E-01
2.990 -.159E-01
3.010 .294E-01
3.030 .106E+00
3.050 .802E-01
3.070 .236E-01
3.090 .352E-01
3.110 .155E+00
3.130 .325E+00
3.150 .352E+00
3.170 .398E+00
3.190 .292E+00
3.210 .872E-01
3.230 -.523E-01
3.250 -.470E-01
3.270 .454E-01
3.290 .107E+00
3.310 .159E+00
3.330 .156E+00
3.350 .126E+00
3.370 .822E-01
3.390 .912E-01
3.410 .109E+00
3.430 .125E+00
3.450 .158E+00
3.470 .179E+00
3.490 .109E+00
3.510 .583E-01
3.530 .847E-01
3.550 .121E+00
3.570 .917E-01
3.590 .158E+00
3.610 .159E+00
3.630 .153E+00
3.650 .299E-01
3.670 -.418E-01
3.690 -.648E-01
3.710 -.254E+00
3.730 -.294E+00
3.750 -.200E+00

2.555 .108E+00
2.575 .982E-01
2.595 .441E-01
2.615 -.688E-01
2.635 -.503E-01
2.655 -.164E+00
2.675 -.548E-01
2.695 .778E-01
2.715 .120E+00
2.735 .196E+00
2.755 .131E+00
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2.795 -.578E-01
2.815 -.481E-02
2.835 -.280E-01
2.855 -.160E+00
2.875 -.103E+00
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2.915 -.163E+00
2.935 -.150E+00
2.955 -.598E-01
2.975 -.286E-01
2.995 -.159E-01
3.015 .453E-01
3.035 .887E-01
3.055 .847E-01
3.075 .129E-01
3.095 .558E-01
3.115 .178E+00
3.135 .298E+00
3.155 .409E+00
3.175 .409E+00
3.195 .251E+00
3.215 .480E-01
3.235 -.296E-01
3.255 .151E-01
3.275 .638E-01
3.295 .136E+00
3.315 .177E+00
3.335 .157E+00
3.355 .121E+00
3.375 .688E-01
3.395 .977E-01
3.415 .103E+00
3.435 .122E+00
3.455 .165E+00
3.475 .173E+00
3.495 .747E-01
3.515 .588E-01
3.535 .952E-01
3.555 .327E-01
3.575 .101E+00
3.595 .158E+00
3.615 .172E+00
3.635 .187E+00
3.655 -.177E-01
3.675 -.327E-01
3.695 -.932E-01
3.715 -.282E+00
3.735 -.250E+00
3.755 -.754E-01

2.550 .101E+00
2.580 .548E-01
2.600 -.723E-02
2.620 -.782E-01
2.640 -.588E-01
2.660 -.179E+00
2.680 .147E-02
2.700 .748E-01
2.720 .142E+00
2.740 .199E+00
2.760 .977E-01
2.780 -.236E-01
2.800 -.563E-01
2.820 .135E-01
2.840 -.643E-01
2.860 -.157E+00
2.880 -.158E+00
2.900 -.145E+00
2.920 -.183E+00
2.940 -.130E+00
2.960 -.429E-01
2.980 -.382E-01
3.000 -.145E-01
3.020 .643E-01
3.040 .832E-01
3.060 .583E-01
3.080 .381E-01
3.100 .768E-01
3.120 .211E+00
3.140 .305E+00
3.160 .386E+00
3.180 .319E+00
3.200 .222E+00
3.220 -.129E-01
3.240 -.178E-01
3.260 -.415E-01
3.280 .947E-01
3.300 .165E+00
3.320 .180E+00
3.340 .158E+00
3.360 .110E+00
3.380 .952E-01
3.400 .102E+00
3.420 .113E+00
3.440 .130E+00
3.460 .180E+00
3.480 .148E+00
3.500 .538E-01
3.520 .693E-01
3.540 .106E+00
3.560 .947E-01
3.580 .113E+00
3.600 .174E+00
3.620 .185E+00
3.640 .164E+00
3.660 -.441E-01
3.680 -.451E-01
3.700 -.137E+00
3.720 -.307E+00
3.740 -.216E+00
3.760 -.111E+00

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|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 3.835 | -.132E+00 | 3.870 | -.249E+00 | 3.875 | -.237E+00 | 3.890 | -.156E+00 |
| 3.905 | -.144E-01 | 3.890 | -.101E+00 | 3.895 | -.817E-01 | 3.900 | -.807E-01 |
| 3.925 | .157E-03 | 3.910 | -.430E-01 | 3.915 | -.356E-01 | 3.920 | -.135E-01 |
| 3.945 | .417E-01 | 3.930 | .827E-03 | 3.935 | .104E-02 | 3.940 | .159E-01 |
| 3.955 | .132E+00 | 3.950 | .902E-01 | 3.955 | .917E-01 | 3.950 | .125E+00 |
| 3.985 | .107E+00 | 3.970 | .125E+00 | 3.975 | .118E+00 | 3.980 | .107E+00 |
| 4.005 | .306E-01 | 3.990 | .101E+00 | 3.995 | .892E-01 | 4.000 | .763E-01 |
| 4.025 | -.155E-01 | 4.010 | .284E-01 | 4.015 | .137E-01 | 4.020 | -.434E-02 |
| 4.045 | -.127E+00 | 4.030 | -.957E-01 | 4.035 | -.778E-01 | 4.040 | -.937E-01 |
| 4.055 | -.100E+00 | 4.050 | -.154E+00 | 4.055 | -.922E-01 | 4.060 | -.108E+00 |
| 4.035 | -.523E-01 | 4.070 | -.947E-01 | 4.075 | -.106E+00 | 4.080 | -.753E-02 |
| 4.105 | .997E-01 | 4.090 | -.349E-01 | 4.095 | .110E-01 | 4.100 | .452E-01 |
| 4.125 | .125E+00 | 4.110 | .807E-01 | 4.115 | .847E-01 | 4.120 | .106E+00 |
| 4.145 | .103E+00 | 4.130 | .134E+00 | 4.135 | .121E+00 | 4.140 | .108E+00 |
| 4.155 | -.932E-02 | 4.150 | .103E+00 | 4.155 | -.653E-02 | 4.160 | .140E-01 |
| 4.185 | -.678E-01 | 4.170 | -.435E-01 | 4.175 | -.553E-01 | 4.180 | -.107E+00 |
| 4.205 | -.857E-01 | 4.190 | -.653E-01 | 4.195 | -.877E-01 | 4.200 | -.109E+00 |
| 4.225 | -.447E-01 | 4.210 | -.832E-01 | 4.215 | -.678E-01 | 4.220 | -.533E-01 |
| 4.245 | .548E-01 | 4.230 | .197E-01 | 4.235 | .173E-01 | 4.240 | .390E-01 |
| 4.255 | .120E+00 | 4.250 | .753E-01 | 4.255 | .144E+00 | 4.250 | .115E+00 |
| 4.285 | .713E-01 | 4.270 | .139E+00 | 4.275 | .148E+00 | 4.280 | .812E-01 |
| 4.305 | -.837E-01 | 4.290 | .450E-01 | 4.295 | .238E-01 | 4.300 | .194E-01 |
| 4.325 | -.135E+00 | 4.310 | -.553E-01 | 4.315 | -.753E-01 | 4.320 | -.114E+00 |
| 4.345 | -.982E-01 | 4.330 | -.121E+00 | 4.335 | -.109E+00 | 4.340 | -.987E-01 |
| 4.355 | -.753E-01 | 4.350 | -.105E+00 | 4.355 | -.773E-01 | 4.360 | -.852E-01 |
| 4.385 | -.289E-02 | 4.370 | -.618E-01 | 4.375 | -.503E-01 | 4.380 | -.122E-02 |
| 4.405 | .115E+00 | 4.390 | .141E-01 | 4.395 | .360E-01 | 4.400 | .481E-01 |
| 4.425 | .113E+00 | 4.410 | .912E-01 | 4.415 | .952E-01 | 4.420 | .111E+00 |
| 4.445 | .151E+00 | 4.430 | .157E+00 | 4.435 | .129E+00 | 4.440 | .129E+00 |
| 4.455 | .193E+00 | 4.450 | .174E+00 | 4.455 | .206E+00 | 4.450 | .201E+00 |
| 4.485 | .106E+00 | 4.470 | .199E+00 | 4.475 | .200E+00 | 4.480 | .107E+00 |
| 4.505 | -.115E+00 | 4.490 | .653E-01 | 4.495 | .162E-01 | 4.500 | -.143E-01 |
| 4.525 | -.136E+00 | 4.510 | -.857E-01 | 4.515 | -.952E-01 | 4.520 | -.123E+00 |
| 4.545 | -.144E+00 | 4.530 | -.181E+00 | 4.535 | -.141E+00 | 4.540 | -.130E+00 |
| 4.555 | -.156E+00 | 4.550 | -.155E+00 | 4.555 | -.148E+00 | 4.560 | -.159E+00 |
| 4.535 | -.125E+00 | 4.570 | -.153E+00 | 4.575 | -.158E+00 | 4.580 | -.105E+00 |
| 4.605 | .357E-02 | 4.590 | -.116E+00 | 4.595 | -.952E-01 | 4.600 | -.852E-01 |
| 4.625 | .146E+00 | 4.610 | -.110E-01 | 4.615 | .219E-01 | 4.620 | .857E-01 |
| 4.645 | .329E+00 | 4.630 | .305E+00 | 4.635 | .289E+00 | 4.640 | .305E+00 |
| 4.655 | .346E+00 | 4.650 | .329E+00 | 4.655 | .333E+00 | 4.650 | .335E+00 |
| 4.685 | .498E+00 | 4.670 | .404E+00 | 4.675 | .454E+00 | 4.680 | .488E+00 |
| 4.705 | .452E+00 | 4.690 | .498E+00 | 4.695 | .498E+00 | 4.700 | .437E+00 |
| 4.725 | .351E+00 | 4.710 | .446E+00 | 4.715 | .406E+00 | 4.720 | .368E+00 |
| 4.745 | .254E+00 | 4.730 | .238E+00 | 4.735 | .284E+00 | 4.740 | .284E+00 |
| 4.755 | .206E+00 | 4.750 | .254E+00 | 4.755 | .197E+00 | 4.750 | .219E+00 |
| 4.735 | .753E-02 | 4.770 | .162E+00 | 4.775 | .118E+00 | 4.730 | -.113E-01 |
| 4.805 | -.105E+00 | 4.790 | -.543E-02 | 4.795 | -.302E-01 | 4.800 | -.362E-01 |
| 4.825 | -.518E-01 | 4.810 | -.419E-01 | 4.815 | -.223E-01 | 4.820 | -.375E-01 |
| 4.845 | -.273E+00 | 4.830 | -.191E+00 | 4.835 | -.178E+00 | 4.840 | -.215E+00 |
| 4.855 | -.332E+00 | 4.850 | -.328E+00 | 4.855 | -.412E+00 | 4.850 | -.390E+00 |
| 4.855 | -.248E+00 | 4.870 | -.386E+00 | 4.875 | -.385E+00 | 4.880 | -.241E+00 |
| 4.905 | -.253E-01 | 4.890 | -.211E+00 | 4.895 | -.173E+00 | 4.900 | -.171E+00 |
| 4.925 | -.737E-01 | 4.910 | -.115E+00 | 4.915 | -.124E+00 | 4.920 | -.937E-01 |
| 4.945 | -.758E-01 | 4.930 | -.419E-01 | 4.935 | -.912E-01 | 4.940 | -.102E+00 |
| 4.955 | -.129E+00 | 4.950 | -.415E-01 | 4.955 | -.132E+00 | 4.950 | -.106E+00 |
| 4.985 | -.211E+00 | 4.970 | -.158E+00 | 4.975 | -.156E+00 | 4.980 | -.246E+00 |
| 5.005 | -.277E+00 | 4.990 | -.225E+00 | 4.995 | -.254E+00 | 5.000 | -.291E+00 |
| 5.025 | -.223E+00 | 5.010 | -.252E+00 | 5.015 | -.242E+00 | 5.020 | -.230E+00 |
| 5.045 | -.137E+00 | 5.030 | -.178E+00 | 5.035 | -.173E+00 | 5.040 | -.155E+00 |
| 5.055 | -.101E+00 | 5.050 | -.129E+00 | 5.055 | -.957E-01 | 5.050 | -.107E+00 |
| | | 5.070 | -.582E-01 | 5.075 | -.122E-01 | 5.080 | -.997E-01 |

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|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 5.195 | .102E+00 | 5.190 | -.942E-01 | 5.195 | -.917E-01 | 5.200 | -.922E-01 |
| 5.205 | -.129E+00 | 5.210 | -.120E+00 | 5.215 | -.123E+00 | 5.220 | -.129E+00 |
| 5.225 | -.130E+00 | 5.230 | -.106E+00 | 5.235 | -.101E+00 | 5.240 | -.922E-01 |
| 5.245 | -.877E-01 | 5.250 | -.887E-01 | 5.255 | -.917E-01 | 5.260 | -.957E-01 |
| 5.265 | -.977E-01 | 5.270 | -.977E-01 | 5.275 | -.982E-01 | 5.280 | -.138E+00 |
| 5.285 | -.133E+00 | 5.290 | -.142E+00 | 5.295 | -.152E+00 | 5.300 | -.156E+00 |
| 5.305 | -.162E+00 | 5.310 | -.152E+00 | 5.315 | -.150E+00 | 5.320 | -.157E+00 |
| 5.325 | -.155E+00 | 5.330 | -.852E-01 | 5.335 | -.112E+00 | 5.340 | -.104E+00 |
| 5.345 | -.872E-01 | 5.350 | -.852E-01 | 5.355 | .233E-01 | 5.360 | -.258E-01 |
| 5.365 | -.151E-01 | 5.370 | .238E-01 | 5.375 | .548E-01 | 5.380 | .753E-01 |
| 5.385 | .593E-01 | 5.390 | .528E-01 | 5.395 | .598E-01 | 5.400 | .698E-01 |
| 5.405 | .703E-02 | 5.410 | .103E-01 | 5.415 | -.171E-01 | 5.420 | -.503E-01 |
| 5.425 | -.688E-01 | 5.430 | -.643E-01 | 5.435 | -.598E-01 | 5.440 | -.543E-01 |
| 5.445 | -.593E-01 | 5.450 | -.472E-01 | 5.455 | .618E-01 | 5.460 | .476E-01 |
| 5.465 | .728E-01 | 5.470 | .108E+00 | 5.475 | .125E+00 | 5.480 | .658E-01 |
| 5.485 | .593E-01 | 5.490 | .351E-01 | 5.495 | .170E-01 | 5.500 | .142E-01 |
| 5.505 | -.797E-01 | 5.510 | -.416E-01 | 5.515 | -.479E-01 | 5.520 | -.733E-01 |
| 5.525 | -.872E-01 | 5.530 | -.618E-01 | 5.535 | -.435E-01 | 5.540 | -.223E-01 |
| 5.545 | -.120E-01 | 5.550 | -.195E-01 | 5.555 | -.106E+00 | 5.560 | -.106E+00 |
| 5.565 | -.137E+00 | 5.570 | -.174E+00 | 5.575 | -.197E+00 | 5.580 | -.344E+00 |
| 5.585 | -.297E+00 | 5.590 | -.308E+00 | 5.595 | -.343E+00 | 5.600 | -.357E+00 |
| 5.605 | -.338E+00 | 5.610 | -.290E+00 | 5.615 | -.248E+00 | 5.620 | -.229E+00 |
| 5.625 | -.242E+00 | 5.630 | -.216E+00 | 5.635 | -.240E+00 | 5.640 | -.254E+00 |
| 5.645 | -.259E+00 | 5.650 | -.290E+00 | 5.655 | -.256E+00 | 5.660 | -.288E+00 |
| 5.665 | -.236E+00 | 5.670 | -.257E+00 | 5.675 | -.251E+00 | 5.680 | -.192E+00 |
| 5.685 | -.203E+00 | 5.690 | -.190E+00 | 5.695 | -.156E+00 | 5.700 | -.154E+00 |
| 5.705 | -.154E+00 | 5.710 | -.182E+00 | 5.715 | -.199E+00 | 5.720 | -.204E+00 |
| 5.725 | -.195E+00 | 5.730 | -.113E+00 | 5.735 | -.108E+00 | 5.740 | -.797E-01 |
| 5.745 | -.658E-01 | 5.750 | -.250E-01 | 5.755 | .327E-01 | 5.760 | .872E-03 |
| 5.765 | -.133E-01 | 5.770 | -.177E-01 | 5.775 | -.259E-01 | 5.780 | .411E-01 |
| 5.785 | .543E-02 | 5.790 | .154E-01 | 5.795 | .548E-01 | 5.800 | .972E-01 |
| 5.805 | .229E+00 | 5.810 | .231E+00 | 5.815 | .271E+00 | 5.820 | .322E+00 |
| 5.825 | .350E+00 | 5.830 | .299E+00 | 5.835 | .271E+00 | 5.840 | .222E+00 |
| 5.845 | .178E+00 | 5.850 | .153E+00 | 5.855 | .129E+00 | 5.860 | .135E+00 |
| 5.865 | .117E+00 | 5.870 | .144E+00 | 5.875 | .150E+00 | 5.880 | .187E+00 |
| 5.885 | .215E+00 | 5.890 | .239E+00 | 5.895 | .255E+00 | 5.900 | .262E+00 |
| 5.905 | .292E+00 | 5.910 | .214E+00 | 5.915 | .198E+00 | 5.920 | .172E+00 |
| 5.925 | .158E+00 | 5.930 | .152E+00 | 5.935 | .176E+00 | 5.940 | .188E+00 |
| 5.945 | .192E+00 | 5.950 | .187E+00 | 5.955 | .192E+00 | 5.960 | .181E+00 |
| 5.965 | .176E+00 | 5.970 | .170E+00 | 5.975 | .159E+00 | 5.980 | .131E+00 |
| 5.985 | .121E+00 | 5.990 | .111E+00 | 5.995 | .106E+00 | 6.000 | .110E+00 |
| 6.005 | .144E+00 | 6.010 | .158E+00 | 6.015 | .184E+00 | 6.020 | .214E+00 |
| 6.025 | .240E+00 | 6.030 | .230E+00 | 6.035 | .248E+00 | 6.040 | .250E+00 |
| 6.045 | .245E+00 | 6.050 | .240E+00 | 6.055 | .997E-01 | 6.060 | .117E+00 |
| 6.065 | .753E-01 | 6.070 | .125E-01 | 6.075 | -.293E-01 | 6.080 | -.159E+00 |
| 6.085 | -.120E+00 | 6.090 | -.129E+00 | 6.095 | -.153E+00 | 6.100 | -.183E+00 |
| 6.105 | -.153E+00 | 6.110 | -.125E+00 | 6.115 | -.947E-01 | 6.120 | -.802E-01 |
| 6.125 | -.842E-01 | 6.130 | -.128E+00 | 6.135 | -.133E+00 | 6.140 | -.144E+00 |
| 6.145 | -.154E+00 | 6.150 | -.159E+00 | 6.155 | -.252E+00 | 6.160 | -.241E+00 |
| 6.165 | -.253E+00 | 6.170 | -.280E+00 | 6.175 | -.296E+00 | 6.180 | -.321E+00 |
| 6.185 | -.309E+00 | 6.190 | -.290E+00 | 6.195 | -.292E+00 | 6.200 | -.296E+00 |
| 6.205 | -.199E+00 | 6.210 | -.207E+00 | 6.215 | -.173E+00 | 6.220 | -.126E+00 |
| 6.225 | -.117E-01 | 6.230 | -.156E-01 | 6.235 | -.259E-01 | 6.240 | -.962E-02 |
| 6.245 | .203E-01 | 6.250 | .421E-01 | 6.255 | .538E-01 | 6.260 | .386E-01 |
| 6.265 | .223E-01 | 6.270 | .627E-02 | 6.275 | -.753E-02 | 6.280 | -.375E-01 |
| 6.285 | -.509E-01 | 6.290 | -.852E-01 | 6.295 | -.104E+00 | 6.300 | -.114E+00 |
| 6.305 | -.137E+00 | 6.310 | -.137E+00 | 6.315 | -.143E+00 | 6.320 | -.151E+00 |
| 6.325 | -.154E+00 | 6.330 | -.753E-01 | 6.335 | -.707E-01 | 6.340 | -.812E-01 |
| 6.345 | -.688E-01 | 6.350 | -.708E-01 | 6.355 | -.952E-01 | 6.360 | -.114E+00 |
| 6.365 | -.129E+00 | 6.370 | -.130E+00 | 6.375 | -.123E+00 | 6.380 | -.208E+00 |
| 6.385 | -.175E+00 | 6.390 | -.181E+00 | 6.395 | -.201E+00 | 6.400 | -.207E+00 |

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|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 6.525 | .187E+00 | 6.530 | .206E+00 | 6.535 | .202E+00 | 6.540 | .195E+00 |
| 6.545 | .678E-01 | 6.550 | .728E-01 | 6.555 | .125E+00 | 6.560 | .110E+00 |
| 6.555 | .917E-01 | 6.555 | .434E-01 | 6.555 | .837E-01 | 6.560 | .897E-01 |
| 6.585 | -.442E-02 | 6.570 | .713E-01 | 6.575 | .334E-01 | 6.590 | .295E-01 |
| 6.605 | -.892E-01 | 6.590 | -.104E-01 | 6.595 | -.416E-02 | 6.600 | -.318E-03 |
| 6.625 | -.867E-01 | 6.610 | -.703E-01 | 6.615 | -.763E-01 | 6.620 | -.872E-01 |
| 6.645 | -.822E-01 | 6.630 | -.912E-01 | 6.635 | -.718E-01 | 6.640 | -.698E-01 |
| 6.655 | -.120E+00 | 6.650 | -.957E-01 | 6.655 | -.137E+00 | 6.650 | -.126E+00 |
| 6.635 | -.704E-01 | 6.670 | -.114E+00 | 6.675 | -.101E+00 | 6.680 | -.887E-01 |
| 6.705 | .206E-01 | 6.690 | -.618E-01 | 6.695 | -.628E-01 | 6.700 | -.698E-01 |
| 6.725 | .302E-01 | 6.710 | -.108E-01 | 6.715 | -.305E-02 | 6.720 | .184E-01 |
| 6.745 | .135E+00 | 6.730 | .957E-01 | 6.735 | .763E-01 | 6.740 | .962E-01 |
| 6.755 | .112E+00 | 6.750 | .153E+00 | 6.755 | .145E+00 | 6.760 | .136E+00 |
| 6.785 | .942E-01 | 6.770 | .907E-01 | 6.775 | .802E-01 | 6.780 | .997E-01 |
| 6.805 | .215E+00 | 6.790 | .101E+00 | 6.795 | .119E+00 | 6.800 | .144E+00 |
| 6.825 | .316E+00 | 6.810 | .232E+00 | 6.815 | .265E+00 | 6.820 | .298E+00 |
| 6.845 | .230E+00 | 6.830 | .296E+00 | 6.835 | .282E+00 | 6.840 | .255E+00 |
| 6.855 | .205E+00 | 6.850 | .215E+00 | 6.855 | .186E+00 | 6.860 | .198E+00 |
| 6.835 | .340E+00 | 6.870 | .211E+00 | 6.875 | .221E+00 | 6.880 | .347E+00 |
| 6.905 | .474E+00 | 6.890 | .359E+00 | 6.895 | .398E+00 | 6.900 | .400E+00 |
| 6.925 | .395E+00 | 6.910 | .407E+00 | 6.915 | .385E+00 | 6.920 | .390E+00 |
| 6.945 | .337E+00 | 6.930 | .373E+00 | 6.935 | .352E+00 | 6.940 | .336E+00 |
| 6.955 | .345E+00 | 6.950 | .351E+00 | 6.955 | .340E+00 | 6.960 | .351E+00 |
| 6.945 | .224E+00 | 6.970 | .332E+00 | 6.975 | .322E+00 | 6.980 | .207E+00 |
| 7.005 | .134E-01 | 6.990 | .173E+00 | 6.995 | .147E+00 | 7.000 | .117E+00 |
| 7.025 | -.528E-01 | 7.010 | .407E-01 | 7.015 | .231E-01 | 7.020 | -.193E-01 |
| 7.045 | -.109E+00 | 7.030 | -.106E+00 | 7.035 | -.857E-01 | 7.040 | -.882E-01 |
| 7.055 | -.253E+00 | 7.050 | -.134E+00 | 7.055 | -.278E+00 | 7.060 | -.248E+00 |
| 7.045 | -.304E+00 | 7.070 | -.296E+00 | 7.075 | -.311E+00 | 7.080 | -.358E+00 |
| 7.105 | -.247E+00 | 7.090 | -.274E+00 | 7.095 | -.263E+00 | 7.100 | -.253E+00 |
| 7.125 | -.159E+00 | 7.110 | -.207E+00 | 7.115 | -.179E+00 | 7.120 | -.164E+00 |
| 7.145 | -.141E+00 | 7.130 | -.139E+00 | 7.135 | -.145E+00 | 7.140 | -.143E+00 |
| 7.165 | -.723E-01 | 7.150 | -.145E+00 | 7.155 | -.528E-01 | 7.160 | -.842E-01 |
| 7.185 | .787E-03 | 7.170 | -.474E-01 | 7.175 | -.385E-01 | 7.180 | .523E-01 |
| 7.205 | .548E-01 | 7.190 | -.339E-02 | 7.195 | .178E-01 | 7.200 | .298E-01 |
| 7.225 | .395E-01 | 7.210 | .201E-01 | 7.215 | .758E-02 | 7.220 | .198E-01 |
| 7.245 | .518E-01 | 7.230 | .255E-01 | 7.235 | .429E-01 | 7.240 | .463E-01 |
| 7.255 | .127E+00 | 7.250 | .698E-01 | 7.255 | .362E-01 | 7.260 | .112E+00 |
| 7.235 | .158E+00 | 7.270 | .136E+00 | 7.275 | .143E+00 | 7.280 | .144E+00 |
| 7.305 | .201E+00 | 7.290 | .158E+00 | 7.295 | .176E+00 | 7.300 | .185E+00 |
| 7.325 | .221E+00 | 7.310 | .213E+00 | 7.315 | .222E+00 | 7.320 | .224E+00 |
| 7.345 | .142E+00 | 7.330 | .178E+00 | 7.335 | .178E+00 | 7.340 | .154E+00 |
| 7.355 | .207E-01 | 7.350 | .122E+00 | 7.355 | .249E-01 | 7.360 | .385E-01 |
| 7.435 | -.902E-01 | 7.370 | -.598E-02 | 7.375 | -.142E-01 | 7.380 | -.128E+00 |
| 7.405 | -.205E+00 | 7.390 | -.104E+00 | 7.395 | -.146E+00 | 7.400 | -.179E+00 |
| 7.425 | -.246E+00 | 7.410 | -.199E+00 | 7.415 | -.203E+00 | 7.420 | -.222E+00 |
| 7.445 | -.837E-01 | 7.430 | -.133E+00 | 7.435 | -.163E+00 | 7.440 | -.135E+00 |
| 7.455 | .307E-01 | 7.450 | -.543E-01 | 7.455 | .593E-01 | 7.460 | .160E-01 |
| 7.435 | .152E+00 | 7.470 | .723E-01 | 7.475 | .972E-01 | 7.480 | .214E+00 |
| 7.505 | .147E+00 | 7.490 | .144E+00 | 7.495 | .156E+00 | 7.500 | .182E+00 |
| 7.525 | .105E+00 | 7.510 | .125E+00 | 7.515 | .992E-01 | 7.520 | .922E-01 |
| 7.545 | -.333E-01 | 7.530 | -.233E-01 | 7.535 | .207E-01 | 7.540 | .465E-03 |
| 7.555 | -.125E+00 | 7.550 | -.536E-01 | 7.555 | -.158E+00 | 7.560 | -.109E+00 |
| 7.535 | -.286E+00 | 7.570 | -.178E+00 | 7.575 | -.224E+00 | 7.580 | -.317E+00 |
| 7.605 | -.313E+00 | 7.590 | -.287E+00 | 7.595 | -.311E+00 | 7.600 | -.330E+00 |
| 7.625 | -.244E+00 | 7.610 | -.292E+00 | 7.615 | -.253E+00 | 7.620 | -.244E+00 |
| 7.645 | -.149E+00 | 7.630 | -.147E+00 | 7.635 | -.179E+00 | 7.640 | -.170E+00 |
| 7.655 | -.947E-01 | 7.650 | -.148E+00 | 7.655 | -.543E-01 | 7.660 | -.105E+00 |
| 7.635 | .320E-02 | 7.670 | -.498E-01 | 7.675 | -.127E-01 | 7.680 | .207E-01 |
| 7.705 | .968E-01 | 7.690 | -.286E-02 | 7.695 | .659E-02 | 7.700 | .184E-01 |
| 7.725 | .113E-01 | 7.710 | .309E-01 | 7.715 | .144E-01 | 7.720 | .937E-02 |
| | | 7.730 | .508E-01 | 7.735 | .518E-01 | 7.740 | .643E-01 |

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|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 7.825 | -.176E-01 | 7.830 | .381E-02 | 7.835 | -.134E-01 | 7.840 | -.201E-01 |
| 7.845 | -.231E-01 | 7.850 | -.274E-01 | 7.855 | -.877E-01 | 7.860 | -.673E-01 |
| 7.865 | -.588E-01 | 7.870 | -.453E-01 | 7.875 | -.198E-01 | 7.880 | -.114E-01 |
| 7.885 | .292E-01 | 7.890 | .468E-01 | 7.895 | .439E-01 | 7.900 | .312E-01 |
| 7.905 | .103E+00 | 7.910 | .718E-01 | 7.915 | .738E-01 | 7.920 | .842E-01 |
| 7.925 | .317E-01 | 7.930 | .152E-01 | 7.935 | .658E-02 | 7.940 | -.105E-01 |
| 7.945 | -.135E-01 | 7.950 | -.115E-01 | 7.955 | -.181E+00 | 7.960 | -.127E+00 |
| 7.965 | -.154E+00 | 7.970 | -.213E+00 | 7.975 | -.247E+00 | 7.980 | -.358E+00 |
| 7.985 | -.305E+00 | 7.990 | -.308E+00 | 7.995 | -.348E+00 | 8.000 | -.386E+00 |
| 8.005 | -.353E+00 | 8.010 | -.349E+00 | 8.015 | -.326E+00 | 8.020 | -.310E+00 |
| 8.025 | -.310E+00 | 8.030 | -.233E+00 | 8.035 | -.261E+00 | 8.040 | -.251E+00 |
| 8.045 | -.229E+00 | 8.050 | -.222E+00 | 8.055 | -.183E+00 | 8.060 | -.217E+00 |
| 8.065 | -.223E+00 | 8.070 | -.212E+00 | 8.075 | -.204E+00 | 8.080 | -.140E+00 |
| 8.085 | -.152E+00 | 8.090 | -.149E+00 | 8.095 | -.114E+00 | 8.100 | -.827E-01 |
| 8.105 | -.554E-02 | 8.110 | -.244E-01 | 8.115 | -.192E-01 | 8.120 | .713E-03 |
| 8.125 | .159E-01 | 8.130 | .468E-01 | 8.135 | .250E-01 | 8.140 | .134E-01 |
| 8.145 | .143E-01 | 8.150 | .208E-01 | 8.155 | .331E-01 | 8.160 | .314E-01 |
| 8.165 | .312E-01 | 8.170 | .343E-01 | 8.175 | .398E-01 | 8.180 | .518E-01 |
| 8.185 | .533E-01 | 8.190 | .558E-01 | 8.195 | .558E-01 | 8.200 | .563E-01 |
| 8.205 | .922E-01 | 8.210 | .807E-01 | 8.215 | .857E-01 | 8.220 | .967E-01 |
| 8.225 | .104E+00 | 8.230 | .338E-01 | 8.235 | .496E-01 | 8.240 | .368E-01 |
| 8.245 | .184E-01 | 8.250 | .144E-01 | 8.255 | .179E-04 | 8.260 | .141E-01 |
| 8.265 | .122E-01 | 8.270 | -.420E-02 | 8.275 | -.241E-01 | 8.280 | -.668E-01 |
| 8.285 | -.558E-01 | 8.290 | -.703E-01 | 8.295 | -.753E-01 | 8.300 | -.760E-01 |
| 8.305 | -.162E+00 | 8.310 | -.130E+00 | 8.315 | -.134E+00 | 8.320 | -.154E+00 |
| 8.325 | -.152E+00 | 8.330 | -.143E+00 | 8.335 | -.119E+00 | 8.340 | -.997E-01 |
| 8.345 | -.932E-01 | 8.350 | -.977E-01 | 8.355 | -.807E-01 | 8.360 | -.842E-01 |
| 8.365 | -.713E-01 | 8.370 | -.523E-01 | 8.375 | -.368E-01 | 8.380 | .385E-01 |
| 8.385 | .250E-01 | 8.390 | .378E-01 | 8.395 | .558E-01 | 8.400 | .593E-01 |
| 8.405 | .397E-01 | 8.410 | .528E-01 | 8.415 | .363E-01 | 8.420 | .346E-01 |
| 8.425 | .335E-01 | 8.430 | .285E-01 | 8.435 | .172E-01 | 8.440 | .142E-01 |
| 8.445 | .234E-01 | 8.450 | .419E-01 | 8.455 | .244E-01 | 8.460 | .472E-01 |
| 8.465 | .513E-01 | 8.470 | .487E-01 | 8.475 | .496E-01 | 8.480 | .882E-01 |
| 8.485 | .807E-01 | 8.490 | .797E-01 | 8.495 | .758E-01 | 8.500 | .673E-01 |
| 8.505 | .430E-01 | 8.510 | .411E-01 | 8.515 | .407E-01 | 8.520 | .461E-01 |
| 8.525 | .588E-01 | 8.530 | .683E-01 | 8.535 | .902E-01 | 8.540 | .108E+00 |
| 8.545 | .122E+00 | 8.550 | .132E+00 | 8.555 | .220E+00 | 8.560 | .206E+00 |
| 8.565 | .217E+00 | 8.570 | .231E+00 | 8.575 | .230E+00 | 8.580 | .188E+00 |
| 8.585 | .168E+00 | 8.590 | .149E+00 | 8.595 | .141E+00 | 8.600 | .146E+00 |
| 8.605 | .757E-01 | 8.610 | .124E+00 | 8.615 | .124E+00 | 8.620 | .113E+00 |
| 8.625 | .103E+00 | 8.630 | .475E-01 | 8.635 | .613E-01 | 8.640 | .394E-01 |
| 8.645 | -.146E-02 | 8.650 | -.364E-01 | 8.655 | -.807E-01 | 8.660 | -.733E-01 |
| 8.665 | -.713E-01 | 8.670 | -.743E-01 | 8.675 | -.743E-01 | 8.680 | -.147E+00 |
| 8.685 | -.115E+00 | 8.690 | -.117E+00 | 8.695 | -.138E+00 | 8.700 | -.156E+00 |
| 8.705 | -.251E+00 | 8.710 | -.240E+00 | 8.715 | -.252E+00 | 8.720 | -.304E+00 |
| 8.725 | -.334E+00 | 8.730 | -.273E+00 | 8.735 | -.267E+00 | 8.740 | -.235E+00 |
| 8.745 | -.207E+00 | 8.750 | -.205E+00 | 8.755 | -.120E+00 | 8.760 | -.171E+00 |
| 8.765 | -.179E+00 | 8.770 | -.159E+00 | 8.775 | -.171E+00 | 8.780 | -.480E-01 |
| 8.785 | -.110E+00 | 8.790 | -.101E+00 | 8.795 | -.508E-01 | 8.800 | -.523E-02 |
| 8.805 | .203E+00 | 8.810 | .154E+00 | 8.815 | .204E+00 | 8.820 | .278E+00 |
| 8.825 | .324E+00 | 8.830 | .342E+00 | 8.835 | .296E+00 | 8.840 | .254E+00 |
| 8.845 | .252E+00 | 8.850 | .276E+00 | 8.855 | .236E+00 | 8.860 | .252E+00 |
| 8.865 | .244E+00 | 8.870 | .235E+00 | 8.875 | .245E+00 | 8.880 | .240E+00 |
| 8.885 | .277E+00 | 8.890 | .291E+00 | 8.895 | .290E+00 | 8.900 | .287E+00 |
| 8.905 | .207E+00 | 8.910 | .227E+00 | 8.915 | .210E+00 | 8.920 | .176E+00 |
| 8.925 | .153E+00 | 8.930 | .120E+00 | 8.935 | .147E+00 | 8.940 | .162E+00 |
| 8.945 | .156E+00 | 8.950 | .171E+00 | 8.955 | .125E+00 | 8.960 | .162E+00 |
| 8.965 | .175E+00 | 8.970 | .171E+00 | 8.975 | .155E+00 | 8.980 | .136E+00 |
| 8.985 | .146E+00 | 8.990 | .140E+00 | 8.995 | .120E+00 | 9.000 | .987E-01 |
| 9.005 | .757E-01 | 9.010 | -.852E-01 | 9.015 | .342E-01 | 9.020 | .857E-01 |
| 9.025 | .317E-01 | 9.030 | -.468E-01 | 9.035 | .337E-02 | 9.040 | -.127E-01 |
| 9.045 | -.275E-01 | 9.050 | -.468E-01 | 9.055 | -.212E-01 | 9.060 | -.847E-01 |

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|--------|-----------|-------|-----------|-------|-----------|--------|-----------|
| 9.165 | .236E-01 | 9.170 | -.528E-01 | 9.155 | .430E-01 | 9.150 | .797E-02 |
| 9.185 | .773E-01 | 9.170 | .613E-01 | 9.175 | .867E-01 | 9.180 | .952E-01 |
| 9.205 | -.623E-01 | 9.190 | .673E-01 | 9.195 | .703E-01 | 9.200 | .787E-01 |
| 9.225 | -.113E+00 | 9.210 | -.316E-01 | 9.215 | -.603E-01 | 9.220 | -.103E+00 |
| 9.245 | -.927E-01 | 9.230 | -.135E+00 | 9.235 | -.742E-01 | 9.240 | -.807E-01 |
| 9.255 | -.713E-01 | 9.250 | -.113E+00 | 9.255 | -.420E-01 | 9.260 | -.723E-01 |
| 9.285 | -.132E+00 | 9.270 | -.708E-01 | 9.275 | -.897E-01 | 9.280 | -.802E-01 |
| 9.305 | -.109E+00 | 9.290 | -.153E+00 | 9.295 | -.154E+00 | 9.300 | -.150E+00 |
| 9.325 | -.528E-01 | 9.310 | -.119E+00 | 9.315 | -.107E+00 | 9.320 | -.837E-01 |
| 9.345 | .116E+00 | 9.330 | .498E-01 | 9.335 | .353E-01 | 9.340 | .653E-01 |
| 9.355 | .252E+00 | 9.350 | .156E+00 | 9.355 | .249E+00 | 9.360 | .233E+00 |
| 9.385 | .311E+00 | 9.370 | .296E+00 | 9.375 | .338E+00 | 9.380 | .290E+00 |
| 9.405 | .137E+00 | 9.390 | .294E+00 | 9.395 | .259E+00 | 9.400 | .256E+00 |
| 9.425 | .239E-01 | 9.410 | .158E+00 | 9.415 | .123E+00 | 9.420 | .643E-01 |
| 9.445 | .129E+00 | 9.430 | .693E-01 | 9.435 | .743E-01 | 9.440 | .103E+00 |
| 9.455 | .273E+00 | 9.450 | .144E+00 | 9.455 | .255E+00 | 9.460 | .242E+00 |
| 9.475 | .282E+00 | 9.470 | .317E+00 | 9.475 | .340E+00 | 9.480 | .309E+00 |
| 9.505 | .127E+00 | 9.490 | .247E+00 | 9.495 | .216E+00 | 9.500 | .193E+00 |
| 9.525 | .847E-01 | 9.510 | .130E+00 | 9.515 | .114E+00 | 9.520 | .952E-01 |
| 9.545 | -.493E-01 | 9.530 | -.218E-01 | 9.535 | .432E-02 | 9.540 | -.142E-01 |
| 9.555 | -.236E+00 | 9.550 | -.723E-01 | 9.555 | -.252E+00 | 9.560 | -.205E+00 |
| 9.585 | -.231E+00 | 9.570 | -.298E+00 | 9.575 | -.331E+00 | 9.580 | -.274E+00 |
| 9.605 | .233E-01 | 9.590 | -.175E+00 | 9.595 | -.138E+00 | 9.600 | -.123E+00 |
| 9.625 | .141E+00 | 9.610 | .518E-02 | 9.615 | .513E-01 | 9.620 | .112E+00 |
| 9.645 | -.337E-01 | 9.630 | .633E-01 | 9.635 | .406E-01 | 9.640 | -.311E-02 |
| 9.655 | -.177E+00 | 9.650 | -.533E-01 | 9.655 | -.157E+00 | 9.660 | -.149E+00 |
| 9.685 | -.334E+00 | 9.670 | -.222E+00 | 9.675 | -.256E+00 | 9.680 | -.362E+00 |
| 9.705 | -.392E+00 | 9.690 | -.354E+00 | 9.695 | -.386E+00 | 9.700 | -.449E+00 |
| 9.725 | -.358E+00 | 9.710 | -.379E+00 | 9.715 | -.369E+00 | 9.720 | -.366E+00 |
| 9.745 | -.310E+00 | 9.730 | -.331E+00 | 9.735 | -.338E+00 | 9.740 | -.327E+00 |
| 9.765 | -.195E+00 | 9.750 | -.296E+00 | 9.755 | -.193E+00 | 9.760 | -.213E+00 |
| 9.785 | -.352E-01 | 9.770 | -.156E+00 | 9.775 | -.152E+00 | 9.780 | .164E-01 |
| 9.805 | .146E+00 | 9.790 | -.952E-02 | 9.795 | .538E-01 | 9.800 | .972E-01 |
| 9.825 | .133E+00 | 9.810 | .111E+00 | 9.815 | .100E+00 | 9.820 | .115E+00 |
| 9.845 | .673E-01 | 9.830 | .146E+00 | 9.835 | .121E+00 | 9.840 | .907E-01 |
| 9.855 | .943E-02 | 9.850 | .508E-01 | 9.855 | .331E-01 | 9.860 | .189E-01 |
| 9.885 | .243E-01 | 9.870 | .148E-02 | 9.875 | .693E-02 | 9.880 | .563E-02 |
| 9.905 | .473E-01 | 9.890 | .353E-01 | 9.895 | .409E-01 | 9.900 | .471E-01 |
| 9.925 | .301E-01 | 9.910 | .548E-01 | 9.915 | .528E-01 | 9.920 | .422E-01 |
| 9.945 | -.673E-01 | 9.930 | -.538E-01 | 9.935 | -.338E-01 | 9.940 | -.490E-01 |
| 9.955 | -.122E+00 | 9.950 | -.758E-01 | 9.955 | -.147E+00 | 9.960 | -.116E+00 |
| 9.985 | -.209E+00 | 9.970 | -.151E+00 | 9.975 | -.179E+00 | 9.980 | -.202E+00 |
| 10.005 | -.199E+00 | 9.990 | -.273E+00 | 9.995 | -.247E+00 | 10.000 | -.272E+00 |

NEW OR EXAGGERATE IMPEDANCES

PROGRAM HAS READ IMPEDANCES FOR AO= .500E+00
PROGRAM HAS READ IMPEDANCES FOR AO= .100E+01
PROGRAM HAS READ IMPEDANCES FOR AO= .150E+01
PROGRAM HAS READ IMPEDANCES FOR AO= .200E+01
PROGRAM HAS READ IMPEDANCES FOR AO= .250E+01
PROGRAM HAS READ IMPEDANCES FOR AO= .300E+01
PROGRAM HAS READ IMPEDANCES FOR AO= .400E+01
PROGRAM HAS READ IMPEDANCES FOR AO= .490E+01
PROGRAM HAS READ IMPEDANCES FOR AO= .500E+01
PROGRAM HAS READ IMPEDANCES FOR AO= .694E+01
PROGRAM HAS READ IMPEDANCES FOR AO= .817E+01

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|-------------------------|---|------------------------|-----------|
| DIRECTION OF RESPONSE : | 1 | MAXIMUM ACCELERATION : | .5268E+00 |
| DIRECTION OF RESPONSE : | 2 | MAXIMUM ACCELERATION : | .1340E-25 |
| DIRECTION OF RESPONSE : | 3 | MAXIMUM ACCELERATION : | .1080E-09 |
| DIRECTION OF RESPONSE : | 4 | MAXIMUM ACCELERATION : | .1499E-26 |
| DIRECTION OF RESPONSE : | 5 | MAXIMUM ACCELERATION : | .6294E-02 |
| DIRECTION OF RESPONSE : | 6 | MAXIMUM ACCELERATION : | .1784E-16 |

STRUCTURE RESPONSE

| | | | |
|---------------|----|------------------------|-----------|
| DOF.(KPCOM) : | 10 | MAXIMUM ACCELERATION : | .6041E+00 |
| DOF.(KPCOM) : | 11 | MAXIMUM ACCELERATION : | .1290E-09 |
| DOF.(KPCOM) : | 19 | MAXIMUM ACCELERATION : | .3951E+00 |
| DOF.(KPCOM) : | 20 | MAXIMUM ACCELERATION : | .2091E-09 |
| DOF.(KPCOM) : | 31 | MAXIMUM ACCELERATION : | .1264E+01 |
| DOF.(KPCOM) : | 32 | MAXIMUM ACCELERATION : | .2500E-09 |

08.32.34.INSSIN,T9999,P2.
09.32.34.USER,SUNGS1.,
09.32.34.CHARGE,PROJWC,03100681355.
09.32.35.3PROJG,PROCL,,,
09.32.35.3SETFS,PROCL/FS=AD.
09.32.35.PROCL.
09.32.35.//LOADER 587 .004 CP .072 RT//LOADER 014472/040000-040000 CM 1 TM
08.32.36.IFE,DT.EQ.TX0,FLASHIT.
09.32.36.ENDIF,FLASHIT.
08.32.36.IFE,JT.EQ.HCH,BULLIT.
09.32.36.CHGFTN.
09.32.37. END CHGFTN
08.32.37. 15600 MAXIMUM EXECUTION FL.
09.32.37. 0.002 CP SECONDS EXECUTION TIME.
08.32.37.GET,SYSBULL/UN=EDSDPER,NA.
09.32.37.IFE,FILE(SYSBULL,AS),OUTIT.
09.32.37.COPY,SYSBULL.
09.32.37. EOF ENCOUNTERED.
09.32.37.ENDIF,OUTIT.
09.32.37.ENDIF,BULLIT.
09.32.37.RETURN,PROCL.
09.32.38.REVERT.
09.32.38.ROUTE,OUTPUT,DC=PR,UN=CS0VAX1,UJN=VAX,FC=CP,DEF.
09.32.38.ROUTE COMPLETE.
09.32.38.REWIND,INPUT.
09.32.38.COPYSEF,INPUT,OUTPUT.
09.32.38. COPY COMPLETE.
09.32.38.REWIND,INPUT.
09.32.38.SKIPR,INPUT.
09.32.38.GET,UCLAF.
08.32.39.REWIND,UCLAF.
09.32.39.COPY3F,UCLAF,TAPE10.
09.32.39. EOF ENCOUNTERED.
08.32.39.REWIND,TAPE10.
09.32.39.ATTACH,T15.
09.32.39.ATTACH,T16.
09.32.39.ATTACH,T17.
08.32.40.COMMENT. TAPE15 IS STRUCTURE NODE DATA
09.32.40.COPY3F,T15,TAPE15.
09.32.40. COPY COMPLETE.
08.32.40.COMMENT. TAPE15 IS STRUCTURE MASS MATRIX
09.32.40.COPY3F,T16,TAPE16.
09.32.40. COPY COMPLETE.
08.32.40.COMMENT. TAPE17 IS FREQUENCIES, MODAL DAMPINGS, AND MODE SHAPES
09.32.40.COPY3F,T17,TAPE17.
09.32.40. COPY COMPLETE.
09.32.40.ATTACH,TAPE18.
09.32.40.REWIND,TAPE18.
08.32.41.REWIND,TAPE15,TAPE16,TAPE17,TAPE18.
09.32.41.ATTACH,SSIN/UN=SUNGS1.
09.32.41.SSIN.
09.32.43. CM LPA41 =3123128, LOADER USED 330400P
09.32.43.//LOADER 587 .835 CP 2.109 RT//LOADER 330426/040000-334000 CM 73 TM
09.33.41. STOP
09.33.41. 321400 MAXIMUM EXECUTION FL.
09.33.41. 27.281 CP SECONDS EXECUTION TIME.
09.33.41.REWIND,TAPE2.
08.33.41.PURGE,PROCL/NA.
09.33.42.DEFINE,PROCL/TA=4.
08.33.42.COPY3F,TAPE2,PROCL.

SYSTEM BULLETIN

IMPELL WALNUT CREEK COMPUTER CENTER OPERATIONS HOURS (PACIFIC TIME)

MONDAY AND FRIDAY 0600 TO 2130
TUESDAY TO THURSDAY 0600 TO 2330
SATURDAY AND SUNDAY 0700 TO 1700

OPERATORS WILL NOT BE ON SITE AT ALL OTHER TIMES. EXTENDED OPERATOR COVERAGE MAY BE ARRANGED BY CONTACTING BOB EARL AT (415) 943-4663/4666

THE CYBER SYSTEM WILL BE UNAVAILABLE TO USERS AS FOLLOWS:

| | | | | |
|-----------|------|----|------|-------------------------|
| MONDAY | 2000 | TO | 2100 | SYSTEM BACKUP |
| TUESDAY | 1930 | TO | 2300 | MAINTENANCE + BACKUP |
| WEDNESDAY | 2200 | TO | 2300 | SYSTEM BACKUP |
| THURSDAY | 2200 | TO | 2300 | SYSTEM BACKUP |
| FRIDAY | 2000 | TO | 2230 | SYSTEM BACKUP + TESTING |
| SATURDAY | 1600 | TO | 1700 | SYSTEM BACKUP |
| SUNDAY | 1400 | TO | 1700 | SYSTEM BACKUP |

HOLIDAY HOURS:

MONDAY, MAY 27, 1985. NO OPERATORS ON SITE. SYSTEM AVAILABLE TO USERS.

SPECIAL CYBER UPGRADE BLOCK TIME.

THE CYBER WILL BE UNAVAILABLE FOR PRODUCTION USE THURSDAYS FROM 2000 HRS. TO 2400 HRS. BEGINNING APRIL 11, 1985 THROUGH MAY 30, 1985. COMPUTER SERVICES WILL BE TESTING NUS VERSION 2.3. ANY USERS WISHING TO TEST THEIR CODES DURING THIS PERIOD WILL NEED TO CONTACT COMPUTER SERVICES AT (415) 943-4666.

GENERAL INFORMATION.

DO NOT RELEASE MAGNETIC TAPES WHEN OPERATORS ARE NOT ON SITE.

USER ADVISORY. MAGNETIC TAPE BACKUPS.

MAGNETIC TAPES ARE SUSCEPTIBLE TO PHYSICAL DAMAGE. BACKUP TAPES ARE RECOMMENDED WHENEVER THE INFORMATION ON THE TAPE WOULD BE EXPENSIVE OR TIME CONSUMING TO RECREATE. PLEASE NOTE THAT IMPELL, CDC, AND JCC DO NOT GIVE REFUNDS FOR JOBS NECESSARY TO RECREATE A TAPE IF NO BACKUP EXISTS.

AS PER THE MEMO DISTRIBUTED TO DIVISIONS OVER A WEEK AGO, THE OLD OVERHEAD JOB NUMBERS BEGINNING WITH 0622 AND 0627 WILL NOT BE VALID AFTER 2/15/85. NEW NUMBERS (BEGINNING WITH 0625004 OR 0624004) MUST BE REQUESTED. A CONSOLIDATED LIST OF OLD VERSUS SUGGESTED NEW NUMBERS WAS DISTRIBUTED TO EACH DIVISION TO EXPEDITE THE REVIEW. THESE CHANGES ARE BEING MADE TO SUIT ACCOUNTING DEPT. NUMBER CHANGES.

CHARGE,PROJWC,03100681355.
ROUTE,OUTPUT,JC=PR,UN=CS0VAX1,FC=CP,DEF,UJN=VAX.
REWIND,INPUT.
COPYSBF,INPUT,OUTPUT.
REWIND,INPUT.
GET,INPUT=C6G).
REWIND,INPUT.
COPYSBF,INPUT,OUTPUT.
REWIND,INPUT.
ATTACH,GLAYER/UN=SASSIMP.
G_LAYER.
REWIND,TAPE1.
PURGE,C6T1/NA.
DEFINE,C6T1.
COPYBF,TAPE1,C6T1.
DAYFILE.
PURGE,S10UT1/NA.
DEFINE,S10UT1/M=W.
REWIND,OUTPUT.
COPYEI,OUTPUT,S10UT1.
EXIT.
PURGE,AA/NA.
DAYFILE,L=AA.
SAVE,AA.
PURGE,S10UT1/NA.
DEFINE,S10UT1/M=W.
REWIND,OUTPUT.
COPYEI,OUTPUT,S10UT1.

0.0

170.

1.0E03

0.0034

0.333333

0.01

30.00

FINAL RADIUS OF TABLE = .170E+03

GREENS FUNCTION TABLE WAS CALCULATED BY ITERATION

SOIL PROPERTIES

| LAYER# | BETA | RHO | POISSON | DAMPING | THICKNESS |
|--------|----------|----------|----------|----------|-----------|
| 1 | .100E+04 | .340E-02 | .333E+00 | .100E-01 | G. |

INCREMENT OF θ_0 FOR TABLE = .260E+00

THE NUMBER OF POINTS IN THE TABLE = 129

THE FREQUENCY OF THE ANALYSIS = .3001E+02

GREENS FUNCTION TABLE

| | GRR | GTR | GRZ | GZZ |
|----|-----------|-----------|-----------|-----------|
| 1 | .159E+00 | -.318E-02 | -.106E+00 | .212E-02 |
| 2 | .155E+00 | -.342E-01 | -.101E+00 | .330E-01 |
| 3 | .144E+00 | -.632E-01 | -.871E-01 | .611E-01 |
| 4 | .127E+00 | -.808E-01 | -.561E-01 | .843E-01 |
| 5 | .105E+00 | -.110E+00 | -.394E-01 | .101E+00 |
| 6 | .799E-01 | -.125E+00 | -.902E-02 | .109E+00 |
| 7 | .527E-01 | -.134E+00 | .223E-01 | .109E+00 |
| 8 | .253E-01 | -.137E+00 | .536E-01 | .100E+00 |
| 9 | -.100E-02 | -.133E+00 | .811E-01 | .832E-01 |
| 10 | -.247E-01 | -.125E+00 | .103E+00 | .589E-01 |
| 11 | -.448E-01 | -.112E+00 | .118E+00 | .293E-01 |
| 12 | -.569E-01 | -.960E-01 | .124E+00 | -.354E-02 |
| 13 | -.715E-01 | -.784E-01 | .122E+00 | -.375E-01 |
| 14 | -.776E-01 | -.604E-01 | .110E+00 | -.700E-01 |
| 15 | -.794E-01 | -.434E-01 | .898E-01 | -.905E-01 |
| 16 | -.775E-01 | -.282E-01 | .625E-01 | -.121E+00 |
| 17 | -.729E-01 | -.157E-01 | .298E-01 | -.136E+00 |
| 18 | -.666E-01 | -.530E-02 | -.617E-02 | -.142E+00 |
| 19 | -.597E-01 | -.559E-04 | -.429E-01 | -.138E+00 |
| 20 | -.533E-01 | .329E-02 | -.779E-01 | -.125E+00 |
| 21 | -.482E-01 | .431E-02 | -.109E+00 | -.104E+00 |
| 22 | -.451E-01 | .381E-02 | -.133E+00 | -.743E-01 |
| 23 | -.443E-01 | .272E-02 | -.150E+00 | -.394E-01 |
| 24 | -.459E-01 | .205E-02 | -.157E+00 | -.101E-02 |
| 25 | -.494E-01 | .271E-02 | -.154E+00 | .362E-01 |
| 26 | -.543E-01 | .569E-02 | -.142E+00 | .759E-01 |
| 27 | -.597E-01 | .109E-01 | -.120E+00 | .109E+00 |
| 28 | -.546E-01 | .192E-01 | -.223E-01 | .136E+00 |
| 29 | -.580E-01 | .303E-01 | -.539E-01 | .155E+00 |
| 30 | -.589E-01 | .437E-01 | -.143E-01 | .155E+00 |
| 31 | -.664E-01 | .587E-01 | .266E-01 | .154E+00 |
| 32 | -.699E-01 | .743E-01 | .682E-01 | .153E+00 |
| 33 | -.749E-01 | .892E-01 | .102E+00 | .132E+00 |
| 34 | -.841E-01 | .102E+00 | .131E+00 | .103E+00 |
| 35 | -.154E-01 | .112E+00 | .153E+00 | .682E-01 |
| 36 | .533E-02 | .118E+00 | .164E+00 | .287E-01 |

| | | | | | | | | |
|-----|---------|---------|---------|---------|---------|---------|---------|---------|
| 91 | 1151+00 | 665E-01 | 782E-01 | 143E+00 | 884E-01 | 615E-01 | 127E+00 | 968E-01 |
| 92 | 1275+00 | 422E-01 | 399E-01 | 157E+00 | 652E-01 | 312E-01 | 152E+00 | 570E-01 |
| 93 | 133E+00 | 153E-01 | 358E-03 | 151E+00 | 37E-01 | 933E-01 | 165E+00 | 112E-01 |
| 94 | 133E+00 | 124E-01 | 401E-01 | 154E+00 | 927E-02 | 969E-01 | 165E+00 | 370E-01 |
| 95 | 133E+00 | 133E+00 | 127E-01 | 138E+00 | 767E-01 | 918E-01 | 151E+00 | 838E-01 |
| 96 | 114E+00 | 638E-01 | 108E+00 | 113E+00 | 467E-01 | 785E-01 | 123E+00 | 125E+00 |
| 97 | 965E-01 | 344E-01 | 132E+00 | 81E-01 | 675E-01 | 582E-01 | 157E+00 | 178E+00 |
| 98 | 747E-01 | 100E+00 | 146E+00 | 45E-01 | 814E-01 | 328E-01 | 392E-01 | 178E+00 |
| 99 | 604E-01 | 110E+00 | 152E+00 | 688E-02 | 871E-01 | 448E-02 | 116E-01 | 185E+00 |
| 90 | 249E-01 | 113E+00 | 147E+00 | 197E-01 | 840E-01 | 243E-01 | 631E-01 | 178E+00 |
| 91 | 136E-03 | 111E+00 | 132E+00 | 672E-01 | 725E-01 | 510E-01 | 111E+00 | 156E+00 |
| 92 | 224E-01 | 102E+00 | 110E+00 | 97E-01 | 534E-01 | 732E-01 | 152E+00 | 121E+00 |
| 93 | 415E-01 | 391E-01 | 793E-01 | 121E+00 | 283E-01 | 888E-01 | 181E+00 | 758E-01 |
| 94 | 55E-01 | 722E-01 | 493E-01 | 136E+00 | 795E-03 | 293E-01 | 198E+00 | 237E-01 |
| 95 | 548E-01 | 532E-01 | 840E-02 | 142E+00 | 314E-01 | 943E-01 | 200E+00 | 314E-01 |
| 96 | 562E-01 | 336E-01 | 285E-01 | 138E+00 | 608E-01 | 842E-01 | 106E+00 | 853E-01 |
| 97 | 595E-01 | 122E-02 | 924E-01 | 103E+00 | 106E+00 | 383E-01 | 117E+00 | 134E+00 |
| 98 | 595E-01 | 122E-02 | 924E-01 | 103E+00 | 106E+00 | 383E-01 | 117E+00 | 134E+00 |
| 99 | 489E-01 | 137E-01 | 115E+00 | 745E-01 | 118E+00 | 734E-02 | 672E-01 | 200E+00 |
| 90 | 359E-01 | 217E-01 | 130E+00 | 415E-01 | 120E+00 | 269E-01 | 113E-01 | 211E+00 |
| 91 | 339E-02 | 230E-01 | 131E+00 | 294E-01 | 956E-01 | 928E-01 | 100E+00 | 188E+00 |
| 92 | 312E-02 | 167E-01 | 118E+00 | 625E-01 | 701E-01 | 119E+00 | 148E+00 | 154E+00 |
| 93 | 677E-02 | 67E-02 | 974E-01 | 909E-01 | 378E-01 | 138E+00 | 184E+00 | 108E+00 |
| 94 | 154E-01 | 550E-02 | 698E-01 | 113E+00 | 957E-03 | 147E+00 | 207E+00 | 536E-01 |
| 95 | 147E-01 | 187E-01 | 376E-01 | 127E+00 | 379E-01 | 146E+00 | 213E+00 | 491E-02 |
| 96 | 311E-02 | 313E-01 | 290E-02 | 132E+00 | 754E-01 | 134E+00 | 204E+00 | 631E-01 |
| 97 | 103E-02 | 417E-01 | 318E-01 | 128E+00 | 109E+00 | 112E+00 | 179E+00 | 117E+00 |
| 98 | 149E-01 | 485E-01 | 643E-01 | 115E+00 | 137E-01 | 817E-01 | 140E+00 | 161E+00 |
| 99 | 314E-01 | 508E-01 | 921E-01 | 946E-01 | 155E+00 | 447E-01 | 908E-01 | 193E+00 |
| 70 | 490E-01 | 478E-01 | 114E+00 | 667E-01 | 163E+00 | 381E-02 | 342E-01 | 216E+00 |
| 71 | 542E-01 | 391E-01 | 127E+00 | 348E-01 | 166E+00 | 381E-01 | 249E-01 | 210E+00 |
| 72 | 311E-01 | 251E-01 | 132E+00 | 623E-03 | 122E+00 | 113E+00 | 132E+00 | 163E+00 |
| 73 | 274E-01 | 630E-02 | 128E+00 | 336E-01 | 897E-01 | 140E+00 | 172E+00 | 118E+00 |
| 74 | 267E-01 | 161E-01 | 119E+00 | 657E-01 | 897E-01 | 140E+00 | 172E+00 | 118E+00 |
| 75 | 267E-01 | 161E-01 | 119E+00 | 657E-01 | 897E-01 | 140E+00 | 172E+00 | 118E+00 |
| 76 | 406E-01 | 406E-01 | 944E-01 | 933E-01 | 511E-01 | 153E+00 | 178E+00 | 645E-01 |
| 77 | 697E-01 | 697E-01 | 673E-01 | 115E+00 | 407E-02 | 165E+00 | 208E+00 | 576E-02 |
| 78 | 727E-01 | 884E-01 | 355E-01 | 128E+00 | 332E-01 | 160E+00 | 201E+00 | 536E-01 |
| 79 | 506E-01 | 103E+00 | 147E-02 | 133E+00 | 726E-01 | 144E+00 | 178E+00 | 109E+00 |
| 80 | 434E-02 | 133E+00 | 329E-01 | 129E+00 | 106E+00 | 113E+00 | 141E+00 | 155E+00 |
| 81 | 423E-02 | 133E+00 | 329E-01 | 129E+00 | 106E+00 | 113E+00 | 141E+00 | 155E+00 |
| 82 | 423E-02 | 133E+00 | 329E-01 | 129E+00 | 106E+00 | 113E+00 | 141E+00 | 155E+00 |
| 83 | 523E-01 | 135E+00 | 928E-01 | 143E+00 | 462E-01 | 149E+00 | 261E-01 | 210E+00 |
| 84 | 523E-01 | 135E+00 | 928E-01 | 143E+00 | 462E-01 | 149E+00 | 261E-01 | 210E+00 |
| 85 | 523E-01 | 135E+00 | 928E-01 | 143E+00 | 462E-01 | 149E+00 | 261E-01 | 210E+00 |
| 86 | 523E-01 | 135E+00 | 928E-01 | 143E+00 | 462E-01 | 149E+00 | 261E-01 | 210E+00 |
| 87 | 523E-01 | 135E+00 | 928E-01 | 143E+00 | 462E-01 | 149E+00 | 261E-01 | 210E+00 |
| 88 | 523E-01 | 135E+00 | 928E-01 | 143E+00 | 462E-01 | 149E+00 | 261E-01 | 210E+00 |
| 89 | 523E-01 | 135E+00 | 928E-01 | 143E+00 | 462E-01 | 149E+00 | 261E-01 | 210E+00 |
| 90 | 523E-01 | 135E+00 | 928E-01 | 143E+00 | 462E-01 | 149E+00 | 261E-01 | 210E+00 |
| 91 | 523E-01 | 135E+00 | 928E-01 | 143E+00 | 462E-01 | 149E+00 | 261E-01 | 210E+00 |
| 92 | 523E-01 | 135E+00 | 928E-01 | 143E+00 | 462E-01 | 149E+00 | 261E-01 | 210E+00 |
| 93 | 523E-01 | 135E+00 | 928E-01 | 143E+00 | 462E-01 | 149E+00 | 261E-01 | 210E+00 |
| 94 | 523E-01 | 135E+00 | 928E-01 | 143E+00 | 462E-01 | 149E+00 | 261E-01 | 210E+00 |
| 95 | 523E-01 | 135E+00 | 928E-01 | 143E+00 | 462E-01 | 149E+00 | 261E-01 | 210E+00 |
| 96 | 523E-01 | 135E+00 | 928E-01 | 143E+00 | 462E-01 | 149E+00 | 261E-01 | 210E+00 |
| 97 | 523E-01 | 135E+00 | 928E-01 | 143E+00 | 462E-01 | 149E+00 | 261E-01 | 210E+00 |
| 98 | 523E-01 | 135E+00 | 928E-01 | 143E+00 | 462E-01 | 149E+00 | 261E-01 | 210E+00 |
| 99 | 523E-01 | 135E+00 | 928E-01 | 143E+00 | 462E-01 | 149E+00 | 261E-01 | 210E+00 |
| 100 | 523E-01 | 135E+00 | 928E-01 | 143E+00 | 462E-01 | 149E+00 | 261E-01 | 210E+00 |

| | | | | | | | | |
|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 107 | .232E-01 | .508E-01 | .968E-01 | .735E-01 | .120E+00 | -.103E+00 | .130E+00 | .219E+00 |
| 108 | .399E-01 | .372E-01 | .112E+00 | .458E-01 | .902E-01 | -.135E+00 | .134E+00 | .176E+00 |
| 109 | .516E-01 | .190E-01 | .119E+00 | .154E-01 | .523E-01 | -.157E+00 | .224E+00 | .119E+00 |
| 110 | .571E-01 | -.201E-02 | .119E+00 | -.158E-01 | .915E-02 | -.168E+00 | .248E+00 | .529E-01 |
| 111 | .558E-01 | -.240E-01 | .110E+00 | -.456E-01 | -.359E-01 | -.167E+00 | .253E+00 | -.169E-01 |
| 112 | .477E-01 | -.448E-01 | .940E-01 | -.720E-01 | -.795E-01 | -.154E+00 | .239E+00 | -.853E-01 |
| 113 | .333E-01 | -.625E-01 | .717E-01 | -.934E-01 | -.118E+00 | -.129E+00 | .206E+00 | -.147E+00 |
| 114 | .138E-01 | -.755E-01 | .447E-01 | -.108E+00 | -.150E+00 | -.945E-01 | .158E+00 | -.197E+00 |
| 115 | -.946E-02 | -.823E-01 | .150E-01 | -.116E+00 | -.170E+00 | -.525E-01 | .936E-01 | -.233E+00 |
| 116 | -.345E-01 | -.819E-01 | -.156E-01 | -.115E+00 | -.180E+00 | -.612E-02 | .313E-01 | -.250E+00 |
| 117 | -.592E-01 | -.742E-01 | -.449E-01 | -.107E+00 | -.176E+00 | .412E-01 | -.381E-01 | -.247E+00 |
| 118 | -.815E-01 | -.593E-01 | -.710E-01 | -.911E-01 | -.160E+00 | .858E-01 | -.104E+00 | -.226E+00 |
| 119 | -.995E-01 | -.382E-01 | -.921E-01 | -.694E-01 | -.132E+00 | .125E+00 | -.162E+00 | -.137E+00 |
| 120 | -.111E+00 | -.122E-01 | -.107E+00 | -.432E-01 | -.956E-01 | .155E+00 | -.207E+00 | -.134E+00 |
| 121 | -.116E+00 | .169E-01 | -.114E+00 | -.142E-01 | -.521E-01 | .173E+00 | -.235E+00 | -.698E-01 |
| 122 | -.113E+00 | .470E-01 | -.114E+00 | .157E-01 | -.524E-02 | .180E+00 | -.245E+00 | -.737E-03 |
| 123 | -.102E+00 | .759E-01 | -.106E+00 | .443E-01 | .416E-01 | .173E+00 | -.236E+00 | .683E-01 |
| 124 | -.330E-01 | .101E+00 | -.905E-01 | .699E-01 | .850E-01 | .155E+00 | -.208E+00 | .132E+00 |
| 125 | -.579E-01 | .121E+00 | -.693E-01 | .906E-01 | .122E+00 | .125E+00 | -.163E+00 | .195E+00 |
| 126 | -.279E-01 | .134E+00 | -.434E-01 | .105E+00 | .149E+00 | .864E-01 | -.105E+00 | .223E+00 |
| 127 | .492E-02 | .139E+00 | -.146E-01 | .113E+00 | .164E+00 | .423E-01 | -.389E-01 | .244E+00 |
| 128 | .383E-01 | .136E+00 | .151E-01 | .112E+00 | .167E+00 | -.404E-02 | .308E-01 | .246E+00 |
| 129 | .599E-01 | .123E+00 | .436E-01 | .105E+00 | .158E+00 | -.492E-01 | .932E-01 | .227E+00 |

17.05.40.GLAYER,17777,P2.
17.05.40.USER,SONGSL,
17.05.40.CHARGE,PROJNC,03100681355.
17.05.41.MPROLOG,PROCL,..
17.05.41.SETES,PROCL/ES=AD.
17.05.41.PROCL.
17.05.41.//LOADER 587 .004 CP .062 RT//LOADER 014472/040000-040000 CM 1 TM
17.05.42.IFE,DT.EQ.TXD,FLASHIT.
17.05.42.ENDIF,FLASHIT.
17.05.42.IFE,DT.EQ.BCU,BULLIT.
17.05.42.CHGETM.
17.05.42. END CHGETM
17.05.42. 15600 MAXIMUM EXECUTION FL.
17.05.42. 0.002 CP SECONDS EXECUTION TIME.
17.05.42.GET,SYSBULL/UN=EDSDPER,NA.
17.05.43.IFE,FILE(SYSBULL,ASI,OUTIT.
17.05.43.COPY,SYSBULL.
17.05.43.EDI ENCOUNTERED.
17.05.43.ENDIF,OUTIT.
17.05.43.ENDIF,BULLIT.
17.05.43.RETURN,PROCL.
17.05.43.REVERT.
17.05.43.ROUTE,OUTPUT,DC=PR,UN=CSNVAX1,FC=CP,DEF,UJN=VAX.
17.05.44.ROUTE COMPLETE.
17.05.44.REWIND,INPUT.
17.05.44.COPYSRF,INPUT,OUTPUT.
17.05.44.ROUTE COMPLETE.
17.05.44.REWIND,INPUT.
17.05.44.GET,INPUT=C65D.
17.05.44.REWIND,INPUT.
17.05.44.COPYSRF,INPUT,OUTPUT.
17.05.44.EDI ENCOUNTERED.
17.05.44.REWIND,INPUT.
17.05.44.ATTACH,GLAYER/UN=SASSIMP.
17.05.45.GLAYER.
17.05.45. CM LWA+1 =2057678, LOADER USED 2243008
17.05.45.//LOADER 587 .969 CP 1.462 RT//LOADER 224202/040000-230000 CM 85 TM
17.06.19. STOP
17.06.19. 214600 MAXIMUM EXECUTION FL.
17.06.19. 28.306 CP SECONDS EXECUTION TIME.
17.06.19.REWIND,TAPE1.
17.06.19.PURGE,C6T1/NA.
17.06.19.C6T1 NOT FOUND.
17.06.19.DEFINE,C6T1.
17.06.19.COPYIF,TAPE1,C6T1.
17.06.19.EDI ENCOUNTERED.
17.06.19.DAYFILE.

17.05.40.GLAYER,T7777,P2.
17.05.40.USER,SUNGS1,
17.05.40.CHARGE,PEUJWC,03100681355.
17.05.41.\$PROLUG,PROCL,
17.05.41.\$SETFS,PROCL/FS=AD.
17.05.41.PROCL.
17.05.41.//_LOADER 587 .004 CP .062 RT//LOADER 014472/040000-040000 CM L TM
17.05.42.IFE,DT,EO,FLASHIT.
17.05.42.ENDIF,FLASHIT.
17.05.42.IFE,DT,EO,BCD,BULLIT.
17.05.42.CHGFTN.
17.05.42. END CHGFTN
17.05.42. 15600 MAXIMUM EXECUTION FL.
17.05.42. 0.002 CP SECONDS EXECUTION TIME.
17.05.42.GET,SYSBULL/UN=EUSOPR,NA.
17.05.43.IFE,FILE(SYSBULL,AS),OUTIT.
17.05.43.COPY,SYSBULL.
17.05.43. EOI ENCOUNTERED.
17.05.43.ENDIF,OUTIT.
17.05.43.ENDIF,BULLIT.
17.05.43.RETURN,PROCL.
17.05.43.REVERT.
17.05.43.ROUTE,OUTPUT,DC=PR,UN=CSJVAXL,FC=CP,DEF,JJN=VAX.
17.05.44.ROUTE COMPLETE.
17.05.44.REWIND,INPUT.
17.05.44.COPYSEF,INPUT,OUTPUT.
17.05.44. COPY COMPLETE.
17.05.44.REWIND,INPUT.
17.05.44.GET,INPUT=C6GD.
17.05.44.REWIND,INPUT.
17.05.44.COPYSEF,INPUT,OUTPUT.
17.05.44. EOI ENCOUNTERED.
17.05.44.REWIND,INPUT.
17.05.44.ATTACH,GLAYER/UN=SASSIMP.
17.05.45.GLAYER.
17.05.45. CH LWA+1 =2057678, LOADER USED 224300B
17.05.45.//LOADER 587 .969 CP 1.462 RT//LOADER 224202/040000-230000 CM 85 TM
17.06.13. STOP
17.06.13. 214600 MAXIMUM EXECUTION FL.
17.06.13. 28.304 CP SECONDS EXECUTION TIME.
17.06.13.REWIND,TAPEL.
17.06.13.PURGE,C6T1/NA.
17.06.13. C6T1 NOT FOUND.
17.06.13.DEFINE,C6T1.
17.06.13.COPYSEF,TAPEL,C6T1.
17.06.13. EOI ENCOUNTERED.
17.06.13.DAYFILE.
17.06.13. USER DAYFILE PROCESSED.
17.06.13.PURGE,S10UT1/NA.
17.06.13.DEFINE,S10UT1/NA.
17.06.20.REWIND,OUTPUT.
17.06.20.COPYE1,OUTPUT,S10UT1.
17.06.20. EOI ENCOUNTERED.
17.06.20.EXIT.
17.06.20.HEAD, 0.002XUNS.
17.06.20.UEPF, 0.057XUNS.
17.06.20.UEFS, 1.071KUNS.
17.06.20.UECP, 29.785SECS.
17.06.20.AESP, 50.139UNTS.
17.06.20.UNIT(*ZHP=5)

UJR = VAX
CREATING JSM = X00G

FAMILY = SYSTEM
USER NAME = S0YGS1

JOB ORIGIN = BATCH.
SERVICE CLASS = INSTALLATION CLASS 0.

```
AAAAAAAAAA 000000000 3333333333 IIIIIIIIIIII X X 0000000000 CCCCCCCCCC HH HH
AAAAAAAAAA 0000000000 3333333333 IIIIIIIIIIII XX XX 000000000000 CCCCCCCCCCCC HH HH
AA AA 00 00 3 33 II XX XX 00 00 CC CC HH HH
AA AA 00 00 33 II XX XX 00 00 CC CC HH HH
AA AA 00 00 33 II XX XX 00 00 CC CC HH HH
AA AA 00 00 33 II XX XX 00 00 CC CC HH HH
AAAAAAAAAA 00 00 33 II XX 00 00 CC HH HH
AAAAAAAAAA 00 00 333 II xx 00 00 CC HH HH
AA AA 00 00 33 II XXXX 00 00 CC HH HH
AA AA 00 00 33 II XX XX 00 00 CC HH HH
AA AA 00 00 33 II XX XX 00 00 00 00 CC HH HH
AA AA 00 00 33 II XX XX 00 00 00 00 CC HH HH
AA AA 00 00 33 II XX XX 00 00 00 00 CC HH HH
AA AA 0000000000 3333333333 IIIIIIIIIIII XX XX 000000000000 CCCCCCCCCCCC HH HH
AA AA 0000000000 3333333333 IIIIIIIIIIII X X 0000000000 CCCCCCCCCC HH HH
```

CLAF

(CGCJ
CGCD)

output: CGTIO

| DESIGN VERIFICATION | |
|---------------------|---------------|
| CLIENT | SCE |
| JOB NO. | 0310-068-131T |
| PROJECT | NRC TEST-1 |
| BY SNO | DATE 4/11/85 |
| BY MARK | DATE 4/11/85 |

SYSTEM BULLETIN

IMPELL WALNUT CREEK COMPUTER CENTER OPERATIONS HOURS (PACIFIC TIME)

MONDAY AND FRIDAY 0600 TO 2130
TUESDAY TO THURSDAY 0600 TO 2330
SATURDAY AND SUNDAY 0700 TO 1700
OPERATORS WILL NOT BE ON SITE AT ALL OTHER TIMES. EXTENDED OPERATOR COVERAGE MAY BE ARRANGED BY CONTACTING BOB EARL AT (415) 943-4663/4666

THE CYBER SYSTEM WILL BE UNAVAILABLE TO USERS AS FOLLOWS:

| | | | | |
|-----------|------|----|------|-------------------------|
| MONDAY | 2000 | TO | 2100 | SYSTEM BACKUP |
| TUESDAY | 1930 | TO | 2100 | MAINTENANCE + BACKUP |
| WEDNESDAY | 2200 | TO | 2300 | SYSTEM BACKUP |
| THURSDAY | 2200 | TO | 2300 | SYSTEM BACKUP |
| FRIDAY | 2000 | TO | 2230 | SYSTEM BACKUP + TESTING |
| SATURDAY | 1600 | TO | 1700 | SYSTEM BACKUP |
| SUNDAY | 1400 | TO | 1700 | SYSTEM BACKUP |

HOLIDAY HOURS.

MONDAY, MAY 27, 1985. NO OPERATORS ON SITE. SYSTEM AVAILABLE TO USERS.

SPECIAL CYBER UPGRADE BLOCK TIME.

THE CYBER WILL BE UNAVAILABLE FOR PRODUCTION USE THURSDAYS FROM 2000 HRS. TO 2400 HRS. BEGINNING APRIL 11, 1985 THROUGH MAY 30, 1985. COMPUTER SERVICES WILL BE TESTING NUS VERSION 2.3. ANY USERS WISHING TO TEST THEIR CODES DURING THIS PERIOD WILL NEED TO CONTACT COMPUTER SERVICES AT (415) 943-4666.

GENERAL INFORMATION.

DO NOT RELEASE MAGNETIC TAPES WHEN OPERATORS ARE NOT ON SITE.

USER ADVISORY. MAGNETIC TAPE BACKUPS.

MAGNETIC TAPES ARE SUSCEPTIBLE TO PHYSICAL DAMAGE. BACKUP TAPES ARE RECOMMENDED WHENEVER THE INFORMATION ON THE TAPE WOULD BE EXPENSIVE OR TIME CONSUMING TO RECREATE. PLEASE NOTE THAT IMPELL, GDC, AND UCC DO NOT GIVE REFUNDS FOR JOBS NECESSARY TO RECREATE A TAPE IF NO BACKUP EXISTS.

AS PER THE MEMO DISTRIBUTED TO DIVISIONS OVER A WEEK AGO, THE OLD OVERHEAD JOB NUMBERS BEGINNING WITH 0622 AND 0627 WILL NOT BE VALID AFTER 2/19/85. NEW NUMBERS (BEGINNING WITH 0625004 OR 0623004) MUST BE REQUESTED. A CONSOLIDATED LIST OF OLD VERSUS SUGGESTED NEW NUMBERS WAS DISTRIBUTED TO EACH DIVISION TO FACILITATE THE REVIEW. THESE CHANGES ARE BEING MADE TO SUIT ACCOUNTING DEPT. NUMBER CHANGES.

DIAL-IN PHONE NUMBERS

CHARGE, PROJWC, 03100681355.
ROUTE, OUTPUT, DC=PR, UN=CSDVAXL, FC=CP, DEF, UJN=YAX.
REWIND, INPUT.
COPYSEF, INPUT, OUTPUT.
REWIND, INPUT.
ATTACH, C6T1.
COPYSEF, C6T1, TAPE7. ✓
REWIND, TAPE7.
GET, INPUT=C6C).
REWIND, INPUT.
COPYSEF, INPUT, OUTPUT.
REWIND, INPUT.
ATTACH, CLAF/UN=SASSIMP.
CLAF.
REWIND, TAPE10.
PURGE, C6T10/NA.
DEFINE, C6T10.
COPYSEF, TAPE10, C6T10. ✓
DAYFILE.
PURGE, SIOUTL/NA.
DEFINE, SIOUTL/R=W.
REWIND, OUTPUT.
COPYE1, OUTPUT, SIOUTL.
EXIT.
PURGE, AA/NA.
DAYFILE, L=AA.
SAVE, AA.
PURGE, SIOUTL/NA.
DEFINE, SIOUTL/R=W.
REWIND, OUTPUT.
COPYE1, OUTPUT, SIOUTL.

1 2 3 4 5 5 1
13 1 1 1 6 1 1

1.
0.12500.1250 1
0.37500.1250 1
0.62500.1250 1
0.87500.1250 1
0.12500.3750 1
0.37500.3750 1
0.62500.3750 1
0.87500.3750 1
0.12500.6250 1
0.37500.6250 1
0.62500.6250 1
0.12500.8750 1
0.37500.8750 1
0.25000.2500
0.500
0.75
1.00
1.224
2.000
2.449
3.00
3.673
4.00
4.897
5.20
5.50
6.121
7.346
8.00
8.75
9.794
10.5
12.00
13.00
14.691
17.00
19.5
20.00
22.0
24.0
25.0
28.0
30.0

THE REFERENCE SHEAR WAVE VELOCITY= .100E+04 ✓

THE CHARACTERISTIC LENGTH OF THE FOUNDATION= .650E+02 ✓

NUMFR0= 29 NCASE= 0 NLayer= 1

THE FOUNDATION IS SYMMETRICAL ABOUT X-AXIS

THE FOUNDATION IS SYMMETRICAL ABOUT Y-AXIS

THE CORE USAGE OF THIS PROBLEM IS 14051 WORDS

THE MAXIMUM CORE ALLOCATED IS 50000 WORDS

| | | | |
|--------------------------|------|------|--------|
| SUBREGION # 1:CENTROID, | .125 | .125 | TYPE 1 |
| SUBREGION # 2:CENTROID, | .375 | .125 | TYPE 1 |
| SUBREGION # 3:CENTROID, | .625 | .125 | TYPE 1 |
| SUBREGION # 4:CENTROID, | .875 | .125 | TYPE 1 |
| SUBREGION # 5:CENTROID, | .125 | .375 | TYPE 1 |
| SUBREGION # 6:CENTROID, | .375 | .375 | TYPE 1 |
| SUBREGION # 7:CENTROID, | .625 | .375 | TYPE 1 |
| SUBREGION # 8:CENTROID, | .875 | .375 | TYPE 1 |
| SUBREGION # 9:CENTROID, | .125 | .625 | TYPE 1 |
| SUBREGION # 10:CENTROID, | .375 | .625 | TYPE 1 |
| SUBREGION # 11:CENTROID, | .625 | .625 | TYPE 1 |
| SUBREGION # 12:CENTROID, | .125 | .875 | TYPE 1 |
| SUBREGION # 13:CENTROID, | .375 | .875 | TYPE 1 |

DIMENSIONS OF SUBREGION TYPE 1 IS .250 .250 ✓

.20420352E+00 0 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.

| | | | | | |
|-----------|-----------|-----------|-----------|-----------|-----------|
| .484E+01 | .677E+00 | 0. | 0. | 0. | 0. |
| 0. | 0. | -.423E+00 | -.357E-01 | .711E-14 | .111E-15 |
| 0. | 0. | .484E+01 | .677E+00 | 0. | .111E-15 |
| .423E+00 | .357E-01 | 0. | 0. | 0. | 0. |
| 0. | 0. | -.848E-15 | -.555E-16 | .610E+01 | .112E+01 |
| -.711E-14 | -.222E-15 | 0. | 0. | 0. | 0. |
| 0. | 0. | .423E+00 | .357E-01 | 0. | -.848E-15 |
| .408E+01 | .956E-01 | 0. | 0. | 0. | 0. |
| -.423E+00 | -.357E-01 | 0. | 0. | 0. | 0. |
| 0. | 0. | .408E+01 | .956E-01 | -.139E-16 | -.434E-18 |
| .125E-13 | .860E-15 | -.711E-14 | -.848E-15 | 0. | 0. |
| 0. | 0. | 0. | -.273E-16 | .533E+01 | .116E+00 |

0.2

.20420352E+00 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3)FORMAT

| | |
|----|----|
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |

| | | | | | | | | |
|-----------|-----------|-----------|-----------|-----------|----------|----------|----|----------|
| 0. | 0. | -.888E-15 | 0. | 0. | 0. | .607E+01 | 0. | .152E+01 |
| -.711E-14 | -.222E-15 | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | .440E+00 | .372E-01 | 0. | 0. | 0. | 0. | 0. |
| .403E+01 | .112E+00 | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| -.440E+00 | -.372E-01 | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | .403E+01 | .112E+00 | -.139E-16 | 0. | 0. | 0. | 0. |
| .153E-13 | .139E-14 | -.711E-14 | -.888E-15 | 0. | 0. | 0. | 0. | 0. |
| -.178E-14 | -.555E-15 | 0. | -.971E-16 | .528E+01 | .131E+00 | 0. | 0. | 0. |

0.3

.30630528E+00 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT

| | |
|----|----|
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |

.40840705E+00 5 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3) FORMAT.

| | | | | | |
|-----------|-----------|-----------|-----------|-----------|-----------|
| 0. | 0. | 0. | 0. | 0. | 0. |
| .432E+01 | .125E+01 | -.457E+00 | -.327E-01 | 0. | 0. |
| 0. | 0. | .432E+01 | .125E+01 | 0. | .111E-15 |
| 0. | 0. | 0. | 0. | 0. | 0. |
| .457E+00 | .327E-01 | 0. | 0. | .602E+01 | .211E+01 |
| 0. | 0. | -.838E-15 | 0. | 0. | 0. |
| -.711E-14 | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | .457E+00 | .327E-01 | 0. | -.178E-14 |
| .396E+01 | .141E+00 | 0. | 0. | 0. | 0. |
| -.457E+00 | -.327E-01 | 0. | 0. | 0. | 0. |
| 0. | 0. | .396E+01 | .141E+00 | -.139E-16 | -.434E-18 |
| .134E-13 | .289E-14 | -.711E-14 | -.178E-14 | 0. | 0. |
| -.133E-14 | 0. | -.400E-14 | -.111E-15 | .521E+01 | .157E+00 |

0.4

.40840705E+00 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT

| | |
|----|----|
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |

.49930022E+00 6 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3) FORMAT.

| | | | | | |
|-----------|-----------|-----------|-----------|-----------|-----------|
| 0. | 0. | 0. | 0. | 0. | 0. |
| .430E+01 | .151E+01 | -.471E+00 | -.250E-01 | 0. | 0. |
| 0. | 0. | .430E+01 | .151E+01 | 0. | .111E-15 |
| 0. | 0. | 0. | 0. | 0. | 0. |
| .471E+00 | .250E-01 | 0. | 0. | .597E+01 | .256E+01 |
| 0. | 0. | -.838E-15 | 0. | 0. | 0. |
| 0. | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | .471E+00 | .250E-01 | -.355E-14 | -.178E-14 |
| .389E+01 | .180E+00 | 0. | 0. | 0. | 0. |
| -.471E+00 | -.250E-01 | 0. | 0. | 0. | 0. |
| 0. | 0. | .389E+01 | .180E+00 | 0. | 0. |
| .577E-14 | .230E-14 | -.711E-14 | -.178E-14 | 0. | 0. |
| -.133E-14 | 0. | -.222E-14 | -.555E-16 | .513E+01 | .173E+00 |

0.5

0. 0.
0. 0.
0. 0.

.81631409E+00 6 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.
.473E+01 .242E+01 0. 0. 0. 0.
0. 0. -.511E+00 .176E-01 .355E-14 .444E-15
0. 0. .473E+01 .242E+01 .888E-15 0.
.511E+00 -.176E-01 0. 0. 0. 0.
0. 0. -.888E-15 .555E-16 .571E+01 .413E+01
0. 0. 0. 0. 0. 0.
0. 0. .511E+00 -.176E-01 -.355E-14 0.
.361E+01 .407E+00 0. 0. 0. 0.
-.511E+00 .176E-01 0. 0. 0. 0.
0. 0. .361E+01 .407E+00 -.139E-16 0.
.655E-14 .566E-14 -.711E-14 -.355E-14 0. 0.
-.173E-14 0. -.400E-14 .278E-16 .483E+01 .411E+00

.81

.81631409E+00 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT
0. 0.
0. 0.
0. 0.
0. 0.
0. 0.
0. 0.

.10091889E+01 5 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.
.468E+01 .296E+01 0. 0. 0. 0.
0. 0. -.527E+00 .481E-01 .355E-14 .444E-15
0. 0. .468E+01 .296E+01 0. 0.
.527E+00 -.481E-01 0. 0. 0. 0.
0. 0. 0. 0. .551E+01 .506E+01
0. 0. -.888E-15 0. 0. 0.
0. 0. .527E+00 -.481E-01 0. 0.
.344E+01 .593E+00 0. 0. 0. 0.
-.527E+00 .481E-01 0. 0. 0. 0.
0. 0. .344E+01 .593E+00 0. -.173E-17
.856E-14 .672E-14 -.711E-14 -.355E-14 0. 0.
-.444E-15 .111E-15 -.888E-15 .694E-17 .465E+01 .598E+00

1.0

.10091889E+01 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT
0. 0.
0. 0.
0. 0.
0. 0.
0. 0.
0. 0.

.12252211E+01 6 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.
.461E+01 .363E+01 0. 0. 0. 0.

1.22

| | | | | | |
|-----------|-----------|-----------|-----------|----------|-----------|
| .711E-14 | -.178E-14 | 0. | 0. | 0. | 0. |
| 0. | 0. | .543E+00 | -.890E-01 | 0. | 0. |
| .325E+01 | .857E+00 | 0. | 0. | 0. | 0. |
| -.543E+00 | .890E-01 | 0. | 0. | 0. | 0. |
| 0. | 0. | .325E+01 | .857E+00 | 0. | -.347E-17 |
| .109E-13 | .416E-14 | -.711E-14 | -.355E-14 | 0. | 0. |
| -.444E-15 | .278E-15 | -.178E-14 | .520E-15 | .443E+01 | .874E+00 |

.12252711E+01 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT

| | |
|----|----|
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |

.15000791E+01 5 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.

| | | | | | |
|-----------|-----------|-----------|-----------|-----------|-----------|
| .453E+01 | .447E+01 | 0. | 0. | 0. | 0. |
| 0. | 0. | -.555E+00 | .145E+00 | .355E-14 | 0. |
| 0. | 0. | .453E+01 | .447E+01 | 0. | 0. |
| .555E+00 | -.145E+00 | 0. | 0. | 0. | 0. |
| 0. | 0. | 0. | 0. | .480E+01 | .780E+01 |
| 0. | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | .555E+00 | -.145E+00 | 0. | 0. |
| .304E+01 | .121E+01 | 0. | 0. | 0. | 0. |
| -.555E+00 | .145E+00 | 0. | 0. | 0. | 0. |
| 0. | 0. | .304E+01 | .121E+01 | -.139E-16 | -.347E-17 |
| .777E-14 | .163E-13 | -.711E-14 | -.711E-14 | 0. | 0. |
| -.133E-14 | .222E-15 | -.133E-14 | .305E-15 | .419E+01 | .126E+01 |

1.5

.15000791E+01 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT

| | |
|----|----|
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |

.16336282E+01 6 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.

| | | | | | |
|-----------|-----------|-----------|-----------|-----------|-----------|
| .449E+01 | .489E+01 | 0. | 0. | 0. | 0. |
| 0. | 0. | -.558E+00 | .174E+00 | 0. | .178E-14 |
| 0. | 0. | .449E+01 | .489E+01 | 0. | -.444E-15 |
| .558E+00 | -.174E+00 | 0. | 0. | 0. | 0. |
| 0. | 0. | -.988E-15 | .444E-15 | .458E+01 | .359E+01 |
| 0. | -.355E-14 | 0. | 0. | 0. | 0. |
| 0. | 0. | .558E+00 | -.174E+00 | -.355E-14 | -.711E-14 |
| .294E+01 | .140E+01 | 0. | 0. | 0. | 0. |
| -.558E+00 | .174E+00 | 0. | 0. | 0. | 0. |
| 0. | 0. | .294E+01 | .140E+01 | -.139E-16 | -.347E-17 |
| .149E-13 | .999E-14 | -.711E-14 | -.711E-14 | 0. | 0. |
| -.444E-15 | 0. | -.178E-14 | .559E-15 | .468E+01 | .147E+01 |

1.6

.16336282E+01 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT

.19999693E+01 6 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.
 .440E+01 .606E+01 0. 0. 0. 0.
 0. 0. -.554E+00 .266E+00 .355E-14 .178E-14
 0. 0. .440E+01 .606E+01 .178E-14 -.888E-15
 .554E+00 -.266E+00 0. 0. 0. 0.
 0. 0. -.838E-15 0. .396E+01 .109E+02
 -.355E-14 -.355E-14 0. 0. 0. 0.
 0. 0. .554E+00 -.266E+00 0. -.711E-14
 .268E+01 .192E+01 0. 0. 0. 0.
 -.554E+00 .266E+00 0. 0. 0. 0.
 0. 0. .268E+01 .192E+01 0. -.694E-17
 .129E-13 .173E-13 -.711E-14 -.711E-14 0. 0.
 -.133E-14 .444E-15 -.222E-14 .883E-15 .380E+01 .206E+01

2.0

.19999693E+01 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT
 0. 0.
 0. 0.
 0. 0.
 0. 0.
 0. 0.

.21237166E+01 6 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.
 .438E+01 .646E+01 0. 0. 0. 0.
 0. 0. -.547E+00 .299E+00 0. 0.
 0. 0. .438E+01 .646E+01 0. -.833E-15
 .547E+00 -.299E+00 0. 0. 0. 0.
 0. 0. -.833E-15 .833E-15 .376E+01 .117E+02
 -.355E-14 -.355E-14 0. 0. 0. 0.
 0. 0. .547E+00 -.299E+00 -.355E-14 0.
 .259E+01 .211E+01 0. 0. 0. 0.
 -.547E+00 .299E+00 0. 0. 0. 0.
 0. 0. .259E+01 .211E+01 -.139E-16 0.
 .155E-13 .138E-13 -.711E-14 -.711E-14 0. 0.
 0. .888E-15 -.222E-14 .444E-15 .372E+01 .229E+01

2.12

.21237166E+01 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT
 0. 0.
 0. 0.
 0. 0.
 0. 0.
 0. 0.
 0. 0.

.22462387E+01 6 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.
 .436E+01 .686E+01 0. 0. 0. 0.
 0. 0. -.536E+00 .333E+00 0. .178E-14
 0. 0. .436E+01 .686E+01 0. -.833E-15

| | | | |
|-----------|----------|-----------|-----------|
| .251E+01 | .230E+01 | 0. | 0. |
| -.536E+00 | .333E+00 | 0. | 0. |
| 0. | 0. | .251E+01 | .230E+01 |
| .152E-13 | .115E-13 | -.711E-14 | -.711E-14 |
| -.444E-15 | .888E-15 | -.178E-14 | 0. |
| | | .354E+01 | .249E+01 |

.22462387E+01 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT

0. 0.
0. 0.
0. 0.
0. 0.
0. 0.
0. 0.

.24998595E+01 6 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.

| | | | | | |
|-----------|-----------|-----------|-----------|----------|-----------|
| .433E+01 | .767E+01 | 0. | 0. | 0. | 0. |
| 0. | 0. | -.504E+00 | .405E+00 | .355E-14 | 0. |
| 0. | 0. | .433E+01 | .767E+01 | .888E-15 | -.888E-15 |
| .504E+00 | -.405E+00 | 0. | 0. | 0. | 0. |
| 0. | 0. | 0. | .888E-15 | .321E+01 | .144E+02 |
| -.355E-14 | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | .504E+00 | -.405E+00 | 0. | -.711E-14 |
| .235E+01 | .269E+01 | 0. | 0. | 0. | 0. |
| -.504E+00 | .405E+00 | 0. | 0. | 0. | 0. |
| 0. | 0. | .235E+01 | .269E+01 | 0. | 0. |
| .124E-13 | .644E-14 | -.711E-14 | -.711E-14 | 0. | 0. |
| 0. | .888E-15 | -.400E-14 | .666E-15 | .349E+01 | .295E+01 |

2.50

.24998595E+01 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT

0. 0.
0. 0.
0. 0.
0. 0.
0. 0.
0. 0.

.30001582E+01 6 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.

| | | | | | |
|-----------|-----------|-----------|-----------|-----------|-----------|
| .429E+01 | .926E+01 | 0. | 0. | 0. | 0. |
| 0. | 0. | -.394E+00 | .534E+00 | 0. | 0. |
| 0. | 0. | .429E+01 | .926E+01 | 0. | -.178E-14 |
| .394E+00 | -.534E+00 | 0. | 0. | 0. | 0. |
| 0. | 0. | -.888E-15 | 0. | .273E+01 | .132E+02 |
| -.355E-14 | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | .394E+00 | -.534E+00 | -.355E-14 | 0. |
| .203E+01 | .353E+01 | 0. | 0. | 0. | 0. |
| -.394E+00 | .534E+00 | 0. | 0. | 0. | 0. |
| 0. | 0. | .203E+01 | .353E+01 | -.278E-16 | -.534E-17 |
| .355E-14 | .138E-13 | -.711E-14 | -.142E-13 | 0. | 0. |
| -.444E-15 | .888E-15 | -.311E-14 | .155E-14 | .325E+01 | .339E+01 |

3.0

.30001582E+01 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT

0. 0.
0. 0.

```

.32672564E+01  5  IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.
.427E+01 .101E+02  0. 0. 0. 0.
0. 0. -.313E+00 .536E+00 0. 0. .355E-14
0. 0. .427E+01 .101E+02 .444E-15 -.178E-14
.313E+00 -.586E+00 0. 0. 0. 0.
0. 0. 0. .173E-14 .253E+01 .202E+02
-.355E-14 0. 0. 0. 0. 0.
0. 0. .313E+00 -.586E+00 -.355E-14 -.142E-13
.187E+01 .401E+01 0. 0. 0. 0.
-.313E+00 .586E+00 0. 0. 0. 0.
0. 0. .187E+01 .401E+01 0. 0. 0.
.755E-14 .338E-13 -.711E-14 -.142E-13 0. 0. 0.
0. .444E-15 0. .422E-14 .315E+01 .441E+01

```

B.26

```

.32672564E+01  1  INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT
0. 0.
0. 0.
0. 0.
0. 0.
0. 0.
0. 0.

```

```

.35735616E+01  6  IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.
.424E+01 .110E+02 0. 0. 0. 0.
0. 0. -.209E+00 .623E+00 0. 0.
0. 0. .424E+01 .110E+02 0. 0.
.209E+00 -.623E+00 0. 0. 0. 0.
0. 0. 0. .178E-14 .254E+01 .225E+02
0. 0. 0. 0. 0. 0.
0. 0. .209E+00 -.623E+00 -.355E-14 0.
.170E+01 .458E+01 0. 0. 0. 0.
-.209E+00 .623E+00 0. 0. 0. 0.
0. 0. .170E+01 .458E+01 0. 0. 0.
.150E-13 .169E-13 -.711E-14 -.142E-13 0. 0. 0.
0. .133E-14 -.133E-14 .222E-14 .307E+01 .501E+01

```

B.57

```

.35735616E+01  1  INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT
0. 0.
0. 0.
0. 0.
0. 0.
0. 0.
0. 0.

```

```

.3999386E+01  5  IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.
.417E+01 .123E+02 0. 0. 0. 0.
0. 0. -.538E-01 .628E+00 0. 0.
0. 0. .417E+01 .123E+02 0. 0.
.538E-01 -.628E+00 0. 0. 0. 0.

```

B.6

| | | | | | | |
|-----------|----------|-----------|-----------|----------|----------|-----------|
| 0. | 0. | .149E+01 | -.594E+01 | 0. | 0. | -.139E-16 |
| .622E-14 | .147E-13 | -.711E-14 | -.142E-13 | 0. | 0. | 0. |
| -.555E-15 | 0. | 0. | 0. | .302E+01 | .583E+01 | |

.39999386E+01 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT

| | |
|----|----|
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |

.42832740E+01 6 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.

| | | | | | |
|-----------|-----------|-----------|-----------|----------|-----------|
| .411E+01 | .132E+02 | 0. | 0. | 0. | 0. |
| 0. | 0. | .470E-01 | .599E+00 | 0. | 0. |
| 0. | 0. | .411E+01 | .132E+02 | 0. | -.178E-14 |
| -.470E-01 | -.599E+00 | 0. | 0. | 0. | 0. |
| 0. | 0. | 0. | .178E-14 | .296E+01 | .275E+02 |
| 0. | -.142E-13 | 0. | 0. | 0. | 0. |
| 0. | 0. | -.470E-01 | -.599E+00 | 0. | 0. |
| .137E+01 | .599E+01 | 0. | 0. | 0. | 0. |
| .470E-01 | .599E+00 | 0. | 0. | 0. | 0. |
| 0. | 0. | .137E+01 | .599E+01 | 0. | -.139E-16 |
| .102E-13 | .799E-14 | -.711E-14 | -.142E-13 | 0. | 0. |
| -.777E-15 | .178E-14 | -.133E-14 | .311E-14 | .300E+01 | .637E+01 |

4.28

.42832740E+01 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT

| | |
|----|----|
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |

.49003845E+01 6 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.

| | | | | | |
|-----------|-----------|-----------|-----------|-----------|----------|
| .393E+01 | .151E+02 | 0. | 0. | 0. | 0. |
| 0. | 0. | .217E+00 | .468E+00 | .178E-14 | .711E-14 |
| 0. | 0. | .393E+01 | .151E+02 | 0. | 0. |
| -.217E+00 | -.468E+00 | 0. | 0. | 0. | 0. |
| 0. | 0. | 0. | 0. | .330E+01 | .315E+02 |
| 0. | -.142E-13 | 0. | 0. | 0. | 0. |
| 0. | 0. | -.217E+00 | -.468E+00 | -.355E-14 | 0. |
| .121E+01 | .725E+01 | 0. | 0. | 0. | 0. |
| .217E+00 | .468E+00 | 0. | 0. | 0. | 0. |
| 0. | 0. | .121E+01 | .725E+01 | -.278E-16 | 0. |
| .135E-13 | .111E-13 | -.711E-14 | -.142E-13 | 0. | 0. |
| 0. | .444E-15 | 0. | .311E-14 | .300E+01 | .744E+01 |

4.90

.49003845E+01 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT

| | |
|----|----|
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |

.53092916E+J1 5 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.

| | | | | | |
|-----------|-----------|-----------|-----------|-----------|----------|
| .382E+01 | .165E+02 | 0. | 0. | 0. | 0. |
| 0. | 0. | .279E+00 | .351E+00 | .178E-14 | 0. |
| 0. | 0. | .332E+01 | .165E+02 | 0. | 0. |
| -.279E+00 | -.351E+00 | 0. | 0. | 0. | 0. |
| 0. | 0. | .178E-14 | .838E-15 | .347E+01 | .340E+02 |
| 0. | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | -.279E+00 | -.351E+00 | 0. | 0. |
| .116E+01 | .808E+01 | 0. | 0. | 0. | 0. |
| .279E+00 | .351E+00 | 0. | 0. | 0. | 0. |
| 0. | 0. | .116E+01 | .808E+01 | -.278E-16 | 0. |
| .444E-15 | .249E-13 | -.711E-14 | -.142E-13 | 0. | 0. |
| 0. | 0. | 0. | .178E-14 | .299E+01 | .811E+01 |

5.30

.53092916E+01 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT

| | |
|----|----|
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |

.59999079E+01 5 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.

| | | | | | |
|-----------|-----------|-----------|-----------|----------|-----------|
| .359E+01 | .188E+02 | 0. | 0. | 0. | 0. |
| 0. | 0. | .287E+00 | .166E+00 | .178E-14 | 0. |
| 0. | 0. | .358E+01 | .168E+02 | 0. | -.222E-15 |
| -.287E+00 | -.166E+00 | 0. | 0. | 0. | 0. |
| 0. | 0. | 0. | .222E-15 | .355E+01 | .382E+02 |
| 0. | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | -.287E+00 | -.166E+00 | 0. | -.142E-13 |
| .119E+01 | .945E+01 | 0. | 0. | 0. | 0. |
| .287E+00 | .166E+00 | 0. | 0. | 0. | 0. |
| 0. | 0. | .119E+01 | .945E+01 | 0. | -.139E-16 |
| .577E-14 | .218E-13 | -.711E-14 | -.284E-13 | 0. | 0. |
| 0. | 0. | .222E-15 | .355E-14 | .290E+01 | .923E+01 |

6.0

.59999079E+01 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT

| | |
|----|----|
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |
| 0. | 0. |

.59429198E+01 6 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.

| | | | | | |
|-----------|-----------|-----------|-----------|-----------|----------|
| .354E+01 | .219E+02 | 0. | 0. | 0. | 0. |
| 0. | 0. | .173E+00 | .155E-01 | 0. | 0. |
| 0. | 0. | .359E+01 | .219E+02 | -.838E-15 | 0. |
| -.173E+00 | -.155E-01 | 0. | 0. | 0. | 0. |
| 0. | 0. | 0. | 0. | .325E+01 | .437E+02 |
| 0. | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | -.173E+00 | -.155E-01 | -.355E-14 | 0. |

6.70

.666E-15 .777E-15 .133E-14 .133E-14 .273E+01 .103E+02

.59429198E+01 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT

0. 0.
 0. 0.
 0. 0.
 0. 0.
 0. 0.
 0. 0.

.7555303E+01 6 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.

| | | | | | |
|-----------|-----------|-----------|-----------|-----------|-----------|
| .362E+01 | .239E+02 | 0. | 0. | 0. | 0. |
| 0. | 0. | .856E-01 | -.137E-01 | .178E-14 | 0. |
| 0. | 0. | .362E+01 | .239E+02 | 0. | 0. |
| -.856E-01 | .137E-01 | 0. | 0. | 0. | 0. |
| 0. | 0. | 0. | 0. | .278E+01 | .474E+02 |
| -.178E-14 | -.284E-13 | 0. | 0. | 0. | 0. |
| 0. | 0. | -.856E-01 | .137E-01 | -.178E-14 | -.284E-13 |
| .144E+01 | .122E+02 | 0. | 0. | 0. | 0. |
| .856E-01 | -.137E-01 | 0. | 0. | 0. | 0. |
| 0. | 0. | .144E+01 | .122E+02 | -.555E-16 | -.278E-16 |
| .813E-15 | .613E-13 | 0. | -.284E-13 | 0. | 0. |
| .555E-15 | .333E-15 | .888E-15 | .888E-15 | .254E+01 | .119E+02 |

.7555303E+01 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT

0. 0.
 0. 0.
 0. 0.
 0. 0.
 0. 0.
 0. 0.

.81681409E+01 6 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.

| | | | | | |
|-----------|-----------|-----------|-----------|-----------|----------|
| .356E+01 | .258E+02 | 0. | 0. | 0. | 0. |
| 0. | 0. | .153E-01 | .693E-03 | .178E-14 | .142E-13 |
| 0. | 0. | .356E+01 | .258E+02 | 0. | 0. |
| -.153E-01 | -.693E-03 | 0. | 0. | 0. | 0. |
| 0. | 0. | 0. | 0. | .217E+01 | .514E+02 |
| -.173E-14 | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | -.153E-01 | -.693E-03 | 0. | 0. |
| .149E+01 | .131E+02 | 0. | 0. | 0. | 0. |
| .153E-01 | .693E-03 | 0. | 0. | 0. | 0. |
| 0. | 0. | .149E+01 | .131E+02 | -.555E-16 | 0. |
| .444E-15 | .179E-13 | -.711E-14 | -.284E-13 | 0. | 0. |
| .666E-15 | 0. | .133E-14 | .222E-15 | .259E+01 | .139E+02 |

.81681409E+01 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT

0. 0.
 0. 0.
 0. 0.
 0. 0.
 0. 0.
 0. 0.

.89847550E+01 5 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.
 .344E+01 .284E+02 0. 0. 0. 0.
 0. 0. -.263E-01 .780E-01 0. 0.
 0. 0. .344E+01 .284E+02 0. 0.
 .263E-01 -.780E-01 0. 0. 0. 0.
 0. 0. 0. 0. .142E+01 .572E+02
 -.355E-14 0. 0. 0. 0. 0.
 0. 0. .263E-01 -.780E-01 -.888E-15 -.284E-13
 .140E+01 .143E+02 0. 0. 0. 0.
 -.263E-01 .780E-01 0. 0. 0. 0.
 0. 0. .140E+01 .143E+02 0. -.278E-16
 .622E-14 .440E-13 -.711E-14 -.284E-13 0. 0.
 .656E-15 0. .444E-15 .833E-16 .252E+01 .144E+02

.89849550E+01 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT
 0. 0.
 0. 0.
 0. 0.
 0. 0.
 0. 0.
 0. 0.

.98017691E+01 6 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.
 .331E+01 .311E+02 0. 0. 0. 0.
 0. 0. .213E-01 .176E+00 0. 0.142E-13
 0. 0. .331E+01 .311E+02 0. 0.
 -.213E-01 -.176E+00 0. 0. 0. 0.
 0. 0. -.222E-15 0. .117E+01 .633E+02
 0. 0. 0. 0. 0. 0.
 0. 0. -.213E-01 -.176E+00 -.888E-15 -.284E-13
 .112E+01 .156E+02 0. 0. 0. 0.
 .213E-01 .176E+00 0. 0. 0. 0.
 0. 0. .112E+01 .156E+02 -.111E-15 0.
 .533E-14 .588E-13 0. -.284E-13 0. 0.
 .333E-15 0. .444E-15 0. .242E+01 .153E+02

.98017691E+01 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT
 0. 0.
 0. 0.
 0. 0.
 0. 0.
 0. 0.
 0. 0.

.10618583E+02 5 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.
 .315E+01 .338E+02 0. 0. 0. 0.
 0. 0. .161E+00 .195E+00 0. 0.142E-13
 0. 0. .315E+01 .338E+02 0. 0.
 -.151E+00 -.195E+00 0. 0. 0. 0.
 0. 0. 0. 0. .127E+01 .692E+02
 -.173E-14 -.284E-13 0. 0. 0. 0.
 0. 0. -.161E+00 -.195E+00 -.888E-15 0.
 .750E+00 .172E+02 0. 0. 0. 0.
 .161E+00 .195E+00 0. 0. 0. 0.

.10618583E+02 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT
0. 0.
0. 0.
0. 0.
0. 0.
0. 0.
0. 0.

.11435397E+02 6 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.
.297E+01 .365E+02 0. 0. 0. 0.
0. 0. .298E+00 .627E-01 .178E-14 .204E-13
0. 0. .297E+01 .365E+02 0. 0.
-.298E+00 -.627E-01 0. 0. 0. 0.
0. 0. 0. 0. .142E+01 .748E+02
0. 0. 0. 0. 0. 0.
0. 0. -.298E+00 -.627E-01 -.178E-14 0.
.607E+00 .190E+02 0. 0. 0. 0.
.298E+00 .627E-01 0. 0. 0. 0.
0. 0. .607E+00 .190E+02 -.222E-15 .111E-15
.666E-14 .513E-13 0. -.234E-13 0. 0.
.111E-15 0. .666E-15 0. .235E+01 .139E+02

.11435397E+02 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT
0. 0.
0. 0.
0. 0.
0. 0.
0. 0.
0. 0.

.12252211E+02 6 IMPEDANCE MATRIX FOLLOWS IN 3(2X,2E10.3)FORMAT.
.286E+01 .394E+02 0. 0. 0. 0.
0. 0. .286E+00 -.133E+00 0. 0.
0. 0. .286E+01 .394E+02 0. 0.
-.286E+00 .133E+00 0. 0. 0. 0.
0. 0. .444E-15 0. .159E+01 .806E+02
-.178E-14 -.568E-13 0. 0. 0. 0.
0. 0. -.286E+00 .133E+00 0. 0.
.776E+00 .209E+02 0. 0. 0. 0.
.286E+00 -.133E+00 0. 0. 0. 0.
0. 0. .776E+00 .209E+02 -.222E-15 .222E-15
.178E-14 .128E-12 -.355E-14 -.563E-13 0. 0.
.111E-15 0. .777E-15 0. .239E+01 .203E+02

.12252211E+02 1 INPUT MOTIONS FOLLOW IN 3(2X,2E10.3) FORMAT
0. 0.
0. 0.
0. 0.
0. 0.
0. 0.
0. 0.

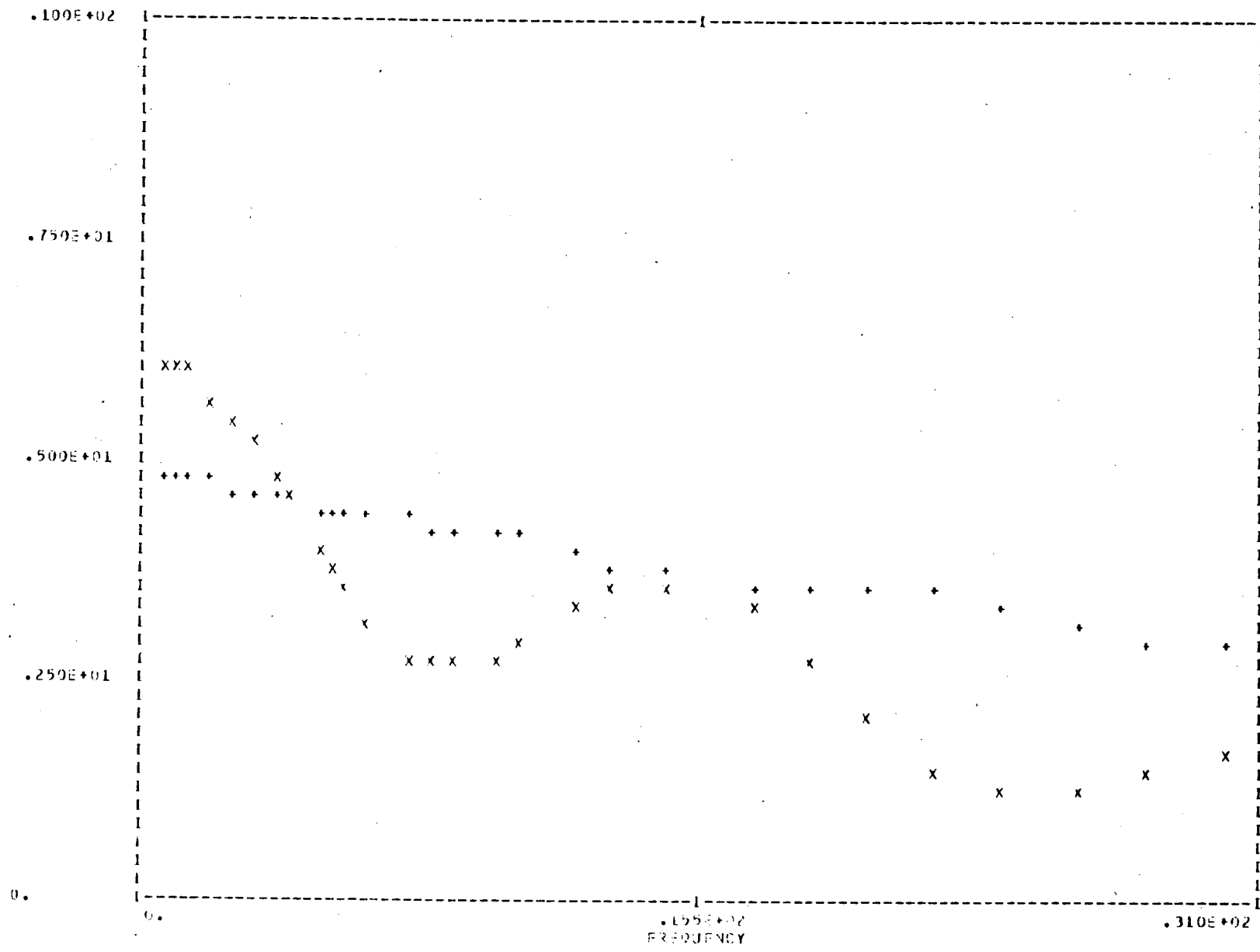
STIFFNESS TERMS FOR D.O.F.S

| | 1 | 2 | 3 | 4 | 5 | 6 |
|------------|----------|----------|----------|----------|----------|----------|
| A0= .204 | .484E+01 | .484E+01 | .619E+01 | .408E+01 | .408E+01 | .533E+01 |
| A0= .306 | .483E+01 | .483E+01 | .607E+01 | .403E+01 | .403E+01 | .528E+01 |
| A0= .408 | .482E+01 | .482E+01 | .602E+01 | .395E+01 | .396E+01 | .521E+01 |
| A0= .817 | .473E+01 | .473E+01 | .571E+01 | .361E+01 | .361E+01 | .483E+01 |
| A0= 1.225 | .461E+01 | .461E+01 | .521E+01 | .325E+01 | .325E+01 | .443E+01 |
| A0= 1.634 | .449E+01 | .449E+01 | .459E+01 | .294E+01 | .294E+01 | .408E+01 |
| A0= 2.124 | .438E+01 | .438E+01 | .376E+01 | .259E+01 | .259E+01 | .372E+01 |
| A0= 2.246 | .436E+01 | .436E+01 | .357E+01 | .251E+01 | .251E+01 | .364E+01 |
| A0= 3.267 | .427E+01 | .427E+01 | .263E+01 | .187E+01 | .187E+01 | .315E+01 |
| A0= 3.574 | .424E+01 | .424E+01 | .264E+01 | .170E+01 | .170E+01 | .307E+01 |
| A0= 4.288 | .411E+01 | .411E+01 | .296E+01 | .137E+01 | .137E+01 | .300E+01 |
| A0= 5.309 | .382E+01 | .382E+01 | .347E+01 | .115E+01 | .116E+01 | .299E+01 |
| A0= 7.556 | .362E+01 | .362E+01 | .273E+01 | .144E+01 | .144E+01 | .264E+01 |
| A0= 8.985 | .344E+01 | .344E+01 | .142E+01 | .140E+01 | .140E+01 | .252E+01 |
| A0= 9.802 | .331E+01 | .331E+01 | .117E+01 | .112E+01 | .112E+01 | .242E+01 |
| A0= 10.619 | .315E+01 | .315E+01 | .127E+01 | .760E+00 | .760E+00 | .234E+01 |
| A0= 11.435 | .297E+01 | .297E+01 | .142E+01 | .607E+00 | .607E+00 | .235E+01 |
| A0= 12.252 | .286E+01 | .286E+01 | .159E+01 | .776E+00 | .776E+00 | .239E+01 |

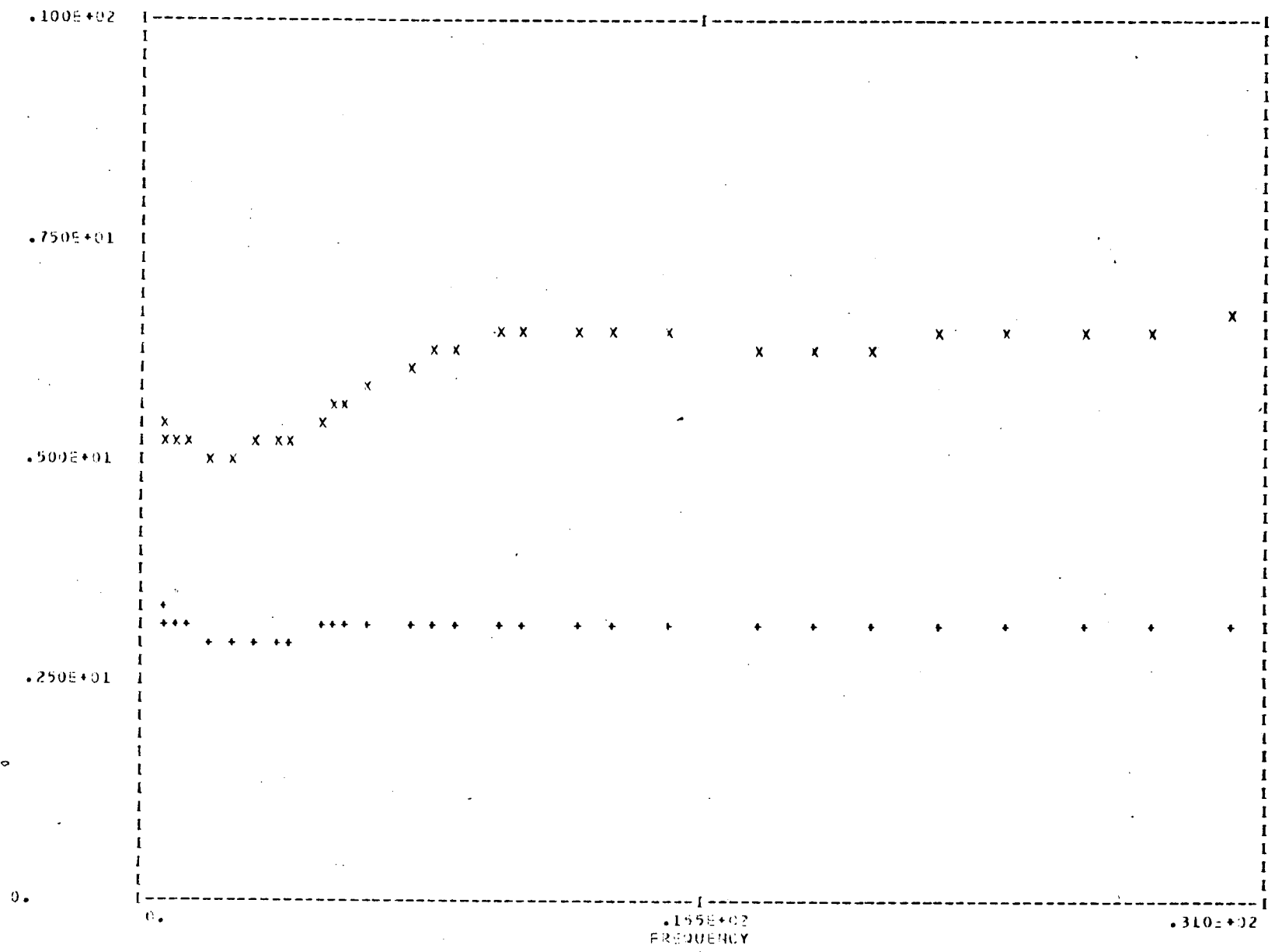
DAMPING TERMS FOR D.O.F.S

| | 1 | 2 | 3 | 4 | 5 | 6 |
|------------|----------|----------|----------|----------|----------|----------|
| A0= .204 | .332E+01 | .332E+01 | .551E+01 | .468E+00 | .468E+00 | .567E+00 |
| A0= .306 | .315E+01 | .315E+01 | .529E+01 | .365E+00 | .365E+00 | .426E+00 |
| A0= .408 | .307E+01 | .307E+01 | .519E+01 | .345E+00 | .345E+00 | .385E+00 |
| A0= .817 | .296E+01 | .296E+01 | .505E+01 | .499E+00 | .499E+00 | .504E+00 |
| A0= 1.225 | .296E+01 | .296E+01 | .511E+01 | .699E+00 | .699E+00 | .713E+00 |
| A0= 1.634 | .299E+01 | .299E+01 | .526E+01 | .855E+00 | .855E+00 | .899E+00 |
| A0= 2.124 | .304E+01 | .304E+01 | .552E+01 | .993E+00 | .993E+00 | .107E+01 |
| A0= 2.246 | .305E+01 | .305E+01 | .560E+01 | .102E+01 | .102E+01 | .111E+01 |
| A0= 3.267 | .309E+01 | .309E+01 | .619E+01 | .123E+01 | .123E+01 | .135E+01 |
| A0= 3.574 | .309E+01 | .309E+01 | .630E+01 | .128E+01 | .128E+01 | .140E+01 |
| A0= 4.288 | .308E+01 | .308E+01 | .642E+01 | .140E+01 | .140E+01 | .149E+01 |
| A0= 5.309 | .310E+01 | .310E+01 | .641E+01 | .152E+01 | .152E+01 | .153E+01 |
| A0= 7.556 | .316E+01 | .316E+01 | .623E+01 | .152E+01 | .152E+01 | .155E+01 |
| A0= 8.985 | .317E+01 | .317E+01 | .637E+01 | .159E+01 | .159E+01 | .160E+01 |
| A0= 9.802 | .317E+01 | .317E+01 | .645E+01 | .159E+01 | .159E+01 | .162E+01 |
| A0= 10.619 | .318E+01 | .318E+01 | .651E+01 | .162E+01 | .162E+01 | .163E+01 |
| A0= 11.435 | .319E+01 | .319E+01 | .654E+01 | .165E+01 | .165E+01 | .165E+01 |

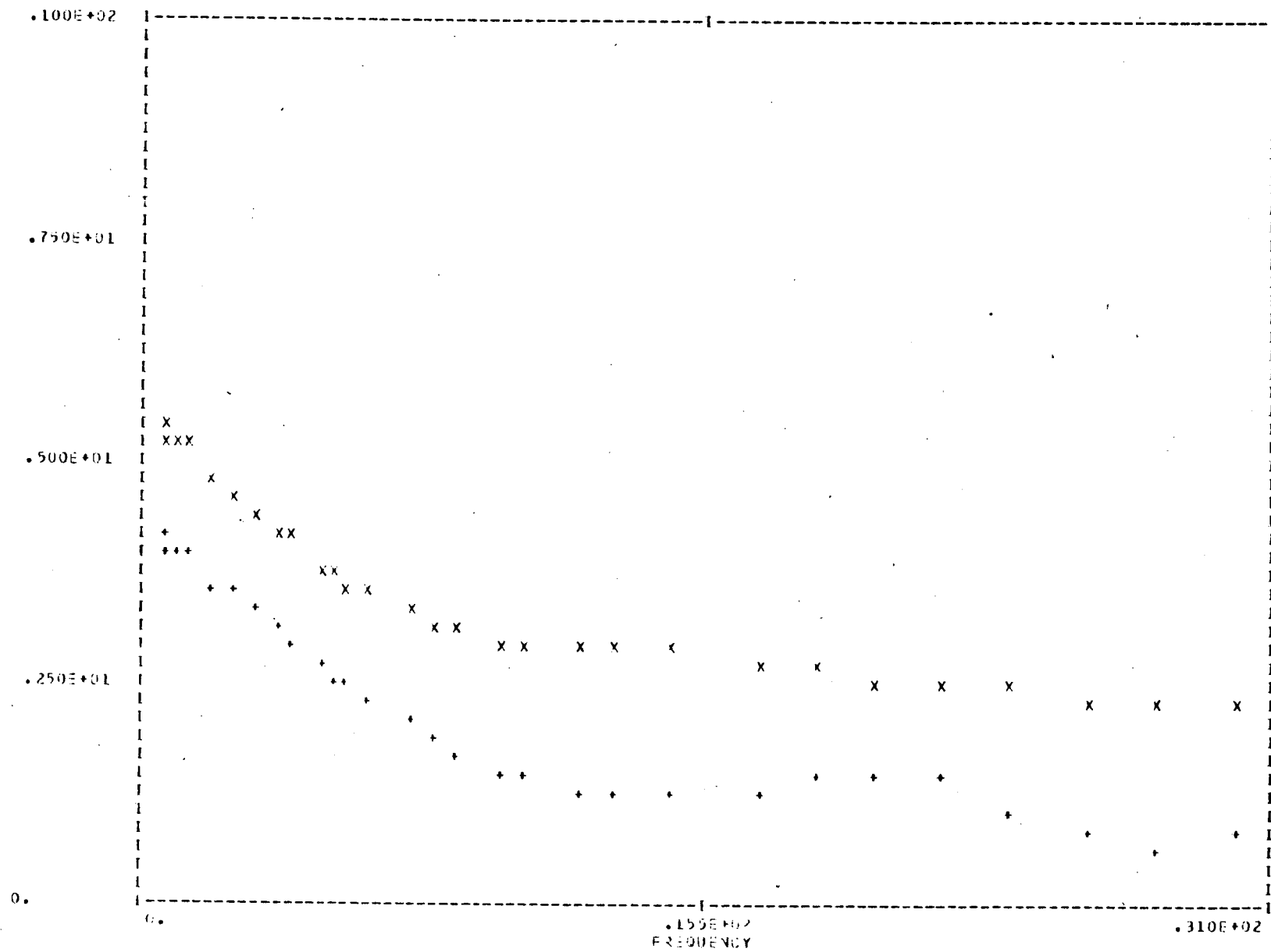
THE SYMBOL O CORRESPONDS TO DEGREE OF FREEDOM NUMBER 1
THE SYMBOL + CORRESPONDS TO DEGREE OF FREEDOM NUMBER 2
THE SYMBOL X CORRESPONDS TO DEGREE OF FREEDOM NUMBER 3



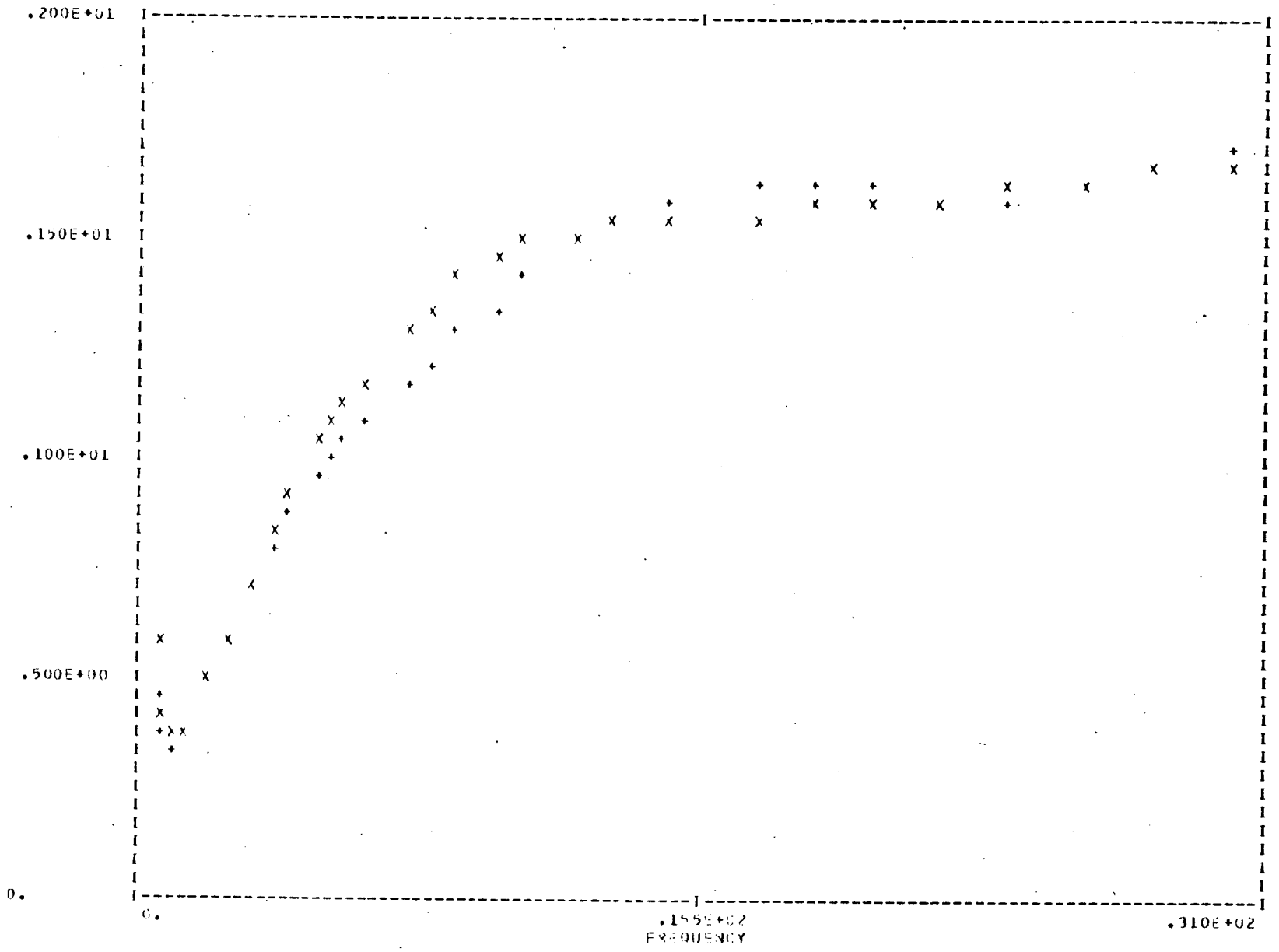
THE SYMBOL X CORRESPONDS TO DEGREE OF FREEDOM NUMBER 1
THE SYMBOL + CORRESPONDS TO DEGREE OF FREEDOM NUMBER 2
THE SYMBOL X CORRESPONDS TO DEGREE OF FREEDOM NUMBER 3



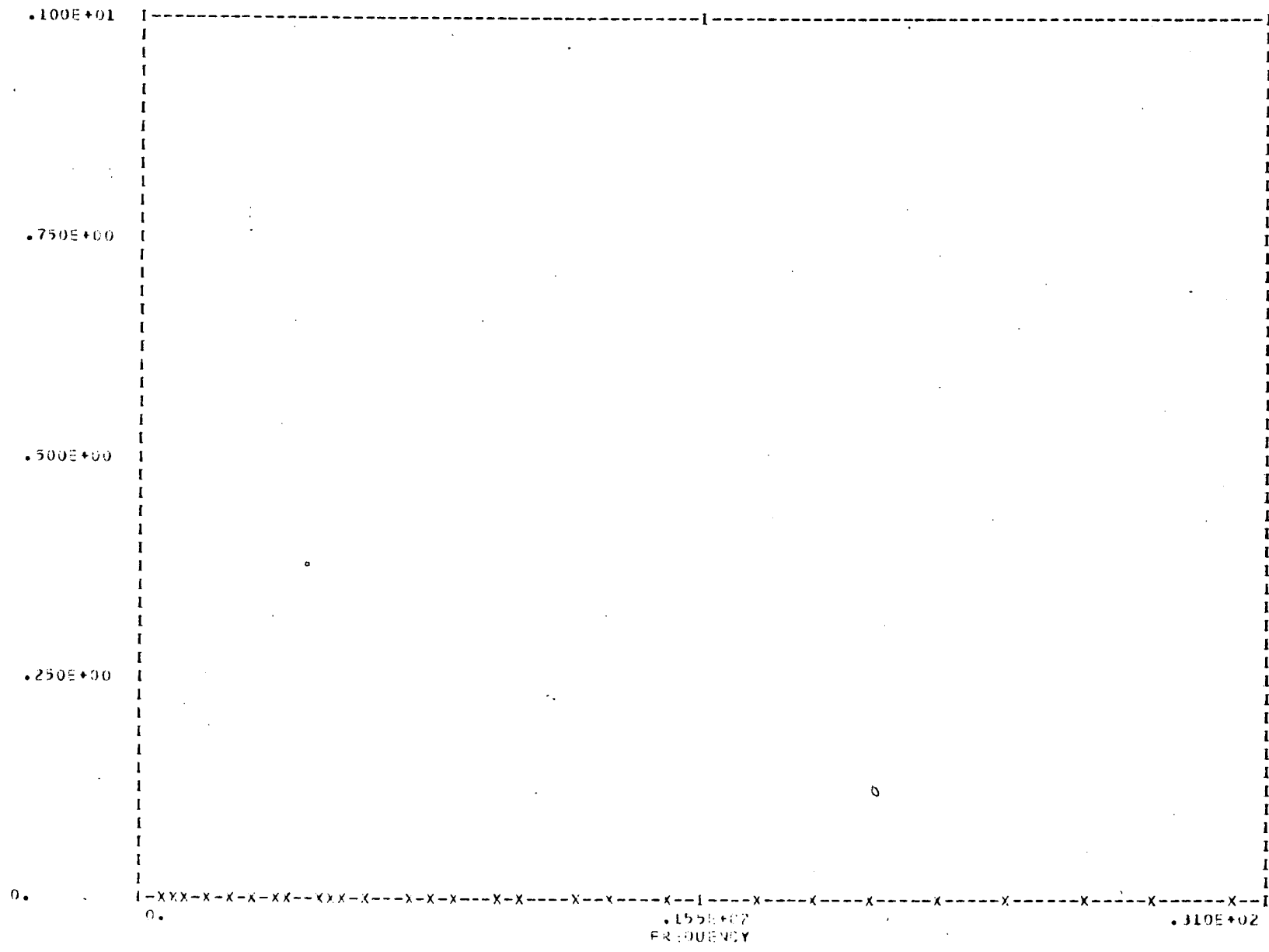
THE SYMBOL + CORRESPONDS TO DEGREE OF FREEDOM NUMBER 4
THE SYMBOL X CORRESPONDS TO DEGREE OF FREEDOM NUMBER 5



THE SYMBOL O CORRESPONDS TO DEGREE OF FREEDOM NUMBER 4
THE SYMBOL + CORRESPONDS TO DEGREE OF FREEDOM NUMBER 5
THE SYMBOL X CORRESPONDS TO DEGREE OF FREEDOM NUMBER 6



THE SYMBOL O CORRESPONDS TO DEGREE OF FREEDOM NUMBER 1
THE SYMBOL + CORRESPONDS TO DEGREE OF FREEDOM NUMBER 2
THE SYMBOL X CORRESPONDS TO DEGREE OF FREEDOM NUMBER 3



17.13.18. CLAF, T7777, P2.
17.13.18. USER, SONGSI, .
17.13.18. CHARGE, PROJNC, 03100681355.
17.13.19. PROLOG, PROCL, . . .
17.13.19. SETFS, PROCL/FS=AD.
17.13.19. PROCL.
17.13.19. //LOADER 587 .004 CP .063 RT//LOADER 014472/040000-040000 CM 1 TM
17.13.20. IFE, DT.EQ, TXD, FLASHIT.
17.13.20. ENDIF, FLASHIT.
17.13.20. IFE, DT.EQ, BCD, BULLIT.
17.13.20. CHGFTN.
17.13.20. END CHGFTN
17.13.20. 15600 MAXIMUM EXECUTION FL.
17.13.20. 0.002 CP SECONDS EXECUTION TIME.
17.13.20. GET, SYSBULL/UN=EDSUPER, NA.
17.13.20. IFE, FILE(SYSBULL, AS), OUTIT.
17.13.21. COPY, SYSBULL.
17.13.21. EOI ENCOUNTERED.
17.13.21. ENDIF, OUTIT.
17.13.21. ENDIF, BULLIT.
17.13.21. RETURN, PROCL.
17.13.21. REVERT.
17.13.21. ROUTE, OUTPUT, DC=PR, UN=CSDVAX1, FC=CP, DEF, UJN=VAX.
17.13.22. ROUTE COMPLETE.
17.13.22. REWIND, INPUT.
17.13.22. COPYSBF, INPUT, OUTPUT.
17.13.22. COPY COMPLETE.
17.13.22. REWIND, INPUT.
17.13.22. ATTACH, C6T1.
17.13.22. COPY3F, C6T1, TAPE7.
17.13.22. COPY COMPLETE.
17.13.22. REWIND, TAPE7.
17.13.22. GET, INPUT=C6CD.
17.13.22. REWIND, INPUT.
17.13.22. COPYSBF, INPUT, OUTPUT.
17.13.23. EOI ENCOUNTERED.
17.13.23. REWIND, INPUT.
17.13.23. ATTACH, CLAF/UN=SASSIMP.
17.13.23. CLAF.
17.13.24. C1 LWA+1 =1733448, LOADER USED 2116098
17.13.24. //LOADER 587 .855 CP 1.260 RT//LOADER 211517/040000-214000 CM 97 TM
17.27.18. STOP
17.27.18. 202500 MAXIMUM EXECUTION FL.
17.27.18. 743.683 CP SECONDS EXECUTION TIME.
17.27.18. REWIND, TAPE10.
17.27.18. PURGE, C6T10/NA.
17.27.18. C6T10 NOT FOUND.
17.27.18. DEFINE, C6T10.
17.27.18. COPY3F, TAPE10, C6T10.
17.27.18. EOI ENCOUNTERED.
17.27.18. DAYFILE.

17.13.18. CLAF, T7777, P2.
17.13.18. USER, SHNGS1,
17.13.18. CHARGE, PROJ#03100681355.
17.13.18. \$PROLOG, PROCL...
17.13.19. \$SETFS, PROCL/FS=AD.
17.13.19. PROCL.
17.13.19. //LOADER 587 .004 CP .063 RT//LOADER 014472/040000-040000 CM 1 TM
17.13.20. IFE, DT.EQ.TXU, FLASHIT.
17.13.20. ENDIF, FLASHIT.
17.13.20. IFE, DT.EQ.BCU, BULLIT.
17.13.20. CHGFTN.
17.13.20. END CHGFTN
17.13.20. 15600 MAXIMUM EXECUTION FL.
17.13.20. 0.002 CP SECONDS EXECUTION TIME.
17.13.20. GET, SYSBULL/UN=IUSUPER, NA.
17.13.20. IFE, FILE(SYSBULL, AS), OUTIT.
17.13.21. COPY, SYSBULL.
17.13.21. EOI ENCOUNTERED.
17.13.21. ENDIF, OUTIT.
17.13.21. ENDIF, BULLIT.
17.13.21. RETURN, PROCL.
17.13.21. REVERT.
17.13.21. ROUTE, OUTPUT, DC=PR, UN=CSJYAX1, FC=CP, DEF, UJN=VAX.
17.13.22. ROUTE COMPLETE.
17.13.22. REWIND, INPUT.
17.13.22. COPYSBF, INPUT, OUTPUT.
17.13.22. COPY COMPLETE.
17.13.22. REWIND, INPUT.
17.13.22. ATTACH, C6T1.
17.13.22. COPYBF, C6T1, TAPE7.
17.13.22. COPY COMPLETE.
17.13.22. REWIND, TAPE7.
17.13.22. GET, INPUT=C6CD.
17.13.22. REWIND, INPUT.
17.13.22. COPYSBF, INPUT, OUTPUT.
17.13.23. EOI ENCOUNTERED.
17.13.23. REWIND, INPUT.
17.13.23. ATTACH, CLAF/UN=SASSIMP.
17.13.23. CLAF.
17.13.24. CM LWA+1 =1733448, LOADER USED 2116008
17.13.24. //LOADER 587 .855 CP 1.260 RT//LOADER 211517/040000-214000 CM 97 TM
17.27.18. STOP
17.27.19. 202500 MAXIMUM EXECUTION FL.
17.27.19. 743.683 CP SECONDS EXECUTION TIME.
17.27.19. REWIND, TAPE10.
17.27.19. PURGE, C6T10/NA.
17.27.19. C6T10 NOT FOUND.
17.27.19. DEFINE, C6T10.
17.27.19. COPYBF, TAPE10, C6T10.
17.27.19. EOI ENCOUNTERED.
17.27.19. DAYFILL.
17.27.19. USER DAYFILE PROCESSED.
17.27.19. PURGE, SIOUTL/NA.
17.27.19. DEFINE, SIOUTL/NA=H.
17.27.19. REWIND, OUTPUT.
17.27.19. COPYE1, OUTPUT, SIOUTL.
17.27.19. EOI ENCOUNTERED.
17.27.19. EXIT.
17.27.20. UEAD, 0.002CONS.
17.27.20. UEPE, 0.075CONS.

17.28.16.UCLP, LB, HS0LLP2,

2.045KLNS.

UJN = VAX
CREATING JOB = 1463

FAMILY = SYSTEM
USER NAME = SONGSL

JOB ORIGIN = BATCH.
SERVICE CLASS = INSTALLATION CLASS 0.

```
AAAAAAAAAA 000000000 3333333333 IIIIIIIIIII 000000000 MM MM GGGGGGGGG CCCCCCCCC  
AAAAAAAAAA 000000000 3333333333 IIIIIIIIIII 000000000 MMM MMM GGGGGGGGG CCCCCCCCC  
AA AA 00 00 3 33 11 00 00 MMM MMM G G CC CC  
AA AA 00 00 33 11 00 00 MM MM MM MM GG CC CC  
AA AA 00 00 31 11 00 00 MM MMM MM GG CC  
AA AA 00 00 33 11 00 00 MM MM MM GG CC  
AAAAAAAAAA 00 00 33 11 00 00 MM MM GG CC  
AAAAAAAAAA 00 00 333 11 00 00 MM MM GG GGGG CC  
AA AA 00 00 33 11 00 00 MM MM GG GGGG CC  
AA AA 00 00 33 11 00 00 MM MM GG GG CC  
AA AA 00 00 33 11 00 00 MM MM GG GG CC  
AA AA 00 00 33 11 00 00 MM MM GG GG CC  
AA AA 00 00 33 11 00 00 MM MM GG GG CC  
AA AA 00 00 33 11 00 00 MM MM GG GG CC  
AA AA 000000000 333333333 IIIIIIIIIII 000000000 MM MM GGGGGGGGG CCCCCCCCC  
AA AA 000000000 333333333 IIIIIIIIIII 000000000 MM MM GGGGGGGGG CCCCCCCCC
```

SSIN

NRC TEST PROBLEM 1

At = 0.005

NFF1: 4096

w/ CLASSI impedances

| DESIGN VERIFICATION | |
|---------------------|---------------|
| CLIENT | SCE |
| JOB NO. | 0310-068-1355 |
| CALC/PROB NO. | NRC TEST - 1 |
| BY: S V I | DATE: 4/12/87 |
| CHKD: M M J | DATE: 4/12/87 |

| | |
|---------------------|------|
| DATE | CHKD |
| DATE | BY |
| JOB NO. | |
| CALC/PROB NO. | |
| CLIENT | |
| DESIGN VERIFICATION | |

SYSTEM BULLETIN

IMPELL WALNUT CREEK COMPUTER CENTER OPERATIONS HOURS (PACIFIC TIME)

MONDAY AND FRIDAY 0600 TO 2130
TUESDAY TO THURSDAY 0600 TO 2130
SATURDAY AND SUNDAY 0700 TO 1700
OPERATORS WILL NOT BE ON SITE AT ALL OTHER TIMES. EXTENDED OPERATOR COVERAGE MAY BE ARRANGED BY
CONTACTING BOB EARL AT (415) 943-4653/4656

THE CYBER SYSTEM WILL BE UNAVAILABLE TO USERS AS FOLLOWS:

| | | | | |
|-----------|------|----|------|-------------------------|
| MONDAY | 2000 | TO | 2100 | SYSTEM BACKUP |
| TUESDAY | 1930 | TO | 2300 | MAINTENANCE + BACKUP |
| WEDNESDAY | 2200 | TO | 2300 | SYSTEM BACKUP |
| THURSDAY | 2200 | TO | 2300 | SYSTEM BACKUP |
| FRIDAY | 2000 | TO | 2230 | SYSTEM BACKUP + TESTING |
| SATURDAY | 1600 | TO | 1700 | SYSTEM BACKUP |
| SUNDAY | 1400 | TO | 1700 | SYSTEM BACKUP |

HOLIDAY HOURS.

MONDAY, MAY 27, 1985. NO OPERATORS ON SITE. SYSTEM AVAILABLE TO USERS.

SPECIAL CYBER UPGRADE BLOCK TIME.

THE CYBER WILL BE UNAVAILABLE FOR PRODUCTION USE THURSDAYS FROM 2000 HRS. TO 2400 HRS. BEGINNING
APRIL 11, 1985 THROUGH MAY 30, 1985. COMPUTER SERVICES WILL BE TESTING NDS VERSION 2.3.
ANY USERS WISHING TO TEST THEIR CODES DURING THIS PERIOD WILL NEED TO CONTACT COMPUTER SERVICES
AT (415) 943-4666.

GENERAL INFORMATION.

DO NOT RELEASE MAGNETIC TAPES WHEN OPERATORS ARE NOT ON SITE.

USER ADVISORY. MAGNETIC TAPE BACKUPS.

MAGNETIC TAPES ARE SUSCEPTIBLE TO PHYSICAL DAMAGE. BACKUP TAPES ARE RECOMMENDED WHENEVER THE INFOR-
MATION ON THE TAPE WOULD BE EXPENSIVE OR TIME CONSUMING TO RECREATE. PLEASE NOTE THAT IMPELL, CDC,
AND JCC DO NOT GIVE REFUNDS FOR JOBS NECESSARY TO RECREATE A TAPE IF NO BACKUP EXISTS.

AS PER THE MEMO DISTRIBUTED TO DIVISIONS OVER A WEEK AGO,
THE OLD OVERHEAD JOB NUMBERS BEGINNING WITH 0622 AND 0627
WILL NOT BE VALID AFTER 2/15/85. NEW NUMBERS (BEGINNING
WITH 0620004 OR 0623004) MUST BE REQUESTED. A CONSOLIDATED
LIST OF OLD VERSUS SUGGESTED NEW NUMBERS WAS DISTRIBUTED TO
EACH DIVISION TO EXPEDITE THE REVIEW. THESE CHANGES ARE
BEING MADE TO SUIT ACCOUNTING DEPT. NUMBER CHANGES.

DIAL-IN PHONE NUMBERS

IMPELL 943-4666 - (415) 943-4666

CHARGE,PROJWC,03100681355.
ROUTE,OUTPUT,JC=PP,UN=CSOVAX1,UIN=YAX,FC=CP,DEF.
REWIND,INPUT.
CJYBFB,INPUT,OUTPUT.
REWIND,INPUT.
SKIPR,INPUT.
ATTACH,C6T10.
REWIND,C6T10.
COPYBF,C6T10,TAPE10.
REWIND,TAPE10.
ATTACH,T15.
ATTACH,T16.
ATTACH,T17.
COMMENT, TAPE15 IS STRUCTURE NODE DATA
COPYBF,T15,TAPE15.
COMMENT, TAPE16 IS STRUCTURE MASS MATRIX
COPYBF,T16,TAPE16.
COMMENT, TAPE17 IS FREQUENCIES, MODAL DAMPINGS, AND MODE SHAPES
COPYBF,T17,TAPE17.
ATTACH,TAPE18.
REWIND,TAPE18.
REWIND,TAPE15,TAPE16,TAPE17,TAPE18.
ATTACH,SSIR/UN=SONGS1.
SSIR.
REWIND,TAPE2.
PJRG, NRCSSTI/NA.
DEFINE, NRCSSTI/M=W.
COPYBF,TAPE2, NRCSSTI.
EXIT.
PJRG, SIOUT1/NA.
DEFINE, SIOUT1/M=W.
REWIND,OUTPUT.
COPYBF,OUTPUT,SIOUT1.

1 6 0
1 2 3 4 5 5
621.1

621.1

621.1

1.397E6

1.397E5

2.79E5

0
11 5 1 2 3 4 5 6
0
1 15 16 17 33 13 1
6
10 11 19 20 31 32
1 1 1 1 0 18
0.005 .4984 2001 4096
0.50 30.0

```
*****  
* IMPELL CORP. *  
* PROGRAM CLASSI *  
* SUBPROGRAM SSIN *  
* *  
* VERSION 0 *  
*****
```

SOIL AND FOUNDATION DATA

REFERENCE SHEAR MODULUS : .342E+04
REFERENCE SHEAR VELOCITY : .100E+04
CHARACTERISTIC LENGTH : .550E+02

NUMBER OF FOUNDATIONS : 1
TOTAL NUMBER OF STRUCTURES : 1

FOUNDATION NUMBER 1
NUMBER OF SUPERSTRUCTURES ON TOP : 1
NUMBER OF DEGREES OF FREEDOM : 6
FOUNDATION DOF'S (I,DOF) : 1 2 3 4 5 6

IMPEDANCE TRANSFORMATION PARAMETERS

IFTIMP : 0
XF : 0.
YF : 0.
ZF : 0.
QF : 0.

MASS MATRIX OF FOUNDATION NUMBER 1, 6 D.O.F.

| | | | | | |
|----------|----------|----------|----------|----------|----------|
| .621E+03 | 0. | 0. | 0. | 0. | 0. |
| 0. | .621E+03 | 0. | 0. | 0. | 0. |
| 0. | 0. | .621E+03 | 0. | 0. | 0. |
| 0. | 0. | 0. | .140E+07 | 0. | 0. |
| 0. | 0. | 0. | 0. | .140E+07 | 0. |
| 0. | 0. | 0. | 0. | 0. | .279E+07 |

NUMBER OF STRUCTURAL MODES : 11
NUMBER OF DDF (BASE EXCITATION) : 6
ACTIVE DDF OF BASE EXCITATION ARE : 1 2 3 4 5 6

COORDINATE TRANSFORM DATA

IFTRAN : 0
X : 0.
Y : 0.
Z : 0.
U : 0.

STRUCTURAL PARAMETERS FOR STRUCTURE NUMBER 1 WERE CALCULATED BY SSI, IFCAL=1

NUMBER OF DDF FOR RESPONSE (NKEEP): 6
DDF FOR RESPONSE (KPCDM): 10 11 19 20 31 32

| | | | | | | | | |
|---------|---------|-----------|---|---|---|---|---|---|
| 0.00000 | 0.00000 | 0.00000 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0.00000 | 0.00000 | 23.50000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0.00000 | 0.00000 | 43.80000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0.00000 | 0.00000 | 63.80000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0.00000 | 0.00000 | 83.80000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0.00000 | 0.00000 | 103.80000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0.00000 | 0.00000 | 123.30000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0.00000 | 0.00000 | 143.80000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0.00000 | 0.00000 | 165.30000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0.00000 | 0.00000 | 184.40000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0.00000 | 0.00000 | 198.50000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0.00000 | 0.00000 | 207.00000 | 0 | 1 | 0 | 1 | 0 | 1 |
| 1.00000 | 0.00000 | 0.00000 | 1 | 1 | 1 | 1 | 1 | 1 |

| | | | | | | | | | |
|----|--------|---------|-------|-----------|----|-----------|----|-----------|----|
| 2 | 15.645 | 98.300 | .0500 | -.500E+02 | 0. | -.129E-12 | 0. | -.401E+04 | 0. |
| 3 | 16.234 | 102.000 | .0500 | .113E-06 | 0. | -.317E+02 | 0. | .543E-05 | 0. |
| 4 | 29.125 | 183.000 | .0500 | .138E+02 | 0. | .474E-07 | 0. | .555E+02 | 0. |
| 5 | 41.698 | 262.000 | .0500 | .692E+01 | 0. | .865E-10 | 0. | .875E+02 | 0. |
| 6 | 44.045 | 277.000 | .0500 | -.457E+01 | 0. | -.146E-08 | 0. | -.894E+01 | 0. |
| 7 | 53.635 | 337.000 | .0500 | .243E-08 | 0. | .101E+02 | 0. | .123E-07 | 0. |
| 8 | 61.911 | 389.000 | .0500 | -.280E+01 | 0. | .322E-12 | 0. | -.147E+02 | 0. |
| 9 | 69.073 | 434.000 | .0500 | .171E+01 | 0. | -.502E-11 | 0. | -.356E+01 | 0. |
| 10 | 69.951 | 437.000 | .0500 | .112E-10 | 0. | -.627E+01 | 0. | .750E-10 | 0. |
| 11 | 77.827 | 489.000 | .0500 | .140E+01 | 0. | -.247E-10 | 0. | .124E+02 | 0. |
| | | | | .840E+00 | 0. | -.444E-12 | 0. | -.167E+01 | 0. |

| | | | | | |
|----------|----|----------|----|----------|----|
| .118E+04 | 0. | 0. | 0. | .122E+06 | 0. |
| 0. | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | .118E+04 | 0. | 0. | 0. |
| 0. | 0. | 0. | 0. | 0. | 0. |
| .122E+06 | 0. | 0. | 0. | .161E+08 | 0. |
| 0. | 0. | 0. | 0. | 0. | 0. |

PARAMETERS FOR RESPONSE CALCULATION (CARD 5)

LFT : 1
NCUM : 1
NCASE : 1
NSTART : 1
EXTRP : 0
SS18 : 12

PARAMETERS FOR REAL TIME ANALYSIS (CARD 6)

DT = .500E-02
SCALE = .428E+00
NPDINT = 2001
NEFT = 4096
FMIN = .500E+00
FMAX = .300E+02

| TIME | ACCEL | TIME | ACCEL | TIME | ACCEL | TIME | ACCEL |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| .005 | -.113E+00 | .010 | -.111E+00 | .015 | -.105E+00 | .020 | -.967E-01 |
| .025 | -.847E-01 | .030 | -.678E-01 | .035 | -.473E-01 | .040 | -.276E-01 |
| .045 | -.112E-01 | .050 | .172E-02 | .055 | .131E-01 | .060 | .252E-01 |
| .065 | .375E-01 | .070 | .489E-01 | .075 | .588E-01 | .080 | .673E-01 |
| .085 | .774E-01 | .090 | .902E-01 | .095 | .104E+00 | .100 | .117E+00 |
| .105 | .125E+00 | .110 | .127E+00 | .115 | .123E+00 | .120 | .113E+00 |
| .125 | .972E-01 | .130 | .758E-01 | .135 | .538E-01 | .140 | .305E-01 |
| .145 | .957E-02 | .150 | -.618E-02 | .155 | -.168E-01 | .160 | -.229E-01 |
| .165 | -.259E-01 | .170 | -.252E-01 | .175 | -.233E-01 | .180 | -.173E-01 |
| .185 | -.872E-02 | .190 | -.678E-03 | .195 | .390E-02 | .200 | .345E-02 |
| .205 | -.147E-02 | .210 | -.673E-02 | .215 | -.932E-02 | .220 | -.703E-02 |
| .225 | -.114E-03 | .230 | .817E-02 | .235 | .157E-01 | .240 | .192E-01 |
| .245 | .132E-01 | .250 | .141E-01 | .255 | .332E-02 | .260 | .318E-02 |
| .265 | -.116E-02 | .270 | -.454E-02 | .275 | -.703E-02 | .280 | -.872E-02 |
| .285 | -.907E-02 | .290 | -.802E-02 | .295 | -.528E-02 | .300 | -.653E-03 |
| .305 | .553E-02 | .310 | .128E-01 | .315 | .200E-01 | .320 | .263E-01 |
| .325 | .312E-01 | .330 | .356E-01 | .335 | .383E-01 | .340 | .415E-01 |
| .345 | .453E-01 | .350 | .486E-01 | .355 | .528E-01 | .360 | .533E-01 |
| .375 | .528E-01 | .370 | .528E-01 | .375 | .528E-01 | .380 | .538E-01 |
| .385 | .943E-01 | .390 | .528E-01 | .395 | .485E-01 | .400 | .394E-01 |
| .405 | .245E-01 | .410 | .678E-02 | .415 | -.138E-01 | .420 | -.353E-01 |
| .425 | -.553E-01 | .430 | -.728E-01 | .435 | -.827E-01 | .440 | -.852E-01 |
| .445 | -.797E-01 | .450 | -.673E-01 | .455 | -.475E-01 | .460 | -.306E-01 |
| .465 | -.127E-01 | .470 | .159E-02 | .475 | .107E-01 | .480 | .150E-01 |
| .485 | .117E-01 | .490 | .482E-02 | .495 | -.357E-02 | .500 | -.116E-01 |
| .505 | -.158E-01 | .510 | -.199E-01 | .515 | -.208E-01 | .520 | -.196E-01 |
| .525 | -.172E-01 | .530 | -.147E-01 | .535 | -.133E-01 | .540 | -.156E-01 |
| .545 | -.239E-01 | .550 | -.389E-01 | .555 | -.598E-01 | .560 | -.797E-01 |
| .565 | -.962E-01 | .570 | -.106E+00 | .575 | -.108E+00 | .580 | -.108E+00 |
| .585 | -.104E+00 | .590 | -.997E-01 | .595 | -.962E-01 | .600 | -.907E-01 |
| .605 | -.312E-01 | .610 | -.633E-01 | .615 | -.358E-01 | .620 | -.177E-02 |
| .625 | .386E-01 | .630 | .753E-01 | .635 | .102E+00 | .640 | .107E+00 |
| .645 | .987E-01 | .650 | .558E-01 | .655 | .233E-01 | .660 | .648E-02 |
| .665 | .126E-01 | .670 | .391E-01 | .675 | .748E-01 | .680 | .102E+00 |
| .685 | .117E+00 | .690 | .110E+00 | .695 | .857E-01 | .700 | .523E-01 |
| .705 | .142E-01 | .710 | -.181E-01 | .715 | -.436E-01 | .720 | -.583E-01 |
| .725 | -.603E-01 | .730 | -.523E-01 | .735 | -.384E-01 | .740 | -.271E-01 |
| .745 | -.245E-01 | .750 | -.322E-01 | .755 | -.451E-01 | .760 | -.628E-01 |
| .765 | -.753E-01 | .770 | -.857E-01 | .775 | -.937E-01 | .780 | -.992E-01 |
| .785 | -.106E+00 | .790 | -.109E+00 | .795 | -.104E+00 | .800 | -.882E-01 |
| .805 | -.578E-01 | .810 | -.748E-01 | .815 | .112E-01 | .820 | .417E-01 |
| .825 | .593E-01 | .830 | .648E-01 | .835 | .496E-01 | .840 | .251E-01 |
| .845 | -.204E-02 | .850 | -.283E-01 | .855 | -.411E-01 | .860 | -.491E-01 |
| .865 | -.425E-01 | .870 | -.268E-01 | .875 | -.137E-01 | .880 | -.239E-02 |
| .885 | .146E-02 | .890 | -.256E-02 | .895 | -.140E-01 | .900 | -.317E-01 |
| .905 | -.573E-01 | .910 | -.827E-01 | .915 | -.110E+00 | .920 | -.136E+00 |
| .925 | -.156E+00 | .930 | -.156E+00 | .935 | -.156E+00 | .940 | -.154E+00 |
| .945 | -.131E+00 | .950 | -.101E+00 | .955 | -.718E-01 | .960 | -.460E-01 |
| .965 | -.275E-01 | .970 | -.157E-01 | .975 | -.802E-02 | .980 | -.548E-02 |
| .985 | .170E-02 | .990 | .733E-02 | .995 | .109E-01 | 1.000 | .131E-01 |
| 1.005 | .508E-02 | 1.010 | .987E-02 | 1.015 | .109E-01 | 1.020 | .114E-01 |
| 1.025 | .128E-01 | 1.030 | .115E-01 | 1.035 | .135E-01 | 1.040 | .118E-01 |
| 1.045 | .713E-02 | 1.050 | .191E-02 | 1.055 | -.543E-02 | 1.060 | -.129E-01 |
| 1.065 | -.207E-01 | 1.070 | -.286E-01 | 1.075 | -.325E-01 | 1.080 | -.280E-01 |
| 1.085 | -.229E-01 | 1.090 | -.169E-01 | 1.095 | .523E-02 | 1.100 | .225E-01 |
| 1.105 | .466E-01 | 1.110 | .578E-01 | 1.115 | .703E-01 | 1.120 | .787E-01 |
| 1.125 | .897E-01 | 1.130 | .733E-01 | 1.135 | .643E-01 | 1.140 | .538E-01 |
| 1.145 | .305E-01 | 1.150 | .305E-01 | 1.155 | .305E-01 | 1.160 | .305E-01 |

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|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 1.245 | .149E-01 | 1.250 | .815E-02 | 1.255 | .887E-02 | 1.260 | .129E-01 |
| 1.255 | -.440E-02 | 1.255 | .126E-01 | 1.255 | .922E-02 | 1.260 | .110E-02 |
| 1.265 | -.211E-01 | 1.270 | -.872E-02 | 1.275 | -.121E-01 | 1.280 | -.165E-01 |
| 1.305 | -.344E-01 | 1.290 | -.253E-01 | 1.295 | -.281E-01 | 1.300 | -.293E-01 |
| 1.325 | -.423E-01 | 1.310 | -.333E-01 | 1.315 | -.349E-01 | 1.320 | -.383E-01 |
| 1.345 | -.770E-01 | 1.330 | -.618E-01 | 1.335 | -.628E-01 | 1.340 | -.693E-01 |
| 1.355 | -.198E+00 | 1.350 | -.832E-01 | 1.355 | -.110E+00 | 1.350 | -.104E+00 |
| 1.345 | -.111E+00 | 1.370 | -.116E+00 | 1.375 | -.118E+00 | 1.380 | -.128E+00 |
| 1.405 | -.302E-01 | 1.390 | -.101E+00 | 1.395 | -.962E-01 | 1.400 | -.942E-01 |
| 1.425 | -.643E-01 | 1.410 | -.732E-01 | 1.415 | -.733E-01 | 1.420 | -.693E-01 |
| 1.445 | -.603E-02 | 1.430 | -.508E-01 | 1.435 | -.480E-01 | 1.440 | -.315E-01 |
| 1.455 | .101E+00 | 1.450 | .214E-01 | 1.455 | .623E-01 | 1.460 | .802E-01 |
| 1.485 | .130E+00 | 1.470 | .120E+00 | 1.475 | .129E+00 | 1.480 | .148E+00 |
| 1.505 | .312E-01 | 1.490 | .116E+00 | 1.495 | .106E+00 | 1.500 | .942E-01 |
| 1.525 | .626E-01 | 1.510 | .683E-01 | 1.515 | .598E-01 | 1.520 | .583E-01 |
| 1.545 | .558E-01 | 1.530 | .543E-01 | 1.535 | .638E-01 | 1.540 | .638E-01 |
| 1.555 | .175E-02 | 1.550 | .446E-01 | 1.555 | .244E-01 | 1.560 | .142E-01 |
| 1.535 | -.897E-02 | 1.570 | -.432E-02 | 1.575 | -.152E-01 | 1.590 | -.227E-02 |
| 1.605 | -.391E-01 | 1.590 | -.122E-01 | 1.595 | -.174E-01 | 1.600 | -.271E-01 |
| 1.625 | -.149E-01 | 1.610 | -.463E-01 | 1.615 | -.445E-01 | 1.620 | -.327E-01 |
| 1.645 | -.613E-01 | 1.630 | -.942E-02 | 1.635 | -.399E-02 | 1.640 | -.221E-01 |
| 1.655 | -.152E+00 | 1.650 | -.111E+00 | 1.655 | -.126E+00 | 1.660 | -.158E+00 |
| 1.635 | -.334E-01 | 1.670 | -.120E+00 | 1.675 | -.302E-01 | 1.680 | -.472E-01 |
| 1.705 | -.742E-01 | 1.690 | -.335E-01 | 1.695 | -.435E-01 | 1.700 | -.588E-01 |
| 1.725 | -.992E-01 | 1.710 | -.104E+00 | 1.715 | -.114E+00 | 1.720 | -.114E+00 |
| 1.745 | .321E-01 | 1.730 | -.603E-01 | 1.735 | -.239E-01 | 1.740 | .992E-02 |
| 1.755 | .150E-01 | 1.750 | .396E-01 | 1.755 | .320E-01 | 1.760 | .245E-01 |
| 1.745 | -.743E-02 | 1.770 | .105E-01 | 1.775 | .528E-02 | 1.780 | .188E-02 |
| 1.805 | .156E-01 | 1.790 | -.155E-01 | 1.795 | -.183E-01 | 1.800 | -.125E-01 |
| 1.825 | .100E+00 | 1.810 | .355E-01 | 1.815 | .543E-01 | 1.820 | .887E-01 |
| 1.845 | .291E-01 | 1.830 | .987E-01 | 1.835 | .787E-01 | 1.840 | .533E-01 |
| 1.855 | .392E-01 | 1.850 | .113E-01 | 1.855 | .140E-01 | 1.850 | .183E-01 |
| 1.895 | .145E+00 | 1.870 | .703E-01 | 1.875 | .104E+00 | 1.880 | .122E+00 |
| 1.905 | .102E+00 | 1.890 | .155E+00 | 1.895 | .154E+00 | 1.900 | .147E+00 |
| 1.925 | -.568E-02 | 1.910 | .907E-01 | 1.915 | .613E-01 | 1.920 | .249E-01 |
| 1.945 | -.291E-01 | 1.930 | -.292E-01 | 1.935 | -.341E-01 | 1.940 | -.334E-01 |
| 1.955 | .453E-02 | 1.950 | -.215E-01 | 1.955 | -.215E-02 | 1.950 | .220E-02 |
| 1.935 | -.320E-01 | 1.970 | .134E-02 | 1.975 | -.733E-02 | 1.980 | -.250E-01 |
| 2.005 | -.376E-01 | 1.990 | -.382E-01 | 1.995 | -.426E-01 | 2.000 | -.447E-01 |
| 2.025 | -.872E-02 | 2.010 | -.355E-01 | 2.015 | -.282E-01 | 2.020 | -.182E-01 |
| 2.045 | .158E-01 | 2.030 | .277E-02 | 2.035 | .703E-02 | 2.040 | .120E-01 |
| 2.055 | .772E-02 | 2.050 | .191E-01 | 2.055 | .236E-01 | 2.050 | .159E-01 |
| 2.035 | -.733E-02 | 2.070 | .648E-03 | 2.075 | -.548E-02 | 2.080 | -.528E-02 |
| 2.105 | .322E-01 | 2.090 | -.428E-02 | 2.095 | .231E-02 | 2.100 | .987E-02 |
| 2.125 | .311E-01 | 2.110 | .325E-01 | 2.115 | .359E-01 | 2.120 | .371E-01 |
| 2.145 | -.330E-01 | 2.130 | .119E-01 | 2.135 | -.417E-02 | 2.140 | -.208E-01 |
| 2.155 | -.500E-01 | 2.150 | -.388E-01 | 2.155 | -.573E-01 | 2.160 | -.513E-01 |
| 2.185 | -.673E-02 | 2.170 | -.508E-01 | 2.175 | -.448E-01 | 2.180 | -.214E-01 |
| 2.205 | -.100E-01 | 2.190 | .102E-01 | 2.195 | .229E-01 | 2.200 | .282E-01 |
| 2.225 | .151E-02 | 2.210 | -.276E-02 | 2.215 | -.613E-02 | 2.220 | -.768E-02 |
| 2.245 | .114E-01 | 2.230 | -.145E-01 | 2.235 | .136E-01 | 2.240 | .199E-01 |
| 2.255 | .226E-02 | 2.250 | .553E-03 | 2.255 | .608E-02 | 2.250 | .265E-02 |
| 2.235 | -.297E-01 | 2.270 | -.174E-02 | 2.275 | -.115E-01 | 2.280 | -.167E-01 |
| 2.305 | -.349E-01 | 2.290 | -.359E-01 | 2.295 | -.377E-01 | 2.300 | -.381E-01 |
| 2.325 | -.270E-01 | 2.310 | -.354E-01 | 2.315 | -.332E-01 | 2.320 | -.298E-01 |
| 2.345 | -.457E-02 | 2.330 | -.187E-01 | 2.335 | -.189E-01 | 2.340 | -.151E-01 |
| 2.355 | -.239E-01 | 2.350 | -.290E-02 | 2.355 | -.253E-01 | 2.360 | -.188E-01 |
| 2.385 | -.195E-01 | 2.370 | -.288E-01 | 2.375 | -.286E-01 | 2.380 | -.548E-01 |
| 2.405 | -.782E-01 | 2.390 | -.414E-01 | 2.395 | -.543E-01 | 2.400 | -.678E-01 |
| 2.425 | -.153E+00 | 2.410 | -.872E-01 | 2.415 | -.101E+00 | 2.420 | -.121E+00 |
| 2.445 | -.157E+00 | 2.430 | -.158E+00 | 2.435 | -.170E+00 | 2.440 | -.173E+00 |
| | | 2.450 | -.157E+00 | 2.455 | -.121E+00 | 2.450 | -.113E+00 |

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|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 2.555 | .907E-01 | 2.570 | .117E+00 | 2.555 | .103E+00 | 2.550 | .101E+00 |
| 2.585 | .603E-01 | 2.570 | .852E-01 | 2.575 | .832E-01 | 2.580 | .548E-01 |
| 2.605 | -.623E-01 | 2.590 | .441E-01 | 2.595 | .170E-01 | 2.600 | -.723E-02 |
| 2.625 | -.773E-01 | 2.610 | -.603E-01 | 2.615 | -.698E-01 | 2.620 | -.782E-01 |
| 2.645 | -.377E-01 | 2.630 | -.538E-01 | 2.635 | -.503E-01 | 2.640 | -.588E-01 |
| 2.665 | -.151E+00 | 2.650 | -.130E+00 | 2.655 | -.164E+00 | 2.660 | -.179E+00 |
| 2.645 | .444E-01 | 2.670 | -.115E+00 | 2.675 | -.548E-01 | 2.630 | .147E-02 |
| 2.705 | .139E+00 | 2.690 | .693E-01 | 2.695 | .778E-01 | 2.700 | .748E-01 |
| 2.725 | .159E+00 | 2.710 | .113E+00 | 2.715 | .120E+00 | 2.720 | .142E+00 |
| 2.745 | .204E+00 | 2.730 | .208E+00 | 2.735 | .196E+00 | 2.740 | .199E+00 |
| 2.755 | .523E-01 | 2.750 | .195E+00 | 2.755 | .131E+00 | 2.750 | .977E-01 |
| 2.785 | -.383E-01 | 2.770 | .121E-01 | 2.775 | -.145E-01 | 2.730 | -.236E-01 |
| 2.805 | -.523E-01 | 2.790 | -.503E-01 | 2.795 | -.578E-01 | 2.800 | -.563E-01 |
| 2.825 | .225E-01 | 2.810 | -.285E-01 | 2.815 | -.481E-02 | 2.820 | .135E-01 |
| 2.845 | -.110E+00 | 2.830 | -.180E-01 | 2.835 | -.280E-01 | 2.840 | -.643E-01 |
| 2.865 | -.142E+00 | 2.850 | -.146E+00 | 2.855 | -.150E+00 | 2.850 | -.157E+00 |
| 2.885 | -.125E+00 | 2.870 | -.122E+00 | 2.875 | -.103E+00 | 2.880 | -.158E+00 |
| 2.905 | -.173E+00 | 2.890 | -.124E+00 | 2.895 | -.137E+00 | 2.900 | -.145E+00 |
| 2.925 | -.205E+00 | 2.910 | -.151E+00 | 2.915 | -.168E+00 | 2.920 | -.188E+00 |
| 2.945 | -.902E-01 | 2.930 | -.151E+00 | 2.935 | -.150E+00 | 2.940 | -.130E+00 |
| 2.965 | -.372E-01 | 2.950 | -.578E-01 | 2.955 | -.598E-01 | 2.960 | -.429E-01 |
| 2.985 | -.231E-01 | 2.970 | -.344E-01 | 2.975 | -.286E-01 | 2.980 | -.382E-01 |
| 3.005 | .295E-01 | 2.990 | -.159E-01 | 2.995 | -.159E-01 | 3.000 | -.145E-01 |
| 3.025 | .748E-01 | 3.010 | .294E-01 | 3.015 | .453E-01 | 3.020 | .643E-01 |
| 3.045 | .342E-01 | 3.030 | .106E+00 | 3.035 | .837E-01 | 3.040 | .832E-01 |
| 3.065 | .379E-01 | 3.050 | .807E-01 | 3.055 | .347E-01 | 3.060 | .583E-01 |
| 3.085 | .250E-01 | 3.070 | .236E-01 | 3.075 | .129E-01 | 3.080 | .381E-01 |
| 3.105 | .157E+00 | 3.090 | .352E-01 | 3.095 | .558E-01 | 3.100 | .769E-01 |
| 3.125 | .233E+00 | 3.110 | .155E+00 | 3.115 | .178E+00 | 3.120 | .211E+00 |
| 3.145 | .332E+00 | 3.130 | .325E+00 | 3.135 | .298E+00 | 3.140 | .305E+00 |
| 3.165 | .384E+00 | 3.150 | .352E+00 | 3.155 | .409E+00 | 3.160 | .386E+00 |
| 3.185 | .325E+00 | 3.170 | .398E+00 | 3.175 | .409E+00 | 3.180 | .319E+00 |
| 3.205 | .643E-01 | 3.190 | .292E+00 | 3.195 | .251E+00 | 3.200 | .222E+00 |
| 3.225 | -.491E-01 | 3.210 | .677E-01 | 3.215 | .480E-01 | 3.220 | -.129E-01 |
| 3.245 | -.271E-01 | 3.230 | -.523E-01 | 3.235 | -.296E-01 | 3.240 | -.178E-01 |
| 3.265 | .152E-01 | 3.250 | -.470E-01 | 3.255 | .151E-01 | 3.260 | -.415E-02 |
| 3.285 | .907E-01 | 3.270 | .454E-01 | 3.275 | .638E-01 | 3.280 | .947E-01 |
| 3.305 | .145E+00 | 3.290 | .107E+00 | 3.295 | .136E+00 | 3.300 | .165E+00 |
| 3.325 | .186E+00 | 3.310 | .159E+00 | 3.315 | .177E+00 | 3.320 | .180E+00 |
| 3.345 | .141E+00 | 3.330 | .156E+00 | 3.335 | .167E+00 | 3.340 | .158E+00 |
| 3.365 | .957E-01 | 3.350 | .126E+00 | 3.355 | .121E+00 | 3.360 | .110E+00 |
| 3.385 | .857E-01 | 3.370 | .822E-01 | 3.375 | .688E-01 | 3.380 | .952E-01 |
| 3.405 | .122E+00 | 3.390 | .912E-01 | 3.395 | .977E-01 | 3.400 | .102E+00 |
| 3.425 | .116E+00 | 3.410 | .109E+00 | 3.415 | .108E+00 | 3.420 | .113E+00 |
| 3.445 | .148E+00 | 3.430 | .125E+00 | 3.435 | .122E+00 | 3.440 | .130E+00 |
| 3.465 | .183E+00 | 3.450 | .156E+00 | 3.455 | .165E+00 | 3.460 | .180E+00 |
| 3.485 | .134E+00 | 3.470 | .179E+00 | 3.475 | .173E+00 | 3.480 | .148E+00 |
| 3.505 | .633E-01 | 3.490 | .109E+00 | 3.495 | .787E-01 | 3.500 | .538E-01 |
| 3.525 | .792E-01 | 3.510 | .553E-01 | 3.515 | .588E-01 | 3.520 | .693E-01 |
| 3.545 | .115E+00 | 3.530 | .847E-01 | 3.535 | .952E-01 | 3.540 | .106E+00 |
| 3.565 | .932E-01 | 3.550 | .121E+00 | 3.555 | .827E-01 | 3.560 | .947E-01 |
| 3.585 | .140E+00 | 3.570 | .917E-01 | 3.575 | .101E+00 | 3.580 | .113E+00 |
| 3.605 | .133E+00 | 3.590 | .156E+00 | 3.595 | .163E+00 | 3.600 | .174E+00 |
| 3.625 | .207E+00 | 3.610 | .159E+00 | 3.615 | .172E+00 | 3.620 | .185E+00 |
| 3.645 | .100E+00 | 3.630 | .153E+00 | 3.635 | .187E+00 | 3.640 | .154E+00 |
| 3.665 | -.436E-01 | 3.650 | .299E-01 | 3.655 | -.177E-01 | 3.660 | -.441E-01 |
| 3.685 | -.453E-01 | 3.670 | -.418E-01 | 3.675 | -.327E-01 | 3.680 | -.451E-01 |
| 3.705 | -.243E+00 | 3.690 | -.648E-01 | 3.695 | -.982E-01 | 3.700 | -.137E+00 |
| 3.725 | -.308E+00 | 3.710 | -.254E+00 | 3.715 | -.282E+00 | 3.720 | -.307E+00 |
| 3.745 | -.201E+00 | 3.730 | -.224E+00 | 3.735 | .7250E+00 | 3.740 | -.216E+00 |
| 3.765 | -.912E-01 | 3.750 | -.200E+00 | 3.755 | -.758E-01 | 3.760 | -.111E+00 |
| | | 3.770 | -.549E-01 | 3.775 | -.392E-01 | 3.780 | -.548E-02 |

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|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 3.835 | -.132E+00 | 3.870 | -.249E+00 | 3.895 | -.237E+00 | 3.890 | -.156E+00 |
| 3.905 | -.144E-01 | 3.890 | -.101E+00 | 3.895 | -.817E-01 | 3.900 | -.807E-01 |
| 3.925 | .157E-03 | 3.910 | -.430E-01 | 3.915 | -.356E-01 | 3.920 | -.135E-01 |
| 3.945 | .487E-01 | 3.930 | .827E-03 | 3.935 | .104E-02 | 3.940 | .159E-01 |
| 3.955 | .132E+00 | 3.950 | .902E-01 | 3.955 | -.917E-01 | 3.960 | .125E+00 |
| 3.985 | .107E+00 | 3.970 | .125E+00 | 3.975 | .118E+00 | 3.980 | .107E+00 |
| 4.005 | .306E-01 | 3.990 | .101E+00 | 3.995 | .892E-01 | 4.000 | .753E-01 |
| 4.025 | -.155E-01 | 4.010 | .284E-01 | 4.015 | .137E-01 | 4.020 | -.434E-02 |
| 4.045 | -.127E+00 | 4.030 | -.957E-01 | 4.035 | -.778E-01 | 4.040 | -.937E-01 |
| 4.055 | -.100E+00 | 4.050 | -.154E+00 | 4.055 | -.922E-01 | 4.060 | -.108E+00 |
| 4.055 | -.523E-01 | 4.070 | -.997E-01 | 4.075 | -.106E+00 | 4.080 | -.753E-02 |
| 4.105 | .797E-01 | 4.070 | -.349E-01 | 4.095 | .110E-01 | 4.100 | .452E-01 |
| 4.125 | .125E+00 | 4.110 | .807E-01 | 4.115 | .847E-01 | 4.120 | .106E+00 |
| 4.145 | .103E+00 | 4.130 | .134E+00 | 4.135 | .121E+00 | 4.140 | .108E+00 |
| 4.155 | -.982E-02 | 4.150 | .103E+00 | 4.155 | -.663E-02 | 4.160 | .140E-01 |
| 4.155 | -.573E-01 | 4.170 | -.435E-01 | 4.175 | -.553E-01 | 4.180 | -.107E+00 |
| 4.205 | -.857E-01 | 4.190 | -.653E-01 | 4.195 | -.877E-01 | 4.200 | -.109E+00 |
| 4.225 | -.447E-01 | 4.210 | -.832E-01 | 4.215 | -.678E-01 | 4.220 | -.533E-01 |
| 4.245 | .648E-01 | 4.230 | .197E-01 | 4.235 | .173E-01 | 4.240 | .390E-01 |
| 4.255 | .120E+00 | 4.250 | .753E-01 | 4.255 | .144E+00 | 4.260 | .115E+00 |
| 4.255 | .713E-01 | 4.270 | .139E+00 | 4.275 | .148E+00 | 4.280 | .812E-01 |
| 4.305 | -.837E-01 | 4.290 | .450E-01 | 4.295 | .238E-01 | 4.300 | .184E-01 |
| 4.325 | -.139E+00 | 4.310 | -.553E-01 | 4.315 | -.753E-01 | 4.320 | -.114E+00 |
| 4.345 | -.952E-01 | 4.330 | -.121E+00 | 4.335 | -.109E+00 | 4.340 | -.987E-01 |
| 4.355 | -.753E-01 | 4.350 | -.105E+00 | 4.355 | -.773E-01 | 4.360 | -.852E-01 |
| 4.385 | -.289E-02 | 4.370 | -.618E-01 | 4.375 | -.503E-01 | 4.380 | -.122E-02 |
| 4.405 | .115E+00 | 4.390 | .141E-01 | 4.395 | .350E-01 | 4.400 | .481E-01 |
| 4.425 | .118E+00 | 4.410 | .912E-01 | 4.415 | .952E-01 | 4.420 | .111E+00 |
| 4.445 | .151E+00 | 4.430 | .157E+00 | 4.435 | .129E+00 | 4.440 | .129E+00 |
| 4.455 | .178E+00 | 4.450 | .174E+00 | 4.455 | .206E+00 | 4.460 | .201E+00 |
| 4.485 | .106E+00 | 4.470 | .199E+00 | 4.475 | .200E+00 | 4.480 | .107E+00 |
| 4.505 | -.115E+00 | 4.490 | .653E-01 | 4.495 | .152E-01 | 4.500 | -.143E-01 |
| 4.525 | -.136E+00 | 4.510 | -.857E-01 | 4.515 | -.952E-01 | 4.520 | -.123E+00 |
| 4.545 | -.144E+00 | 4.530 | -.181E+00 | 4.535 | -.141E+00 | 4.540 | -.130E+00 |
| 4.555 | -.156E+00 | 4.550 | -.155E+00 | 4.555 | -.148E+00 | 4.560 | -.159E+00 |
| 4.585 | -.125E+00 | 4.570 | -.153E+00 | 4.575 | -.158E+00 | 4.580 | -.105E+00 |
| 4.605 | .857E-02 | 4.590 | -.116E+00 | 4.595 | -.952E-01 | 4.600 | -.852E-01 |
| 4.625 | .146E+00 | 4.610 | -.110E-01 | 4.615 | .217E-01 | 4.620 | .857E-01 |
| 4.645 | .327E+00 | 4.630 | .305E+00 | 4.635 | .289E+00 | 4.640 | .305E+00 |
| 4.655 | .346E+00 | 4.650 | .329E+00 | 4.655 | .383E+00 | 4.660 | .335E+00 |
| 4.685 | .498E+00 | 4.670 | .404E+00 | 4.675 | .454E+00 | 4.680 | .488E+00 |
| 4.705 | .452E+00 | 4.690 | .498E+00 | 4.695 | .438E+00 | 4.700 | .487E+00 |
| 4.725 | .351E+00 | 4.710 | .446E+00 | 4.715 | .406E+00 | 4.720 | .368E+00 |
| 4.745 | .254E+00 | 4.730 | .238E+00 | 4.735 | .284E+00 | 4.740 | .284E+00 |
| 4.755 | .206E+00 | 4.750 | .254E+00 | 4.755 | .197E+00 | 4.760 | .219E+00 |
| 4.785 | .753E-02 | 4.770 | .152E+00 | 4.775 | .118E+00 | 4.780 | -.118E-01 |
| 4.805 | -.105E+00 | 4.790 | -.593E-02 | 4.795 | -.302E-01 | 4.800 | -.362E-01 |
| 4.825 | -.518E-01 | 4.810 | -.419E-01 | 4.815 | -.223E-01 | 4.820 | -.375E-01 |
| 4.845 | -.273E+00 | 4.830 | -.121E+00 | 4.835 | -.178E+00 | 4.840 | -.215E+00 |
| 4.855 | -.332E+00 | 4.850 | -.326E+00 | 4.855 | -.412E+00 | 4.860 | -.390E+00 |
| 4.885 | -.248E+00 | 4.870 | -.386E+00 | 4.875 | -.385E+00 | 4.880 | -.241E+00 |
| 4.905 | -.253E-01 | 4.890 | -.211E+00 | 4.895 | -.173E+00 | 4.900 | -.171E+00 |
| 4.925 | -.737E-01 | 4.910 | -.115E+00 | 4.915 | -.124E+00 | 4.920 | -.937E-01 |
| 4.945 | -.753E-01 | 4.930 | -.419E-01 | 4.935 | -.712E-01 | 4.940 | -.102E+00 |
| 4.955 | -.129E+00 | 4.950 | -.415E-01 | 4.955 | -.132E+00 | 4.960 | -.106E+00 |
| 4.985 | -.211E+00 | 4.970 | -.158E+00 | 4.975 | -.156E+00 | 4.980 | -.246E+00 |
| 5.005 | -.277E+00 | 4.990 | -.225E+00 | 4.995 | -.254E+00 | 5.000 | -.249E+00 |
| 5.025 | -.223E+00 | 5.010 | -.252E+00 | 5.015 | -.242E+00 | 5.020 | -.230E+00 |
| 5.045 | -.137E+00 | 5.030 | -.178E+00 | 5.035 | -.173E+00 | 5.040 | -.155E+00 |
| 5.055 | -.101E+00 | 5.050 | -.129E+00 | 5.055 | -.957E-01 | 5.060 | -.107E+00 |
| 5.085 | -.382E-01 | 5.070 | -.842E-01 | 5.075 | -.822E-01 | 5.080 | -.997E-01 |
| | | 5.090 | -.957E-01 | 5.095 | -.857E-01 | 5.100 | -.718E-01 |

| | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 5.205 | -.129E+00 | 5.210 | -.120E+00 | 5.215 | -.120E+00 | 5.220 | -.129E+00 |
| 5.225 | -.140E+00 | 5.230 | -.136E+00 | 5.235 | -.101E+00 | 5.240 | -.922E-01 |
| 5.245 | -.877E-01 | 5.250 | -.887E-01 | 5.255 | -.917E-01 | 5.260 | -.957E-01 |
| 5.265 | -.977E-01 | 5.270 | -.977E-01 | 5.275 | -.982E-01 | 5.280 | -.138E+00 |
| 5.285 | -.133E+00 | 5.290 | -.142E+00 | 5.295 | -.152E+00 | 5.300 | -.156E+00 |
| 5.305 | -.162E+00 | 5.310 | -.152E+00 | 5.315 | -.150E+00 | 5.320 | -.157E+00 |
| 5.325 | -.156E+00 | 5.330 | -.852E-01 | 5.335 | -.112E+00 | 5.340 | -.104E+00 |
| 5.345 | -.972E-01 | 5.350 | -.852E-01 | 5.355 | .233E-01 | 5.360 | -.258E-01 |
| 5.365 | -.151E-01 | 5.370 | .238E-01 | 5.375 | .548E-01 | 5.380 | .753E-01 |
| 5.385 | .593E-01 | 5.390 | .528E-01 | 5.395 | .598E-01 | 5.400 | .698E-01 |
| 5.405 | .708E-02 | 5.410 | .103E-01 | 5.415 | -.171E-01 | 5.420 | -.503E-01 |
| 5.425 | -.588E-01 | 5.430 | -.643E-01 | 5.435 | -.598E-01 | 5.440 | -.543E-01 |
| 5.445 | -.509E-01 | 5.450 | -.472E-01 | 5.455 | .618E-01 | 5.460 | .476E-01 |
| 5.465 | .720E-01 | 5.470 | .108E+00 | 5.475 | .125E+00 | 5.480 | .658E-01 |
| 5.485 | .593E-01 | 5.490 | .351E-01 | 5.495 | .170E-01 | 5.500 | .142E-01 |
| 5.505 | -.797E-01 | 5.510 | -.416E-01 | 5.515 | -.479E-01 | 5.520 | -.733E-01 |
| 5.525 | -.872E-01 | 5.530 | -.618E-01 | 5.535 | -.435E-01 | 5.540 | -.223E-01 |
| 5.545 | -.120E-01 | 5.550 | -.155E-01 | 5.555 | -.106E+00 | 5.560 | -.106E+00 |
| 5.565 | -.137E+00 | 5.570 | -.174E+00 | 5.575 | -.197E+00 | 5.580 | -.344E+00 |
| 5.585 | -.297E+00 | 5.590 | -.308E+00 | 5.595 | -.343E+00 | 5.600 | -.357E+00 |
| 5.605 | -.338E+00 | 5.610 | -.290E+00 | 5.615 | -.248E+00 | 5.620 | -.229E+00 |
| 5.625 | -.242E+00 | 5.630 | -.216E+00 | 5.635 | -.240E+00 | 5.640 | -.254E+00 |
| 5.645 | -.259E+00 | 5.650 | -.290E+00 | 5.655 | -.256E+00 | 5.660 | -.288E+00 |
| 5.665 | -.286E+00 | 5.670 | -.257E+00 | 5.675 | -.251E+00 | 5.680 | -.192E+00 |
| 5.685 | -.203E+00 | 5.690 | -.190E+00 | 5.695 | -.156E+00 | 5.700 | -.154E+00 |
| 5.705 | -.154E+00 | 5.710 | -.182E+00 | 5.715 | -.199E+00 | 5.720 | -.204E+00 |
| 5.725 | -.195E+00 | 5.730 | -.113E+00 | 5.735 | -.108E+00 | 5.740 | -.797E-01 |
| 5.745 | -.459E-01 | 5.750 | -.250E-01 | 5.755 | .327E-01 | 5.760 | .872E-03 |
| 5.765 | -.133E-01 | 5.770 | -.177E-01 | 5.775 | -.259E-01 | 5.780 | .411E-01 |
| 5.785 | .698E-02 | 5.790 | .154E-01 | 5.795 | .548E-01 | 5.800 | .972E-01 |
| 5.805 | .229E+00 | 5.810 | .231E+00 | 5.815 | .271E+00 | 5.820 | .322E+00 |
| 5.825 | .350E+00 | 5.830 | .299E+00 | 5.835 | .271E+00 | 5.840 | .222E+00 |
| 5.845 | .178E+00 | 5.850 | .153E+00 | 5.855 | .129E+00 | 5.860 | .135E+00 |
| 5.865 | .137E+00 | 5.870 | .144E+00 | 5.875 | .160E+00 | 5.880 | .187E+00 |
| 5.885 | .215E+00 | 5.890 | .239E+00 | 5.895 | .255E+00 | 5.900 | .262E+00 |
| 5.905 | .202E+00 | 5.910 | .214E+00 | 5.915 | .198E+00 | 5.920 | .172E+00 |
| 5.925 | .150E+00 | 5.930 | .152E+00 | 5.935 | .176E+00 | 5.940 | .189E+00 |
| 5.945 | .192E+00 | 5.950 | .187E+00 | 5.955 | .192E+00 | 5.960 | .181E+00 |
| 5.965 | .176E+00 | 5.970 | .170E+00 | 5.975 | .159E+00 | 5.980 | .131E+00 |
| 5.985 | .121E+00 | 5.990 | .111E+00 | 5.995 | .106E+00 | 6.000 | .110E+00 |
| 6.005 | .149E+00 | 6.010 | .158E+00 | 6.015 | .184E+00 | 6.020 | .214E+00 |
| 6.025 | .240E+00 | 6.030 | .230E+00 | 6.035 | .248E+00 | 6.040 | .250E+00 |
| 6.045 | .245E+00 | 6.050 | .240E+00 | 6.055 | .997E-01 | 6.060 | .117E+00 |
| 6.065 | .753E-01 | 6.070 | .125E-01 | 6.075 | -.298E-01 | 6.080 | -.159E+00 |
| 6.085 | -.120E+00 | 6.090 | -.129E+00 | 6.095 | -.163E+00 | 6.100 | -.183E+00 |
| 6.105 | -.153E+00 | 6.110 | -.125E+00 | 6.115 | -.947E-01 | 6.120 | -.802E-01 |
| 6.125 | -.392E-01 | 6.130 | -.128E+00 | 6.135 | -.133E+00 | 6.140 | -.144E+00 |
| 6.145 | -.153E+00 | 6.150 | -.159E+00 | 6.155 | -.252E+00 | 6.160 | -.241E+00 |
| 6.165 | -.253E+00 | 6.170 | -.250E+00 | 6.175 | -.296E+00 | 6.180 | -.321E+00 |
| 6.185 | -.300E+00 | 6.190 | -.290E+00 | 6.195 | -.292E+00 | 6.200 | -.296E+00 |
| 6.205 | -.193E+00 | 6.210 | -.207E+00 | 6.215 | -.173E+00 | 6.220 | -.126E+00 |
| 6.225 | -.917E-01 | 6.230 | -.158E-01 | 6.235 | -.259E-01 | 6.240 | -.952E-02 |
| 6.245 | .293E-01 | 6.250 | .421E-01 | 6.255 | .538E-01 | 6.260 | .386E-01 |
| 6.265 | .223E-01 | 6.270 | .627E-02 | 6.275 | -.753E-02 | 6.280 | -.375E-01 |
| 6.285 | -.508E-01 | 6.290 | -.852E-01 | 6.295 | -.104E+00 | 6.300 | -.114E+00 |
| 6.305 | -.137E+00 | 6.310 | -.137E+00 | 6.315 | -.143E+00 | 6.320 | -.151E+00 |
| 6.325 | -.194E+00 | 6.330 | -.753E-01 | 6.335 | -.307E-01 | 6.340 | -.612E-01 |
| 6.345 | -.548E-01 | 6.350 | -.708E-01 | 6.355 | -.952E-01 | 6.360 | -.114E+00 |
| 6.365 | -.124E+00 | 6.370 | -.136E+00 | 6.375 | -.123E+00 | 6.380 | -.208E+00 |
| 6.385 | -.179E+00 | 6.390 | -.181E+00 | 6.395 | -.201E+00 | 6.400 | -.207E+00 |

| | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 6.525 | .201E+00 | 6.530 | .200E+00 | 6.535 | .202E+00 | 6.520 | .195E+00 |
| 6.545 | .678E-01 | 6.530 | .726E-01 | 6.535 | .125E+00 | 6.540 | .110E+00 |
| 6.555 | .917E-01 | 6.550 | .434E-01 | 6.555 | .837E-01 | 6.560 | .897E-01 |
| 6.585 | -.442E-02 | 6.570 | .713E-01 | 6.575 | .334E-01 | 6.580 | .295E-01 |
| 6.605 | -.392E-01 | 6.590 | -.104E-01 | 6.595 | -.416E-02 | 6.600 | -.313E-03 |
| 6.625 | -.857E-01 | 6.610 | -.703E-01 | 6.615 | -.763E-01 | 6.620 | -.872E-01 |
| 6.645 | -.322E-01 | 6.630 | -.912E-01 | 6.635 | -.718E-01 | 6.640 | -.698E-01 |
| 6.655 | -.120E+00 | 6.650 | -.957E-01 | 6.655 | -.137E+00 | 6.660 | -.126E+00 |
| 6.665 | -.708E-01 | 6.670 | -.114E+00 | 6.675 | -.101E+00 | 6.680 | -.887E-01 |
| 6.705 | .206E-01 | 6.690 | -.618E-01 | 6.695 | -.628E-01 | 6.700 | -.698E-01 |
| 6.725 | .302E-01 | 6.710 | -.108E-01 | 6.715 | -.305E-02 | 6.720 | .184E-01 |
| 6.745 | .135E+00 | 6.730 | .957E-01 | 6.735 | .763E-01 | 6.740 | .962E-01 |
| 6.755 | .112E+00 | 6.750 | .153E+00 | 6.755 | .145E+00 | 6.760 | .136E+00 |
| 6.765 | .942E-01 | 6.770 | .907E-01 | 6.775 | .802E-01 | 6.780 | .997E-01 |
| 6.805 | .215E+00 | 6.790 | .101E+00 | 6.795 | .119E+00 | 6.800 | .144E+00 |
| 6.825 | .315E+00 | 6.810 | .232E+00 | 6.815 | .255E+00 | 6.820 | .298E+00 |
| 6.845 | .230E+00 | 6.830 | .296E+00 | 6.835 | .282E+00 | 6.840 | .255E+00 |
| 6.855 | .205E+00 | 6.850 | .215E+00 | 6.855 | .186E+00 | 6.860 | .198E+00 |
| 6.885 | .340E+00 | 6.870 | .211E+00 | 6.875 | .221E+00 | 6.880 | .347E+00 |
| 6.905 | .470E+00 | 6.890 | .359E+00 | 6.895 | .398E+00 | 6.900 | .400E+00 |
| 6.925 | .395E+00 | 6.910 | .407E+00 | 6.915 | .335E+00 | 6.920 | .390E+00 |
| 6.945 | .337E+00 | 6.930 | .373E+00 | 6.935 | .352E+00 | 6.940 | .336E+00 |
| 6.955 | .345E+00 | 6.950 | .351E+00 | 6.955 | .340E+00 | 6.960 | .351E+00 |
| 6.985 | .224E+00 | 6.970 | .332E+00 | 6.975 | .322E+00 | 6.980 | .207E+00 |
| 7.005 | .138E-01 | 6.990 | .193E+00 | 6.995 | .147E+00 | 7.000 | .117E+00 |
| 7.025 | -.528E-01 | 7.010 | .407E-01 | 7.015 | .231E-01 | 7.020 | -.193E-01 |
| 7.045 | -.109E+00 | 7.030 | -.106E+00 | 7.035 | -.867E-01 | 7.040 | -.882E-01 |
| 7.055 | -.203E+00 | 7.050 | -.134E+00 | 7.055 | -.278E+00 | 7.060 | -.248E+00 |
| 7.085 | -.304E+00 | 7.070 | -.296E+00 | 7.075 | -.311E+00 | 7.080 | -.358E+00 |
| 7.105 | -.247E+00 | 7.090 | -.274E+00 | 7.095 | -.253E+00 | 7.100 | -.253E+00 |
| 7.125 | -.158E+00 | 7.110 | -.207E+00 | 7.115 | -.179E+00 | 7.120 | -.164E+00 |
| 7.145 | -.141E+00 | 7.130 | -.139E+00 | 7.135 | -.145E+00 | 7.140 | -.143E+00 |
| 7.155 | -.723E-01 | 7.150 | -.145E+00 | 7.155 | -.528E-01 | 7.160 | -.842E-01 |
| 7.185 | .787E-03 | 7.170 | -.474E-01 | 7.175 | -.385E-01 | 7.180 | .523E-01 |
| 7.205 | .548E-01 | 7.190 | -.339E-02 | 7.195 | .178E-01 | 7.200 | .298E-01 |
| 7.225 | .395E-01 | 7.210 | .201E-01 | 7.215 | .758E-02 | 7.220 | .188E-01 |
| 7.245 | .518E-01 | 7.230 | .255E-01 | 7.235 | .429E-01 | 7.240 | .463E-01 |
| 7.255 | .127E+00 | 7.250 | .698E-01 | 7.255 | .362E-01 | 7.260 | .112E+00 |
| 7.265 | .153E+00 | 7.270 | .136E+00 | 7.275 | .143E+00 | 7.280 | .144E+00 |
| 7.305 | .201E+00 | 7.290 | .158E+00 | 7.295 | .176E+00 | 7.300 | .185E+00 |
| 7.325 | .221E+00 | 7.310 | .213E+00 | 7.315 | .222E+00 | 7.320 | .224E+00 |
| 7.345 | .142E+00 | 7.330 | .178E+00 | 7.335 | .178E+00 | 7.340 | .154E+00 |
| 7.355 | .207E-01 | 7.350 | .122E+00 | 7.355 | .249E-01 | 7.360 | .385E-01 |
| 7.385 | -.902E-01 | 7.370 | -.598E-02 | 7.375 | -.182E-01 | 7.380 | -.128E+00 |
| 7.405 | -.205E+00 | 7.390 | -.104E+00 | 7.395 | -.146E+00 | 7.400 | -.179E+00 |
| 7.425 | -.246E+00 | 7.410 | -.199E+00 | 7.415 | -.203E+00 | 7.420 | -.222E+00 |
| 7.445 | -.847E-01 | 7.430 | -.133E+00 | 7.435 | -.153E+00 | 7.440 | -.135E+00 |
| 7.465 | .307E-01 | 7.450 | -.543E-01 | 7.455 | .593E-01 | 7.460 | .160E-01 |
| 7.485 | .152E+00 | 7.470 | .723E-01 | 7.475 | .972E-01 | 7.480 | .214E+00 |
| 7.505 | .147E+00 | 7.490 | .144E+00 | 7.495 | .166E+00 | 7.500 | .192E+00 |
| 7.525 | .105E+00 | 7.510 | .125E+00 | 7.515 | .992E-01 | 7.520 | .922E-01 |
| 7.545 | -.333E-01 | 7.530 | -.233E-01 | 7.535 | .207E-01 | 7.540 | .455E-03 |
| 7.555 | -.125E+00 | 7.550 | -.538E-01 | 7.555 | -.158E+00 | 7.560 | -.109E+00 |
| 7.585 | -.286E+00 | 7.570 | -.178E+00 | 7.575 | -.224E+00 | 7.580 | -.317E+00 |
| 7.605 | -.313E+00 | 7.590 | -.287E+00 | 7.595 | -.311E+00 | 7.600 | -.330E+00 |
| 7.625 | -.244E+00 | 7.610 | -.292E+00 | 7.615 | -.253E+00 | 7.620 | -.244E+00 |
| 7.645 | -.149E+00 | 7.630 | -.147E+00 | 7.635 | -.179E+00 | 7.640 | -.170E+00 |
| 7.655 | -.947E-01 | 7.650 | -.148E+00 | 7.655 | -.143E-01 | 7.660 | -.105E+00 |
| 7.685 | .329E-02 | 7.670 | -.498E-01 | 7.675 | -.127E-01 | 7.680 | .207E-01 |
| 7.705 | .558E-01 | 7.690 | -.250E-02 | 7.695 | .658E-02 | 7.700 | .184E-01 |
| | | 7.710 | .309E-01 | 7.715 | .144E-01 | 7.720 | .937E-02 |

| | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 7.845 | -.231E-01 | 7.850 | -.274E-01 | 7.855 | -.134E-01 | 7.860 | -.201E-01 |
| 7.855 | -.588E-01 | 7.855 | -.274E-01 | 7.855 | -.877E-01 | 7.850 | -.673E-01 |
| 7.845 | .292E-01 | 7.870 | -.463E-01 | 7.875 | -.198E-01 | 7.880 | -.114E-01 |
| 7.905 | .103E+00 | 7.890 | .468E-01 | 7.895 | .439E-01 | 7.900 | .312E-01 |
| 7.925 | .817E-01 | 7.910 | .718E-01 | 7.915 | .738E-01 | 7.920 | .842E-01 |
| 7.945 | -.135E-01 | 7.930 | .152E-01 | 7.935 | .658E-02 | 7.940 | -.105E-01 |
| 7.955 | -.154E+00 | 7.950 | -.115E-01 | 7.955 | -.181E+00 | 7.960 | -.127E+00 |
| 7.945 | -.305E+00 | 7.970 | -.213E+00 | 7.975 | -.247E+00 | 7.980 | -.358E+00 |
| 8.005 | -.353E+00 | 7.990 | -.308E+00 | 7.995 | -.348E+00 | 8.000 | -.386E+00 |
| 8.025 | -.310E+00 | 8.010 | -.349E+00 | 8.015 | -.326E+00 | 8.020 | -.310E+00 |
| 8.045 | -.229E+00 | 8.030 | -.233E+00 | 8.035 | -.261E+00 | 8.040 | -.251E+00 |
| 8.055 | -.223E+00 | 8.050 | -.222E+00 | 8.055 | -.193E+00 | 8.060 | -.217E+00 |
| 8.085 | -.162E+00 | 8.070 | -.212E+00 | 8.075 | -.204E+00 | 8.080 | -.140E+00 |
| 8.105 | -.558E-02 | 8.090 | -.149E+00 | 8.095 | -.114E+00 | 8.100 | -.827E-01 |
| 8.125 | .159E-01 | 8.110 | -.244E-01 | 8.115 | -.192E-01 | 8.120 | .713E-03 |
| 8.145 | .143E-01 | 8.130 | .458E-01 | 8.135 | .250E-01 | 8.140 | .134E-01 |
| 8.155 | .312E-01 | 8.150 | .208E-01 | 8.155 | .331E-01 | 8.160 | .314E-01 |
| 8.135 | .538E-01 | 8.170 | .343E-01 | 8.175 | .398E-01 | 8.180 | .518E-01 |
| 8.205 | .922E-01 | 8.190 | .558E-01 | 8.195 | .558E-01 | 8.200 | .553E-01 |
| 8.225 | .104E+00 | 8.210 | .807E-01 | 8.215 | .957E-01 | 8.220 | .957E-01 |
| 8.245 | .188E-01 | 8.230 | .338E-01 | 8.235 | .496E-01 | 8.240 | .368E-01 |
| 8.255 | .122E-01 | 8.250 | .144E-01 | 8.255 | .179E-04 | 8.250 | .141E-01 |
| 8.235 | -.653E-01 | 8.270 | -.420E-02 | 8.275 | -.241E-01 | 8.280 | -.668E-01 |
| 8.305 | -.152E+00 | 8.290 | -.703E-01 | 8.295 | -.763E-01 | 8.300 | -.768E-01 |
| 8.325 | -.152E+00 | 8.310 | -.130E+00 | 8.315 | -.134E+00 | 8.320 | -.154E+00 |
| 8.345 | -.932E-01 | 8.330 | -.143E+00 | 8.335 | -.119E+00 | 8.340 | -.997E-01 |
| 8.365 | -.719E-01 | 8.350 | -.977E-01 | 8.355 | -.807E-01 | 8.360 | -.842E-01 |
| 8.385 | .269E-01 | 8.370 | -.523E-01 | 8.375 | -.358E-01 | 8.380 | .385E-01 |
| 8.405 | .897E-01 | 8.390 | .378E-01 | 8.395 | .558E-01 | 8.400 | .593E-01 |
| 8.425 | .335E-01 | 8.410 | .528E-01 | 8.415 | .353E-01 | 8.420 | .346E-01 |
| 8.445 | .233E-01 | 8.430 | .285E-01 | 8.435 | .172E-01 | 8.440 | .142E-01 |
| 8.455 | .513E-01 | 8.450 | .419E-01 | 8.455 | .244E-01 | 8.460 | .472E-01 |
| 8.425 | .807E-01 | 8.470 | .407E-01 | 8.475 | .496E-01 | 8.480 | .882E-01 |
| 8.505 | .430E-01 | 8.490 | .797E-01 | 8.495 | .758E-01 | 8.500 | .673E-01 |
| 8.525 | .583E-01 | 8.510 | .411E-01 | 8.515 | .407E-01 | 8.520 | .461E-01 |
| 8.545 | .122E+00 | 8.530 | .683E-01 | 8.535 | .902E-01 | 8.540 | .108E+00 |
| 8.565 | .217E+00 | 8.550 | .132E+00 | 8.555 | .220E+00 | 8.560 | .206E+00 |
| 8.585 | .153E+00 | 8.570 | .231E+00 | 8.575 | .230E+00 | 8.580 | .188E+00 |
| 8.605 | .757E-01 | 8.590 | .149E+00 | 8.595 | .141E+00 | 8.600 | .146E+00 |
| 8.625 | .108E+00 | 8.610 | .124E+00 | 8.615 | .124E+00 | 8.620 | .113E+00 |
| 8.645 | -.146E-02 | 8.630 | .475E-01 | 8.635 | .613E-01 | 8.640 | .394E-01 |
| 8.665 | -.713E-01 | 8.650 | -.354E-01 | 8.655 | -.807E-01 | 8.660 | -.733E-01 |
| 8.685 | -.115E+00 | 8.670 | -.743E-01 | 8.675 | -.743E-01 | 8.680 | -.147E+00 |
| 8.705 | -.261E+00 | 8.690 | -.117E+00 | 8.695 | -.138E+00 | 8.700 | -.156E+00 |
| 8.725 | -.337E+00 | 8.710 | -.240E+00 | 8.715 | -.252E+00 | 8.720 | -.304E+00 |
| 8.745 | -.207E+00 | 8.730 | -.273E+00 | 8.735 | -.257E+00 | 8.740 | -.235E+00 |
| 8.765 | -.179E+00 | 8.750 | -.205E+00 | 8.755 | -.120E+00 | 8.760 | -.171E+00 |
| 8.785 | -.110E+00 | 8.770 | -.159E+00 | 8.775 | -.171E+00 | 8.780 | -.480E-01 |
| 8.805 | .203E+00 | 8.790 | -.101E+00 | 8.795 | -.598E-01 | 8.800 | -.523E-02 |
| 8.825 | .324E+00 | 8.810 | .154E+00 | 8.815 | .204E+00 | 8.820 | .273E+00 |
| 8.845 | .252E+00 | 8.830 | .343E+00 | 8.835 | .296E+00 | 8.840 | .264E+00 |
| 8.865 | .248E+00 | 8.850 | .276E+00 | 8.855 | .236E+00 | 8.860 | .252E+00 |
| 8.885 | .277E+00 | 8.870 | .235E+00 | 8.875 | .245E+00 | 8.880 | .240E+00 |
| 8.905 | .207E+00 | 8.890 | .291E+00 | 8.895 | .290E+00 | 8.900 | .287E+00 |
| 8.925 | .153E+00 | 8.910 | .227E+00 | 8.915 | .210E+00 | 8.920 | .176E+00 |
| 8.945 | .166E+00 | 8.930 | .120E+00 | 8.935 | .147E+00 | 8.940 | .152E+00 |
| 8.965 | .175E+00 | 8.950 | .171E+00 | 8.955 | .125E+00 | 8.960 | .162E+00 |
| 8.985 | .146E+00 | 8.970 | .171E+00 | 8.975 | .155E+00 | 8.980 | .136E+00 |
| 9.005 | .357E-01 | 8.990 | .140E+00 | 8.995 | .120E+00 | 9.000 | .987E-01 |
| 9.025 | .337E-01 | 9.010 | .852E-01 | 9.015 | .842E-01 | 9.020 | .857E-01 |
| 9.045 | -.477E-01 | 9.030 | -.456E-03 | 9.035 | .337E-02 | 9.040 | -.127E-01 |
| | | 9.050 | -.616E-01 | 9.055 | -.912E-01 | 9.060 | -.847E-01 |

| | | | | | | | |
|--------|-----------|-------|-----------|-------|-----------|--------|-----------|
| 9.155 | .236E-01 | 9.170 | .613E-01 | 9.175 | .458E-01 | 9.180 | .797E-02 |
| 9.135 | .779E-01 | 9.190 | .673E-01 | 9.175 | .857E-01 | 9.180 | .952E-01 |
| 9.205 | -.623E-01 | 9.210 | -.316E-01 | 9.195 | .703E-01 | 9.200 | .787E-01 |
| 9.225 | -.114E+00 | 9.230 | -.135E+00 | 9.215 | -.603E-01 | 9.220 | -.103E+00 |
| 9.245 | -.927E-01 | 9.250 | -.113E+00 | 9.235 | -.942E-01 | 9.240 | -.807E-01 |
| 9.255 | -.718E-01 | 9.270 | -.708E-01 | 9.255 | -.420E-01 | 9.260 | -.723E-01 |
| 9.285 | -.132E+00 | 9.290 | -.153E+00 | 9.275 | -.897E-01 | 9.280 | -.802E-01 |
| 9.305 | -.109E+00 | 9.310 | -.119E+00 | 9.295 | -.154E+00 | 9.300 | -.150E+00 |
| 9.325 | -.628E-01 | 9.330 | .498E-01 | 9.315 | -.107E+00 | 9.320 | -.337E-01 |
| 9.345 | .116E+00 | 9.350 | .156E+00 | 9.335 | .353E-01 | 9.340 | .653E-01 |
| 9.355 | .252E+00 | 9.370 | .296E+00 | 9.355 | .249E+00 | 9.350 | .233E+00 |
| 9.385 | .311E+00 | 9.390 | .294E+00 | 9.375 | .338E+00 | 9.380 | .290E+00 |
| 9.405 | .137E+00 | 9.410 | .158E+00 | 9.395 | .259E+00 | 9.400 | .256E+00 |
| 9.425 | .239E-01 | 9.430 | .693E-01 | 9.415 | .123E+00 | 9.420 | .643E-01 |
| 9.445 | .129E+00 | 9.450 | .144E+00 | 9.435 | .743E-01 | 9.440 | .103E+00 |
| 9.455 | .273E+00 | 9.470 | .317E+00 | 9.455 | .255E+00 | 9.450 | .242E+00 |
| 9.435 | .282E+00 | 9.490 | .247E+00 | 9.475 | .340E+00 | 9.480 | .309E+00 |
| 9.505 | .127E+00 | 9.510 | .130E+00 | 9.495 | .216E+00 | 9.500 | .193E+00 |
| 9.525 | .847E-01 | 9.530 | -.218E-01 | 9.515 | .114E+00 | 9.520 | .952E-01 |
| 9.545 | -.498E-01 | 9.550 | -.723E-01 | 9.535 | .432E-02 | 9.540 | -.142E-01 |
| 9.555 | -.236E+00 | 9.570 | -.298E+00 | 9.555 | -.252E+00 | 9.550 | -.205E+00 |
| 9.535 | -.231E+00 | 9.590 | -.175E+00 | 9.575 | -.331E+00 | 9.580 | -.274E+00 |
| 9.605 | .233E-01 | 9.610 | .618E-02 | 9.595 | -.138E+00 | 9.600 | -.123E+00 |
| 9.625 | .141E+00 | 9.630 | .633E-01 | 9.615 | .513E-01 | 9.620 | .112E+00 |
| 9.645 | -.399E-01 | 9.650 | -.583E-01 | 9.635 | .406E-01 | 9.640 | -.311E-02 |
| 9.655 | -.177E+00 | 9.670 | -.222E+00 | 9.655 | -.157E+00 | 9.650 | -.149E+00 |
| 9.635 | -.339E+00 | 9.690 | -.354E+00 | 9.675 | -.256E+00 | 9.680 | -.362E+00 |
| 9.705 | -.382E+00 | 9.710 | -.379E+00 | 9.695 | -.386E+00 | 9.700 | -.449E+00 |
| 9.725 | -.368E+00 | 9.730 | -.331E+00 | 9.715 | -.369E+00 | 9.720 | -.366E+00 |
| 9.745 | -.310E+00 | 9.750 | -.296E+00 | 9.735 | -.338E+00 | 9.740 | -.327E+00 |
| 9.755 | -.195E+00 | 9.770 | -.156E+00 | 9.755 | -.193E+00 | 9.750 | -.213E+00 |
| 9.785 | -.352E-01 | 9.790 | -.952E-02 | 9.775 | -.152E+00 | 9.780 | .164E-01 |
| 9.805 | .146E+00 | 9.810 | .111E+00 | 9.795 | .538E-01 | 9.800 | .972E-01 |
| 9.825 | .133E+00 | 9.830 | .146E+00 | 9.815 | .100E+00 | 9.820 | .115E+00 |
| 9.845 | .673E-01 | 9.850 | .508E-01 | 9.835 | .121E+00 | 9.840 | .907E-01 |
| 9.855 | .643E-02 | 9.870 | .148E-02 | 9.855 | .331E-01 | 9.850 | .189E-01 |
| 9.835 | .243E-01 | 9.890 | .353E-01 | 9.875 | .693E-02 | 9.880 | .563E-02 |
| 9.905 | .473E-01 | 9.910 | .548E-01 | 9.895 | .409E-01 | 9.900 | .471E-01 |
| 9.925 | .301E-01 | 9.930 | -.538E-01 | 9.915 | .528E-01 | 9.920 | .422E-01 |
| 9.945 | -.673E-01 | 9.950 | -.758E-01 | 9.935 | -.388E-01 | 9.940 | -.490E-01 |
| 9.955 | -.122E+00 | 9.970 | -.151E+00 | 9.955 | -.147E+00 | 9.950 | -.116E+00 |
| 9.935 | -.209E+00 | 9.990 | -.223E+00 | 9.975 | -.179E+00 | 9.980 | -.202E+00 |
| 10.005 | -.199E+00 | | | 9.995 | -.247E+00 | 10.000 | -.272E+00 |

PROGRAM HAS READ IMPEDANCES FOR A0= .204E+00
PROGRAM HAS READ IMPEDANCES FOR A0= .306E+00
PROGRAM HAS READ IMPEDANCES FOR A0= .408E+00
PROGRAM HAS READ IMPEDANCES FOR A0= .500E+00
PROGRAM HAS READ IMPEDANCES FOR A0= .817E+00
PROGRAM HAS READ IMPEDANCES FOR A0= .100E+01
PROGRAM HAS READ IMPEDANCES FOR A0= .123E+01
PROGRAM HAS READ IMPEDANCES FOR A0= .150E+01
PROGRAM HAS READ IMPEDANCES FOR A0= .163E+01
PROGRAM HAS READ IMPEDANCES FOR A0= .200E+01
PROGRAM HAS READ IMPEDANCES FOR A0= .212E+01
PROGRAM HAS READ IMPEDANCES FOR A0= .225E+01
PROGRAM HAS READ IMPEDANCES FOR A0= .250E+01
PROGRAM HAS READ IMPEDANCES FOR A0= .300E+01
PROGRAM HAS READ IMPEDANCES FOR A0= .327E+01
PROGRAM HAS READ IMPEDANCES FOR A0= .357E+01
PROGRAM HAS READ IMPEDANCES FOR A0= .400E+01
PROGRAM HAS READ IMPEDANCES FOR A0= .429E+01
PROGRAM HAS READ IMPEDANCES FOR A0= .490E+01
PROGRAM HAS READ IMPEDANCES FOR A0= .531E+01
PROGRAM HAS READ IMPEDANCES FOR A0= .500E+01
PROGRAM HAS READ IMPEDANCES FOR A0= .694E+01
PROGRAM HAS READ IMPEDANCES FOR A0= .756E+01
PROGRAM HAS READ IMPEDANCES FOR A0= .817E+01
PROGRAM HAS READ IMPEDANCES FOR A0= .898E+01
PROGRAM HAS READ IMPEDANCES FOR A0= .980E+01
PROGRAM HAS READ IMPEDANCES FOR A0= .106E+02
PROGRAM HAS READ IMPEDANCES FOR A0= .114E+02
PROGRAM HAS READ IMPEDANCES FOR A0= .123E+02

| | | | |
|-------------------------|---|------------------------|-----------|
| DIRECTION OF RESPONSE : | 1 | MAXIMUM ACCELERATION : | .5172E+00 |
| DIRECTION OF RESPONSE : | 2 | MAXIMUM ACCELERATION : | .1619E-25 |
| DIRECTION OF RESPONSE : | 3 | MAXIMUM ACCELERATION : | .1419E-09 |
| DIRECTION OF RESPONSE : | 4 | MAXIMUM ACCELERATION : | .1890E-26 |
| DIRECTION OF RESPONSE : | 5 | MAXIMUM ACCELERATION : | .5175E-02 |
| DIRECTION OF RESPONSE : | 6 | MAXIMUM ACCELERATION : | .1486E-16 |

STRUCTURE RESPONSE

| | | | |
|---------------|----|------------------------|-----------|
| DOF.(KPCOM) : | 10 | MAXIMUM ACCELERATION : | .5258E+00 |
| DOF.(KPCOM) : | 11 | MAXIMUM ACCELERATION : | .1196E-09 |
| DOF.(KPCOM) : | 19 | MAXIMUM ACCELERATION : | .9675E+00 |
| DOF.(KPCOM) : | 20 | MAXIMUM ACCELERATION : | .2316E-09 |
| DOF.(KPCOM) : | 31 | MAXIMUM ACCELERATION : | .1304E+01 |
| DOF.(KPCOM) : | 32 | MAXIMUM ACCELERATION : | .2375E-09 |

03.33.55.INSSIN,T9997,P2.
03.33.55.USER,SONGS1.
03.33.55.CHARGE,PROJNC,03100681355.
03.33.55.3PROLOG,PROCL1.
03.33.55.4SETS,PROCL/FS=AD.
03.33.55.PROCL.
03.33.55.//LOADER 587 .004 CP .054 RT//LOADER 014472/040000-040000 CM 1 TM
03.33.57.IFE,DT.EQ.TX0,FLASHIT.
03.33.57.ENDIF,FLASHIT.
03.33.57.IFE,DT.EQ.BC0,BULLIT.
03.33.57.CHGFTN.
03.33.57. END CHGFTN
03.33.57. 15600 MAXIMUM EXECUTION FL.
03.33.57. 0.002 CP SECONDS EXECUTION TIME.
03.33.57.GET,SYSBULL/UN=EDSUPER,NA.
03.33.58.IFE,=ILT(SYSBULL,AS),OUTIT.
03.33.58.COPY,SYSBULL.
03.33.58. END ENCOUNTERED.
03.33.58.ENDIF,OUTIT.
03.33.58.ENDIF,BULLIT.
03.33.58.RETURN,PROCL.
03.33.59.REVERT.
03.33.59.ROUTE,OUTPUT,DC=PR,UN=CSJ/VAX1,UJN=VAX,FC=CP,DEF.
03.33.59. ROUTE COMPLETE.
03.34.00.REWIND,INPUT.
03.34.00.COPYSEF,INPUT,OUTPUT.
03.34.00. COPY COMPLETE.
03.34.00.REWIND,INPUT.
03.34.00.SKIPR,INPUT.
03.34.00.ATTACH,C6T10.
03.34.00.REWIND,C6T10.
03.34.00.COPY3F,C6T10,TAPE10.
03.34.00. COPY COMPLETE.
03.34.00.REWIND,TAPE10.
03.34.00.ATTACH,T15.
03.34.01.ATTACH,T16.
03.34.01.ATTACH,T17.
03.34.01.COMMENT. TAPE15 IS STRUCTURE NODE DATA
03.34.01.COPY3F,T15,TAPE15.
03.34.02. COPY COMPLETE.
03.34.02.COMMENT. TAPE16 IS STRUCTURE MASS MATRIX
03.34.02.COPY3F,T16,TAPE16.
03.34.02. COPY COMPLETE.
03.34.02.COMMENT. TAPE17 IS FREQUENCIES, MODAL DAMPINGS, AND MODE SHAPES
03.34.02.COPY3F,T17,TAPE17.
03.34.02. COPY COMPLETE.
03.34.02.ATTACH,TAPE18.
03.34.03.REWIND,TAPE18.
03.34.03.REWIND,TAPE15,TAPE16,TAPE17,TAPE18.
03.34.03.ATTACH,SSIN/UN=SONGS1.
03.34.03.SSIN.
03.34.05. CM LWA+1 =3123120, LOADER USED 3304000
03.34.05.//LOADER 587 .051 CP 1.756 PT//LOADER 330326/040000-334000 CM 73 TM
03.35.43. STOP
03.35.43. 321400 MAXIMUM EXECUTION FL.
03.35.43. 59.260 CP SECONDS EXECUTION TIME.
03.35.43.REWIND,TAPE2.
03.35.43.PUNGE,NRCSST0/NA.
03.35.47.DEFINE,NRCSST0/M=W.
03.35.47.COPY3F,TAPE2,NRCSST0.

08.35.51.UECP, 60.825SECS.
08.35.51.AESR, 101.622UNTS.
08.35.51.\$OUT(*/*P=E)
08.35.51. NO FILES PROCESSED.
08.35.51.\$DAYFILE (OUTPUT, JT=D)
08.37.21.UCLP, LB, MSULLP2,

1.589KLS.

SYSTEM BULLETIN

IMPELL WALNUT CREEK COMPUTER CENTER OPERATIONS HOURS (PACIFIC TIME!)

| | | | | | |
|----------|-----|----------|------|----|------|
| MONDAY | AND | FRIDAY | 0600 | TU | 2130 |
| TUESDAY | TO | THURSDAY | 0600 | TD | 2330 |
| SATURDAY | AND | SUNDAY | 0700 | TU | 1700 |

OPERATORS WILL NOT BE ON SITE AT ALL OTHER TIMES. EXTENDED OPERATOR COVERAGE MAY BE ARRANGED BY CONTACTING BOB EARL AT (415) 943-4663/4666

THE CYBER SYSTEM WILL BE UNAVAILABLE TO USERS AS FOLLOWS:

| | | | | |
|-----------|------|----|------|-------------------------|
| MONDAY | 2000 | TD | 2100 | SYSTEM BACKUP |
| TUESDAY | 1930 | TD | 2300 | MAINTENANCE + BACKUP |
| WEDNESDAY | 2200 | TD | 2300 | SYSTEM BACKUP |
| THURSDAY | 2200 | TD | 2300 | SYSTEM BACKUP |
| FRIDAY | 2000 | TD | 2230 | SYSTEM BACKUP + TESTING |
| SATURDAY | 1600 | TD | 1700 | SYSTEM BACKUP |
| SUNDAY | 1400 | TD | 1700 | SYSTEM BACKUP |

HOLIDAY HOURS.

MONDAY, MAY 27, 1985. NO OPERATORS ON SITE. SYSTEM AVAILABLE TO USERS.

SPECIAL CYBER UPGRADE BLOCK TIME.

THE CYBER WILL BE UNAVAILABLE FOR PRODUCTION USE THURSDAYS FROM 2000 HRS. TO 2400 HRS. BEGINNING APRIL 11, 1985 THROUGH MAY 30 1985. COMPUTER SERVICES WILL BE TESTING NOS VERSION 2.3 . ANY USERS WISHING TO TEST THEIR CODES DURING THIS PERIOD WILL NEED TO CONTACT COMPUTER SERVICES AT (415)943-4666.

GENERAL INFORMATION.

DO NOT RELEASE MAGNETIC TAPES WHEN OPERATORS ARE NOT ON SITE.

USER ADVISORY. MAGNETIC TAPE BACKUPS.

MAGNETIC TAPES ARE SUSCEPTIBLE TO PHYSICAL DAMAGE. BACKUP TAPES ARE RECOMMENDED WHENEVER THE INFORMATION ON THE TAPE WOULD BE EXPENSIVE OR TIME CONSUMING TO RECREATE . PLEASE NOTE THAT IMPELL, CDC, AND UCC DO NOT GIVE REFUNDS FOR JOBS NECESSARY TO RECREATE A TAPE IF NO BACKUP EXISTS.

AS PER THE MEMO DISTRIBUTED TO DIVISIONS OVER A WEEK AGO, THE OLD OVERHEAD JOB NUMBERS BEGINNING WITH 0622 AND 0627 WILL NOT BE VALID AFTER 2/15/85. NEW NUMBERS (BEGINNING WITH 0625004 OR 0623004) MUST BE REQUESTED. A CONSOLIDATED LIST OF OLD VERSUS SUGGESTED NEW NUMBERS WAS DISTRIBUTED TO EACH DIVISION TO EXPIDITE THE REVIFW. THESE CHANGES ARE BEING MADE TO SUIT ACCOUNTING DEP'T. NUMBER CHANGES.

DIAL-IN PHONE NUMBERS

300/1200 - (415)947-4990

USER,SUNGS1,.
CHARGE,PROJWC,03100681355.
ROUTE,OUTPUT,DC=PR,UN=CSUVAX1,UJN=VAX,FC=A0,DEF.
REWIND,INPUT.
CJYYSBF,INPUT,OUTPUT.
REWIND,INPUT.
SKIPR,INPUT.
PJRG, NRCT9/NA.
DEFINE, NRCT9/M=W.
ATTACH, TAPE12=NRCL.
GET, RESPEC/UN=IMPLIB.
RESPEC.
REWIND, TAPE9.
CJYBF, TAPE9, NRCT9.

2001 1 0.005 2% RESPONSE SPECTRA AT EL. 0.0 FT (BASEMAT)
 0 1 0 3 26 1 2 0.3 30.0
 (E16.8)
 0.3 0.4 0.7 1.0 1.5 1.7 2.0 2.5
 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5
 7.0 7.5 8.0 9.0 10.0 12.0 15.0 20.0
 25.0 30.0

0.02
 2001 1 0.005 2% RESPONSE SPECTRA AT EL. 83.8 FT (NODE 4)
 0 1 0 3 26 1 2 0.3 30.0
 (12300(/), (E16.8))
 0.3 0.4 0.7 1.0 1.5 1.7 2.0 2.5
 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5
 7.0 7.5 8.0 9.0 10.0 12.0 15.0 20.0
 25.0 30.0

0.02
 2001 1 0.005 2% RESPONSE SPECTRA AT EL. 143.8 FT (NODE 7)
 0 1 0 3 26 1 2 0.3 30.0
 (15400(/), (E16.8))
 0.3 0.4 0.7 1.0 1.5 1.7 2.0 2.5
 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5
 7.0 7.5 8.0 9.0 10.0 12.0 15.0 20.0
 25.0 30.0

0.02
 2001 1 0.005 2% RESPONSE SPECTRA AT EL. 207.0 FT (NODE 11)
 0 1 0 3 26 1 2 0.3 30.0
 (20500(/), (E16.8))
 0.3 0.4 0.7 1.0 1.5 1.7 2.0 2.5
 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5
 7.0 7.5 8.0 9.0 10.0 12.0 15.0 20.0
 25.0 30.0

VERIFIED - ALL PROJECTS

NOTICE

* IMPELL CORPORATION *
* PROGRAM RESPEC *
* VERSION 10/06/75 *

/ NRC TEST PROBLEM 1A / CLASS 1 ANALYSIS / 2% RESPONSE SPECTRA / X-DIR /

NUMBER OF ACCELERATION
TIME HISTORIES PROCESSED 4.

INPUT TIME HISTORY CONTROL

| | | |
|---------------------------|------|--------|
| TIME HISTORY NUMBER | | 1 |
| NUMBER OF TIME POINTS | NTP | 2001 |
| INPUT CODE | INPT | 1 |
| TIME STEP | DEL | .0050 |
| ACCELERATION SCALE FACTOR | SFTR | 1.0000 |

COMPUTATION AND OUTPUT CONTROL

| | | |
|--------------------------------|------|---------|
| INPUT HISTORY INTEGRATION CODE | INTR | 0 |
| SPECTRUM COMPUTATION CODES | ISPC | 1 |
| | IDUR | 0 |
| SPECTRUM OUTPUT CODE | IDUT | 3 |
| NUMBER OF FREQUENCY POINTS | NFP | 26 |
| NUMBER OF DAMPINGS | NDP | 1 |
| FREQUENCY SCALE TYPE CODE | IFSC | 2 |
| LOWEST FREQUENCY IN CPS | W1 | .3000 |
| HIGHEST FREQUENCY IN CPS | W2 | 30.0000 |
| TIME STEP TO PERIOD RATIO | DELP | .2000 |

FIELD LENGTH REQUIREMENTS
(IN OCTAL)

| | |
|-----------------------|--------|
| PROGRAM LENGTH | 040437 |
| BLANK COMMON REQUIRED | 007647 |
| FIELD LENGTH REQUIRED | 050306 |

FORMAT OF INPUT TIME HISTORY IS

(E16.8)

| TIME | ACCEL | TIME | ACCEL | TIME | ACCEL | TIME | ACCEL | TIME | ACCEL |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| .005 | .123E-01 | .010 | -.543E-02 | .015 | -.231E-01 | .020 | -.385E-01 | .025 | -.502E-01 |
| .030 | -.572E-01 | .035 | -.599E-01 | .040 | -.588E-01 | .045 | -.549E-01 | .050 | -.491E-01 |
| .055 | -.421E-01 | .060 | -.338E-01 | .065 | -.243E-01 | .070 | -.133E-01 | .075 | -.774E-03 |
| .080 | .130E-01 | .085 | .273E-01 | .090 | .416E-01 | .095 | .548E-01 | .100 | .663E-01 |
| .105 | .756E-01 | .110 | .822E-01 | .115 | .860E-01 | .120 | .859E-01 | .125 | .846E-01 |
| .130 | .789E-01 | .135 | .695E-01 | .140 | .566E-01 | .145 | .404E-01 | .150 | .215E-01 |
| .155 | .115E-02 | .160 | -.194E-01 | .165 | -.386E-01 | .170 | -.555E-01 | .175 | -.691E-01 |
| .180 | -.791E-01 | .185 | -.858E-01 | .190 | -.895E-01 | .195 | -.908E-01 | .200 | -.904E-01 |
| .205 | -.885E-01 | .210 | -.855E-01 | .215 | -.816E-01 | .220 | -.767E-01 | .225 | -.710E-01 |
| .230 | -.647E-01 | .235 | -.580E-01 | .240 | -.514E-01 | .245 | -.450E-01 | .250 | -.392E-01 |
| .255 | -.341E-01 | .260 | -.296E-01 | .265 | -.259E-01 | .270 | -.229E-01 | .275 | -.205E-01 |
| .280 | -.186E-01 | .285 | -.172E-01 | .290 | -.159E-01 | .295 | -.144E-01 | .300 | -.124E-01 |
| .305 | -.950E-02 | .310 | -.539E-02 | .315 | .122E-04 | .320 | .651E-02 | .325 | .141E-01 |
| .330 | .221E-01 | .335 | .302E-01 | .340 | .381E-01 | .345 | .455E-01 | .350 | .524E-01 |
| .355 | .589E-01 | .360 | .650E-01 | .365 | .707E-01 | .370 | .759E-01 | .375 | .806E-01 |
| .380 | .845E-01 | .385 | .873E-01 | .390 | .888E-01 | .395 | .889E-01 | .400 | .871E-01 |
| .405 | .833E-01 | .410 | .771E-01 | .415 | .683E-01 | .420 | .557E-01 | .425 | .426E-01 |
| .430 | .267E-01 | .435 | .101E-01 | .440 | -.572E-02 | .445 | -.189E-01 | .450 | -.281E-01 |
| .455 | -.321E-01 | .460 | -.309E-01 | .465 | -.250E-01 | .470 | -.159E-01 | .475 | -.529E-02 |
| .480 | .494E-02 | .485 | .135E-01 | .490 | .197E-01 | .495 | .236E-01 | .500 | .260E-01 |
| .505 | .277E-01 | .510 | .293E-01 | .515 | .313E-01 | .520 | .331E-01 | .525 | .340E-01 |
| .530 | .331E-01 | .535 | .296E-01 | .540 | .233E-01 | .545 | .146E-01 | .550 | .425E-02 |
| .555 | -.664E-02 | .560 | -.173E-01 | .565 | -.275E-01 | .570 | -.374E-01 | .575 | -.477E-01 |
| .580 | -.592E-01 | .585 | -.720E-01 | .590 | -.855E-01 | .595 | -.983E-01 | .600 | -.108E+00 |
| .605 | -.112E+00 | .610 | -.109E+00 | .615 | -.985E-01 | .620 | -.805E-01 | .625 | -.576E-01 |
| .630 | -.329E-01 | .635 | -.986E-02 | .640 | .883E-02 | .645 | .218E-01 | .650 | .291E-01 |
| .655 | .323E-01 | .660 | .339E-01 | .665 | .360E-01 | .670 | .402E-01 | .675 | .467E-01 |
| .680 | .544E-01 | .685 | .611E-01 | .690 | .644E-01 | .695 | .624E-01 | .700 | .541E-01 |
| .705 | .400E-01 | .710 | .218E-01 | .715 | .164E-02 | .720 | -.179E-01 | .725 | -.350E-01 |
| .730 | -.489E-01 | .735 | -.596E-01 | .740 | -.682E-01 | .745 | -.759E-01 | .750 | -.839E-01 |
| .755 | -.929E-01 | .760 | -.103E+00 | .765 | -.113E+00 | .770 | -.122E+00 | .775 | -.130E+00 |
| .780 | -.136E+00 | .785 | -.139E+00 | .790 | -.139E+00 | .795 | -.137E+00 | .800 | -.131E+00 |
| .805 | -.123E+00 | .810 | -.111E+00 | .815 | -.965E-01 | .820 | -.784E-01 | .825 | -.581E-01 |
| .830 | -.369E-01 | .835 | -.159E-01 | .840 | -.670E-04 | .845 | .121E-01 | .850 | .187E-01 |
| .855 | .200E-01 | .860 | .172E-01 | .865 | .121E-01 | .870 | .681E-02 | .875 | .281E-02 |
| .880 | .964E-03 | .885 | .105E-02 | .890 | .195E-02 | .895 | .198E-02 | .900 | -.579E-03 |
| .905 | -.704E-02 | .910 | -.179E-01 | .915 | -.327E-01 | .920 | -.503E-01 | .925 | -.688E-01 |
| .930 | -.864E-01 | .935 | -.101E+00 | .940 | -.112E+00 | .945 | -.118E+00 | .950 | -.119E+00 |
| .955 | -.114E+00 | .960 | -.106E+00 | .965 | -.932E-01 | .970 | -.774E-01 | .975 | -.593E-01 |
| .980 | -.398E-01 | .985 | -.202E-01 | .990 | -.167E-02 | .995 | .148E-01 | 1.000 | .284E-01 |
| 1.005 | .387E-01 | 1.010 | .458E-01 | 1.015 | .503E-01 | 1.020 | .527E-01 | 1.025 | .540E-01 |
| 1.030 | .547E-01 | 1.035 | .550E-01 | 1.040 | .549E-01 | 1.045 | .539E-01 | 1.050 | .514E-01 |
| 1.055 | .471E-01 | 1.060 | .406E-01 | 1.065 | .323E-01 | 1.070 | .227E-01 | 1.075 | .129E-01 |
| 1.080 | .404E-02 | 1.085 | -.256E-02 | 1.090 | -.630E-02 | 1.095 | -.637E-02 | 1.100 | -.283E-02 |
| 1.105 | .388E-02 | 1.110 | .129E-01 | 1.115 | .232E-01 | 1.120 | .337E-01 | 1.125 | .431E-01 |
| 1.130 | .508E-01 | 1.135 | .552E-01 | 1.140 | .591E-01 | 1.145 | .595E-01 | 1.150 | .580E-01 |
| 1.155 | .548E-01 | 1.160 | .507E-01 | 1.165 | .459E-01 | 1.170 | .408E-01 | 1.175 | .355E-01 |
| 1.180 | .300E-01 | 1.185 | .244E-01 | 1.190 | .185E-01 | 1.195 | .125E-01 | 1.200 | .631E-02 |
| 1.205 | .305E-03 | 1.210 | -.529E-02 | 1.215 | -.102E-01 | 1.220 | -.142E-01 | 1.225 | -.173E-01 |
| 1.230 | -.193E-01 | 1.235 | -.205E-01 | 1.240 | -.208E-01 | 1.245 | -.206E-01 | 1.250 | -.201E-01 |
| 1.255 | -.194E-01 | 1.260 | -.187E-01 | 1.265 | -.182E-01 | 1.270 | -.181E-01 | 1.275 | -.186E-01 |
| 1.280 | -.198E-01 | 1.285 | -.217E-01 | 1.290 | -.243E-01 | 1.295 | -.274E-01 | 1.300 | -.307E-01 |
| 1.305 | -.340E-01 | 1.310 | -.373E-01 | 1.315 | -.403E-01 | 1.320 | -.432E-01 | 1.325 | -.463E-01 |
| 1.330 | -.497E-01 | 1.335 | -.538E-01 | 1.340 | -.588E-01 | 1.345 | -.646E-01 | 1.350 | -.714E-01 |
| 1.355 | -.788E-01 | 1.360 | -.865E-01 | 1.365 | -.942E-01 | 1.370 | -.101E+00 | 1.375 | -.108E+00 |
| 1.380 | -.113E+00 | 1.385 | -.116E+00 | 1.390 | -.117E+00 | 1.395 | -.117E+00 | 1.400 | -.114E+00 |
| 1.405 | -.109E+00 | 1.410 | -.103E+00 | 1.415 | -.966E-01 | 1.420 | -.893E-01 | 1.425 | -.819E-01 |
| 1.430 | -.741E-01 | 1.435 | -.655E-01 | 1.440 | -.552E-01 | 1.445 | -.423E-01 | 1.450 | -.261E-01 |
| 1.455 | -.643E-02 | 1.460 | .153E-01 | 1.465 | .409E-01 | 1.470 | .656E-01 | 1.475 | .886E-01 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 1.580 | .182E-02 | 1.585 | -.683E-02 | 1.590 | -.169E-01 | 1.595 | -.277E-01 | 1.600 | -.377E-01 |
| 1.605 | -.453E-01 | 1.610 | -.490E-01 | 1.615 | -.485E-01 | 1.620 | -.443E-01 | 1.625 | -.382E-01 |
| 1.630 | -.327E-01 | 1.635 | -.302E-01 | 1.640 | -.325E-01 | 1.645 | -.401E-01 | 1.650 | -.520E-01 |
| 1.655 | -.659E-01 | 1.660 | -.791E-01 | 1.665 | -.839E-01 | 1.670 | -.934E-01 | 1.675 | -.922E-01 |
| 1.680 | -.866E-01 | 1.685 | -.786E-01 | 1.690 | -.709E-01 | 1.695 | -.657E-01 | 1.700 | -.642E-01 |
| 1.705 | -.662E-01 | 1.710 | -.704E-01 | 1.715 | -.744E-01 | 1.720 | -.761E-01 | 1.725 | -.736E-01 |
| 1.730 | -.663E-01 | 1.735 | -.545E-01 | 1.740 | -.399E-01 | 1.745 | -.243E-01 | 1.750 | -.958E-02 |
| 1.755 | .272E-02 | 1.760 | .120E-01 | 1.765 | .182E-01 | 1.770 | .220E-01 | 1.775 | .241E-01 |
| 1.780 | .251E-01 | 1.785 | .256E-01 | 1.790 | .256E-01 | 1.795 | .254E-01 | 1.800 | .251E-01 |
| 1.805 | .251E-01 | 1.810 | .259E-01 | 1.815 | .281E-01 | 1.820 | .319E-01 | 1.825 | .373E-01 |
| 1.830 | .434E-01 | 1.835 | .492E-01 | 1.840 | .533E-01 | 1.845 | .548E-01 | 1.850 | .533E-01 |
| 1.855 | .493E-01 | 1.860 | .442E-01 | 1.865 | .399E-01 | 1.870 | .384E-01 | 1.875 | .413E-01 |
| 1.880 | .489E-01 | 1.885 | .606E-01 | 1.890 | .746E-01 | 1.895 | .884E-01 | 1.900 | .992E-01 |
| 1.905 | .105E+00 | 1.910 | .104E+00 | 1.915 | .970E-01 | 1.920 | .840E-01 | 1.925 | .671E-01 |
| 1.930 | .483E-01 | 1.935 | .294E-01 | 1.940 | .121E-01 | 1.945 | -.276E-02 | 1.950 | -.149E-01 |
| 1.955 | -.242E-01 | 1.960 | -.312E-01 | 1.965 | -.360E-01 | 1.970 | -.392E-01 | 1.975 | -.409E-01 |
| 1.980 | -.416E-01 | 1.985 | -.415E-01 | 1.990 | -.410E-01 | 1.995 | -.405E-01 | 2.000 | -.403E-01 |
| 2.005 | -.403E-01 | 2.010 | -.402E-01 | 2.015 | -.396E-01 | 2.020 | -.377E-01 | 2.025 | -.338E-01 |
| 2.030 | -.277E-01 | 2.035 | -.193E-01 | 2.040 | -.920E-02 | 2.045 | .171E-02 | 2.050 | .122E-01 |
| 2.055 | .212E-01 | 2.060 | .278E-01 | 2.065 | .316E-01 | 2.070 | .326E-01 | 2.075 | .316E-01 |
| 2.080 | .294E-01 | 2.085 | .271E-01 | 2.090 | .256E-01 | 2.095 | .256E-01 | 2.100 | .273E-01 |
| 2.105 | .303E-01 | 2.110 | .342E-01 | 2.115 | .381E-01 | 2.120 | .410E-01 | 2.125 | .420E-01 |
| 2.130 | .406E-01 | 2.135 | .364E-01 | 2.140 | .295E-01 | 2.145 | .204E-01 | 2.150 | .981E-02 |
| 2.155 | -.124E-02 | 2.160 | -.117E-01 | 2.165 | -.206E-01 | 2.170 | -.272E-01 | 2.175 | -.310E-01 |
| 2.180 | -.322E-01 | 2.185 | -.308E-01 | 2.190 | -.276E-01 | 2.195 | -.232E-01 | 2.200 | -.182E-01 |
| 2.205 | -.133E-01 | 2.210 | -.873E-02 | 2.215 | -.481E-02 | 2.220 | -.155E-02 | 2.225 | .113E-02 |
| 2.230 | .332E-02 | 2.235 | .509E-02 | 2.240 | .648E-02 | 2.245 | .746E-02 | 2.250 | .795E-02 |
| 2.255 | .787E-02 | 2.260 | .713E-02 | 2.265 | .566E-02 | 2.270 | .338E-02 | 2.275 | .261E-03 |
| 2.280 | -.371E-02 | 2.285 | -.850E-02 | 2.290 | -.140E-01 | 2.295 | -.200E-01 | 2.300 | -.262E-01 |
| 2.305 | -.322E-01 | 2.310 | -.376E-01 | 2.315 | -.419E-01 | 2.320 | -.449E-01 | 2.325 | -.463E-01 |
| 2.330 | -.461E-01 | 2.335 | -.446E-01 | 2.340 | -.421E-01 | 2.345 | -.390E-01 | 2.350 | -.361E-01 |
| 2.355 | -.337E-01 | 2.360 | -.322E-01 | 2.365 | -.319E-01 | 2.370 | -.329E-01 | 2.375 | -.349E-01 |
| 2.380 | -.378E-01 | 2.385 | -.413E-01 | 2.390 | -.453E-01 | 2.395 | -.498E-01 | 2.400 | -.550E-01 |
| 2.405 | -.613E-01 | 2.410 | -.692E-01 | 2.415 | -.791E-01 | 2.420 | -.911E-01 | 2.425 | -.105E+00 |
| 2.430 | -.120E+00 | 2.435 | -.135E+00 | 2.440 | -.149E+00 | 2.445 | -.150E+00 | 2.450 | -.166E+00 |
| 2.455 | -.167E+00 | 2.460 | -.154E+00 | 2.465 | -.156E+00 | 2.470 | -.145E+00 | 2.475 | -.133E+00 |
| 2.480 | -.122E+00 | 2.485 | -.111E+00 | 2.490 | -.103E+00 | 2.495 | -.959E-01 | 2.500 | -.891E-01 |
| 2.505 | -.814E-01 | 2.510 | -.719E-01 | 2.515 | -.598E-01 | 2.520 | -.453E-01 | 2.525 | -.288E-01 |
| 2.530 | -.112E-01 | 2.535 | .674E-02 | 2.540 | .244E-01 | 2.545 | .414E-01 | 2.550 | .579E-01 |
| 2.555 | .738E-01 | 2.560 | .888E-01 | 2.565 | .102E+00 | 2.570 | .113E+00 | 2.575 | .119E+00 |
| 2.580 | .120E+00 | 2.585 | .113E+00 | 2.590 | .100E+00 | 2.595 | .813E-01 | 2.600 | .588E-01 |
| 2.605 | .350E-01 | 2.610 | .124E-01 | 2.615 | -.719E-02 | 2.620 | -.233E-01 | 2.625 | -.365E-01 |
| 2.630 | -.483E-01 | 2.635 | -.606E-01 | 2.640 | -.749E-01 | 2.645 | -.915E-01 | 2.650 | -.110E+00 |
| 2.655 | -.127E+00 | 2.660 | -.141E+00 | 2.665 | -.148E+00 | 2.670 | -.147E+00 | 2.675 | -.137E+00 |
| 2.680 | -.118E+00 | 2.685 | -.931E-01 | 2.690 | -.641E-01 | 2.695 | -.338E-01 | 2.700 | -.405E-02 |
| 2.705 | .244E-01 | 2.710 | .518E-01 | 2.715 | .789E-01 | 2.720 | .107E+00 | 2.725 | .135E+00 |
| 2.730 | .163E+00 | 2.735 | .190E+00 | 2.740 | .212E+00 | 2.745 | .227E+00 | 2.750 | .233E+00 |
| 2.755 | .229E+00 | 2.760 | .215E+00 | 2.765 | .193E+00 | 2.770 | .165E+00 | 2.775 | .134E+00 |
| 2.780 | .103E+00 | 2.785 | .727E-01 | 2.790 | .452E-01 | 2.795 | .209E-01 | 2.800 | .102E-03 |
| 2.805 | -.172E-01 | 2.810 | -.310E-01 | 2.815 | -.413E-01 | 2.820 | -.483E-01 | 2.825 | -.525E-01 |
| 2.830 | -.550E-01 | 2.835 | -.570E-01 | 2.840 | -.600E-01 | 2.845 | -.653E-01 | 2.850 | -.736E-01 |
| 2.855 | -.847E-01 | 2.860 | -.977E-01 | 2.865 | -.111E+00 | 2.870 | -.123E+00 | 2.875 | -.132E+00 |
| 2.880 | -.138E+00 | 2.885 | -.140E+00 | 2.890 | -.140E+00 | 2.895 | -.139E+00 | 2.900 | -.139E+00 |
| 2.905 | -.141E+00 | 2.910 | -.144E+00 | 2.915 | -.150E+00 | 2.920 | -.155E+00 | 2.925 | -.160E+00 |
| 2.930 | -.161E+00 | 2.935 | -.158E+00 | 2.940 | -.152E+00 | 2.945 | -.141E+00 | 2.950 | -.127E+00 |
| 2.955 | -.112E+00 | 2.960 | -.957E-01 | 2.965 | -.815E-01 | 2.970 | -.674E-01 | 2.975 | -.543E-01 |
| 2.980 | -.422E-01 | 2.985 | -.309E-01 | 2.990 | -.205E-01 | 2.995 | -.110E-01 | 3.000 | -.237E-02 |
| 3.005 | .550E-02 | 3.010 | .128E-01 | 3.015 | .201E-01 | 3.020 | .279E-01 | 3.025 | .364E-01 |
| 3.030 | .457E-01 | 3.035 | .593E-01 | 3.040 | .644E-01 | 3.045 | .717E-01 | 3.050 | .760E-01 |
| 3.055 | .763E-01 | 3.060 | .721E-01 | 3.065 | .539E-01 | 3.070 | .526E-01 | 3.075 | .400E-01 |
| 3.080 | .279E-01 | 3.085 | .182E-01 | 3.090 | .127E-01 | 3.095 | .121E-01 | 3.100 | .171E-01 |
| 3.105 | .274E-01 | 3.110 | .621E-01 | 3.115 | .520E-01 | 3.120 | .866E-01 | 3.125 | .113E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 3.230 | .640E-01 | 3.235 | .250E-01 | 3.240 | -.547E-02 | 3.245 | -.295E-01 | 3.250 | -.457E-01 |
| 3.255 | -.541E-01 | 3.260 | -.550E-01 | 3.265 | -.490E-01 | 3.270 | -.368E-01 | 3.275 | -.192E-01 |
| 3.280 | .278E-02 | 3.285 | .281E-01 | 3.290 | .555E-01 | 3.295 | .839E-01 | 3.300 | .112E+00 |
| 3.305 | .139E+00 | 3.310 | .165E+00 | 3.315 | .188E+00 | 3.320 | .208E+00 | 3.325 | .225E+00 |
| 3.330 | .238E+00 | 3.335 | .248E+00 | 3.340 | .253E+00 | 3.345 | .254E+00 | 3.350 | .251E+00 |
| 3.355 | .244E+00 | 3.360 | .233E+00 | 3.365 | .220E+00 | 3.370 | .205E+00 | 3.375 | .190E+00 |
| 3.380 | .176E+00 | 3.385 | .163E+00 | 3.390 | .153E+00 | 3.395 | .145E+00 | 3.400 | .139E+00 |
| 3.405 | .136E+00 | 3.410 | .133E+00 | 3.415 | .130E+00 | 3.420 | .129E+00 | 3.425 | .127E+00 |
| 3.430 | .126E+00 | 3.435 | .127E+00 | 3.440 | .128E+00 | 3.445 | .132E+00 | 3.450 | .138E+00 |
| 3.455 | .146E+00 | 3.460 | .154E+00 | 3.465 | .161E+00 | 3.470 | .167E+00 | 3.475 | .168E+00 |
| 3.480 | .166E+00 | 3.485 | .159E+00 | 3.490 | .148E+00 | 3.495 | .133E+00 | 3.500 | .117E+00 |
| 3.505 | .101E+00 | 3.510 | .860E-01 | 3.515 | .733E-01 | 3.520 | .632E-01 | 3.525 | .555E-01 |
| 3.530 | .499E-01 | 3.535 | .457E-01 | 3.540 | .426E-01 | 3.545 | .405E-01 | 3.550 | .397E-01 |
| 3.555 | .402E-01 | 3.560 | .425E-01 | 3.565 | .465E-01 | 3.570 | .517E-01 | 3.575 | .577E-01 |
| 3.580 | .636E-01 | 3.585 | .691E-01 | 3.590 | .741E-01 | 3.595 | .790E-01 | 3.600 | .847E-01 |
| 3.605 | .920E-01 | 3.610 | .102E+00 | 3.615 | .113E+00 | 3.620 | .126E+00 | 3.625 | .137E+00 |
| 3.630 | .145E+00 | 3.635 | .147E+00 | 3.640 | .141E+00 | 3.645 | .127E+00 | 3.650 | .106E+00 |
| 3.655 | .800E-01 | 3.660 | .519E-01 | 3.665 | .245E-01 | 3.670 | -.114E-03 | 3.675 | -.211E-01 |
| 3.680 | -.392E-01 | 3.685 | -.562E-01 | 3.690 | -.743E-01 | 3.695 | -.958E-01 | 3.700 | -.122E+00 |
| 3.705 | -.152E+00 | 3.710 | -.185E+00 | 3.715 | -.218E+00 | 3.720 | -.248E+00 | 3.725 | -.272E+00 |
| 3.730 | -.288E+00 | 3.735 | -.296E+00 | 3.740 | -.295E+00 | 3.745 | -.286E+00 | 3.750 | -.271E+00 |
| 3.755 | -.251E+00 | 3.760 | -.226E+00 | 3.765 | -.198E+00 | 3.770 | -.158E+00 | 3.775 | -.136E+00 |
| 3.780 | -.104E+00 | 3.785 | -.731E-01 | 3.790 | -.448E-01 | 3.795 | -.202E-01 | 3.800 | .186E-03 |
| 3.805 | .164E-01 | 3.810 | .292E-01 | 3.815 | .393E-01 | 3.820 | .474E-01 | 3.825 | .534E-01 |
| 3.830 | .565E-01 | 3.835 | .550E-01 | 3.840 | .473E-01 | 3.845 | .317E-01 | 3.850 | .774E-02 |
| 3.855 | -.235E-01 | 3.860 | -.597E-01 | 3.865 | -.972E-01 | 3.870 | -.132E+00 | 3.875 | -.160E+00 |
| 3.880 | -.178E+00 | 3.885 | -.187E+00 | 3.890 | -.185E+00 | 3.895 | -.176E+00 | 3.900 | -.162E+00 |
| 3.905 | -.145E+00 | 3.910 | -.127E+00 | 3.915 | -.109E+00 | 3.920 | -.919E-01 | 3.925 | -.739E-01 |
| 3.930 | -.547E-01 | 3.935 | -.341E-01 | 3.940 | -.121E-01 | 3.945 | .102E-01 | 3.950 | .318E-01 |
| 3.955 | .515E-01 | 3.960 | .687E-01 | 3.965 | .831E-01 | 3.970 | .951E-01 | 3.975 | .105E+00 |
| 3.980 | .114E+00 | 3.985 | .120E+00 | 3.990 | .125E+00 | 3.995 | .126E+00 | 4.000 | .122E+00 |
| 4.005 | .113E+00 | 4.010 | .979E-01 | 4.015 | .771E-01 | 4.020 | .519E-01 | 4.025 | .241E-01 |
| 4.030 | -.433E-02 | 4.035 | -.317E-01 | 4.040 | -.568E-01 | 4.045 | -.791E-01 | 4.050 | -.984E-01 |
| 4.055 | -.115E+00 | 4.060 | -.128E+00 | 4.065 | -.139E+00 | 4.070 | -.145E+00 | 4.075 | -.147E+00 |
| 4.080 | -.143E+00 | 4.085 | -.134E+00 | 4.090 | -.118E+00 | 4.095 | -.967E-01 | 4.100 | -.711E-01 |
| 4.105 | -.427E-01 | 4.110 | -.131E-01 | 4.115 | .162E-01 | 4.120 | .440E-01 | 4.125 | .694E-01 |
| 4.130 | .915E-01 | 4.135 | .110E+00 | 4.140 | .123E+00 | 4.145 | .131E+00 | 4.150 | .132E+00 |
| 4.155 | .127E+00 | 4.160 | .116E+00 | 4.165 | .988E-01 | 4.170 | .776E-01 | 4.175 | .537E-01 |
| 4.180 | .287E-01 | 4.185 | .418E-02 | 4.190 | -.186E-01 | 4.195 | -.389E-01 | 4.200 | -.561E-01 |
| 4.205 | -.698E-01 | 4.210 | -.798E-01 | 4.215 | -.856E-01 | 4.220 | -.856E-01 | 4.225 | -.824E-01 |
| 4.230 | -.727E-01 | 4.235 | -.576E-01 | 4.240 | -.376E-01 | 4.245 | -.139E-01 | 4.250 | .121E-01 |
| 4.255 | .308E-01 | 4.260 | .543E-01 | 4.265 | .874E-01 | 4.270 | .107E+00 | 4.275 | .122E+00 |
| 4.280 | .131E+00 | 4.285 | .135E+00 | 4.290 | .133E+00 | 4.295 | .124E+00 | 4.300 | .109E+00 |
| 4.305 | .885E-01 | 4.310 | .630E-01 | 4.315 | .343E-01 | 4.320 | .442E-02 | 4.325 | -.246E-01 |
| 4.330 | -.507E-01 | 4.335 | -.728E-01 | 4.340 | -.399E-01 | 4.345 | -.102E+00 | 4.350 | -.110E+00 |
| 4.355 | -.114E+00 | 4.360 | -.115E+00 | 4.365 | -.113E+00 | 4.370 | -.108E+00 | 4.375 | -.100E+00 |
| 4.380 | -.889E-01 | 4.385 | -.737E-01 | 4.390 | -.548E-01 | 4.395 | -.329E-01 | 4.400 | -.905E-02 |
| 4.405 | .152E-01 | 4.410 | .386E-01 | 4.415 | .600E-01 | 4.420 | .788E-01 | 4.425 | .953E-01 |
| 4.430 | .110E+00 | 4.435 | .124E+00 | 4.440 | .137E+00 | 4.445 | .151E+00 | 4.450 | .165E+00 |
| 4.455 | .178E+00 | 4.460 | .190E+00 | 4.465 | .199E+00 | 4.470 | .202E+00 | 4.475 | .200E+00 |
| 4.480 | .191E+00 | 4.485 | .175E+00 | 4.490 | .152E+00 | 4.495 | .124E+00 | 4.500 | .911E-01 |
| 4.505 | .554E-01 | 4.510 | .181E-01 | 4.515 | -.194E-01 | 4.520 | -.559E-01 | 4.525 | -.903E-01 |
| 4.530 | -.122E+00 | 4.535 | -.149E+00 | 4.540 | -.172E+00 | 4.545 | -.190E+00 | 4.550 | -.202E+00 |
| 4.555 | -.210E+00 | 4.560 | -.213E+00 | 4.565 | -.212E+00 | 4.570 | -.207E+00 | 4.575 | -.201E+00 |
| 4.580 | -.193E+00 | 4.585 | -.184E+00 | 4.590 | -.174E+00 | 4.595 | -.151E+00 | 4.600 | -.145E+00 |
| 4.605 | -.123E+00 | 4.610 | -.952E-01 | 4.615 | -.601E-01 | 4.620 | -.179E-01 | 4.625 | .303E-01 |
| 4.630 | .824E-01 | 4.635 | .136E+00 | 4.640 | .188E+00 | 4.645 | .236E+00 | 4.650 | .279E+00 |
| 4.655 | .316E+00 | 4.660 | .349E+00 | 4.665 | .378E+00 | 4.670 | .406E+00 | 4.675 | .432E+00 |
| 4.680 | .458E+00 | 4.685 | .482E+00 | 4.690 | .503E+00 | 4.695 | .519E+00 | 4.700 | .527E+00 |
| 4.705 | .526E+00 | 4.710 | .516E+00 | 4.715 | .498E+00 | 4.720 | .473E+00 | 4.725 | .445E+00 |
| 4.730 | .415E+00 | 4.735 | .385E+00 | 4.740 | .356E+00 | 4.745 | .328E+00 | 4.750 | .300E+00 |
| 4.755 | .271E+00 | 4.760 | .241E+00 | 4.765 | .209E+00 | 4.770 | .175E+00 | 4.775 | .140E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 4.880 | -.315E+00 | 4.885 | -.307E+00 | 4.890 | -.290E+00 | 4.895 | -.264E+00 | 4.900 | -.232E+00 |
| 4.905 | -.196E+00 | 4.910 | -.150E+00 | 4.915 | -.125E+00 | 4.920 | -.930E-01 | 4.925 | -.651E-01 |
| 4.930 | -.418E-01 | 4.935 | -.235E-01 | 4.940 | -.104E-01 | 4.945 | -.257E-02 | 4.950 | -.388E-03 |
| 4.955 | -.362E-02 | 4.960 | -.122E-01 | 4.955 | -.260E-01 | 4.970 | -.442E-01 | 4.975 | -.663E-01 |
| 4.980 | -.915E-01 | 4.985 | -.119E+00 | 4.990 | -.147E+00 | 4.995 | -.177E+00 | 5.000 | -.205E+00 |
| 5.005 | -.233E+00 | 5.010 | -.257E+00 | 5.015 | -.277E+00 | 5.020 | -.292E+00 | 5.025 | -.300E+00 |
| 5.030 | -.302E+00 | 5.035 | -.297E+00 | 5.040 | -.287E+00 | 5.045 | -.273E+00 | 5.050 | -.257E+00 |
| 5.055 | -.240E+00 | 5.060 | -.224E+00 | 5.055 | -.210E+00 | 5.070 | -.198E+00 | 5.075 | -.188E+00 |
| 5.080 | -.179E+00 | 5.085 | -.171E+00 | 5.090 | -.163E+00 | 5.095 | -.155E+00 | 5.100 | -.148E+00 |
| 5.105 | -.142E+00 | 5.110 | -.137E+00 | 5.115 | -.133E+00 | 5.120 | -.130E+00 | 5.125 | -.130E+00 |
| 5.130 | -.130E+00 | 5.135 | -.132E+00 | 5.140 | -.136E+00 | 5.145 | -.141E+00 | 5.150 | -.147E+00 |
| 5.155 | -.154E+00 | 5.160 | -.162E+00 | 5.165 | -.169E+00 | 5.170 | -.176E+00 | 5.175 | -.180E+00 |
| 5.180 | -.182E+00 | 5.185 | -.181E+00 | 5.190 | -.179E+00 | 5.195 | -.176E+00 | 5.200 | -.172E+00 |
| 5.205 | -.168E+00 | 5.210 | -.155E+00 | 5.215 | -.163E+00 | 5.220 | -.150E+00 | 5.225 | -.157E+00 |
| 5.230 | -.152E+00 | 5.235 | -.146E+00 | 5.240 | -.137E+00 | 5.245 | -.128E+00 | 5.250 | -.118E+00 |
| 5.255 | -.109E+00 | 5.260 | -.101E+00 | 5.265 | -.950E-01 | 5.270 | -.911E-01 | 5.275 | -.888E-01 |
| 5.280 | -.879E-01 | 5.285 | -.878E-01 | 5.290 | -.884E-01 | 5.295 | -.897E-01 | 5.300 | -.919E-01 |
| 5.305 | -.948E-01 | 5.310 | -.982E-01 | 5.315 | -.102E+00 | 5.320 | -.104E+00 | 5.325 | -.104E+00 |
| 5.330 | -.101E+00 | 5.335 | -.940E-01 | 5.340 | -.831E-01 | 5.345 | -.686E-01 | 5.350 | -.512E-01 |
| 5.355 | -.319E-01 | 5.360 | -.115E-01 | 5.365 | -.928E-02 | 5.370 | -.302E-01 | 5.375 | -.509E-01 |
| 5.380 | .714E-01 | 5.385 | .909E-01 | 5.390 | .109E+00 | 5.395 | .123E+00 | 5.400 | .133E+00 |
| 5.405 | .136E+00 | 5.410 | .133E+00 | 5.415 | .123E+00 | 5.420 | .107E+00 | 5.425 | .878E-01 |
| 5.430 | .672E-01 | 5.435 | .481E-01 | 5.440 | .330E-01 | 5.445 | .235E-01 | 5.450 | .203E-01 |
| 5.455 | .230E-01 | 5.460 | .306E-01 | 5.465 | .413E-01 | 5.470 | .534E-01 | 5.475 | .649E-01 |
| 5.480 | .744E-01 | 5.485 | .803E-01 | 5.490 | .819E-01 | 5.495 | .786E-01 | 5.500 | .703E-01 |
| 5.505 | .573E-01 | 5.510 | .408E-01 | 5.515 | .221E-01 | 5.520 | .304E-02 | 5.525 | -.147E-01 |
| 5.530 | -.296E-01 | 5.535 | -.408E-01 | 5.540 | -.486E-01 | 5.545 | -.539E-01 | 5.550 | -.587E-01 |
| 5.555 | -.654E-01 | 5.560 | -.752E-01 | 5.565 | -.928E-01 | 5.570 | -.116E+00 | 5.575 | -.146E+00 |
| 5.580 | -.180E+00 | 5.585 | -.217E+00 | 5.590 | -.253E+00 | 5.595 | -.286E+00 | 5.600 | -.313E+00 |
| 5.605 | -.334E+00 | 5.610 | -.346E+00 | 5.615 | -.352E+00 | 5.620 | -.351E+00 | 5.625 | -.346E+00 |
| 5.630 | -.338E+00 | 5.635 | -.330E+00 | 5.640 | -.322E+00 | 5.645 | -.316E+00 | 5.650 | -.311E+00 |
| 5.655 | -.308E+00 | 5.660 | -.306E+00 | 5.665 | -.304E+00 | 5.670 | -.300E+00 | 5.675 | -.294E+00 |
| 5.680 | -.285E+00 | 5.685 | -.274E+00 | 5.690 | -.262E+00 | 5.695 | -.249E+00 | 5.700 | -.237E+00 |
| 5.705 | -.228E+00 | 5.710 | -.220E+00 | 5.715 | -.215E+00 | 5.720 | -.210E+00 | 5.725 | -.203E+00 |
| 5.730 | -.194E+00 | 5.735 | -.182E+00 | 5.740 | -.166E+00 | 5.745 | -.147E+00 | 5.750 | -.126E+00 |
| 5.755 | -.106E+00 | 5.760 | -.876E-01 | 5.765 | -.726E-01 | 5.770 | -.609E-01 | 5.775 | -.517E-01 |
| 5.780 | -.432E-01 | 5.785 | -.332E-01 | 5.790 | -.197E-01 | 5.795 | -.105E-02 | 5.800 | .235E-01 |
| 5.805 | .534E-01 | 5.810 | .873E-01 | 5.815 | .123E+00 | 5.820 | .158E+00 | 5.825 | .189E+00 |
| 5.830 | .215E+00 | 5.835 | .234E+00 | 5.840 | .244E+00 | 5.845 | .246E+00 | 5.850 | .242E+00 |
| 5.855 | .231E+00 | 5.860 | .217E+00 | 5.865 | .202E+00 | 5.870 | .189E+00 | 5.875 | .178E+00 |
| 5.880 | .171E+00 | 5.885 | .170E+00 | 5.890 | .173E+00 | 5.895 | .179E+00 | 5.900 | .188E+00 |
| 5.905 | .196E+00 | 5.910 | .204E+00 | 5.915 | .209E+00 | 5.920 | .212E+00 | 5.925 | .212E+00 |
| 5.930 | .211E+00 | 5.935 | .210E+00 | 5.940 | .210E+00 | 5.945 | .211E+00 | 5.950 | .213E+00 |
| 5.955 | .216E+00 | 5.960 | .219E+00 | 5.965 | .222E+00 | 5.970 | .223E+00 | 5.975 | .222E+00 |
| 5.980 | .220E+00 | 5.985 | .216E+00 | 5.990 | .212E+00 | 5.995 | .209E+00 | 6.000 | .207E+00 |
| 6.005 | .207E+00 | 6.010 | .210E+00 | 6.015 | .216E+00 | 6.020 | .226E+00 | 6.025 | .240E+00 |
| 6.030 | .256E+00 | 6.035 | .273E+00 | 6.040 | .289E+00 | 6.045 | .301E+00 | 6.050 | .307E+00 |
| 6.055 | .305E+00 | 6.060 | .292E+00 | 6.065 | .269E+00 | 6.070 | .236E+00 | 6.075 | .194E+00 |
| 6.080 | .148E+00 | 6.085 | .991E-01 | 6.090 | .522E-01 | 6.095 | .985E-02 | 6.100 | -.261E-01 |
| 6.105 | -.548E-01 | 6.110 | -.762E-01 | 6.115 | -.914E-01 | 6.120 | -.102E+00 | 6.125 | -.109E+00 |
| 6.130 | -.114E+00 | 6.135 | -.119E+00 | 6.140 | -.124E+00 | 6.145 | -.131E+00 | 6.150 | -.140E+00 |
| 6.155 | -.152E+00 | 6.160 | -.167E+00 | 6.165 | -.185E+00 | 6.170 | -.206E+00 | 6.175 | -.227E+00 |
| 6.180 | -.249E+00 | 6.185 | -.259E+00 | 6.190 | -.285E+00 | 6.195 | -.296E+00 | 6.200 | -.301E+00 |
| 6.205 | -.249E+00 | 6.210 | -.291E+00 | 6.215 | -.275E+00 | 6.220 | -.254E+00 | 6.225 | -.229E+00 |
| 6.230 | -.200E+00 | 6.235 | -.170E+00 | 6.240 | -.139E+00 | 6.245 | -.109E+00 | 6.250 | -.818E-01 |
| 6.255 | -.578E-01 | 6.260 | -.385E-01 | 6.265 | -.251E-01 | 6.270 | -.182E-01 | 6.275 | -.183E-01 |
| 6.280 | -.254E-01 | 6.285 | -.391E-01 | 6.290 | -.585E-01 | 6.295 | -.824E-01 | 6.300 | -.109E+00 |
| 6.305 | -.137E+00 | 6.310 | -.164E+00 | 6.315 | -.188E+00 | 6.320 | -.208E+00 | 6.325 | -.223E+00 |
| 6.330 | -.233E+00 | 6.335 | -.238E+00 | 6.340 | -.238E+00 | 6.345 | -.236E+00 | 6.350 | -.233E+00 |
| 6.355 | -.229E+00 | 6.360 | -.228E+00 | 6.365 | -.223E+00 | 6.370 | -.231E+00 | 6.375 | -.236E+00 |
| 6.380 | -.241E+00 | 6.385 | -.248E+00 | 6.390 | -.253E+00 | 6.395 | -.256E+00 | 6.400 | -.257E+00 |
| 6.405 | -.253E+00 | 6.410 | -.245E+00 | 6.415 | -.230E+00 | 6.420 | -.209E+00 | 6.425 | -.180E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 6.530 | .256E+00 | 6.535 | .234E+00 | 6.540 | .213E+00 | 6.545 | .193E+00 | 6.550 | .175E+00 |
| 6.555 | .161E+00 | 6.560 | .149E+00 | 6.565 | .139E+00 | 6.570 | .129E+00 | 6.575 | .120E+00 |
| 6.580 | .110E+00 | 6.585 | .996E-01 | 6.590 | .884E-01 | 6.595 | .769E-01 | 6.600 | .658E-01 |
| 6.605 | .554E-01 | 6.610 | .461E-01 | 6.615 | .380E-01 | 6.620 | .309E-01 | 6.625 | .247E-01 |
| 6.630 | .190E-01 | 6.635 | .135E-01 | 6.640 | .801E-02 | 6.645 | .262E-02 | 6.650 | -.254E-02 |
| 6.655 | -.714E-02 | 6.660 | -.108E-01 | 6.665 | -.133E-01 | 6.670 | -.142E-01 | 6.675 | -.134E-01 |
| 6.680 | -.111E-01 | 6.685 | -.744E-02 | 6.690 | -.260E-02 | 6.695 | .314E-02 | 6.700 | .968E-02 |
| 6.705 | .171E-01 | 6.710 | .256E-01 | 6.715 | .356E-01 | 6.720 | .474E-01 | 6.725 | .613E-01 |
| 6.730 | .771E-01 | 6.735 | .942E-01 | 6.740 | .112E+00 | 6.745 | .128E+00 | 6.750 | .141E+00 |
| 6.755 | .151E+00 | 6.760 | .156E+00 | 6.765 | .155E+00 | 6.770 | .149E+00 | 6.775 | .140E+00 |
| 6.780 | .129E+00 | 6.785 | .119E+00 | 6.790 | .110E+00 | 6.795 | .106E+00 | 6.800 | .106E+00 |
| 6.805 | .111E+00 | 6.810 | .120E+00 | 6.815 | .132E+00 | 6.820 | .146E+00 | 6.825 | .160E+00 |
| 6.830 | .172E+00 | 6.835 | .180E+00 | 6.840 | .184E+00 | 6.845 | .183E+00 | 6.850 | .177E+00 |
| 6.855 | .168E+00 | 6.860 | .158E+00 | 6.865 | .148E+00 | 6.870 | .142E+00 | 6.875 | .139E+00 |
| 6.880 | .144E+00 | 6.885 | .154E+00 | 6.890 | .171E+00 | 6.895 | .193E+00 | 6.900 | .217E+00 |
| 6.905 | .241E+00 | 6.910 | .254E+00 | 6.915 | .282E+00 | 6.920 | .296E+00 | 6.925 | .305E+00 |
| 6.930 | .309E+00 | 6.935 | .309E+00 | 6.940 | .308E+00 | 6.945 | .305E+00 | 6.950 | .302E+00 |
| 6.955 | .298E+00 | 6.960 | .295E+00 | 6.965 | .291E+00 | 6.970 | .285E+00 | 6.975 | .276E+00 |
| 6.980 | .265E+00 | 6.985 | .249E+00 | 6.990 | .230E+00 | 6.995 | .206E+00 | 7.000 | .178E+00 |
| 7.005 | .148E+00 | 7.010 | .116E+00 | 7.015 | .836E-01 | 7.020 | .518E-01 | 7.025 | .218E-01 |
| 7.030 | -.588E-02 | 7.035 | -.312E-01 | 7.040 | -.545E-01 | 7.045 | -.766E-01 | 7.050 | -.985E-01 |
| 7.055 | -.121E+00 | 7.060 | -.144E+00 | 7.065 | -.157E+00 | 7.070 | -.190E+00 | 7.075 | -.211E+00 |
| 7.080 | -.228E+00 | 7.085 | -.240E+00 | 7.090 | -.245E+00 | 7.095 | -.242E+00 | 7.100 | -.234E+00 |
| 7.105 | -.219E+00 | 7.110 | -.200E+00 | 7.115 | -.178E+00 | 7.120 | -.155E+00 | 7.125 | -.131E+00 |
| 7.130 | -.108E+00 | 7.135 | -.858E-01 | 7.140 | -.644E-01 | 7.145 | -.441E-01 | 7.150 | -.251E-01 |
| 7.155 | -.733E-02 | 7.160 | .909E-02 | 7.165 | .242E-01 | 7.170 | .383E-01 | 7.175 | .514E-01 |
| 7.180 | .639E-01 | 7.185 | .756E-01 | 7.190 | .864E-01 | 7.195 | .957E-01 | 7.200 | .103E+00 |
| 7.205 | .107E+00 | 7.210 | .108E+00 | 7.215 | .106E+00 | 7.220 | .100E+00 | 7.225 | .919E-01 |
| 7.230 | .826E-01 | 7.235 | .734E-01 | 7.240 | .657E-01 | 7.245 | .603E-01 | 7.250 | .574E-01 |
| 7.255 | .569E-01 | 7.260 | .583E-01 | 7.265 | .609E-01 | 7.270 | .641E-01 | 7.275 | .676E-01 |
| 7.280 | .714E-01 | 7.285 | .756E-01 | 7.290 | .807E-01 | 7.295 | .858E-01 | 7.300 | .939E-01 |
| 7.305 | .102E+00 | 7.310 | .110E+00 | 7.315 | .117E+00 | 7.320 | .122E+00 | 7.325 | .124E+00 |
| 7.330 | .124E+00 | 7.335 | .119E+00 | 7.340 | .110E+00 | 7.345 | .976E-01 | 7.350 | .809E-01 |
| 7.355 | .606E-01 | 7.360 | .371E-01 | 7.365 | .108E-01 | 7.370 | -.179E-01 | 7.375 | -.482E-01 |
| 7.380 | -.796E-01 | 7.385 | -.112E+00 | 7.390 | -.143E+00 | 7.395 | -.174E+00 | 7.400 | -.203E+00 |
| 7.405 | -.230E+00 | 7.410 | -.254E+00 | 7.415 | -.273E+00 | 7.420 | -.287E+00 | 7.425 | -.295E+00 |
| 7.430 | -.296E+00 | 7.435 | -.289E+00 | 7.440 | -.274E+00 | 7.445 | -.252E+00 | 7.450 | -.223E+00 |
| 7.455 | -.188E+00 | 7.460 | -.148E+00 | 7.465 | -.104E+00 | 7.470 | -.588E-01 | 7.475 | -.127E-01 |
| 7.480 | .328E-01 | 7.485 | .750E-01 | 7.490 | .116E+00 | 7.495 | .150E+00 | 7.500 | .178E+00 |
| 7.505 | .198E+00 | 7.510 | .210E+00 | 7.515 | .214E+00 | 7.520 | .210E+00 | 7.525 | .199E+00 |
| 7.530 | .183E+00 | 7.535 | .152E+00 | 7.540 | .139E+00 | 7.545 | .113E+00 | 7.550 | .847E-01 |
| 7.555 | .542E-01 | 7.560 | .210E-01 | 7.565 | -.148E-01 | 7.570 | -.529E-01 | 7.575 | -.924E-01 |
| 7.580 | -.132E+00 | 7.585 | -.170E+00 | 7.590 | -.204E+00 | 7.595 | -.233E+00 | 7.600 | -.256E+00 |
| 7.605 | -.272E+00 | 7.610 | -.281E+00 | 7.615 | -.284E+00 | 7.620 | -.280E+00 | 7.625 | -.270E+00 |
| 7.630 | -.255E+00 | 7.635 | -.235E+00 | 7.640 | -.212E+00 | 7.645 | -.186E+00 | 7.650 | -.158E+00 |
| 7.655 | -.129E+00 | 7.660 | -.994E-01 | 7.665 | -.707E-01 | 7.670 | -.433E-01 | 7.675 | -.176E-01 |
| 7.680 | .627E-02 | 7.685 | .279E-01 | 7.690 | .471E-01 | 7.695 | .633E-01 | 7.700 | .764E-01 |
| 7.705 | .859E-01 | 7.710 | .919E-01 | 7.715 | .946E-01 | 7.720 | .949E-01 | 7.725 | .936E-01 |
| 7.730 | .920E-01 | 7.735 | .907E-01 | 7.740 | .902E-01 | 7.745 | .903E-01 | 7.750 | .898E-01 |
| 7.755 | .874E-01 | 7.760 | .813E-01 | 7.765 | .701E-01 | 7.770 | .531E-01 | 7.775 | .305E-01 |
| 7.780 | .330E-02 | 7.785 | -.265E-01 | 7.790 | -.564E-01 | 7.795 | -.839E-01 | 7.800 | -.107E+00 |
| 7.805 | -.125E+00 | 7.810 | -.136E+00 | 7.815 | -.141E+00 | 7.820 | -.141E+00 | 7.825 | -.138E+00 |
| 7.830 | -.132E+00 | 7.835 | -.125E+00 | 7.840 | -.119E+00 | 7.845 | -.113E+00 | 7.850 | -.108E+00 |
| 7.855 | -.105E+00 | 7.860 | -.102E+00 | 7.865 | -.992E-01 | 7.870 | -.953E-01 | 7.875 | -.922E-01 |
| 7.880 | -.861E-01 | 7.885 | -.774E-01 | 7.890 | -.659E-01 | 7.895 | -.517E-01 | 7.900 | -.353E-01 |
| 7.905 | -.178E-01 | 7.910 | -.379E-03 | 7.915 | .154E-01 | 7.920 | .281E-01 | 7.925 | .366E-01 |
| 7.930 | .401E-01 | 7.935 | .381E-01 | 7.940 | .304E-01 | 7.945 | .172E-01 | 7.950 | -.132E-02 |
| 7.955 | -.247E-01 | 7.960 | -.526E-01 | 7.965 | -.843E-01 | 7.970 | -.119E+00 | 7.975 | -.156E+00 |
| 7.980 | -.194E+00 | 7.985 | -.232E+00 | 7.990 | -.258E+00 | 7.995 | -.300E+00 | 8.000 | -.329E+00 |
| 8.005 | -.351E+00 | 8.010 | -.367E+00 | 8.015 | -.376E+00 | 8.020 | -.377E+00 | 8.025 | -.372E+00 |
| 8.030 | -.360E+00 | 8.035 | -.343E+00 | 8.040 | -.322E+00 | 8.045 | -.300E+00 | 8.050 | -.276E+00 |
| 8.055 | -.253E+00 | 8.060 | -.232E+00 | 8.065 | -.213E+00 | 8.070 | -.176E+00 | 8.075 | -.179E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 8.180 | .690E-01 | 8.185 | .652E-01 | 8.190 | .628E-01 | 8.195 | .622E-01 | 8.200 | .633E-01 |
| 8.205 | .656E-01 | 8.210 | .684E-01 | 8.215 | .704E-01 | 8.220 | .709E-01 | 8.225 | .691E-01 |
| 8.230 | .649E-01 | 8.235 | .583E-01 | 8.240 | .501E-01 | 8.245 | .409E-01 | 8.250 | .315E-01 |
| 8.255 | .221E-01 | 8.260 | .131E-01 | 8.265 | .408E-02 | 8.270 | -.533E-02 | 8.275 | -.157E-01 |
| 8.280 | -.273E-01 | 8.285 | -.405E-01 | 8.290 | -.551E-01 | 8.295 | -.707E-01 | 8.300 | -.867E-01 |
| 8.305 | -.102E+00 | 8.310 | -.117E+00 | 8.315 | -.129E+00 | 8.320 | -.139E+00 | 8.325 | -.147E+00 |
| 8.330 | -.152E+00 | 8.335 | -.154E+00 | 8.340 | -.154E+00 | 8.345 | -.151E+00 | 8.350 | -.145E+00 |
| 8.355 | -.137E+00 | 8.360 | -.126E+00 | 8.365 | -.112E+00 | 8.370 | -.952E-01 | 8.375 | -.758E-01 |
| 8.380 | -.543E-01 | 8.385 | -.314E-01 | 8.390 | -.828E-02 | 8.395 | .139E-01 | 8.400 | .338E-01 |
| 9.405 | .507E-01 | 8.410 | .636E-01 | 8.415 | .726E-01 | 8.420 | .777E-01 | 8.425 | .794E-01 |
| 8.430 | .786E-01 | 8.435 | .761E-01 | 8.440 | .725E-01 | 8.445 | .683E-01 | 8.450 | .641E-01 |
| 8.455 | .601E-01 | 8.460 | .566E-01 | 8.465 | .539E-01 | 8.470 | .524E-01 | 8.475 | .524E-01 |
| 8.480 | .539E-01 | 8.485 | .556E-01 | 8.490 | .600E-01 | 8.495 | .632E-01 | 8.500 | .653E-01 |
| 8.505 | .656E-01 | 8.510 | .637E-01 | 8.515 | .599E-01 | 8.520 | .553E-01 | 8.525 | .513E-01 |
| 8.530 | .497E-01 | 8.535 | .523E-01 | 8.540 | .599E-01 | 8.545 | .729E-01 | 8.550 | .905E-01 |
| 8.555 | .111E+00 | 8.560 | .133E+00 | 8.565 | .154E+00 | 8.570 | .171E+00 | 8.575 | .185E+00 |
| 8.580 | .193E+00 | 8.585 | .197E+00 | 8.590 | .197E+00 | 8.595 | .194E+00 | 8.600 | .189E+00 |
| 8.605 | .182E+00 | 8.610 | .174E+00 | 8.615 | .164E+00 | 8.620 | .153E+00 | 8.625 | .139E+00 |
| 8.630 | .123E+00 | 8.635 | .104E+00 | 8.640 | .836E-01 | 8.645 | .615E-01 | 8.650 | .386E-01 |
| 8.655 | .157E-01 | 8.660 | -.633E-02 | 8.665 | -.270E-01 | 8.670 | -.461E-01 | 8.675 | -.635E-01 |
| 8.680 | -.796E-01 | 8.685 | -.951E-01 | 8.690 | -.111E+00 | 8.695 | -.127E+00 | 8.700 | -.145E+00 |
| 8.705 | -.165E+00 | 8.710 | -.186E+00 | 8.715 | -.208E+00 | 8.720 | -.228E+00 | 8.725 | -.245E+00 |
| 8.730 | -.258E+00 | 8.735 | -.254E+00 | 8.740 | -.265E+00 | 8.745 | -.260E+00 | 8.750 | -.250E+00 |
| 8.755 | -.236E+00 | 8.760 | -.221E+00 | 8.765 | -.206E+00 | 8.770 | -.190E+00 | 8.775 | -.174E+00 |
| 8.780 | -.156E+00 | 8.785 | -.136E+00 | 8.790 | -.111E+00 | 8.795 | -.805E-01 | 8.800 | -.440E-01 |
| 8.805 | -.194E-02 | 8.810 | .443E-01 | 8.815 | .929E-01 | 8.820 | .141E+00 | 8.825 | .187E+00 |
| 8.830 | .229E+00 | 8.835 | .264E+00 | 8.840 | .292E+00 | 8.845 | .311E+00 | 8.850 | .323E+00 |
| 8.855 | .327E+00 | 8.860 | .324E+00 | 8.865 | .317E+00 | 8.870 | .306E+00 | 8.875 | .293E+00 |
| 8.880 | .281E+00 | 8.885 | .269E+00 | 8.890 | .258E+00 | 8.895 | .248E+00 | 8.900 | .239E+00 |
| 8.905 | .229E+00 | 8.910 | .217E+00 | 8.915 | .203E+00 | 8.920 | .186E+00 | 8.925 | .167E+00 |
| 8.930 | .148E+00 | 8.935 | .130E+00 | 8.940 | .114E+00 | 8.945 | .101E+00 | 8.950 | .927E-01 |
| 8.955 | .882E-01 | 8.960 | .872E-01 | 8.965 | .885E-01 | 8.970 | .912E-01 | 8.975 | .943E-01 |
| 8.980 | .973E-01 | 8.985 | .998E-01 | 8.990 | .102E+00 | 8.995 | .103E+00 | 9.000 | .104E+00 |
| 9.005 | .103E+00 | 9.010 | .102E+00 | 9.015 | .982E-01 | 9.020 | .928E-01 | 9.025 | .852E-01 |
| 9.030 | .754E-01 | 9.035 | .637E-01 | 9.040 | .503E-01 | 9.045 | .358E-01 | 9.050 | .202E-01 |
| 9.055 | .408E-02 | 9.060 | -.125E-01 | 9.065 | -.291E-01 | 9.070 | -.452E-01 | 9.075 | -.601E-01 |
| 9.080 | -.731E-01 | 9.085 | -.835E-01 | 9.090 | -.905E-01 | 9.095 | -.940E-01 | 9.100 | -.941E-01 |
| 9.105 | -.914E-01 | 9.110 | -.865E-01 | 9.115 | -.802E-01 | 9.120 | -.734E-01 | 9.125 | -.662E-01 |
| 9.130 | -.587E-01 | 9.135 | -.505E-01 | 9.140 | -.411E-01 | 9.145 | -.300E-01 | 9.150 | -.167E-01 |
| 9.155 | -.107E-02 | 9.160 | .156E-01 | 9.165 | .357E-01 | 9.170 | .554E-01 | 9.175 | .745E-01 |
| 9.180 | .918E-01 | 9.185 | .106E+00 | 9.190 | .115E+00 | 9.195 | .119E+00 | 9.200 | .116E+00 |
| 9.205 | .106E+00 | 9.210 | .887E-01 | 9.215 | .559E-01 | 9.220 | .391E-01 | 9.225 | .102E-01 |
| 9.230 | -.183E-01 | 9.235 | -.443E-01 | 9.240 | -.662E-01 | 9.245 | -.832E-01 | 9.250 | -.954E-01 |
| 9.255 | -.104E+00 | 9.260 | -.109E+00 | 9.265 | -.114E+00 | 9.270 | -.118E+00 | 9.275 | -.124E+00 |
| 9.280 | -.131E+00 | 9.285 | -.139E+00 | 9.290 | -.147E+00 | 9.295 | -.155E+00 | 9.300 | -.161E+00 |
| 9.305 | -.166E+00 | 9.310 | -.168E+00 | 9.315 | -.167E+00 | 9.320 | -.152E+00 | 9.325 | -.151E+00 |
| 9.330 | -.135E+00 | 9.335 | -.112E+00 | 9.340 | -.826E-01 | 9.345 | -.475E-01 | 9.350 | -.763E-02 |
| 9.355 | .354E-01 | 9.360 | .796E-01 | 9.365 | .123E+00 | 9.370 | .163E+00 | 9.375 | .199E+00 |
| 9.380 | .230E+00 | 9.385 | .253E+00 | 9.390 | .269E+00 | 9.395 | .276E+00 | 9.400 | .274E+00 |
| 9.405 | .264E+00 | 9.410 | .244E+00 | 9.415 | .217E+00 | 9.420 | .185E+00 | 9.425 | .151E+00 |
| 9.430 | .117E+00 | 9.435 | .867E-01 | 9.440 | .683E-01 | 9.445 | .500E-01 | 9.450 | .587E-01 |
| 9.455 | .697E-01 | 9.460 | .892E-01 | 9.465 | .114E+00 | 9.470 | .142E+00 | 9.475 | .169E+00 |
| 9.480 | .193E+00 | 9.485 | .212E+00 | 9.490 | .226E+00 | 9.495 | .232E+00 | 9.500 | .233E+00 |
| 9.505 | .227E+00 | 9.510 | .217E+00 | 9.515 | .201E+00 | 9.520 | .182E+00 | 9.525 | .159E+00 |
| 9.530 | .134E+00 | 9.535 | .106E+00 | 9.540 | .771E-01 | 9.545 | .454E-01 | 9.550 | .112E-01 |
| 9.555 | -.258E-01 | 9.560 | -.652E-01 | 9.565 | -.106E+00 | 9.570 | -.145E+00 | 9.575 | -.180E+00 |
| 9.580 | -.208E+00 | 9.585 | -.226E+00 | 9.590 | -.230E+00 | 9.595 | -.219E+00 | 9.600 | -.194E+00 |
| 9.605 | -.158E+00 | 9.610 | -.113E+00 | 9.615 | -.647E-01 | 9.620 | -.151E-01 | 9.625 | .284E-01 |
| 9.630 | .659E-01 | 9.635 | .945E-01 | 9.640 | .113E+00 | 9.645 | .121E+00 | 9.650 | .119E+00 |
| 9.655 | .106E+00 | 9.660 | .834E-01 | 9.665 | .514E-01 | 9.670 | .113E-01 | 9.675 | -.351E-01 |
| 9.680 | -.853E-01 | 9.685 | -.137E+00 | 9.690 | -.186E+00 | 9.695 | -.232E+00 | 9.700 | -.272E+00 |

SPECTRA FOR THE PRECEDING TIME HISTORY WILL BE
CALCULATED AT THE FOLLOWING FREQUENCIES (IN CPS)

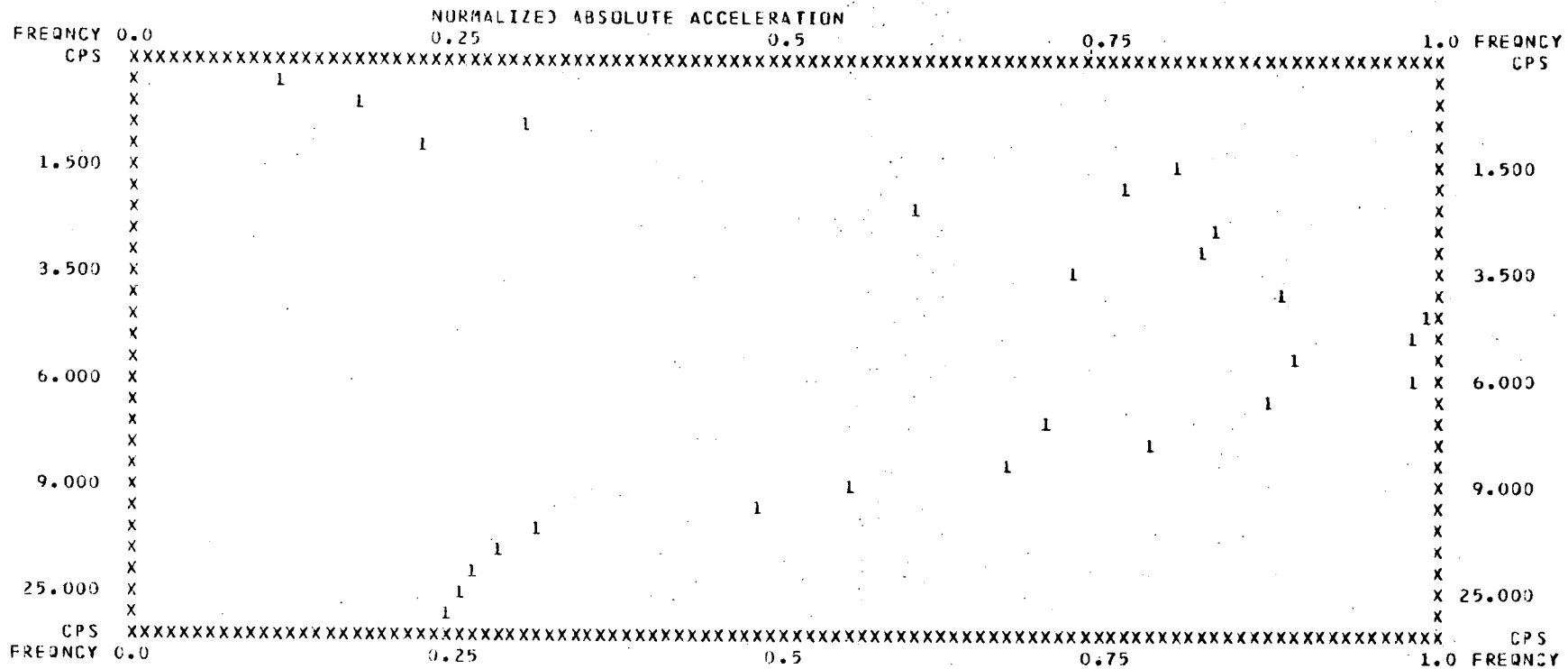
| | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| .3000 | .4000 | .7000 | 1.0000 | 1.5000 | 1.7000 | 2.0000 | 2.5000 | 3.0000 | 3.5000 |
| 4.0000 | 4.5000 | 5.0000 | 5.5000 | 6.0000 | 6.5000 | 7.0000 | 7.5000 | 8.0000 | 9.0000 |
| 10.0000 | 12.0000 | 15.0000 | 20.0000 | 25.0000 | 30.0000 | | | | |

| FREQUENCY (CPS) | PERIOD (SECS) | ABSOLUTE ACCELERATION | PSEUDO VELOCITY | TIME AT MAXIMUM |
|--------------------|------------------|--------------------------|--------------------|--------------------|
| .300 | 3.333 | .2653E+00 | .1408E+00 | .9080E+01 |
| .400 | 2.500 | .3943E+00 | .1497E+00 | .1083E+02 |
| .700 | 1.429 | .6541E+00 | .1487E+00 | .6345E+01 |
| 1.000 | 1.000 | .4867E+00 | .7746E-01 | .5230E+01 |
| 1.500 | .667 | .1704E+01 | .1807E+00 | .6815E+01 |
| 1.700 | .588 | .1607E+01 | .1504E+00 | .6575E+01 |
| 2.000 | .500 | .1274E+01 | .1014E+00 | .9320E+01 |
| 2.500 | .400 | .1752E+01 | .1116E+00 | .5995E+01 |
| 3.000 | .333 | .1731E+01 | .9185E-01 | .8955E+01 |
| 3.500 | .286 | .1524E+01 | .6932E-01 | .4940E+01 |
| 4.000 | .250 | .1852E+01 | .7367E-01 | .7930E+01 |
| 4.500 | .222 | .2099E+01 | .7425E-01 | .6550E+01 |
| 5.000 | .200 | .2059E+01 | .6553E-01 | .8070E+01 |
| 5.500 | .182 | .1876E+01 | .5430E-01 | .8035E+01 |
| 6.000 | .167 | .2068E+01 | .5484E-01 | .4690E+01 |
| 6.500 | .154 | .1846E+01 | .4520E-01 | .4470E+01 |
| 7.000 | .143 | .1494E+01 | .3397E-01 | .9765E+01 |
| 7.500 | .133 | .1646E+01 | .3492E-01 | .9750E+01 |
| 8.000 | .125 | .1422E+01 | .2829E-01 | .9740E+01 |
| 9.000 | .111 | .1182E+01 | .2090E-01 | .6515E+01 |
| 10.000 | .100 | .1028E+01 | .1637E-01 | .6490E+01 |
| 12.000 | .083 | .6798E+00 | .9016E-02 | .6215E+01 |
| 15.000 | .067 | .6052E+00 | .6421E-02 | .4720E+01 |
| 20.000 | .050 | .5755E+00 | .4580E-02 | .4710E+01 |
| 25.000 | .040 | .5461E+00 | .3477E-02 | .4705E+01 |
| 30.000 | .033 | .5380E+00 | .2854E-02 | .4700E+01 |

MAXIMUM ABSOLUTE SPECTRAL ACCELERATION .2099E+01
AT FREQUENCY (CPS) .4500E+01

NORMALIZED PLOT OF RESPONSE SPECTRA.....

| DAMPING VALUE | MAXIMUM VALJE | AT FREQUENCY | PLOT SYMBOL |
|---------------|---------------|--------------|-------------|
| .2000E-01 | .2099E+01 | .4500E+01 | 1 |



INPUT TIME HISTORY CONTROL

| | | |
|---------------------------|------|--------|
| TIME HISTORY NUMBER | | 2 |
| NUMBER OF TIME POINTS | NTP | 2001 |
| INPUT CODE | INPT | 1 |
| TIME STEP | DEL | .0050 |
| ACCELERATION SCALE FACTOR | SFIR | 1.0000 |

COMPUTATION AND OUTPUT CONTROL

| | | |
|--------------------------------|------|---------|
| INPUT HISTORY INTEGRATION CODE | INTR | 0 |
| SPECTRUM COMPUTATION CODES | ISPC | 1 |
| | IDUR | 0 |
| SPECTRUM OUTPUT CODE | IDUT | 3 |
| NUMBER OF FREQUENCY POINTS | NFP | 26 |
| NUMBER OF DAMPINGS | NDP | 1 |
| FREQUENCY SCALE TYPE CODE | IFSC | 2 |
| LOWEST FREQUENCY IN CPS | W1 | .3000 |
| HIGHEST FREQUENCY IN CPS | W2 | 30.0000 |
| TIME STEP TO PERIOD RATIO | DELP | .2000 |

FIELD LENGTH REQUIREMENTS
(IN OCTAL)

| | |
|-----------------------|--------|
| PROGRAM LENGTH | 040437 |
| BLANK COMMON REQUIRED | 007647 |
| FIELD LENGTH REQUIRED | 050306 |

FORMAT OF INPUT TIME HISTORY IS

(I2300(I),(E16.8))

| TIME | ACCEL | TIME | ACCEL | TIME | ACCEL | TIME | ACCEL | TIME | ACCEL |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| .005 | .806E-01 | .010 | .613E-01 | .015 | .383E-01 | .020 | .118E-01 | .025 | -.168E-01 |
| .030 | -.450E-01 | .035 | -.703E-01 | .040 | -.904E-01 | .045 | -.104E+00 | .050 | -.111E+00 |
| .055 | -.114E+00 | .060 | -.113E+00 | .065 | -.114E+00 | .070 | -.116E+00 | .075 | -.123E+00 |
| .080 | -.133E+00 | .085 | -.145E+00 | .090 | -.157E+00 | .095 | -.168E+00 | .100 | -.175E+00 |
| .105 | -.177E+00 | .110 | -.176E+00 | .115 | -.172E+00 | .120 | -.168E+00 | .125 | -.166E+00 |
| .130 | -.167E+00 | .135 | -.173E+00 | .140 | -.182E+00 | .145 | -.195E+00 | .150 | -.209E+00 |
| .155 | -.224E+00 | .160 | -.236E+00 | .165 | -.246E+00 | .170 | -.252E+00 | .175 | -.253E+00 |
| .180 | -.251E+00 | .185 | -.245E+00 | .190 | -.236E+00 | .195 | -.227E+00 | .200 | -.217E+00 |
| .205 | -.208E+00 | .210 | -.199E+00 | .215 | -.191E+00 | .220 | -.184E+00 | .225 | -.176E+00 |
| .230 | -.166E+00 | .235 | -.155E+00 | .240 | -.142E+00 | .245 | -.127E+00 | .250 | -.112E+00 |
| .255 | -.956E-01 | .260 | -.803E-01 | .265 | -.664E-01 | .270 | -.544E-01 | .275 | -.442E-01 |
| .280 | -.353E-01 | .285 | -.270E-01 | .290 | -.187E-01 | .295 | -.947E-02 | .300 | .964E-03 |
| .305 | .128E-01 | .310 | .259E-01 | .315 | .400E-01 | .320 | .546E-01 | .325 | .692E-01 |
| .330 | .834E-01 | .335 | .970E-01 | .340 | .110E+00 | .345 | .122E+00 | .350 | .133E+00 |
| .355 | .143E+00 | .360 | .152E+00 | .365 | .161E+00 | .370 | .170E+00 | .375 | .179E+00 |
| .380 | .188E+00 | .385 | .196E+00 | .390 | .204E+00 | .395 | .210E+00 | .400 | .216E+00 |
| .405 | .219E+00 | .410 | .220E+00 | .415 | .220E+00 | .420 | .217E+00 | .425 | .212E+00 |
| .430 | .206E+00 | .435 | .197E+00 | .440 | .187E+00 | .445 | .177E+00 | .450 | .166E+00 |
| .455 | .157E+00 | .460 | .150E+00 | .465 | .147E+00 | .470 | .147E+00 | .475 | .152E+00 |
| .480 | .158E+00 | .485 | .164E+00 | .490 | .169E+00 | .495 | .169E+00 | .500 | .164E+00 |
| .505 | .153E+00 | .510 | .138E+00 | .515 | .120E+00 | .520 | .103E+00 | .525 | .889E-01 |
| .530 | .785E-01 | .535 | .721E-01 | .540 | .684E-01 | .545 | .650E-01 | .550 | .593E-01 |
| .555 | .491E-01 | .560 | .336E-01 | .565 | .132E-01 | .570 | -.103E-01 | .575 | -.344E-01 |
| .580 | -.567E-01 | .585 | -.755E-01 | .590 | -.905E-01 | .595 | -.102E+00 | .600 | -.112E+00 |
| .605 | -.121E+00 | .610 | -.130E+00 | .615 | -.140E+00 | .620 | -.148E+00 | .625 | -.153E+00 |
| .630 | -.153E+00 | .635 | -.149E+00 | .640 | -.140E+00 | .645 | -.129E+00 | .650 | -.120E+00 |
| .655 | -.116E+00 | .660 | -.118E+00 | .665 | -.127E+00 | .670 | -.142E+00 | .675 | -.158E+00 |
| .680 | -.172E+00 | .685 | -.179E+00 | .690 | -.178E+00 | .695 | -.169E+00 | .700 | -.155E+00 |
| .705 | -.141E+00 | .710 | -.131E+00 | .715 | -.129E+00 | .720 | -.138E+00 | .725 | -.155E+00 |
| .730 | -.177E+00 | .735 | -.198E+00 | .740 | -.213E+00 | .745 | -.219E+00 | .750 | -.213E+00 |
| .755 | -.197E+00 | .760 | -.176E+00 | .765 | -.154E+00 | .770 | -.136E+00 | .775 | -.127E+00 |
| .780 | -.127E+00 | .785 | -.135E+00 | .790 | -.146E+00 | .795 | -.157E+00 | .800 | -.163E+00 |
| .805 | -.160E+00 | .810 | -.148E+00 | .815 | -.126E+00 | .820 | -.971E-01 | .825 | -.659E-01 |
| .830 | -.358E-01 | .835 | -.103E-01 | .840 | .846E-02 | .845 | .197E-01 | .850 | .240E-01 |
| .855 | .229E-01 | .860 | .187E-01 | .865 | .138E-01 | .870 | .105E-01 | .875 | .106E-01 |
| .880 | .152E-01 | .885 | .244E-01 | .890 | .375E-01 | .895 | .526E-01 | .900 | .676E-01 |
| .905 | .799E-01 | .910 | .870E-01 | .915 | .875E-01 | .920 | .810E-01 | .925 | .684E-01 |
| .930 | .521E-01 | .935 | .352E-01 | .940 | .210E-01 | .945 | .123E-01 | .950 | .109E-01 |
| .955 | .169E-01 | .960 | .291E-01 | .965 | .450E-01 | .970 | .619E-01 | .975 | .768E-01 |
| .980 | .879E-01 | .985 | .942E-01 | .990 | .960E-01 | .995 | .945E-01 | 1.000 | .914E-01 |
| 1.005 | .882E-01 | 1.010 | .850E-01 | 1.015 | .853E-01 | 1.020 | .857E-01 | 1.025 | .864E-01 |
| 1.030 | .865E-01 | 1.035 | .851E-01 | 1.040 | .819E-01 | 1.045 | .757E-01 | 1.050 | .700E-01 |
| 1.055 | .623E-01 | 1.060 | .540E-01 | 1.065 | .455E-01 | 1.070 | .359E-01 | 1.075 | .283E-01 |
| 1.080 | .197E-01 | 1.085 | .111E-01 | 1.090 | .303E-02 | 1.095 | -.403E-02 | 1.100 | -.934E-02 |
| 1.105 | -.123E-01 | 1.110 | -.124E-01 | 1.115 | -.986E-02 | 1.120 | -.520E-02 | 1.125 | .515E-03 |
| 1.130 | .594E-02 | 1.135 | .971E-02 | 1.140 | .107E-01 | 1.145 | .843E-02 | 1.150 | .289E-02 |
| 1.155 | -.516E-02 | 1.160 | -.145E-01 | 1.165 | -.237E-01 | 1.170 | -.315E-01 | 1.175 | -.368E-01 |
| 1.180 | -.395E-01 | 1.185 | -.397E-01 | 1.190 | -.335E-01 | 1.195 | -.370E-01 | 1.200 | -.364E-01 |
| 1.205 | -.376E-01 | 1.210 | -.409E-01 | 1.215 | -.461E-01 | 1.220 | -.521E-01 | 1.225 | -.580E-01 |
| 1.230 | -.624E-01 | 1.235 | -.644E-01 | 1.240 | -.635E-01 | 1.245 | -.601E-01 | 1.250 | -.548E-01 |
| 1.255 | -.487E-01 | 1.260 | -.431E-01 | 1.265 | -.389E-01 | 1.270 | -.367E-01 | 1.275 | -.367E-01 |
| 1.280 | -.384E-01 | 1.285 | -.411E-01 | 1.290 | -.439E-01 | 1.295 | -.451E-01 | 1.300 | -.469E-01 |
| 1.305 | -.464E-01 | 1.310 | -.445E-01 | 1.315 | -.418E-01 | 1.320 | -.389E-01 | 1.325 | -.364E-01 |
| 1.330 | -.348E-01 | 1.335 | -.345E-01 | 1.340 | -.355E-01 | 1.345 | -.377E-01 | 1.350 | -.409E-01 |
| 1.355 | -.446E-01 | 1.360 | -.485E-01 | 1.365 | -.523E-01 | 1.370 | -.556E-01 | 1.375 | -.583E-01 |
| 1.380 | -.604E-01 | 1.385 | -.619E-01 | 1.390 | -.628E-01 | 1.395 | -.632E-01 | 1.400 | -.630E-01 |
| 1.405 | -.621E-01 | 1.410 | -.604E-01 | 1.415 | -.580E-01 | 1.420 | -.551E-01 | 1.425 | -.519E-01 |
| 1.430 | -.488E-01 | 1.435 | -.450E-01 | 1.440 | -.439E-01 | 1.445 | -.420E-01 | 1.450 | -.400E-01 |
| 1.455 | -.367E-01 | 1.460 | -.312E-01 | 1.465 | -.227E-01 | 1.470 | -.108E-01 | 1.475 | .390E-02 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 1.580 | .201E-01 | 1.585 | .177E-01 | 1.590 | .185E-01 | 1.595 | .217E-01 | 1.600 | .258E-01 |
| 1.605 | .292E-01 | 1.610 | .308E-01 | 1.615 | .304E-01 | 1.620 | .288E-01 | 1.625 | .275E-01 |
| 1.630 | .279E-01 | 1.635 | .307E-01 | 1.640 | .355E-01 | 1.645 | .408E-01 | 1.650 | .441E-01 |
| 1.655 | .433E-01 | 1.660 | .358E-01 | 1.665 | .248E-01 | 1.670 | .912E-02 | 1.675 | -.689E-02 |
| 1.680 | -.194E-01 | 1.685 | -.253E-01 | 1.690 | -.231E-01 | 1.695 | -.136E-01 | 1.700 | .205E-03 |
| 1.705 | .138E-01 | 1.710 | .225E-01 | 1.715 | .229E-01 | 1.720 | .136E-01 | 1.725 | -.377E-02 |
| 1.730 | -.252E-01 | 1.735 | -.453E-01 | 1.740 | -.589E-01 | 1.745 | -.624E-01 | 1.750 | -.547E-01 |
| 1.755 | -.379E-01 | 1.760 | -.155E-01 | 1.765 | .387E-02 | 1.770 | .177E-01 | 1.775 | .213E-01 |
| 1.780 | .135E-01 | 1.785 | -.385E-02 | 1.790 | -.268E-01 | 1.795 | -.500E-01 | 1.800 | -.685E-01 |
| 1.805 | -.786E-01 | 1.810 | -.788E-01 | 1.815 | -.702E-01 | 1.820 | -.554E-01 | 1.825 | -.385E-01 |
| 1.830 | -.232E-01 | 1.835 | -.129E-01 | 1.840 | -.929E-02 | 1.845 | -.124E-01 | 1.850 | -.211E-01 |
| 1.855 | -.331E-01 | 1.860 | -.455E-01 | 1.865 | -.558E-01 | 1.870 | -.617E-01 | 1.875 | -.617E-01 |
| 1.880 | -.552E-01 | 1.885 | -.428E-01 | 1.890 | -.256E-01 | 1.895 | -.579E-02 | 1.900 | .140E-01 |
| 1.905 | .308E-01 | 1.910 | .423E-01 | 1.915 | .456E-01 | 1.920 | .432E-01 | 1.925 | .329E-01 |
| 1.930 | .179E-01 | 1.935 | .118E-02 | 1.940 | -.138E-01 | 1.945 | -.240E-01 | 1.950 | -.274E-01 |
| 1.955 | -.237E-01 | 1.960 | -.139E-01 | 1.965 | -.352E-03 | 1.970 | .139E-01 | 1.975 | .259E-01 |
| 1.980 | .336E-01 | 1.985 | .351E-01 | 1.990 | .341E-01 | 1.995 | .289E-01 | 2.000 | .230E-01 |
| 2.005 | .185E-01 | 2.010 | .170E-01 | 2.015 | .193E-01 | 2.020 | .251E-01 | 2.025 | .334E-01 |
| 2.030 | .427E-01 | 2.035 | .518E-01 | 2.040 | .594E-01 | 2.045 | .652E-01 | 2.050 | .692E-01 |
| 2.055 | .716E-01 | 2.060 | .730E-01 | 2.065 | .737E-01 | 2.070 | .739E-01 | 2.075 | .735E-01 |
| 2.080 | .723E-01 | 2.085 | .703E-01 | 2.090 | .675E-01 | 2.095 | .643E-01 | 2.100 | .613E-01 |
| 2.105 | .592E-01 | 2.110 | .586E-01 | 2.115 | .596E-01 | 2.120 | .620E-01 | 2.125 | .651E-01 |
| 2.130 | .678E-01 | 2.135 | .689E-01 | 2.140 | .671E-01 | 2.145 | .619E-01 | 2.150 | .532E-01 |
| 2.155 | .416E-01 | 2.160 | .283E-01 | 2.165 | .151E-01 | 2.170 | .354E-02 | 2.175 | -.487E-02 |
| 2.180 | -.930E-02 | 2.185 | -.955E-02 | 2.190 | -.663E-02 | 2.195 | -.155E-02 | 2.200 | .391E-02 |
| 2.205 | .809E-02 | 2.210 | .974E-02 | 2.215 | .820E-02 | 2.220 | .350E-02 | 2.225 | -.323E-02 |
| 2.230 | -.110E-01 | 2.235 | -.183E-01 | 2.240 | -.240E-01 | 2.245 | -.272E-01 | 2.250 | -.279E-01 |
| 2.255 | -.267E-01 | 2.260 | -.247E-01 | 2.265 | -.232E-01 | 2.270 | -.232E-01 | 2.275 | -.255E-01 |
| 2.280 | -.303E-01 | 2.285 | -.373E-01 | 2.290 | -.456E-01 | 2.295 | -.541E-01 | 2.300 | -.619E-01 |
| 2.305 | -.680E-01 | 2.310 | -.722E-01 | 2.315 | -.743E-01 | 2.320 | -.748E-01 | 2.325 | -.742E-01 |
| 2.330 | -.732E-01 | 2.335 | -.722E-01 | 2.340 | -.714E-01 | 2.345 | -.710E-01 | 2.350 | -.708E-01 |
| 2.355 | -.707E-01 | 2.360 | -.706E-01 | 2.365 | -.703E-01 | 2.370 | -.699E-01 | 2.375 | -.698E-01 |
| 2.380 | -.700E-01 | 2.385 | -.708E-01 | 2.390 | -.722E-01 | 2.395 | -.742E-01 | 2.400 | -.765E-01 |
| 2.405 | -.789E-01 | 2.410 | -.814E-01 | 2.415 | -.839E-01 | 2.420 | -.867E-01 | 2.425 | -.903E-01 |
| 2.430 | -.952E-01 | 2.435 | -.102E+00 | 2.440 | -.110E+00 | 2.445 | -.119E+00 | 2.450 | -.127E+00 |
| 2.455 | -.134E+00 | 2.460 | -.138E+00 | 2.465 | -.137E+00 | 2.470 | -.132E+00 | 2.475 | -.122E+00 |
| 2.480 | -.109E+00 | 2.485 | -.955E-01 | 2.490 | -.838E-01 | 2.495 | -.763E-01 | 2.500 | -.739E-01 |
| 2.505 | -.765E-01 | 2.510 | -.826E-01 | 2.515 | -.895E-01 | 2.520 | -.941E-01 | 2.525 | -.940E-01 |
| 2.530 | -.874E-01 | 2.535 | -.743E-01 | 2.540 | -.564E-01 | 2.545 | -.352E-01 | 2.550 | -.168E-01 |
| 2.555 | -.950E-03 | 2.560 | .976E-02 | 2.565 | .151E-01 | 2.570 | .153E-01 | 2.575 | .150E-01 |
| 2.580 | .134E-01 | 2.585 | .128E-01 | 2.590 | .135E-01 | 2.595 | .147E-01 | 2.600 | .151E-01 |
| 2.605 | .131E-01 | 2.610 | .781E-02 | 2.615 | -.538E-03 | 2.620 | -.106E-01 | 2.625 | -.203E-01 |
| 2.630 | -.273E-01 | 2.635 | -.302E-01 | 2.640 | -.288E-01 | 2.645 | -.242E-01 | 2.650 | -.190E-01 |
| 2.655 | -.157E-01 | 2.660 | -.165E-01 | 2.665 | -.220E-01 | 2.670 | -.309E-01 | 2.675 | -.402E-01 |
| 2.680 | -.460E-01 | 2.685 | -.445E-01 | 2.690 | -.336E-01 | 2.695 | -.129E-01 | 2.700 | .151E-01 |
| 2.705 | .462E-01 | 2.710 | .756E-01 | 2.715 | .989E-01 | 2.720 | .113E+00 | 2.725 | .119E+00 |
| 2.730 | .119E+00 | 2.735 | .115E+00 | 2.740 | .114E+00 | 2.745 | .117E+00 | 2.750 | .126E+00 |
| 2.755 | .139E+00 | 2.760 | .153E+00 | 2.765 | .164E+00 | 2.770 | .166E+00 | 2.775 | .157E+00 |
| 2.780 | .138E+00 | 2.785 | .110E+00 | 2.790 | .793E-01 | 2.795 | .505E-01 | 2.800 | .288E-01 |
| 2.805 | .174E-01 | 2.810 | .173E-01 | 2.815 | .267E-01 | 2.820 | .418E-01 | 2.825 | .582E-01 |
| 2.830 | .712E-01 | 2.835 | .777E-01 | 2.840 | .760E-01 | 2.845 | .655E-01 | 2.850 | .510E-01 |
| 2.855 | .323E-01 | 2.860 | .132E-01 | 2.865 | -.351E-02 | 2.870 | -.165E-01 | 2.875 | -.246E-01 |
| 2.880 | -.282E-01 | 2.885 | -.283E-01 | 2.890 | -.263E-01 | 2.895 | -.241E-01 | 2.900 | -.236E-01 |
| 2.905 | -.263E-01 | 2.910 | -.332E-01 | 2.915 | -.447E-01 | 2.920 | -.603E-01 | 2.925 | -.783E-01 |
| 2.930 | -.967E-01 | 2.935 | -.113E+00 | 2.940 | -.125E+00 | 2.945 | -.131E+00 | 2.950 | -.130E+00 |
| 2.955 | -.124E+00 | 2.960 | -.115E+00 | 2.965 | -.106E+00 | 2.970 | -.983E-01 | 2.975 | -.955E-01 |
| 2.980 | -.980E-01 | 2.985 | -.106E+00 | 2.990 | -.116E+00 | 2.995 | -.128E+00 | 3.000 | -.138E+00 |
| 3.005 | -.145E+00 | 3.010 | -.146E+00 | 3.015 | -.144E+00 | 3.020 | -.137E+00 | 3.025 | -.129E+00 |
| 3.030 | -.121E+00 | 3.035 | -.114E+00 | 3.040 | -.110E+00 | 3.045 | -.107E+00 | 3.050 | -.107E+00 |
| 3.055 | -.108E+00 | 3.060 | -.109E+00 | 3.065 | -.110E+00 | 3.070 | -.112E+00 | 3.075 | -.113E+00 |
| 3.080 | -.115E+00 | 3.085 | -.117E+00 | 3.090 | -.115E+00 | 3.095 | -.118E+00 | 3.100 | -.114E+00 |
| 3.105 | -.106E+00 | 3.110 | -.939E-01 | 3.115 | -.763E-01 | 3.120 | -.542E-01 | 3.125 | -.288E-01 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 3.230 | .236E+00 | 3.235 | .225E+00 | 3.240 | .220E+00 | 3.245 | .220E+00 | 3.250 | .226E+00 |
| 3.255 | .236E+00 | 3.260 | .249E+00 | 3.265 | .263E+00 | 3.270 | .277E+00 | 3.275 | .290E+00 |
| 3.280 | .302E+00 | 3.285 | .313E+00 | 3.290 | .323E+00 | 3.295 | .333E+00 | 3.300 | .344E+00 |
| 3.305 | .356E+00 | 3.310 | .358E+00 | 3.315 | .380E+00 | 3.320 | .389E+00 | 3.325 | .396E+00 |
| 3.330 | .400E+00 | 3.335 | .399E+00 | 3.340 | .394E+00 | 3.345 | .386E+00 | 3.350 | .375E+00 |
| 3.355 | .362E+00 | 3.360 | .348E+00 | 3.365 | .333E+00 | 3.370 | .318E+00 | 3.375 | .303E+00 |
| 3.380 | .287E+00 | 3.385 | .271E+00 | 3.390 | .255E+00 | 3.395 | .240E+00 | 3.400 | .226E+00 |
| 3.405 | .214E+00 | 3.410 | .202E+00 | 3.415 | .192E+00 | 3.420 | .183E+00 | 3.425 | .174E+00 |
| 3.430 | .164E+00 | 3.435 | .152E+00 | 3.440 | .140E+00 | 3.445 | .127E+00 | 3.450 | .115E+00 |
| 3.455 | .104E+00 | 3.460 | .945E-01 | 3.465 | .881E-01 | 3.470 | .839E-01 | 3.475 | .810E-01 |
| 3.480 | .778E-01 | 3.485 | .724E-01 | 3.490 | .631E-01 | 3.495 | .489E-01 | 3.500 | .299E-01 |
| 3.505 | .720E-02 | 3.510 | -.170E-01 | 3.515 | -.401E-01 | 3.520 | -.594E-01 | 3.525 | -.729E-01 |
| 3.530 | -.799E-01 | 3.535 | -.810E-01 | 3.540 | -.779E-01 | 3.545 | -.732E-01 | 3.550 | -.695E-01 |
| 3.555 | -.688E-01 | 3.560 | -.720E-01 | 3.565 | -.784E-01 | 3.570 | -.856E-01 | 3.575 | -.942E-01 |
| 3.580 | -.991E-01 | 3.585 | -.997E-01 | 3.590 | -.956E-01 | 3.595 | -.876E-01 | 3.600 | -.771E-01 |
| 3.605 | -.661E-01 | 3.610 | -.559E-01 | 3.615 | -.474E-01 | 3.620 | -.404E-01 | 3.625 | -.342E-01 |
| 3.630 | -.277E-01 | 3.635 | -.205E-01 | 3.640 | -.128E-01 | 3.645 | -.575E-02 | 3.650 | -.108E-02 |
| 3.655 | -.636E-03 | 3.660 | -.551E-02 | 3.665 | -.155E-01 | 3.670 | -.290E-01 | 3.675 | -.431E-01 |
| 3.680 | -.544E-01 | 3.685 | -.602E-01 | 3.690 | -.592E-01 | 3.695 | -.520E-01 | 3.700 | -.414E-01 |
| 3.705 | -.315E-01 | 3.710 | -.267E-01 | 3.715 | -.303E-01 | 3.720 | -.435E-01 | 3.725 | -.647E-01 |
| 3.730 | -.900E-01 | 3.735 | -.114E+00 | 3.740 | -.130E+00 | 3.745 | -.136E+00 | 3.750 | -.128E+00 |
| 3.755 | -.107E+00 | 3.760 | -.781E-01 | 3.765 | -.457E-01 | 3.770 | -.157E-01 | 3.775 | .738E-02 |
| 3.780 | .210E-01 | 3.785 | .250E-01 | 3.790 | .216E-01 | 3.795 | .143E-01 | 3.800 | .691E-02 |
| 3.805 | .256E-02 | 3.810 | .305E-02 | 3.815 | .849E-02 | 3.820 | .176E-01 | 3.825 | .280E-01 |
| 3.830 | .372E-01 | 3.835 | .426E-01 | 3.840 | .425E-01 | 3.845 | .356E-01 | 3.850 | .216E-01 |
| 3.855 | .106E-02 | 3.860 | -.249E-01 | 3.865 | -.544E-01 | 3.870 | -.848E-01 | 3.875 | -.113E+00 |
| 3.880 | -.136E+00 | 3.885 | -.151E+00 | 3.890 | -.157E+00 | 3.895 | -.152E+00 | 3.900 | -.139E+00 |
| 3.905 | -.120E+00 | 3.910 | -.100E+00 | 3.915 | -.332E-01 | 3.920 | -.725E-01 | 3.925 | -.696E-01 |
| 3.930 | -.741E-01 | 3.935 | -.832E-01 | 3.940 | -.930E-01 | 3.945 | -.995E-01 | 3.950 | -.994E-01 |
| 3.955 | -.913E-01 | 3.960 | -.759E-01 | 3.965 | -.562E-01 | 3.970 | -.360E-01 | 3.975 | -.193E-01 |
| 3.980 | -.896E-02 | 3.985 | -.627E-02 | 3.990 | -.104E-01 | 3.995 | -.191E-01 | 4.000 | -.291E-01 |
| 4.005 | -.377E-01 | 4.010 | -.429E-01 | 4.015 | -.446E-01 | 4.020 | -.438E-01 | 4.025 | -.427E-01 |
| 4.030 | -.435E-01 | 4.035 | -.478E-01 | 4.040 | -.562E-01 | 4.045 | -.678E-01 | 4.050 | -.807E-01 |
| 4.055 | -.927E-01 | 4.060 | -.101E+00 | 4.065 | -.105E+00 | 4.070 | -.104E+00 | 4.075 | -.971E-01 |
| 4.080 | -.870E-01 | 4.085 | -.747E-01 | 4.090 | -.615E-01 | 4.095 | -.482E-01 | 4.100 | -.349E-01 |
| 4.105 | -.216E-01 | 4.110 | -.755E-02 | 4.115 | .724E-02 | 4.120 | .232E-01 | 4.125 | .398E-01 |
| 4.130 | .563E-01 | 4.135 | .718E-01 | 4.140 | .852E-01 | 4.145 | .955E-01 | 4.150 | .102E+00 |
| 4.155 | .104E+00 | 4.160 | .102E+00 | 4.165 | .967E-01 | 4.170 | .876E-01 | 4.175 | .762E-01 |
| 4.180 | .636E-01 | 4.185 | .512E-01 | 4.190 | .401E-01 | 4.195 | .314E-01 | 4.200 | .255E-01 |
| 4.205 | .226E-01 | 4.210 | .221E-01 | 4.215 | .234E-01 | 4.220 | .256E-01 | 4.225 | .282E-01 |
| 4.230 | .311E-01 | 4.235 | .346E-01 | 4.240 | .394E-01 | 4.245 | .463E-01 | 4.250 | .560E-01 |
| 4.255 | .685E-01 | 4.260 | .832E-01 | 4.265 | .989E-01 | 4.270 | .114E+00 | 4.275 | .126E+00 |
| 4.280 | .134E+00 | 4.285 | .136E+00 | 4.290 | .133E+00 | 4.295 | .125E+00 | 4.300 | .113E+00 |
| 4.305 | .987E-01 | 4.310 | .824E-01 | 4.315 | .655E-01 | 4.320 | .487E-01 | 4.325 | .325E-01 |
| 4.330 | .172E-01 | 4.335 | .326E-02 | 4.340 | -.883E-02 | 4.345 | -.186E-01 | 4.350 | -.257E-01 |
| 4.355 | -.302E-01 | 4.360 | -.323E-01 | 4.365 | -.327E-01 | 4.370 | -.323E-01 | 4.375 | -.318E-01 |
| 4.380 | -.318E-01 | 4.385 | -.322E-01 | 4.390 | -.324E-01 | 4.395 | -.314E-01 | 4.400 | -.284E-01 |
| 4.405 | -.227E-01 | 4.410 | -.143E-01 | 4.415 | -.415E-02 | 4.420 | .645E-02 | 4.425 | .158E-01 |
| 4.430 | .224E-01 | 4.435 | .259E-01 | 4.440 | .253E-01 | 4.445 | .228E-01 | 4.450 | .200E-01 |
| 4.455 | .187E-01 | 4.460 | .207E-01 | 4.465 | .266E-01 | 4.470 | .358E-01 | 4.475 | .465E-01 |
| 4.480 | .561E-01 | 4.485 | .617E-01 | 4.490 | .611E-01 | 4.495 | .528E-01 | 4.500 | .371E-01 |
| 4.505 | .155E-01 | 4.510 | -.926E-02 | 4.515 | -.340E-01 | 4.520 | -.558E-01 | 4.525 | -.724E-01 |
| 4.530 | -.828E-01 | 4.535 | -.875E-01 | 4.540 | -.377E-01 | 4.545 | -.856E-01 | 4.550 | -.832E-01 |
| 4.555 | -.821E-01 | 4.560 | -.830E-01 | 4.565 | -.857E-01 | 4.570 | -.892E-01 | 4.575 | -.921E-01 |
| 4.580 | -.932E-01 | 4.585 | -.918E-01 | 4.590 | -.878E-01 | 4.595 | -.817E-01 | 4.600 | -.742E-01 |
| 4.605 | -.663E-01 | 4.610 | -.582E-01 | 4.615 | -.495E-01 | 4.620 | -.391E-01 | 4.625 | -.257E-01 |
| 4.630 | -.786E-02 | 4.635 | .151E-01 | 4.640 | .427E-01 | 4.645 | .733E-01 | 4.650 | .104E+00 |
| 4.655 | .133E+00 | 4.660 | .156E+00 | 4.665 | .172E+00 | 4.670 | .182E+00 | 4.675 | .187E+00 |
| 4.680 | .190E+00 | 4.685 | .196E+00 | 4.690 | .207E+00 | 4.695 | .224E+00 | 4.700 | .247E+00 |
| 4.705 | .274E+00 | 4.710 | .299E+00 | 4.715 | .319E+00 | 4.720 | .329E+00 | 4.725 | .329E+00 |
| 4.730 | .318E+00 | 4.735 | .300E+00 | 4.740 | .281E+00 | 4.745 | .265E+00 | 4.750 | .258E+00 |
| 4.755 | .260E+00 | 4.760 | .223E+00 | 4.765 | .200E+00 | 4.770 | .180E+00 | 4.775 | .166E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 4.880 | .279E-01 | 4.885 | .187E-01 | 4.890 | .197E-01 | 4.895 | .278E-01 | 4.900 | .390E-01 |
| 4.905 | .492E-01 | 4.910 | .547E-01 | 4.915 | .533E-01 | 4.920 | .441E-01 | 4.925 | .281E-01 |
| 4.930 | .704E-02 | 4.935 | -.154E-01 | 4.940 | -.395E-01 | 4.945 | -.606E-01 | 4.950 | -.788E-01 |
| 4.955 | -.947E-01 | 4.960 | -.110E+00 | 4.965 | -.126E+00 | 4.970 | -.146E+00 | 4.975 | -.172E+00 |
| 4.980 | -.203E+00 | 4.985 | -.238E+00 | 4.990 | -.277E+00 | 4.995 | -.317E+00 | 5.000 | -.354E+00 |
| 5.005 | -.388E+00 | 5.010 | -.415E+00 | 5.015 | -.438E+00 | 5.020 | -.454E+00 | 5.025 | -.467E+00 |
| 5.030 | -.477E+00 | 5.035 | -.484E+00 | 5.040 | -.490E+00 | 5.045 | -.494E+00 | 5.050 | -.497E+00 |
| 5.055 | -.498E+00 | 5.060 | -.497E+00 | 5.065 | -.494E+00 | 5.070 | -.491E+00 | 5.075 | -.488E+00 |
| 5.080 | -.486E+00 | 5.085 | -.485E+00 | 5.090 | -.484E+00 | 5.095 | -.483E+00 | 5.100 | -.482E+00 |
| 5.105 | -.478E+00 | 5.110 | -.472E+00 | 5.115 | -.464E+00 | 5.120 | -.453E+00 | 5.125 | -.442E+00 |
| 5.130 | -.430E+00 | 5.135 | -.418E+00 | 5.140 | -.407E+00 | 5.145 | -.398E+00 | 5.150 | -.390E+00 |
| 5.155 | -.382E+00 | 5.160 | -.375E+00 | 5.165 | -.366E+00 | 5.170 | -.356E+00 | 5.175 | -.343E+00 |
| 5.180 | -.328E+00 | 5.185 | -.311E+00 | 5.190 | -.291E+00 | 5.195 | -.269E+00 | 5.200 | -.246E+00 |
| 5.205 | -.222E+00 | 5.210 | -.200E+00 | 5.215 | -.179E+00 | 5.220 | -.150E+00 | 5.225 | -.143E+00 |
| 5.230 | -.128E+00 | 5.235 | -.112E+00 | 5.240 | -.955E-01 | 5.245 | -.767E-01 | 5.250 | -.551E-01 |
| 5.255 | -.309E-01 | 5.260 | -.535E-02 | 5.265 | .201E-01 | 5.270 | .434E-01 | 5.275 | .631E-01 |
| 5.280 | .782E-01 | 5.285 | .887E-01 | 5.290 | .955E-01 | 5.295 | .100E+00 | 5.300 | .105E+00 |
| 5.305 | .110E+00 | 5.310 | .117E+00 | 5.315 | .127E+00 | 5.320 | .137E+00 | 5.325 | .147E+00 |
| 5.330 | .157E+00 | 5.335 | .155E+00 | 5.340 | .172E+00 | 5.345 | .178E+00 | 5.350 | .184E+00 |
| 5.355 | .191E+00 | 5.360 | .200E+00 | 5.365 | .211E+00 | 5.370 | .222E+00 | 5.375 | .234E+00 |
| 5.380 | .246E+00 | 5.385 | .255E+00 | 5.390 | .261E+00 | 5.395 | .255E+00 | 5.400 | .266E+00 |
| 5.405 | .264E+00 | 5.410 | .259E+00 | 5.415 | .251E+00 | 5.420 | .239E+00 | 5.425 | .224E+00 |
| 5.430 | .205E+00 | 5.435 | .183E+00 | 5.440 | .161E+00 | 5.445 | .140E+00 | 5.450 | .122E+00 |
| 5.455 | .109E+00 | 5.460 | .103E+00 | 5.465 | .104E+00 | 5.470 | .109E+00 | 5.475 | .117E+00 |
| 5.480 | .123E+00 | 5.485 | .126E+00 | 5.490 | .123E+00 | 5.495 | .112E+00 | 5.500 | .942E-01 |
| 5.505 | .707E-01 | 5.510 | .437E-01 | 5.515 | .158E-01 | 5.520 | -.106E-01 | 5.525 | -.335E-01 |
| 5.530 | -.518E-01 | 5.535 | -.653E-01 | 5.540 | -.743E-01 | 5.545 | -.800E-01 | 5.550 | -.840E-01 |
| 5.555 | -.881E-01 | 5.560 | -.943E-01 | 5.565 | -.104E+00 | 5.570 | -.120E+00 | 5.575 | -.142E+00 |
| 5.580 | -.169E+00 | 5.585 | -.202E+00 | 5.590 | -.238E+00 | 5.595 | -.273E+00 | 5.600 | -.307E+00 |
| 5.605 | -.334E+00 | 5.610 | -.353E+00 | 5.615 | -.354E+00 | 5.620 | -.367E+00 | 5.625 | -.364E+00 |
| 5.630 | -.357E+00 | 5.635 | -.350E+00 | 5.640 | -.346E+00 | 5.645 | -.348E+00 | 5.650 | -.355E+00 |
| 5.655 | -.369E+00 | 5.660 | -.386E+00 | 5.665 | -.404E+00 | 5.670 | -.420E+00 | 5.675 | -.432E+00 |
| 5.680 | -.438E+00 | 5.685 | -.437E+00 | 5.690 | -.429E+00 | 5.695 | -.417E+00 | 5.700 | -.404E+00 |
| 5.705 | -.392E+00 | 5.710 | -.385E+00 | 5.715 | -.383E+00 | 5.720 | -.387E+00 | 5.725 | -.394E+00 |
| 5.730 | -.404E+00 | 5.735 | -.411E+00 | 5.740 | -.412E+00 | 5.745 | -.405E+00 | 5.750 | -.389E+00 |
| 5.755 | -.365E+00 | 5.760 | -.336E+00 | 5.765 | -.305E+00 | 5.770 | -.278E+00 | 5.775 | -.257E+00 |
| 5.780 | -.245E+00 | 5.785 | -.241E+00 | 5.790 | -.242E+00 | 5.795 | -.243E+00 | 5.800 | -.239E+00 |
| 5.805 | -.225E+00 | 5.810 | -.198E+00 | 5.815 | -.159E+00 | 5.820 | -.109E+00 | 5.825 | -.539E-01 |
| 5.830 | .391E-03 | 5.835 | .476E-01 | 5.840 | .830E-01 | 5.845 | .104E+00 | 5.850 | .112E+00 |
| 5.855 | .110E+00 | 5.860 | .102E+00 | 5.865 | .958E-01 | 5.870 | .954E-01 | 5.875 | .105E+00 |
| 5.880 | .126E+00 | 5.885 | .157E+00 | 5.890 | .195E+00 | 5.895 | .237E+00 | 5.900 | .278E+00 |
| 5.905 | .314E+00 | 5.910 | .342E+00 | 5.915 | .351E+00 | 5.920 | .373E+00 | 5.925 | .380E+00 |
| 5.930 | .385E+00 | 5.935 | .391E+00 | 5.940 | .400E+00 | 5.945 | .414E+00 | 5.950 | .434E+00 |
| 5.955 | .457E+00 | 5.960 | .483E+00 | 5.965 | .506E+00 | 5.970 | .526E+00 | 5.975 | .539E+00 |
| 5.980 | .545E+00 | 5.985 | .545E+00 | 5.990 | .539E+00 | 5.995 | .531E+00 | 6.000 | .523E+00 |
| 6.005 | .518E+00 | 6.010 | .517E+00 | 6.015 | .521E+00 | 6.020 | .529E+00 | 6.025 | .540E+00 |
| 6.030 | .551E+00 | 6.035 | .552E+00 | 6.040 | .569E+00 | 6.045 | .572E+00 | 6.050 | .570E+00 |
| 6.055 | .562E+00 | 6.060 | .549E+00 | 6.065 | .530E+00 | 6.070 | .505E+00 | 6.075 | .474E+00 |
| 6.080 | .437E+00 | 6.085 | .395E+00 | 6.090 | .351E+00 | 6.095 | .305E+00 | 6.100 | .262E+00 |
| 6.105 | .223E+00 | 6.110 | .190E+00 | 6.115 | .165E+00 | 6.120 | .146E+00 | 6.125 | .131E+00 |
| 6.130 | .118E+00 | 6.135 | .103E+00 | 6.140 | .839E-01 | 6.145 | .590E-01 | 6.150 | .277E-01 |
| 6.155 | -.912E-02 | 6.160 | -.498E-01 | 6.165 | -.923E-01 | 6.170 | -.134E+00 | 6.175 | -.175E+00 |
| 6.180 | -.212E+00 | 6.185 | -.247E+00 | 6.190 | -.279E+00 | 6.195 | -.310E+00 | 6.200 | -.339E+00 |
| 6.205 | -.367E+00 | 6.210 | -.393E+00 | 6.215 | -.416E+00 | 6.220 | -.435E+00 | 6.225 | -.449E+00 |
| 6.230 | -.459E+00 | 6.235 | -.454E+00 | 6.240 | -.465E+00 | 6.245 | -.465E+00 | 6.250 | -.464E+00 |
| 6.255 | -.464E+00 | 6.260 | -.466E+00 | 6.265 | -.472E+00 | 6.270 | -.480E+00 | 6.275 | -.491E+00 |
| 6.280 | -.504E+00 | 6.285 | -.518E+00 | 6.290 | -.533E+00 | 6.295 | -.548E+00 | 6.300 | -.561E+00 |
| 6.305 | -.574E+00 | 6.310 | -.585E+00 | 6.315 | -.594E+00 | 6.320 | -.601E+00 | 6.325 | -.604E+00 |
| 6.330 | -.603E+00 | 6.335 | -.597E+00 | 6.340 | -.586E+00 | 6.345 | -.571E+00 | 6.350 | -.551E+00 |
| 6.355 | -.529E+00 | 6.360 | -.506E+00 | 6.365 | -.484E+00 | 6.370 | -.455E+00 | 6.375 | -.449E+00 |
| 6.380 | -.437E+00 | 6.385 | -.427E+00 | 6.390 | -.418E+00 | 6.395 | -.407E+00 | 6.400 | -.394E+00 |
| 6.405 | -.374E+00 | 6.410 | -.355E+00 | 6.415 | -.335E+00 | 6.420 | -.312E+00 | 6.425 | -.285E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 6.530 | .458E+00 | 6.535 | .475E+00 | 6.540 | .488E+00 | 6.545 | .496E+00 | 6.550 | .501E+00 |
| 6.555 | .503E+00 | 6.560 | .505E+00 | 6.565 | .509E+00 | 6.570 | .516E+00 | 6.575 | .526E+00 |
| 6.580 | .538E+00 | 6.585 | .550E+00 | 6.590 | .550E+00 | 6.595 | .555E+00 | 6.600 | .564E+00 |
| 6.605 | .556E+00 | 6.610 | .544E+00 | 6.615 | .528E+00 | 6.620 | .511E+00 | 6.625 | .495E+00 |
| 6.630 | .482E+00 | 6.635 | .471E+00 | 6.640 | .463E+00 | 6.645 | .455E+00 | 6.650 | .446E+00 |
| 6.655 | .432E+00 | 6.660 | .414E+00 | 6.665 | .390E+00 | 6.670 | .353E+00 | 6.675 | .332E+00 |
| 6.680 | .302E+00 | 6.685 | .274E+00 | 6.690 | .248E+00 | 6.695 | .227E+00 | 6.700 | .208E+00 |
| 6.705 | .191E+00 | 6.710 | .173E+00 | 6.715 | .154E+00 | 6.720 | .133E+00 | 6.725 | .108E+00 |
| 6.730 | .814E-01 | 6.735 | .544E-01 | 6.740 | .289E-01 | 6.745 | .634E-02 | 6.750 | -.126E-01 |
| 6.755 | -.283E-01 | 6.760 | -.423E-01 | 6.765 | -.568E-01 | 6.770 | -.741E-01 | 6.775 | -.961E-01 |
| 6.780 | -.124E+00 | 6.785 | -.156E+00 | 6.790 | -.190E+00 | 6.795 | -.224E+00 | 6.800 | -.253E+00 |
| 6.805 | -.274E+00 | 6.810 | -.286E+00 | 6.815 | -.288E+00 | 6.820 | -.281E+00 | 6.825 | -.268E+00 |
| 6.830 | -.254E+00 | 6.835 | -.242E+00 | 6.840 | -.235E+00 | 6.845 | -.236E+00 | 6.850 | -.244E+00 |
| 6.855 | -.258E+00 | 6.860 | -.274E+00 | 6.865 | -.290E+00 | 6.870 | -.300E+00 | 6.875 | -.302E+00 |
| 6.880 | -.294E+00 | 6.885 | -.277E+00 | 6.890 | -.250E+00 | 6.895 | -.216E+00 | 6.900 | -.178E+00 |
| 6.905 | -.140E+00 | 6.910 | -.103E+00 | 6.915 | -.712E-01 | 6.920 | -.446E-01 | 6.925 | -.234E-01 |
| 6.930 | -.638E-02 | 6.935 | .826E-02 | 6.940 | .229E-01 | 6.945 | .397E-01 | 6.950 | .603E-01 |
| 6.955 | .856E-01 | 6.960 | .115E+00 | 6.965 | .148E+00 | 6.970 | .183E+00 | 6.975 | .216E+00 |
| 6.980 | .245E+00 | 6.985 | .270E+00 | 6.990 | .290E+00 | 6.995 | .303E+00 | 7.000 | .312E+00 |
| 7.005 | .318E+00 | 7.010 | .323E+00 | 7.015 | .327E+00 | 7.020 | .333E+00 | 7.025 | .341E+00 |
| 7.030 | .350E+00 | 7.035 | .351E+00 | 7.040 | .373E+00 | 7.045 | .383E+00 | 7.050 | .391E+00 |
| 7.055 | .396E+00 | 7.060 | .397E+00 | 7.065 | .394E+00 | 7.070 | .385E+00 | 7.075 | .374E+00 |
| 7.080 | .360E+00 | 7.085 | .346E+00 | 7.090 | .333E+00 | 7.095 | .323E+00 | 7.100 | .317E+00 |
| 7.105 | .316E+00 | 7.110 | .318E+00 | 7.115 | .323E+00 | 7.120 | .327E+00 | 7.125 | .328E+00 |
| 7.130 | .325E+00 | 7.135 | .317E+00 | 7.140 | .302E+00 | 7.145 | .283E+00 | 7.150 | .261E+00 |
| 7.155 | .238E+00 | 7.160 | .216E+00 | 7.165 | .196E+00 | 7.170 | .178E+00 | 7.175 | .162E+00 |
| 7.180 | .147E+00 | 7.185 | .132E+00 | 7.190 | .115E+00 | 7.195 | .948E-01 | 7.200 | .721E-01 |
| 7.205 | .468E-01 | 7.210 | .198E-01 | 7.215 | -.832E-02 | 7.220 | -.357E-01 | 7.225 | -.648E-01 |
| 7.230 | -.922E-01 | 7.235 | -.119E+00 | 7.240 | -.144E+00 | 7.245 | -.168E+00 | 7.250 | -.190E+00 |
| 7.255 | -.209E+00 | 7.260 | -.226E+00 | 7.265 | -.239E+00 | 7.270 | -.250E+00 | 7.275 | -.259E+00 |
| 7.280 | -.267E+00 | 7.285 | -.274E+00 | 7.290 | -.281E+00 | 7.295 | -.287E+00 | 7.300 | -.293E+00 |
| 7.305 | -.298E+00 | 7.310 | -.300E+00 | 7.315 | -.300E+00 | 7.320 | -.296E+00 | 7.325 | -.290E+00 |
| 7.330 | -.283E+00 | 7.335 | -.276E+00 | 7.340 | -.269E+00 | 7.345 | -.265E+00 | 7.350 | -.264E+00 |
| 7.355 | -.266E+00 | 7.360 | -.270E+00 | 7.365 | -.275E+00 | 7.370 | -.275E+00 | 7.375 | -.284E+00 |
| 7.380 | -.285E+00 | 7.385 | -.285E+00 | 7.390 | -.282E+00 | 7.395 | -.278E+00 | 7.400 | -.274E+00 |
| 7.405 | -.269E+00 | 7.410 | -.265E+00 | 7.415 | -.261E+00 | 7.420 | -.257E+00 | 7.425 | -.251E+00 |
| 7.430 | -.243E+00 | 7.435 | -.231E+00 | 7.440 | -.215E+00 | 7.445 | -.192E+00 | 7.450 | -.165E+00 |
| 7.455 | -.133E+00 | 7.460 | -.970E-01 | 7.465 | -.594E-01 | 7.470 | -.217E-01 | 7.475 | .148E-01 |
| 7.480 | .490E-01 | 7.485 | .806E-01 | 7.490 | .109E+00 | 7.495 | .136E+00 | 7.500 | .160E+00 |
| 7.505 | .183E+00 | 7.510 | .203E+00 | 7.515 | .220E+00 | 7.520 | .234E+00 | 7.525 | .244E+00 |
| 7.530 | .248E+00 | 7.535 | .248E+00 | 7.540 | .245E+00 | 7.545 | .239E+00 | 7.550 | .232E+00 |
| 7.555 | .225E+00 | 7.560 | .220E+00 | 7.565 | .215E+00 | 7.570 | .210E+00 | 7.575 | .204E+00 |
| 7.580 | .194E+00 | 7.585 | .182E+00 | 7.590 | .165E+00 | 7.595 | .146E+00 | 7.600 | .125E+00 |
| 7.605 | .106E+00 | 7.610 | .912E-01 | 7.615 | .812E-01 | 7.620 | .772E-01 | 7.625 | .785E-01 |
| 7.630 | .836E-01 | 7.635 | .904E-01 | 7.640 | .965E-01 | 7.645 | .100E+00 | 7.650 | .100E+00 |
| 7.655 | .958E-01 | 7.660 | .903E-01 | 7.665 | .821E-01 | 7.670 | .737E-01 | 7.675 | .663E-01 |
| 7.680 | .604E-01 | 7.685 | .551E-01 | 7.690 | .528E-01 | 7.695 | .493E-01 | 7.700 | .444E-01 |
| 7.705 | .370E-01 | 7.710 | .251E-01 | 7.715 | .117E-01 | 7.720 | -.590E-02 | 7.725 | -.257E-01 |
| 7.730 | -.461E-01 | 7.735 | -.655E-01 | 7.740 | -.823E-01 | 7.745 | -.953E-01 | 7.750 | -.104E+00 |
| 7.755 | -.109E+00 | 7.760 | -.112E+00 | 7.765 | -.115E+00 | 7.770 | -.120E+00 | 7.775 | -.130E+00 |
| 7.780 | -.147E+00 | 7.785 | -.170E+00 | 7.790 | -.198E+00 | 7.795 | -.229E+00 | 7.800 | -.258E+00 |
| 7.805 | -.282E+00 | 7.810 | -.299E+00 | 7.815 | -.305E+00 | 7.820 | -.302E+00 | 7.825 | -.290E+00 |
| 7.830 | -.274E+00 | 7.835 | -.257E+00 | 7.840 | -.242E+00 | 7.845 | -.233E+00 | 7.850 | -.231E+00 |
| 7.855 | -.236E+00 | 7.860 | -.244E+00 | 7.865 | -.254E+00 | 7.870 | -.261E+00 | 7.875 | -.263E+00 |
| 7.880 | -.258E+00 | 7.885 | -.247E+00 | 7.890 | -.230E+00 | 7.895 | -.209E+00 | 7.900 | -.186E+00 |
| 7.905 | -.165E+00 | 7.910 | -.145E+00 | 7.915 | -.129E+00 | 7.920 | -.117E+00 | 7.925 | -.107E+00 |
| 7.930 | -.992E-01 | 7.935 | -.924E-01 | 7.940 | -.851E-01 | 7.945 | -.800E-01 | 7.950 | -.744E-01 |
| 7.955 | -.760E-01 | 7.960 | -.676E-01 | 7.965 | -.680E-01 | 7.970 | -.716E-01 | 7.975 | -.786E-01 |
| 7.980 | -.885E-01 | 7.985 | -.100E+00 | 7.990 | -.113E+00 | 7.995 | -.125E+00 | 8.000 | -.135E+00 |
| 8.005 | -.142E+00 | 8.010 | -.145E+00 | 8.015 | -.144E+00 | 8.020 | -.139E+00 | 8.025 | -.131E+00 |
| 8.030 | -.121E+00 | 8.035 | -.109E+00 | 8.040 | -.955E-01 | 8.045 | -.843E-01 | 8.050 | -.729E-01 |
| 8.055 | -.629E-01 | 8.060 | -.548E-01 | 8.065 | -.489E-01 | 8.070 | -.453E-01 | 8.075 | -.438E-01 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 8.180 | -.273E-01 | 8.185 | -.267E-01 | 8.190 | -.255E-01 | 8.195 | -.270E-01 | 8.200 | -.281E-01 |
| 8.205 | -.293E-01 | 8.210 | -.297E-01 | 8.215 | -.288E-01 | 8.220 | -.252E-01 | 8.225 | -.223E-01 |
| 8.230 | -.178E-01 | 8.235 | -.138E-01 | 8.240 | -.115E-01 | 8.245 | -.116E-01 | 8.250 | -.142E-01 |
| 8.255 | -.188E-01 | 8.260 | -.244E-01 | 8.265 | -.296E-01 | 8.270 | -.333E-01 | 8.275 | -.347E-01 |
| 8.280 | -.339E-01 | 8.285 | -.316E-01 | 8.290 | -.292E-01 | 8.295 | -.281E-01 | 8.300 | -.295E-01 |
| 8.305 | -.340E-01 | 8.310 | -.414E-01 | 8.315 | -.507E-01 | 8.320 | -.603E-01 | 8.325 | -.686E-01 |
| 8.330 | -.741E-01 | 8.335 | -.757E-01 | 8.340 | -.734E-01 | 8.345 | -.678E-01 | 8.350 | -.601E-01 |
| 8.355 | -.520E-01 | 8.360 | -.446E-01 | 8.365 | -.388E-01 | 8.370 | -.348E-01 | 8.375 | -.320E-01 |
| 8.380 | -.291E-01 | 8.385 | -.249E-01 | 8.390 | -.184E-01 | 8.395 | -.911E-02 | 8.400 | .264E-02 |
| 8.405 | .156E-01 | 8.410 | .281E-01 | 8.415 | .381E-01 | 8.420 | .441E-01 | 8.425 | .450E-01 |
| 8.430 | .411E-01 | 8.435 | .332E-01 | 8.440 | .234E-01 | 8.445 | .139E-01 | 8.450 | .654E-02 |
| 8.455 | .286E-02 | 8.460 | .330E-02 | 8.465 | .737E-02 | 8.470 | .138E-01 | 8.475 | .211E-01 |
| 8.480 | .276E-01 | 8.485 | .323E-01 | 8.490 | .349E-01 | 8.495 | .357E-01 | 8.500 | .354E-01 |
| 8.505 | .348E-01 | 8.510 | .347E-01 | 8.515 | .353E-01 | 8.520 | .363E-01 | 8.525 | .376E-01 |
| 8.530 | .388E-01 | 8.535 | .399E-01 | 8.540 | .416E-01 | 8.545 | .449E-01 | 8.550 | .510E-01 |
| 8.555 | .609E-01 | 8.560 | .751E-01 | 8.565 | .928E-01 | 8.570 | .113E+00 | 8.575 | .132E+00 |
| 8.580 | .149E+00 | 8.585 | .150E+00 | 8.590 | .155E+00 | 8.595 | .164E+00 | 8.600 | .158E+00 |
| 8.605 | .149E+00 | 8.610 | .140E+00 | 8.615 | .134E+00 | 8.620 | .131E+00 | 8.625 | .134E+00 |
| 8.630 | .139E+00 | 8.635 | .146E+00 | 8.640 | .150E+00 | 8.645 | .151E+00 | 8.650 | .146E+00 |
| 8.655 | .135E+00 | 8.660 | .120E+00 | 8.665 | .102E+00 | 8.670 | .847E-01 | 8.675 | .704E-01 |
| 8.680 | .609E-01 | 8.685 | .566E-01 | 8.690 | .565E-01 | 8.695 | .584E-01 | 8.700 | .596E-01 |
| 8.705 | .571E-01 | 8.710 | .487E-01 | 8.715 | .333E-01 | 8.720 | .115E-01 | 8.725 | -.148E-01 |
| 8.730 | -.422E-01 | 8.735 | -.673E-01 | 8.740 | -.865E-01 | 8.745 | -.977E-01 | 8.750 | -.100E+00 |
| 8.755 | -.951E-01 | 8.760 | -.853E-01 | 8.765 | -.745E-01 | 8.770 | -.669E-01 | 8.775 | -.653E-01 |
| 8.780 | -.714E-01 | 8.785 | -.844E-01 | 8.790 | -.102E+00 | 8.795 | -.119E+00 | 8.800 | -.132E+00 |
| 8.805 | -.136E+00 | 8.810 | -.129E+00 | 8.815 | -.110E+00 | 8.820 | -.827E-01 | 8.825 | -.503E-01 |
| 8.830 | -.183E-01 | 8.835 | .810E-02 | 8.840 | .249E-01 | 8.845 | -.303E-01 | 8.850 | .246E-01 |
| 8.855 | .105E-01 | 8.860 | -.802E-02 | 8.865 | -.263E-01 | 8.870 | -.404E-01 | 8.875 | -.476E-01 |
| 8.880 | -.468E-01 | 8.885 | -.389E-01 | 8.890 | -.258E-01 | 8.895 | -.106E-01 | 8.900 | .391E-02 |
| 8.905 | .153E-01 | 8.910 | .223E-01 | 8.915 | .246E-01 | 8.920 | .229E-01 | 8.925 | .188E-01 |
| 8.930 | .143E-01 | 8.935 | .115E-01 | 8.940 | .119E-01 | 8.945 | .170E-01 | 8.950 | .270E-01 |
| 8.955 | .417E-01 | 8.960 | .601E-01 | 8.965 | .806E-01 | 8.970 | .102E+00 | 8.975 | .121E+00 |
| 8.980 | .138E+00 | 8.985 | .152E+00 | 8.990 | .163E+00 | 8.995 | .171E+00 | 9.000 | .178E+00 |
| 9.005 | .185E+00 | 9.010 | .193E+00 | 9.015 | .202E+00 | 9.020 | .213E+00 | 9.025 | .225E+00 |
| 9.030 | .235E+00 | 9.035 | .243E+00 | 9.040 | .247E+00 | 9.045 | .248E+00 | 9.050 | .244E+00 |
| 9.055 | .237E+00 | 9.060 | .228E+00 | 9.065 | .219E+00 | 9.070 | .211E+00 | 9.075 | .204E+00 |
| 9.080 | .199E+00 | 9.085 | .196E+00 | 9.090 | .193E+00 | 9.095 | .190E+00 | 9.100 | .188E+00 |
| 9.105 | .184E+00 | 9.110 | .180E+00 | 9.115 | .175E+00 | 9.120 | .170E+00 | 9.125 | .165E+00 |
| 9.130 | .159E+00 | 9.135 | .153E+00 | 9.140 | .146E+00 | 9.145 | .139E+00 | 9.150 | .131E+00 |
| 9.155 | .123E+00 | 9.160 | .117E+00 | 9.165 | .111E+00 | 9.170 | .108E+00 | 9.175 | .105E+00 |
| 9.180 | .104E+00 | 9.185 | .102E+00 | 9.190 | .991E-01 | 9.195 | .935E-01 | 9.200 | .842E-01 |
| 9.205 | .702E-01 | 9.210 | .511E-01 | 9.215 | .270E-01 | 9.220 | -.116E-02 | 9.225 | -.321E-01 |
| 9.230 | -.641E-01 | 9.235 | -.948E-01 | 9.240 | -.122E+00 | 9.245 | -.145E+00 | 9.250 | -.161E+00 |
| 9.255 | -.172E+00 | 9.260 | -.178E+00 | 9.265 | -.180E+00 | 9.270 | -.182E+00 | 9.275 | -.185E+00 |
| 9.280 | -.192E+00 | 9.285 | -.204E+00 | 9.290 | -.220E+00 | 9.295 | -.240E+00 | 9.300 | -.260E+00 |
| 9.305 | -.279E+00 | 9.310 | -.294E+00 | 9.315 | -.303E+00 | 9.320 | -.306E+00 | 9.325 | -.303E+00 |
| 9.330 | -.296E+00 | 9.335 | -.285E+00 | 9.340 | -.272E+00 | 9.345 | -.258E+00 | 9.350 | -.244E+00 |
| 9.355 | -.228E+00 | 9.360 | -.210E+00 | 9.365 | -.189E+00 | 9.370 | -.166E+00 | 9.375 | -.142E+00 |
| 9.380 | -.117E+00 | 9.385 | -.926E-01 | 9.390 | -.712E-01 | 9.395 | -.539E-01 | 9.400 | -.416E-01 |
| 9.405 | -.346E-01 | 9.410 | -.328E-01 | 9.415 | -.352E-01 | 9.420 | -.407E-01 | 9.425 | -.479E-01 |
| 9.430 | -.551E-01 | 9.435 | -.602E-01 | 9.440 | -.613E-01 | 9.445 | -.565E-01 | 9.450 | -.440E-01 |
| 9.455 | -.229E-01 | 9.460 | .676E-02 | 9.465 | .438E-01 | 9.470 | .858E-01 | 9.475 | .130E+00 |
| 9.480 | .171E+00 | 9.485 | .208E+00 | 9.490 | .237E+00 | 9.495 | .258E+00 | 9.500 | .270E+00 |
| 9.505 | .276E+00 | 9.510 | .279E+00 | 9.515 | .280E+00 | 9.520 | .282E+00 | 9.525 | .286E+00 |
| 9.530 | .293E+00 | 9.535 | .302E+00 | 9.540 | .311E+00 | 9.545 | .317E+00 | 9.550 | .320E+00 |
| 9.555 | .317E+00 | 9.560 | .307E+00 | 9.565 | .292E+00 | 9.570 | .273E+00 | 9.575 | .250E+00 |
| 9.580 | .228E+00 | 9.585 | .208E+00 | 9.590 | .194E+00 | 9.595 | .189E+00 | 9.600 | .193E+00 |
| 9.605 | .208E+00 | 9.610 | .231E+00 | 9.615 | .259E+00 | 9.620 | .290E+00 | 9.625 | .317E+00 |
| 9.630 | .338E+00 | 9.635 | .347E+00 | 9.640 | .344E+00 | 9.645 | .329E+00 | 9.650 | .303E+00 |
| 9.655 | .271E+00 | 9.660 | .235E+00 | 9.665 | .198E+00 | 9.670 | .153E+00 | 9.675 | .130E+00 |
| 9.680 | .968E-01 | 9.685 | .628E-01 | 9.690 | .261E-01 | 9.695 | -.140E-01 | 9.700 | -.571E-01 |
| 9.705 | -.102E+00 | 9.710 | -.145E+00 | 9.715 | -.134E+00 | 9.720 | -.218E+00 | 9.725 | -.246E+00 |

SPECTRA FOR THE PRECEDING TIME HISTORY WILL BE
CALCULATED AT THE FOLLOWING FREQUENCIES (IN CPS)

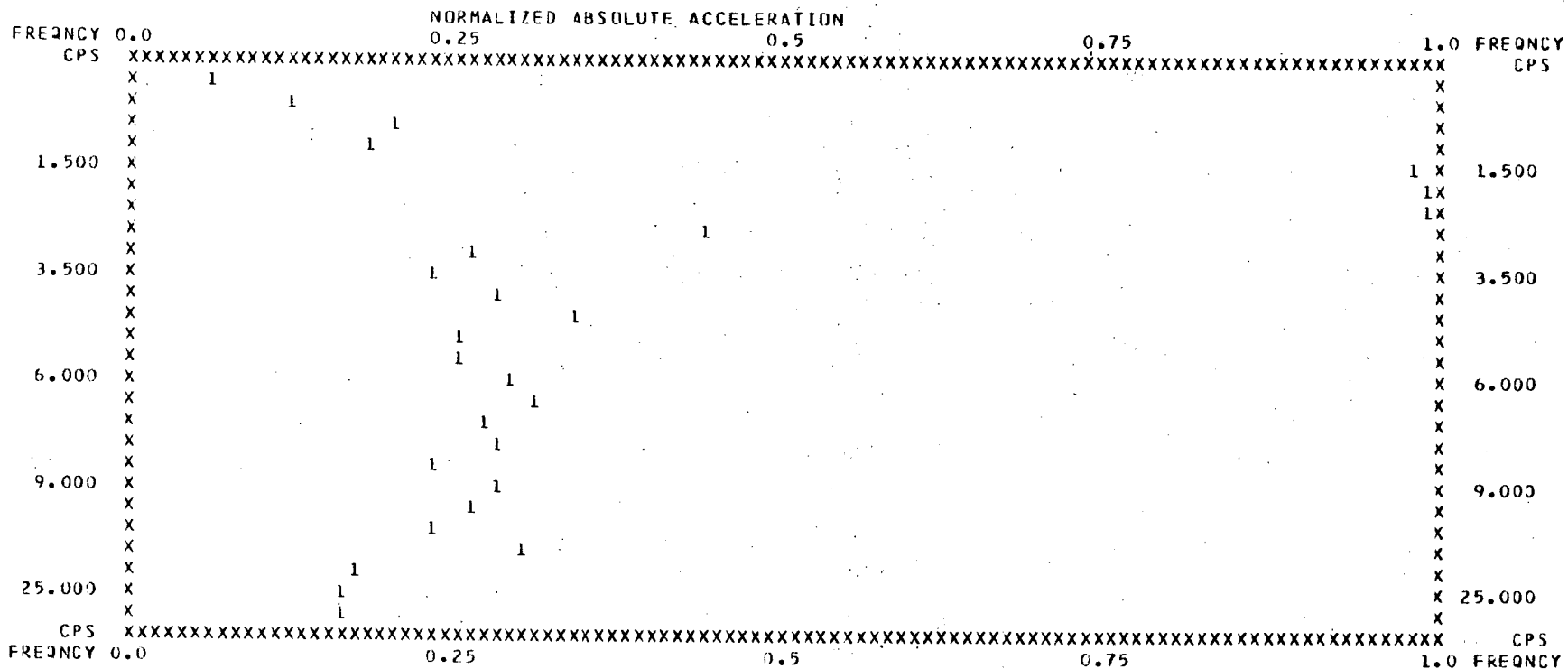
| | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| .3000 | .4000 | .7000 | 1.0000 | 1.5000 | 1.7000 | 2.0000 | 2.5000 | 3.0000 | 3.5000 |
| 4.0000 | 4.5000 | 5.0000 | 5.5000 | 6.0000 | 6.5000 | 7.0000 | 7.5000 | 8.0000 | 9.0000 |
| 10.0000 | 12.0000 | 15.0000 | 20.0000 | 25.0000 | 30.0000 | | | | |

| FREQUENCY (CPS) | PERIOD (SECS) | ABSOLUTE ACCELERATION | PSEUDO VELOCITY | TIME AT MAXIMUM |
|--------------------|------------------|--------------------------|--------------------|--------------------|
| .300 | 3.333 | .2492E+00 | .1322E+00 | .9065E+01 |
| .400 | 2.500 | .4855E+00 | .1617E+00 | .1079E+02 |
| .700 | 1.429 | .7523E+00 | .1710E+00 | .6340E+01 |
| 1.000 | 1.000 | .6862E+00 | .1092E+00 | .5285E+01 |
| 1.500 | .667 | .3510E+01 | .3724E+00 | .6830E+01 |
| 1.700 | .588 | .3560E+01 | .3333E+00 | .7295E+01 |
| 2.000 | .500 | .3553E+01 | .2828E+00 | .9940E+01 |
| 2.500 | .400 | .1617E+01 | .1030E+00 | .6330E+01 |
| 3.000 | .333 | .9691E+00 | .5141E-01 | .9340E+01 |
| 3.500 | .286 | .8782E+00 | .3993E-01 | .6305E+01 |
| 4.000 | .250 | .1043E+01 | .4148E-01 | .6580E+01 |
| 4.500 | .222 | .1260E+01 | .4455E-01 | .6560E+01 |
| 5.000 | .200 | .9484E+00 | .3019E-01 | .6550E+01 |
| 5.500 | .182 | .9311E+00 | .2694E-01 | .7850E+01 |
| 6.000 | .167 | .1089E+01 | .2889E-01 | .5100E+01 |
| 6.500 | .154 | .1140E+01 | .2791E-01 | .9780E+01 |
| 7.000 | .143 | .9922E+00 | .2256E-01 | .9770E+01 |
| 7.500 | .133 | .1027E+01 | .2179E-01 | .9755E+01 |
| 8.000 | .125 | .8718E+00 | .1734E-01 | .9745E+01 |
| 9.000 | .111 | .1047E+01 | .1851E-01 | .6355E+01 |
| 10.000 | .100 | .9745E+00 | .1551E-01 | .6335E+01 |
| 12.000 | .083 | .8571E+00 | .1137E-01 | .6305E+01 |
| 15.000 | .067 | .1121E+01 | .1190E-01 | .6060E+01 |
| 20.000 | .050 | .6445E+00 | .5129E-02 | .6325E+01 |
| 25.000 | .040 | .6112E+00 | .3891E-02 | .6330E+01 |
| 30.000 | .033 | .6085E+00 | .3228E-02 | .6330E+01 |

MAXIMUM ABSOLUTE SPECTRAL ACCELERATION .3560E+01
AT FREQUENCY (CPS) .1700E+01

NORMALIZED PLOT OF RESPONSE SPECTRA.....

| DAMPING VALUE | MAXIMUM VALUE | AT FREQUENCY | PLOT SYMBOL |
|------------------|------------------|-----------------|----------------|
| .2000E-01 | .3560E+01 | .1700E+01 | 1 |



INPUT TIME HISTORY CONTROL

| | | |
|---------------------------|------|--------|
| TIME HISTORY NUMBER | | 3 |
| NUMBER OF TIME POINTS | NTP | 2001 |
| INPUT CODE | INPT | 1 |
| TIME STEP | DEL | .0050 |
| ACCELERATION SCALE FACTOR | SFTR | 1.0000 |

COMPUTATION AND OUTPUT CONTROL

| | | |
|--------------------------------|------|---------|
| INPUT HISTORY INTEGRATION CODE | INTR | 0 |
| SPECTRUM COMPUTATION CODES | ISPC | 1 |
| | IDUR | 0 |
| SPECTRUM OUTPUT CODE | IDUT | 3 |
| NUMBER OF FREQUENCY POINTS | NFP | 26 |
| NUMBER OF DAMPINGS | NDP | 1 |
| FREQUENCY SCALE TYPE CODE | IFSC | 2 |
| LOWEST FREQUENCY IN CPS | W1 | .3000 |
| HIGHEST FREQUENCY IN CPS | W2 | 30.0000 |
| TIME STEP TO PERIOD RATIO | DELP | .2000 |

FIELD LENGTH REQUIREMENTS
(IN OCTAL)

| | |
|-----------------------|--------|
| PROGRAM LENGTH | 040437 |
| BLANK COMMON REQUIRED | 007647 |
| FIELD LENGTH REQUIRED | 050306 |

FORMAT OF INPUT TIME HISTORY IS

(I6400(I), (E16.8))

| TIME | ACCEL | TIME | ACCEL | TIME | ACCEL | TIME | ACCEL | TIME | ACCEL |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| .005 | .113E+00 | .010 | .884E-01 | .015 | .634E-01 | .020 | .373E-01 | .025 | .102E-01 |
| .030 | -.175E-01 | .035 | -.453E-01 | .040 | -.727E-01 | .045 | -.992E-01 | .050 | -.125E+00 |
| .055 | -.149E+00 | .060 | -.173E+00 | .065 | -.196E+00 | .070 | -.218E+00 | .075 | -.239E+00 |
| .080 | -.260E+00 | .085 | -.280E+00 | .090 | -.298E+00 | .095 | -.314E+00 | .100 | -.329E+00 |
| .105 | -.342E+00 | .110 | -.353E+00 | .115 | -.362E+00 | .120 | -.370E+00 | .125 | -.376E+00 |
| .130 | -.381E+00 | .135 | -.384E+00 | .140 | -.386E+00 | .145 | -.386E+00 | .150 | -.384E+00 |
| .155 | -.381E+00 | .160 | -.378E+00 | .165 | -.373E+00 | .170 | -.367E+00 | .175 | -.361E+00 |
| .180 | -.354E+00 | .185 | -.346E+00 | .190 | -.337E+00 | .195 | -.326E+00 | .200 | -.315E+00 |
| .205 | -.303E+00 | .210 | -.289E+00 | .215 | -.276E+00 | .220 | -.251E+00 | .225 | -.246E+00 |
| .230 | -.230E+00 | .235 | -.214E+00 | .240 | -.198E+00 | .245 | -.181E+00 | .250 | -.163E+00 |
| .255 | -.145E+00 | .260 | -.127E+00 | .265 | -.109E+00 | .270 | -.901E-01 | .275 | -.715E-01 |
| .280 | -.528E-01 | .285 | -.341E-01 | .290 | -.155E-01 | .295 | .308E-02 | .300 | .215E-01 |
| .305 | .396E-01 | .310 | .574E-01 | .315 | .749E-01 | .320 | .919E-01 | .325 | .109E+00 |
| .330 | .125E+00 | .335 | .141E+00 | .340 | .157E+00 | .345 | .172E+00 | .350 | .187E+00 |
| .355 | .202E+00 | .360 | .215E+00 | .365 | .228E+00 | .370 | .241E+00 | .375 | .252E+00 |
| .380 | .263E+00 | .385 | .273E+00 | .390 | .283E+00 | .395 | .292E+00 | .400 | .300E+00 |
| .405 | .307E+00 | .410 | .314E+00 | .415 | .319E+00 | .420 | .323E+00 | .425 | .326E+00 |
| .430 | .329E+00 | .435 | .329E+00 | .440 | .329E+00 | .445 | .327E+00 | .450 | .323E+00 |
| .455 | .317E+00 | .460 | .310E+00 | .465 | .302E+00 | .470 | .293E+00 | .475 | .283E+00 |
| .480 | .273E+00 | .485 | .253E+00 | .490 | .253E+00 | .495 | .242E+00 | .500 | .230E+00 |
| .505 | .217E+00 | .510 | .202E+00 | .515 | .187E+00 | .520 | .171E+00 | .525 | .155E+00 |
| .530 | .138E+00 | .535 | .122E+00 | .540 | .106E+00 | .545 | .899E-01 | .550 | .734E-01 |
| .555 | .564E-01 | .560 | .387E-01 | .565 | .204E-01 | .570 | .173E-02 | .575 | -.169E-01 |
| .580 | -.353E-01 | .585 | -.532E-01 | .590 | -.707E-01 | .595 | -.880E-01 | .600 | -.106E+00 |
| .605 | -.124E+00 | .610 | -.142E+00 | .615 | -.161E+00 | .620 | -.180E+00 | .625 | -.198E+00 |
| .630 | -.215E+00 | .635 | -.230E+00 | .640 | -.242E+00 | .645 | -.253E+00 | .650 | -.262E+00 |
| .655 | -.269E+00 | .660 | -.277E+00 | .665 | -.284E+00 | .670 | -.292E+00 | .675 | -.299E+00 |
| .680 | -.305E+00 | .685 | -.309E+00 | .690 | -.310E+00 | .695 | -.310E+00 | .700 | -.307E+00 |
| .705 | -.302E+00 | .710 | -.296E+00 | .715 | -.291E+00 | .720 | -.285E+00 | .725 | -.279E+00 |
| .730 | -.274E+00 | .735 | -.268E+00 | .740 | -.261E+00 | .745 | -.252E+00 | .750 | -.242E+00 |
| .755 | -.231E+00 | .760 | -.220E+00 | .765 | -.208E+00 | .770 | -.196E+00 | .775 | -.185E+00 |
| .780 | -.174E+00 | .785 | -.163E+00 | .790 | -.153E+00 | .795 | -.142E+00 | .800 | -.132E+00 |
| .805 | -.121E+00 | .810 | -.109E+00 | .815 | -.977E-01 | .820 | -.853E-01 | .825 | -.749E-01 |
| .830 | -.635E-01 | .835 | -.518E-01 | .840 | -.396E-01 | .845 | -.269E-01 | .850 | -.137E-01 |
| .855 | -.229E-03 | .860 | .132E-01 | .865 | .252E-01 | .870 | .384E-01 | .875 | .498E-01 |
| .880 | .603E-01 | .885 | .703E-01 | .890 | .800E-01 | .895 | .898E-01 | .900 | .998E-01 |
| .905 | .110E+00 | .910 | .120E+00 | .915 | .130E+00 | .920 | .138E+00 | .925 | .146E+00 |
| .930 | .152E+00 | .935 | .156E+00 | .940 | .159E+00 | .945 | .150E+00 | .950 | .161E+00 |
| .955 | .160E+00 | .960 | .159E+00 | .965 | .158E+00 | .970 | .156E+00 | .975 | .153E+00 |
| .980 | .150E+00 | .985 | .147E+00 | .990 | .143E+00 | .995 | .138E+00 | 1.000 | .134E+00 |
| 1.005 | .130E+00 | 1.010 | .125E+00 | 1.015 | .120E+00 | 1.020 | .115E+00 | 1.025 | .109E+00 |
| 1.030 | .103E+00 | 1.035 | .957E-01 | 1.040 | .886E-01 | 1.045 | .814E-01 | 1.050 | .743E-01 |
| 1.055 | .674E-01 | 1.060 | .607E-01 | 1.065 | .542E-01 | 1.070 | .476E-01 | 1.075 | .409E-01 |
| 1.080 | .338E-01 | 1.085 | .252E-01 | 1.090 | .183E-01 | 1.095 | .101E-01 | 1.100 | .183E-02 |
| 1.105 | -.631E-02 | 1.110 | -.141E-01 | 1.115 | -.213E-01 | 1.120 | -.279E-01 | 1.125 | -.339E-01 |
| 1.130 | -.392E-01 | 1.135 | -.440E-01 | 1.140 | -.484E-01 | 1.145 | -.525E-01 | 1.150 | -.564E-01 |
| 1.155 | -.600E-01 | 1.160 | -.635E-01 | 1.165 | -.668E-01 | 1.170 | -.698E-01 | 1.175 | -.725E-01 |
| 1.180 | -.748E-01 | 1.185 | -.756E-01 | 1.190 | -.780E-01 | 1.195 | -.790E-01 | 1.200 | -.797E-01 |
| 1.205 | -.800E-01 | 1.210 | -.802E-01 | 1.215 | -.802E-01 | 1.220 | -.801E-01 | 1.225 | -.798E-01 |
| 1.230 | -.792E-01 | 1.235 | -.784E-01 | 1.240 | -.772E-01 | 1.245 | -.758E-01 | 1.250 | -.741E-01 |
| 1.255 | -.722E-01 | 1.260 | -.701E-01 | 1.265 | -.679E-01 | 1.270 | -.655E-01 | 1.275 | -.630E-01 |
| 1.280 | -.604E-01 | 1.285 | -.577E-01 | 1.290 | -.548E-01 | 1.295 | -.519E-01 | 1.300 | -.489E-01 |
| 1.305 | -.459E-01 | 1.310 | -.430E-01 | 1.315 | -.402E-01 | 1.320 | -.375E-01 | 1.325 | -.348E-01 |
| 1.330 | -.322E-01 | 1.335 | -.296E-01 | 1.340 | -.270E-01 | 1.345 | -.246E-01 | 1.350 | -.223E-01 |
| 1.355 | -.203E-01 | 1.360 | -.186E-01 | 1.365 | -.173E-01 | 1.370 | -.155E-01 | 1.375 | -.160E-01 |
| 1.380 | -.160E-01 | 1.385 | -.154E-01 | 1.390 | -.172E-01 | 1.395 | -.185E-01 | 1.400 | -.200E-01 |
| 1.405 | -.218E-01 | 1.410 | -.238E-01 | 1.415 | -.259E-01 | 1.420 | -.281E-01 | 1.425 | -.302E-01 |
| 1.430 | -.323E-01 | 1.435 | -.345E-01 | 1.440 | -.368E-01 | 1.445 | -.393E-01 | 1.450 | -.420E-01 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 1.580 | .509E-01 | 1.585 | .557E-01 | 1.590 | .627E-01 | 1.595 | .685E-01 | 1.600 | .737E-01 |
| 1.605 | .779E-01 | 1.610 | .810E-01 | 1.615 | .829E-01 | 1.620 | .839E-01 | 1.625 | .844E-01 |
| 1.630 | .851E-01 | 1.635 | .861E-01 | 1.640 | .876E-01 | 1.645 | .894E-01 | 1.650 | .910E-01 |
| 1.655 | .916E-01 | 1.660 | .908E-01 | 1.665 | .882E-01 | 1.670 | .838E-01 | 1.675 | .781E-01 |
| 1.680 | .716E-01 | 1.685 | .652E-01 | 1.690 | .593E-01 | 1.695 | .541E-01 | 1.700 | .496E-01 |
| 1.705 | .453E-01 | 1.710 | .405E-01 | 1.715 | .347E-01 | 1.720 | .275E-01 | 1.725 | .189E-01 |
| 1.730 | .935E-02 | 1.735 | -.635E-03 | 1.740 | -.104E-01 | 1.745 | -.193E-01 | 1.750 | -.271E-01 |
| 1.755 | -.338E-01 | 1.760 | -.397E-01 | 1.765 | -.452E-01 | 1.770 | -.508E-01 | 1.775 | -.567E-01 |
| 1.780 | -.629E-01 | 1.785 | -.692E-01 | 1.790 | -.754E-01 | 1.795 | -.811E-01 | 1.800 | -.861E-01 |
| 1.805 | -.904E-01 | 1.810 | -.939E-01 | 1.815 | -.969E-01 | 1.820 | -.996E-01 | 1.825 | -.102E+00 |
| 1.830 | -.104E+00 | 1.835 | -.105E+00 | 1.840 | -.106E+00 | 1.845 | -.106E+00 | 1.850 | -.104E+00 |
| 1.855 | -.102E+00 | 1.860 | -.997E-01 | 1.865 | -.969E-01 | 1.870 | -.942E-01 | 1.875 | -.915E-01 |
| 1.880 | -.888E-01 | 1.885 | -.859E-01 | 1.890 | -.822E-01 | 1.895 | -.773E-01 | 1.900 | -.711E-01 |
| 1.905 | -.635E-01 | 1.910 | -.546E-01 | 1.915 | -.451E-01 | 1.920 | -.352E-01 | 1.925 | -.256E-01 |
| 1.930 | -.165E-01 | 1.935 | -.818E-02 | 1.940 | -.483E-03 | 1.945 | .675E-02 | 1.950 | .138E-01 |
| 1.955 | .208E-01 | 1.960 | .278E-01 | 1.965 | .349E-01 | 1.970 | .419E-01 | 1.975 | .487E-01 |
| 1.980 | .552E-01 | 1.985 | .612E-01 | 1.990 | .669E-01 | 1.995 | .721E-01 | 2.000 | .770E-01 |
| 2.005 | .816E-01 | 2.010 | .858E-01 | 2.015 | .895E-01 | 2.020 | .926E-01 | 2.025 | .950E-01 |
| 2.030 | .967E-01 | 2.035 | .977E-01 | 2.040 | .982E-01 | 2.045 | .985E-01 | 2.050 | .987E-01 |
| 2.055 | .990E-01 | 2.060 | .994E-01 | 2.065 | .100E+00 | 2.070 | .100E+00 | 2.075 | .101E+00 |
| 2.080 | .100E+00 | 2.085 | .992E-01 | 2.090 | .976E-01 | 2.095 | .954E-01 | 2.100 | .927E-01 |
| 2.105 | .898E-01 | 2.110 | .869E-01 | 2.115 | .841E-01 | 2.120 | .815E-01 | 2.125 | .791E-01 |
| 2.130 | .768E-01 | 2.135 | .745E-01 | 2.140 | .721E-01 | 2.145 | .693E-01 | 2.150 | .662E-01 |
| 2.155 | .624E-01 | 2.160 | .582E-01 | 2.165 | .533E-01 | 2.170 | .479E-01 | 2.175 | .422E-01 |
| 2.180 | .363E-01 | 2.185 | .302E-01 | 2.190 | .242E-01 | 2.195 | .183E-01 | 2.200 | .126E-01 |
| 2.205 | .696E-02 | 2.210 | .148E-02 | 2.215 | -.396E-02 | 2.220 | -.940E-02 | 2.225 | -.148E-01 |
| 2.230 | -.203E-01 | 2.235 | -.257E-01 | 2.240 | -.310E-01 | 2.245 | -.361E-01 | 2.250 | -.410E-01 |
| 2.255 | -.457E-01 | 2.260 | -.502E-01 | 2.265 | -.544E-01 | 2.270 | -.585E-01 | 2.275 | -.623E-01 |
| 2.280 | -.660E-01 | 2.285 | -.694E-01 | 2.290 | -.726E-01 | 2.295 | -.756E-01 | 2.300 | -.784E-01 |
| 2.305 | -.811E-01 | 2.310 | -.836E-01 | 2.315 | -.860E-01 | 2.320 | -.883E-01 | 2.325 | -.905E-01 |
| 2.330 | -.927E-01 | 2.335 | -.946E-01 | 2.340 | -.963E-01 | 2.345 | -.976E-01 | 2.350 | -.986E-01 |
| 2.355 | -.992E-01 | 2.360 | -.994E-01 | 2.365 | -.992E-01 | 2.370 | -.988E-01 | 2.375 | -.982E-01 |
| 2.380 | -.974E-01 | 2.385 | -.966E-01 | 2.390 | -.957E-01 | 2.395 | -.948E-01 | 2.400 | -.939E-01 |
| 2.405 | -.928E-01 | 2.410 | -.916E-01 | 2.415 | -.903E-01 | 2.420 | -.888E-01 | 2.425 | -.873E-01 |
| 2.430 | -.860E-01 | 2.435 | -.849E-01 | 2.440 | -.845E-01 | 2.445 | -.847E-01 | 2.450 | -.856E-01 |
| 2.455 | -.871E-01 | 2.460 | -.891E-01 | 2.465 | -.911E-01 | 2.470 | -.930E-01 | 2.475 | -.944E-01 |
| 2.480 | -.952E-01 | 2.485 | -.956E-01 | 2.490 | -.956E-01 | 2.495 | -.956E-01 | 2.500 | -.959E-01 |
| 2.505 | -.965E-01 | 2.510 | -.976E-01 | 2.515 | -.990E-01 | 2.520 | -.100E+00 | 2.525 | -.101E+00 |
| 2.530 | -.102E+00 | 2.535 | -.101E+00 | 2.540 | -.996E-01 | 2.545 | -.972E-01 | 2.550 | -.941E-01 |
| 2.555 | -.906E-01 | 2.560 | -.857E-01 | 2.565 | -.823E-01 | 2.570 | -.773E-01 | 2.575 | -.715E-01 |
| 2.580 | -.646E-01 | 2.585 | -.566E-01 | 2.590 | -.477E-01 | 2.595 | -.383E-01 | 2.600 | -.289E-01 |
| 2.605 | -.200E-01 | 2.610 | -.120E-01 | 2.615 | -.498E-02 | 2.620 | .123E-02 | 2.625 | .700E-02 |
| 2.630 | .128E-01 | 2.635 | .190E-01 | 2.640 | .258E-01 | 2.645 | .329E-01 | 2.650 | .399E-01 |
| 2.655 | .461E-01 | 2.660 | .509E-01 | 2.665 | .539E-01 | 2.670 | .551E-01 | 2.675 | .548E-01 |
| 2.680 | .536E-01 | 2.685 | .523E-01 | 2.690 | .515E-01 | 2.695 | .517E-01 | 2.700 | .528E-01 |
| 2.705 | .547E-01 | 2.710 | .557E-01 | 2.715 | .585E-01 | 2.720 | .598E-01 | 2.725 | .606E-01 |
| 2.730 | .612E-01 | 2.735 | .622E-01 | 2.740 | .642E-01 | 2.745 | .676E-01 | 2.750 | .725E-01 |
| 2.755 | .787E-01 | 2.760 | .857E-01 | 2.765 | .928E-01 | 2.770 | .993E-01 | 2.775 | .105E+00 |
| 2.780 | .109E+00 | 2.785 | .112E+00 | 2.790 | .114E+00 | 2.795 | .116E+00 | 2.800 | .118E+00 |
| 2.805 | .120E+00 | 2.810 | .122E+00 | 2.815 | .123E+00 | 2.820 | .124E+00 | 2.825 | .125E+00 |
| 2.830 | .124E+00 | 2.835 | .123E+00 | 2.840 | .122E+00 | 2.845 | .119E+00 | 2.850 | .117E+00 |
| 2.855 | .114E+00 | 2.860 | .110E+00 | 2.865 | .105E+00 | 2.870 | .990E-01 | 2.875 | .914E-01 |
| 2.880 | .825E-01 | 2.885 | .725E-01 | 2.890 | .617E-01 | 2.895 | .506E-01 | 2.900 | .394E-01 |
| 2.905 | .282E-01 | 2.910 | .170E-01 | 2.915 | .536E-02 | 2.920 | -.688E-02 | 2.925 | -.200E-01 |
| 2.930 | -.341E-01 | 2.935 | -.491E-01 | 2.940 | -.647E-01 | 2.945 | -.804E-01 | 2.950 | -.958E-01 |
| 2.955 | -.111E+00 | 2.960 | -.125E+00 | 2.965 | -.138E+00 | 2.970 | -.151E+00 | 2.975 | -.164E+00 |
| 2.980 | -.176E+00 | 2.985 | -.187E+00 | 2.990 | -.198E+00 | 2.995 | -.209E+00 | 3.000 | -.218E+00 |
| 3.005 | -.227E+00 | 3.010 | -.234E+00 | 3.015 | -.241E+00 | 3.020 | -.246E+00 | 3.025 | -.250E+00 |
| 3.030 | -.254E+00 | 3.035 | -.256E+00 | 3.040 | -.258E+00 | 3.045 | -.258E+00 | 3.050 | -.256E+00 |
| 3.055 | -.253E+00 | 3.060 | -.248E+00 | 3.065 | -.242E+00 | 3.070 | -.235E+00 | 3.075 | -.227E+00 |
| 3.080 | -.219E+00 | 3.085 | -.211E+00 | 3.090 | -.202E+00 | 3.095 | -.193E+00 | 3.100 | -.184E+00 |
| 3.105 | -.174E+00 | 3.110 | -.163E+00 | 3.115 | -.150E+00 | 3.120 | -.136E+00 | 3.125 | -.121E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 3.230 | .392E+00 | 3.235 | .413E+00 | 3.240 | .432E+00 | 3.245 | .449E+00 | 3.250 | .464E+00 |
| 3.255 | .477E+00 | 3.260 | .489E+00 | 3.265 | .499E+00 | 3.270 | .507E+00 | 3.275 | .513E+00 |
| 3.280 | .518E+00 | 3.285 | .521E+00 | 3.290 | .523E+00 | 3.295 | .523E+00 | 3.300 | .522E+00 |
| 3.305 | .520E+00 | 3.310 | .516E+00 | 3.315 | .512E+00 | 3.320 | .506E+00 | 3.325 | .500E+00 |
| 3.330 | .492E+00 | 3.335 | .483E+00 | 3.340 | .474E+00 | 3.345 | .463E+00 | 3.350 | .452E+00 |
| 3.355 | .441E+00 | 3.360 | .428E+00 | 3.365 | .415E+00 | 3.370 | .401E+00 | 3.375 | .387E+00 |
| 3.380 | .371E+00 | 3.385 | .354E+00 | 3.390 | .337E+00 | 3.395 | .318E+00 | 3.400 | .300E+00 |
| 3.405 | .281E+00 | 3.410 | .252E+00 | 3.415 | .243E+00 | 3.420 | .224E+00 | 3.425 | .204E+00 |
| 3.430 | .185E+00 | 3.435 | .155E+00 | 3.440 | .145E+00 | 3.445 | .125E+00 | 3.450 | .105E+00 |
| 3.455 | .852E-01 | 3.460 | .657E-01 | 3.465 | .470E-01 | 3.470 | .291E-01 | 3.475 | .123E-01 |
| 3.480 | -.362E-02 | 3.485 | -.186E-01 | 3.490 | -.330E-01 | 3.495 | -.469E-01 | 3.500 | -.605E-01 |
| 3.505 | -.741E-01 | 3.510 | -.876E-01 | 3.515 | -.101E+00 | 3.520 | -.114E+00 | 3.525 | -.126E+00 |
| 3.530 | -.136E+00 | 3.535 | -.146E+00 | 3.540 | -.155E+00 | 3.545 | -.163E+00 | 3.550 | -.169E+00 |
| 3.555 | -.176E+00 | 3.560 | -.181E+00 | 3.565 | -.186E+00 | 3.570 | -.190E+00 | 3.575 | -.193E+00 |
| 3.580 | -.195E+00 | 3.585 | -.196E+00 | 3.590 | -.195E+00 | 3.595 | -.193E+00 | 3.600 | -.190E+00 |
| 3.605 | -.187E+00 | 3.610 | -.183E+00 | 3.615 | -.178E+00 | 3.620 | -.172E+00 | 3.625 | -.166E+00 |
| 3.630 | -.157E+00 | 3.635 | -.147E+00 | 3.640 | -.135E+00 | 3.645 | -.122E+00 | 3.650 | -.107E+00 |
| 3.655 | -.929E-01 | 3.660 | -.788E-01 | 3.665 | -.655E-01 | 3.670 | -.533E-01 | 3.675 | -.419E-01 |
| 3.680 | -.309E-01 | 3.685 | -.197E-01 | 3.690 | -.806E-02 | 3.695 | .425E-02 | 3.700 | .169E-01 |
| 3.705 | .295E-01 | 3.710 | .411E-01 | 3.715 | .510E-01 | 3.720 | .587E-01 | 3.725 | .639E-01 |
| 3.730 | .669E-01 | 3.735 | .679E-01 | 3.740 | .676E-01 | 3.745 | .655E-01 | 3.750 | .650E-01 |
| 3.755 | .633E-01 | 3.760 | .613E-01 | 3.765 | .588E-01 | 3.770 | .556E-01 | 3.775 | .515E-01 |
| 3.780 | .468E-01 | 3.785 | .417E-01 | 3.790 | .365E-01 | 3.795 | .314E-01 | 3.800 | .267E-01 |
| 3.805 | .222E-01 | 3.810 | .179E-01 | 3.815 | .135E-01 | 3.820 | .884E-02 | 3.825 | .390E-02 |
| 3.830 | -.115E-02 | 3.835 | -.604E-02 | 3.840 | -.104E-01 | 3.845 | -.142E-01 | 3.850 | -.173E-01 |
| 3.855 | -.201E-01 | 3.860 | -.231E-01 | 3.865 | -.268E-01 | 3.870 | -.320E-01 | 3.875 | -.387E-01 |
| 3.880 | -.469E-01 | 3.885 | -.563E-01 | 3.890 | -.661E-01 | 3.895 | -.756E-01 | 3.900 | -.845E-01 |
| 3.905 | -.922E-01 | 3.910 | -.990E-01 | 3.915 | -.105E+00 | 3.920 | -.111E+00 | 3.925 | -.117E+00 |
| 3.930 | -.123E+00 | 3.935 | -.129E+00 | 3.940 | -.136E+00 | 3.945 | -.142E+00 | 3.950 | -.146E+00 |
| 3.955 | -.150E+00 | 3.960 | -.152E+00 | 3.965 | -.153E+00 | 3.970 | -.153E+00 | 3.975 | -.153E+00 |
| 3.980 | -.152E+00 | 3.985 | -.150E+00 | 3.990 | -.148E+00 | 3.995 | -.144E+00 | 4.000 | -.139E+00 |
| 4.005 | -.133E+00 | 4.010 | -.126E+00 | 4.015 | -.118E+00 | 4.020 | -.109E+00 | 4.025 | -.997E-01 |
| 4.030 | -.911E-01 | 4.035 | -.832E-01 | 4.040 | -.750E-01 | 4.045 | -.692E-01 | 4.050 | -.627E-01 |
| 4.055 | -.563E-01 | 4.060 | -.497E-01 | 4.065 | -.430E-01 | 4.070 | -.365E-01 | 4.075 | -.304E-01 |
| 4.080 | -.249E-01 | 4.085 | -.201E-01 | 4.090 | -.159E-01 | 4.095 | -.121E-01 | 4.100 | -.838E-02 |
| 4.105 | -.446E-02 | 4.110 | -.909E-04 | 4.115 | .483E-02 | 4.120 | .103E-01 | 4.125 | .162E-01 |
| 4.130 | .225E-01 | 4.135 | .290E-01 | 4.140 | .357E-01 | 4.145 | .426E-01 | 4.150 | .497E-01 |
| 4.155 | .571E-01 | 4.160 | .646E-01 | 4.165 | .720E-01 | 4.170 | .792E-01 | 4.175 | .859E-01 |
| 4.180 | .919E-01 | 4.185 | .970E-01 | 4.190 | .101E+00 | 4.195 | .105E+00 | 4.200 | .108E+00 |
| 4.205 | .110E+00 | 4.210 | .112E+00 | 4.215 | .114E+00 | 4.220 | .115E+00 | 4.225 | .115E+00 |
| 4.230 | .114E+00 | 4.235 | .113E+00 | 4.240 | .111E+00 | 4.245 | .108E+00 | 4.250 | .106E+00 |
| 4.255 | .104E+00 | 4.260 | .103E+00 | 4.265 | .102E+00 | 4.270 | .101E+00 | 4.275 | .998E-01 |
| 4.280 | .990E-01 | 4.285 | .982E-01 | 4.290 | .973E-01 | 4.295 | .963E-01 | 4.300 | .952E-01 |
| 4.305 | .940E-01 | 4.310 | .926E-01 | 4.315 | .907E-01 | 4.320 | .882E-01 | 4.325 | .849E-01 |
| 4.330 | .806E-01 | 4.335 | .752E-01 | 4.340 | .691E-01 | 4.345 | .623E-01 | 4.350 | .551E-01 |
| 4.355 | .478E-01 | 4.360 | .405E-01 | 4.365 | .332E-01 | 4.370 | .257E-01 | 4.375 | .178E-01 |
| 4.380 | .949E-02 | 4.385 | .695E-03 | 4.390 | -.847E-02 | 4.395 | -.178E-01 | 4.400 | -.268E-01 |
| 4.405 | -.354E-01 | 4.410 | -.432E-01 | 4.415 | -.501E-01 | 4.420 | -.561E-01 | 4.425 | -.614E-01 |
| 4.430 | -.662E-01 | 4.435 | -.706E-01 | 4.440 | -.746E-01 | 4.445 | -.781E-01 | 4.450 | -.809E-01 |
| 4.455 | -.827E-01 | 4.460 | -.832E-01 | 4.465 | -.822E-01 | 4.470 | -.797E-01 | 4.475 | -.757E-01 |
| 4.480 | -.705E-01 | 4.485 | -.644E-01 | 4.490 | -.577E-01 | 4.495 | -.509E-01 | 4.500 | -.441E-01 |
| 4.505 | -.375E-01 | 4.510 | -.313E-01 | 4.515 | -.254E-01 | 4.520 | -.200E-01 | 4.525 | -.151E-01 |
| 4.530 | -.106E-01 | 4.535 | -.657E-02 | 4.540 | -.341E-02 | 4.545 | -.887E-03 | 4.550 | .852E-03 |
| 4.555 | .180E-02 | 4.560 | .200E-02 | 4.565 | .154E-02 | 4.570 | .531E-03 | 4.575 | -.915E-03 |
| 4.580 | -.273E-02 | 4.585 | -.491E-02 | 4.590 | -.751E-02 | 4.595 | -.107E-01 | 4.600 | -.144E-01 |
| 4.605 | -.189E-01 | 4.610 | -.241E-01 | 4.615 | -.298E-01 | 4.620 | -.356E-01 | 4.625 | -.409E-01 |
| 4.630 | -.453E-01 | 4.635 | -.483E-01 | 4.640 | -.494E-01 | 4.645 | -.484E-01 | 4.650 | -.454E-01 |
| 4.655 | -.407E-01 | 4.660 | -.346E-01 | 4.665 | -.275E-01 | 4.670 | -.195E-01 | 4.675 | -.107E-01 |
| 4.680 | -.730E-03 | 4.685 | .107E-01 | 4.690 | .242E-01 | 4.695 | .400E-01 | 4.700 | .584E-01 |
| 4.705 | .790E-01 | 4.710 | .102E+00 | 4.715 | .126E+00 | 4.720 | .150E+00 | 4.725 | .175E+00 |
| 4.730 | .199E+00 | 4.735 | .223E+00 | 4.740 | .246E+00 | 4.745 | .270E+00 | 4.750 | .293E+00 |
| 4.755 | .317E+00 | 4.760 | .341E+00 | 4.765 | .365E+00 | 4.770 | .388E+00 | 4.775 | .410E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 4.880 | .368E+00 | 4.885 | .337E+00 | 4.890 | .305E+00 | 4.895 | .271E+00 | 4.900 | .236E+00 |
| 4.905 | .201E+00 | 4.910 | .165E+00 | 4.915 | .129E+00 | 4.920 | .932E-01 | 4.925 | .572E-01 |
| 4.930 | .212E-01 | 4.935 | -.149E-01 | 4.940 | -.509E-01 | 4.945 | -.867E-01 | 4.950 | -.122E+00 |
| 4.955 | -.157E+00 | 4.960 | -.191E+00 | 4.965 | -.225E+00 | 4.970 | -.258E+00 | 4.975 | -.290E+00 |
| 4.980 | -.321E+00 | 4.985 | -.352E+00 | 4.990 | -.382E+00 | 4.995 | -.412E+00 | 5.000 | -.440E+00 |
| 5.005 | -.467E+00 | 5.010 | -.494E+00 | 5.015 | -.519E+00 | 5.020 | -.544E+00 | 5.025 | -.568E+00 |
| 5.030 | -.591E+00 | 5.035 | -.612E+00 | 5.040 | -.633E+00 | 5.045 | -.651E+00 | 5.050 | -.668E+00 |
| 5.055 | -.682E+00 | 5.060 | -.694E+00 | 5.065 | -.704E+00 | 5.070 | -.712E+00 | 5.075 | -.717E+00 |
| 5.080 | -.722E+00 | 5.085 | -.724E+00 | 5.090 | -.725E+00 | 5.095 | -.724E+00 | 5.100 | -.721E+00 |
| 5.105 | -.716E+00 | 5.110 | -.708E+00 | 5.115 | -.698E+00 | 5.120 | -.686E+00 | 5.125 | -.672E+00 |
| 5.130 | -.657E+00 | 5.135 | -.639E+00 | 5.140 | -.620E+00 | 5.145 | -.599E+00 | 5.150 | -.576E+00 |
| 5.155 | -.553E+00 | 5.160 | -.528E+00 | 5.165 | -.501E+00 | 5.170 | -.474E+00 | 5.175 | -.447E+00 |
| 5.180 | -.418E+00 | 5.185 | -.389E+00 | 5.190 | -.360E+00 | 5.195 | -.330E+00 | 5.200 | -.299E+00 |
| 5.205 | -.268E+00 | 5.210 | -.236E+00 | 5.215 | -.204E+00 | 5.220 | -.172E+00 | 5.225 | -.140E+00 |
| 5.230 | -.109E+00 | 5.235 | -.788E-01 | 5.240 | -.490E-01 | 5.245 | -.197E-01 | 5.250 | .928E-02 |
| 5.255 | .380E-01 | 5.260 | .664E-01 | 5.265 | .943E-01 | 5.270 | .121E+00 | 5.275 | .148E+00 |
| 5.280 | .172E+00 | 5.285 | .196E+00 | 5.290 | .218E+00 | 5.295 | .239E+00 | 5.300 | .258E+00 |
| 5.305 | .276E+00 | 5.310 | .293E+00 | 5.315 | .308E+00 | 5.320 | .322E+00 | 5.325 | .334E+00 |
| 5.330 | .344E+00 | 5.335 | .352E+00 | 5.340 | .358E+00 | 5.345 | .362E+00 | 5.350 | .365E+00 |
| 5.355 | .367E+00 | 5.360 | .369E+00 | 5.365 | .369E+00 | 5.370 | .368E+00 | 5.375 | .367E+00 |
| 5.380 | .364E+00 | 5.385 | .350E+00 | 5.390 | .355E+00 | 5.395 | .350E+00 | 5.400 | .343E+00 |
| 5.405 | .337E+00 | 5.410 | .329E+00 | 5.415 | .322E+00 | 5.420 | .314E+00 | 5.425 | .304E+00 |
| 5.430 | .293E+00 | 5.435 | .281E+00 | 5.440 | .266E+00 | 5.445 | .251E+00 | 5.450 | .234E+00 |
| 5.455 | .217E+00 | 5.460 | .200E+00 | 5.465 | .183E+00 | 5.470 | .166E+00 | 5.475 | .150E+00 |
| 5.480 | .134E+00 | 5.485 | .118E+00 | 5.490 | .102E+00 | 5.495 | .863E-01 | 5.500 | .702E-01 |
| 5.505 | .539E-01 | 5.510 | .374E-01 | 5.515 | .205E-01 | 5.520 | .332E-02 | 5.525 | -.143E-01 |
| 5.530 | -.323E-01 | 5.535 | -.506E-01 | 5.540 | -.690E-01 | 5.545 | -.872E-01 | 5.550 | -.105E+00 |
| 5.555 | -.122E+00 | 5.560 | -.138E+00 | 5.565 | -.153E+00 | 5.570 | -.167E+00 | 5.575 | -.181E+00 |
| 5.580 | -.195E+00 | 5.585 | -.210E+00 | 5.590 | -.226E+00 | 5.595 | -.243E+00 | 5.600 | -.261E+00 |
| 5.605 | -.279E+00 | 5.610 | -.298E+00 | 5.615 | -.317E+00 | 5.620 | -.335E+00 | 5.625 | -.353E+00 |
| 5.630 | -.370E+00 | 5.635 | -.386E+00 | 5.640 | -.401E+00 | 5.645 | -.416E+00 | 5.650 | -.429E+00 |
| 5.655 | -.443E+00 | 5.660 | -.456E+00 | 5.665 | -.469E+00 | 5.670 | -.481E+00 | 5.675 | -.493E+00 |
| 5.680 | -.504E+00 | 5.685 | -.515E+00 | 5.690 | -.524E+00 | 5.695 | -.532E+00 | 5.700 | -.539E+00 |
| 5.705 | -.544E+00 | 5.710 | -.547E+00 | 5.715 | -.549E+00 | 5.720 | -.550E+00 | 5.725 | -.549E+00 |
| 5.730 | -.548E+00 | 5.735 | -.546E+00 | 5.740 | -.543E+00 | 5.745 | -.538E+00 | 5.750 | -.532E+00 |
| 5.755 | -.523E+00 | 5.760 | -.512E+00 | 5.765 | -.499E+00 | 5.770 | -.484E+00 | 5.775 | -.468E+00 |
| 5.780 | -.450E+00 | 5.785 | -.432E+00 | 5.790 | -.413E+00 | 5.795 | -.393E+00 | 5.800 | -.372E+00 |
| 5.805 | -.350E+00 | 5.810 | -.326E+00 | 5.815 | -.299E+00 | 5.820 | -.270E+00 | 5.825 | -.239E+00 |
| 5.830 | -.205E+00 | 5.835 | -.170E+00 | 5.840 | -.134E+00 | 5.845 | -.965E-01 | 5.850 | -.586E-01 |
| 5.855 | -.204E-01 | 5.860 | .179E-01 | 5.865 | .560E-01 | 5.870 | .939E-01 | 5.875 | .131E+00 |
| 5.880 | .169E+00 | 5.885 | .205E+00 | 5.890 | .242E+00 | 5.895 | .278E+00 | 5.900 | .314E+00 |
| 5.905 | .350E+00 | 5.910 | .386E+00 | 5.915 | .421E+00 | 5.920 | .455E+00 | 5.925 | .489E+00 |
| 5.930 | .521E+00 | 5.935 | .551E+00 | 5.940 | .580E+00 | 5.945 | .606E+00 | 5.950 | .631E+00 |
| 5.955 | .654E+00 | 5.960 | .675E+00 | 5.965 | .694E+00 | 5.970 | .713E+00 | 5.975 | .729E+00 |
| 5.980 | .743E+00 | 5.985 | .755E+00 | 5.990 | .765E+00 | 5.995 | .773E+00 | 6.000 | .778E+00 |
| 6.005 | .781E+00 | 6.010 | .782E+00 | 6.015 | .781E+00 | 6.020 | .778E+00 | 6.025 | .773E+00 |
| 6.030 | .766E+00 | 6.035 | .758E+00 | 6.040 | .748E+00 | 6.045 | .737E+00 | 6.050 | .725E+00 |
| 6.055 | .711E+00 | 6.060 | .697E+00 | 6.065 | .682E+00 | 6.070 | .665E+00 | 6.075 | .646E+00 |
| 6.080 | .625E+00 | 6.085 | .600E+00 | 6.090 | .573E+00 | 6.095 | .543E+00 | 6.100 | .510E+00 |
| 6.105 | .475E+00 | 6.110 | .438E+00 | 6.115 | .400E+00 | 6.120 | .361E+00 | 6.125 | .322E+00 |
| 6.130 | .281E+00 | 6.135 | .240E+00 | 6.140 | .199E+00 | 6.145 | .156E+00 | 6.150 | .112E+00 |
| 6.155 | .678E-01 | 6.160 | .226E-01 | 6.165 | -.233E-01 | 6.170 | -.696E-01 | 6.175 | -.117E+00 |
| 6.180 | -.164E+00 | 6.185 | -.212E+00 | 6.190 | -.260E+00 | 6.195 | -.308E+00 | 6.200 | -.357E+00 |
| 6.205 | -.405E+00 | 6.210 | -.452E+00 | 6.215 | -.498E+00 | 6.220 | -.543E+00 | 6.225 | -.585E+00 |
| 6.230 | -.625E+00 | 6.235 | -.553E+00 | 6.240 | -.698E+00 | 6.245 | -.730E+00 | 6.250 | -.760E+00 |
| 6.255 | -.786E+00 | 6.260 | -.810E+00 | 6.265 | -.831E+00 | 6.270 | -.848E+00 | 6.275 | -.863E+00 |
| 6.280 | -.874E+00 | 6.285 | -.883E+00 | 6.290 | -.888E+00 | 6.295 | -.891E+00 | 6.300 | -.892E+00 |
| 6.305 | -.890E+00 | 6.310 | -.886E+00 | 6.315 | -.879E+00 | 6.320 | -.871E+00 | 6.325 | -.860E+00 |
| 6.330 | -.847E+00 | 6.335 | -.832E+00 | 6.340 | -.815E+00 | 6.345 | -.795E+00 | 6.350 | -.773E+00 |
| 6.355 | -.748E+00 | 6.360 | -.721E+00 | 6.365 | -.693E+00 | 6.370 | -.663E+00 | 6.375 | -.631E+00 |
| 6.380 | -.599E+00 | 6.385 | -.556E+00 | 6.390 | -.533E+00 | 6.395 | -.499E+00 | 6.400 | -.465E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 6.530 | .594E+00 | 6.535 | .631E+00 | 6.540 | .667E+00 | 6.545 | .699E+00 | 6.550 | .730E+00 |
| 6.555 | .758E+00 | 6.560 | .783E+00 | 6.565 | .806E+00 | 6.570 | .827E+00 | 6.575 | .846E+00 |
| 6.580 | .862E+00 | 6.585 | .875E+00 | 6.590 | .885E+00 | 6.595 | .892E+00 | 6.600 | .896E+00 |
| 6.605 | .896E+00 | 6.610 | .893E+00 | 6.615 | .886E+00 | 6.620 | .876E+00 | 6.625 | .864E+00 |
| 6.630 | .848E+00 | 6.635 | .830E+00 | 6.640 | .809E+00 | 6.645 | .785E+00 | 6.650 | .759E+00 |
| 6.655 | .729E+00 | 6.660 | .697E+00 | 6.665 | .663E+00 | 6.670 | .626E+00 | 6.675 | .587E+00 |
| 6.680 | .546E+00 | 6.685 | .503E+00 | 6.690 | .459E+00 | 6.695 | .414E+00 | 6.700 | .368E+00 |
| 6.705 | .321E+00 | 6.710 | .273E+00 | 6.715 | .225E+00 | 6.720 | .176E+00 | 6.725 | .127E+00 |
| 6.730 | .782E-01 | 6.735 | .296E-01 | 6.740 | -.182E-01 | 6.745 | -.648E-01 | 6.750 | -.110E+00 |
| 6.755 | -.153E+00 | 6.760 | -.195E+00 | 6.765 | -.235E+00 | 6.770 | -.273E+00 | 6.775 | -.310E+00 |
| 6.780 | -.345E+00 | 6.785 | -.379E+00 | 6.790 | -.412E+00 | 6.795 | -.443E+00 | 6.800 | -.472E+00 |
| 6.805 | -.499E+00 | 6.810 | -.523E+00 | 6.815 | -.544E+00 | 6.820 | -.562E+00 | 6.825 | -.577E+00 |
| 6.830 | -.588E+00 | 6.835 | -.596E+00 | 6.840 | -.601E+00 | 6.845 | -.603E+00 | 6.850 | -.602E+00 |
| 6.855 | -.599E+00 | 6.860 | -.593E+00 | 6.865 | -.586E+00 | 6.870 | -.576E+00 | 6.875 | -.564E+00 |
| 6.880 | -.550E+00 | 6.885 | -.533E+00 | 6.890 | -.515E+00 | 6.895 | -.493E+00 | 6.900 | -.468E+00 |
| 6.905 | -.441E+00 | 6.910 | -.410E+00 | 6.915 | -.376E+00 | 6.920 | -.340E+00 | 6.925 | -.301E+00 |
| 6.930 | -.260E+00 | 6.935 | -.218E+00 | 6.940 | -.175E+00 | 6.945 | -.131E+00 | 6.950 | -.864E-01 |
| 6.955 | -.407E-01 | 6.960 | .589E-02 | 6.965 | .532E-01 | 6.970 | .101E+00 | 6.975 | .150E+00 |
| 6.980 | .199E+00 | 6.985 | .248E+00 | 6.990 | .296E+00 | 6.995 | .344E+00 | 7.000 | .391E+00 |
| 7.005 | .436E+00 | 7.010 | .480E+00 | 7.015 | .522E+00 | 7.020 | .561E+00 | 7.025 | .597E+00 |
| 7.030 | .631E+00 | 7.035 | .662E+00 | 7.040 | .690E+00 | 7.045 | .716E+00 | 7.050 | .738E+00 |
| 7.055 | .757E+00 | 7.060 | .773E+00 | 7.065 | .786E+00 | 7.070 | .795E+00 | 7.075 | .800E+00 |
| 7.080 | .800E+00 | 7.085 | .796E+00 | 7.090 | .789E+00 | 7.095 | .777E+00 | 7.100 | .761E+00 |
| 7.105 | .742E+00 | 7.110 | .721E+00 | 7.115 | .697E+00 | 7.120 | .670E+00 | 7.125 | .642E+00 |
| 7.130 | .611E+00 | 7.135 | .577E+00 | 7.140 | .542E+00 | 7.145 | .504E+00 | 7.150 | .465E+00 |
| 7.155 | .424E+00 | 7.160 | .382E+00 | 7.165 | .339E+00 | 7.170 | .295E+00 | 7.175 | .251E+00 |
| 7.180 | .206E+00 | 7.185 | .152E+00 | 7.190 | .117E+00 | 7.195 | .719E-01 | 7.200 | .276E-01 |
| 7.205 | -.158E-01 | 7.210 | -.583E-01 | 7.215 | -.996E-01 | 7.220 | -.140E+00 | 7.225 | -.179E+00 |
| 7.230 | -.217E+00 | 7.235 | -.254E+00 | 7.240 | -.290E+00 | 7.245 | -.325E+00 | 7.250 | -.359E+00 |
| 7.255 | -.391E+00 | 7.260 | -.421E+00 | 7.265 | -.448E+00 | 7.270 | -.473E+00 | 7.275 | -.496E+00 |
| 7.280 | -.517E+00 | 7.285 | -.535E+00 | 7.290 | -.550E+00 | 7.295 | -.554E+00 | 7.300 | -.575E+00 |
| 7.305 | -.584E+00 | 7.310 | -.590E+00 | 7.315 | -.594E+00 | 7.320 | -.594E+00 | 7.325 | -.592E+00 |
| 7.330 | -.587E+00 | 7.335 | -.579E+00 | 7.340 | -.569E+00 | 7.345 | -.557E+00 | 7.350 | -.543E+00 |
| 7.355 | -.526E+00 | 7.360 | -.508E+00 | 7.365 | -.489E+00 | 7.370 | -.468E+00 | 7.375 | -.446E+00 |
| 7.380 | -.423E+00 | 7.385 | -.399E+00 | 7.390 | -.374E+00 | 7.395 | -.349E+00 | 7.400 | -.323E+00 |
| 7.405 | -.298E+00 | 7.410 | -.273E+00 | 7.415 | -.248E+00 | 7.420 | -.223E+00 | 7.425 | -.199E+00 |
| 7.430 | -.176E+00 | 7.435 | -.153E+00 | 7.440 | -.131E+00 | 7.445 | -.109E+00 | 7.450 | -.879E-01 |
| 7.455 | -.666E-01 | 7.460 | -.452E-01 | 7.465 | -.238E-01 | 7.470 | -.232E-02 | 7.475 | .193E-01 |
| 7.480 | .412E-01 | 7.485 | .632E-01 | 7.490 | .854E-01 | 7.495 | .108E+00 | 7.500 | .131E+00 |
| 7.505 | .154E+00 | 7.510 | .177E+00 | 7.515 | .201E+00 | 7.520 | .224E+00 | 7.525 | .246E+00 |
| 7.530 | .268E+00 | 7.535 | .289E+00 | 7.540 | .308E+00 | 7.545 | .326E+00 | 7.550 | .343E+00 |
| 7.555 | .359E+00 | 7.560 | .374E+00 | 7.565 | .388E+00 | 7.570 | .400E+00 | 7.575 | .410E+00 |
| 7.580 | .418E+00 | 7.585 | .423E+00 | 7.590 | .426E+00 | 7.595 | .425E+00 | 7.600 | .422E+00 |
| 7.605 | .416E+00 | 7.610 | .407E+00 | 7.615 | .396E+00 | 7.620 | .383E+00 | 7.625 | .368E+00 |
| 7.630 | .351E+00 | 7.635 | .333E+00 | 7.640 | .312E+00 | 7.645 | .290E+00 | 7.650 | .267E+00 |
| 7.655 | .243E+00 | 7.660 | .217E+00 | 7.665 | .191E+00 | 7.670 | .154E+00 | 7.675 | .138E+00 |
| 7.680 | .110E+00 | 7.685 | .831E-01 | 7.690 | .558E-01 | 7.695 | .288E-01 | 7.700 | .201E-02 |
| 7.705 | -.242E-01 | 7.710 | -.498E-01 | 7.715 | -.746E-01 | 7.720 | -.987E-01 | 7.725 | -.122E+00 |
| 7.730 | -.145E+00 | 7.735 | -.156E+00 | 7.740 | -.187E+00 | 7.745 | -.207E+00 | 7.750 | -.226E+00 |
| 7.755 | -.243E+00 | 7.760 | -.258E+00 | 7.765 | -.271E+00 | 7.770 | -.283E+00 | 7.775 | -.294E+00 |
| 7.780 | -.303E+00 | 7.785 | -.312E+00 | 7.790 | -.321E+00 | 7.795 | -.329E+00 | 7.800 | -.338E+00 |
| 7.805 | -.346E+00 | 7.810 | -.353E+00 | 7.815 | -.350E+00 | 7.820 | -.355E+00 | 7.825 | -.369E+00 |
| 7.830 | -.371E+00 | 7.835 | -.372E+00 | 7.840 | -.372E+00 | 7.845 | -.371E+00 | 7.850 | -.368E+00 |
| 7.855 | -.365E+00 | 7.860 | -.362E+00 | 7.865 | -.357E+00 | 7.870 | -.352E+00 | 7.875 | -.345E+00 |
| 7.880 | -.339E+00 | 7.885 | -.331E+00 | 7.890 | -.322E+00 | 7.895 | -.313E+00 | 7.900 | -.302E+00 |
| 7.905 | -.291E+00 | 7.910 | -.278E+00 | 7.915 | -.264E+00 | 7.920 | -.249E+00 | 7.925 | -.232E+00 |
| 7.930 | -.214E+00 | 7.935 | -.195E+00 | 7.940 | -.175E+00 | 7.945 | -.156E+00 | 7.950 | -.135E+00 |
| 7.955 | -.115E+00 | 7.960 | -.954E-01 | 7.965 | -.760E-01 | 7.970 | -.571E-01 | 7.975 | -.390E-01 |
| 7.980 | -.218E-01 | 7.985 | -.580E-02 | 7.990 | .891E-02 | 7.995 | .221E-01 | 8.000 | .338E-01 |
| 8.005 | .438E-01 | 8.010 | .522E-01 | 8.015 | .589E-01 | 8.020 | .641E-01 | 8.025 | .678E-01 |
| 8.030 | .702E-01 | 8.035 | .712E-01 | 8.040 | .712E-01 | 8.045 | .701E-01 | 8.050 | .682E-01 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 8.180 | -.942E-01 | 8.185 | -.957E-01 | 8.190 | -.968E-01 | 8.195 | -.975E-01 | 8.200 | -.978E-01 |
| 8.205 | -.974E-01 | 8.210 | -.963E-01 | 8.215 | -.943E-01 | 8.220 | -.912E-01 | 8.225 | -.873E-01 |
| 8.230 | -.826E-01 | 8.235 | -.775E-01 | 8.240 | -.721E-01 | 8.245 | -.666E-01 | 8.250 | -.613E-01 |
| 8.255 | -.560E-01 | 8.260 | -.508E-01 | 8.265 | -.455E-01 | 8.270 | -.401E-01 | 8.275 | -.343E-01 |
| 8.280 | -.284E-01 | 8.285 | -.224E-01 | 8.290 | -.164E-01 | 8.295 | -.108E-01 | 8.300 | -.571E-02 |
| 8.305 | -.126E-02 | 8.310 | .243E-02 | 8.315 | .536E-02 | 8.320 | .757E-02 | 8.325 | .914E-02 |
| 8.330 | .102E-01 | 8.335 | .107E-01 | 8.340 | .108E-01 | 8.345 | .104E-01 | 8.350 | .964E-02 |
| 8.355 | .839E-02 | 8.360 | .657E-02 | 8.365 | .449E-02 | 8.370 | .194E-02 | 8.375 | -.888E-03 |
| 8.380 | -.382E-02 | 8.385 | -.668E-02 | 8.390 | -.928E-02 | 8.395 | -.114E-01 | 8.400 | -.131E-01 |
| 8.405 | -.142E-01 | 8.410 | -.147E-01 | 8.415 | -.149E-01 | 8.420 | -.148E-01 | 8.425 | -.146E-01 |
| 8.430 | -.144E-01 | 8.435 | -.142E-01 | 8.440 | -.139E-01 | 8.445 | -.136E-01 | 8.450 | -.130E-01 |
| 8.455 | -.121E-01 | 8.460 | -.108E-01 | 8.465 | -.911E-02 | 8.470 | -.716E-02 | 8.475 | -.501E-02 |
| 8.480 | -.273E-02 | 8.485 | -.311E-03 | 8.490 | .229E-02 | 8.495 | .519E-02 | 8.500 | .849E-02 |
| 8.505 | .123E-01 | 8.510 | .165E-01 | 8.515 | .210E-01 | 8.520 | .255E-01 | 8.525 | .299E-01 |
| 8.530 | .339E-01 | 8.535 | .373E-01 | 8.540 | .403E-01 | 8.545 | .431E-01 | 8.550 | .460E-01 |
| 8.555 | .494E-01 | 8.560 | .537E-01 | 8.565 | .591E-01 | 8.570 | .657E-01 | 8.575 | .732E-01 |
| 8.580 | .814E-01 | 8.585 | .899E-01 | 8.590 | .984E-01 | 8.595 | .107E+00 | 8.600 | .115E+00 |
| 8.605 | .122E+00 | 8.610 | .130E+00 | 8.615 | .137E+00 | 8.620 | .145E+00 | 8.625 | .153E+00 |
| 8.630 | .161E+00 | 8.635 | .168E+00 | 8.640 | .176E+00 | 8.645 | .182E+00 | 8.650 | .188E+00 |
| 8.655 | .193E+00 | 8.660 | .197E+00 | 8.665 | .200E+00 | 8.670 | .201E+00 | 8.675 | .202E+00 |
| 8.680 | .202E+00 | 8.685 | .201E+00 | 8.690 | .199E+00 | 8.695 | .196E+00 | 8.700 | .191E+00 |
| 8.705 | .186E+00 | 8.710 | .179E+00 | 8.715 | .171E+00 | 8.720 | .161E+00 | 8.725 | .148E+00 |
| 8.730 | .135E+00 | 8.735 | .119E+00 | 8.740 | .102E+00 | 8.745 | .834E-01 | 8.750 | .643E-01 |
| 8.755 | .448E-01 | 8.760 | .251E-01 | 8.765 | .521E-02 | 8.770 | -.148E-01 | 8.775 | -.351E-01 |
| 8.780 | -.559E-01 | 8.785 | -.772E-01 | 8.790 | -.990E-01 | 8.795 | -.121E+00 | 8.800 | -.143E+00 |
| 8.805 | -.164E+00 | 8.810 | -.183E+00 | 8.815 | -.201E+00 | 8.820 | -.217E+00 | 8.825 | -.230E+00 |
| 8.830 | -.241E+00 | 8.835 | -.250E+00 | 8.840 | -.256E+00 | 8.845 | -.260E+00 | 8.850 | -.263E+00 |
| 8.855 | -.263E+00 | 8.860 | -.252E+00 | 8.865 | -.259E+00 | 8.870 | -.254E+00 | 8.875 | -.247E+00 |
| 8.880 | -.239E+00 | 8.885 | -.230E+00 | 8.890 | -.219E+00 | 8.895 | -.206E+00 | 8.900 | -.192E+00 |
| 8.905 | -.176E+00 | 8.910 | -.158E+00 | 8.915 | -.139E+00 | 8.920 | -.119E+00 | 8.925 | -.970E-01 |
| 8.930 | -.750E-01 | 8.935 | -.526E-01 | 8.940 | -.303E-01 | 8.945 | -.818E-02 | 8.950 | .138E-01 |
| 8.955 | .356E-01 | 8.960 | .575E-01 | 8.965 | .796E-01 | 8.970 | .102E+00 | 8.975 | .124E+00 |
| 8.980 | .147E+00 | 8.985 | .169E+00 | 8.990 | .191E+00 | 8.995 | .213E+00 | 9.000 | .233E+00 |
| 9.005 | .253E+00 | 9.010 | .272E+00 | 9.015 | .291E+00 | 9.020 | .308E+00 | 9.025 | .325E+00 |
| 9.030 | .341E+00 | 9.035 | .355E+00 | 9.040 | .368E+00 | 9.045 | .380E+00 | 9.050 | .390E+00 |
| 9.055 | .398E+00 | 9.060 | .405E+00 | 9.065 | .410E+00 | 9.070 | .414E+00 | 9.075 | .416E+00 |
| 9.080 | .416E+00 | 9.085 | .414E+00 | 9.090 | .410E+00 | 9.095 | .404E+00 | 9.100 | .396E+00 |
| 9.105 | .386E+00 | 9.110 | .375E+00 | 9.115 | .363E+00 | 9.120 | .349E+00 | 9.125 | .335E+00 |
| 9.130 | .319E+00 | 9.135 | .302E+00 | 9.140 | .283E+00 | 9.145 | .264E+00 | 9.150 | .243E+00 |
| 9.155 | .222E+00 | 9.160 | .199E+00 | 9.165 | .177E+00 | 9.170 | .154E+00 | 9.175 | .132E+00 |
| 9.180 | .110E+00 | 9.185 | .882E-01 | 9.190 | .671E-01 | 9.195 | .465E-01 | 9.200 | .264E-01 |
| 9.205 | .679E-02 | 9.210 | -.125E-01 | 9.215 | -.316E-01 | 9.220 | -.507E-01 | 9.225 | -.699E-01 |
| 9.230 | -.895E-01 | 9.235 | -.109E+00 | 9.240 | -.130E+00 | 9.245 | -.150E+00 | 9.250 | -.170E+00 |
| 9.255 | -.189E+00 | 9.260 | -.207E+00 | 9.265 | -.224E+00 | 9.270 | -.241E+00 | 9.275 | -.256E+00 |
| 9.280 | -.270E+00 | 9.285 | -.284E+00 | 9.290 | -.298E+00 | 9.295 | -.311E+00 | 9.300 | -.325E+00 |
| 9.305 | -.337E+00 | 9.310 | -.350E+00 | 9.315 | -.361E+00 | 9.320 | -.372E+00 | 9.325 | -.382E+00 |
| 9.330 | -.391E+00 | 9.335 | -.399E+00 | 9.340 | -.405E+00 | 9.345 | -.411E+00 | 9.350 | -.414E+00 |
| 9.355 | -.416E+00 | 9.360 | -.415E+00 | 9.365 | -.411E+00 | 9.370 | -.405E+00 | 9.375 | -.396E+00 |
| 9.380 | -.385E+00 | 9.385 | -.371E+00 | 9.390 | -.355E+00 | 9.395 | -.336E+00 | 9.400 | -.316E+00 |
| 9.405 | -.295E+00 | 9.410 | -.271E+00 | 9.415 | -.247E+00 | 9.420 | -.221E+00 | 9.425 | -.194E+00 |
| 9.430 | -.167E+00 | 9.435 | -.140E+00 | 9.440 | -.113E+00 | 9.445 | -.854E-01 | 9.450 | -.597E-01 |
| 9.455 | -.325E-01 | 9.460 | -.442E-02 | 9.465 | .248E-01 | 9.470 | .554E-01 | 9.475 | .873E-01 |
| 9.480 | .120E+00 | 9.485 | .154E+00 | 9.490 | .187E+00 | 9.495 | .221E+00 | 9.500 | .253E+00 |
| 9.505 | .285E+00 | 9.510 | .316E+00 | 9.515 | .346E+00 | 9.520 | .375E+00 | 9.525 | .402E+00 |
| 9.530 | .428E+00 | 9.535 | .452E+00 | 9.540 | .475E+00 | 9.545 | .496E+00 | 9.550 | .515E+00 |
| 9.555 | .532E+00 | 9.560 | .547E+00 | 9.565 | .559E+00 | 9.570 | .569E+00 | 9.575 | .575E+00 |
| 9.580 | .578E+00 | 9.585 | .577E+00 | 9.590 | .573E+00 | 9.595 | .565E+00 | 9.600 | .555E+00 |
| 9.605 | .542E+00 | 9.610 | .528E+00 | 9.615 | .513E+00 | 9.620 | .497E+00 | 9.625 | .481E+00 |
| 9.630 | .465E+00 | 9.635 | .448E+00 | 9.640 | .429E+00 | 9.645 | .409E+00 | 9.650 | .388E+00 |
| 9.655 | .365E+00 | 9.660 | .341E+00 | 9.665 | .315E+00 | 9.670 | .288E+00 | 9.675 | .260E+00 |
| 9.680 | .231E+00 | 9.685 | .200E+00 | 9.690 | .167E+00 | 9.695 | .132E+00 | 9.700 | .946E-01 |
| 9.705 | .563E-01 | 9.710 | .169E-01 | 9.715 | -.232E-01 | 9.720 | -.635E-01 | 9.725 | -.104E+00 |

SPECTRA FOR THE PRECEDING TIME HISTORY WILL BE
CALCULATED AT THE FOLLOWING FREQUENCIES (IN CPS)

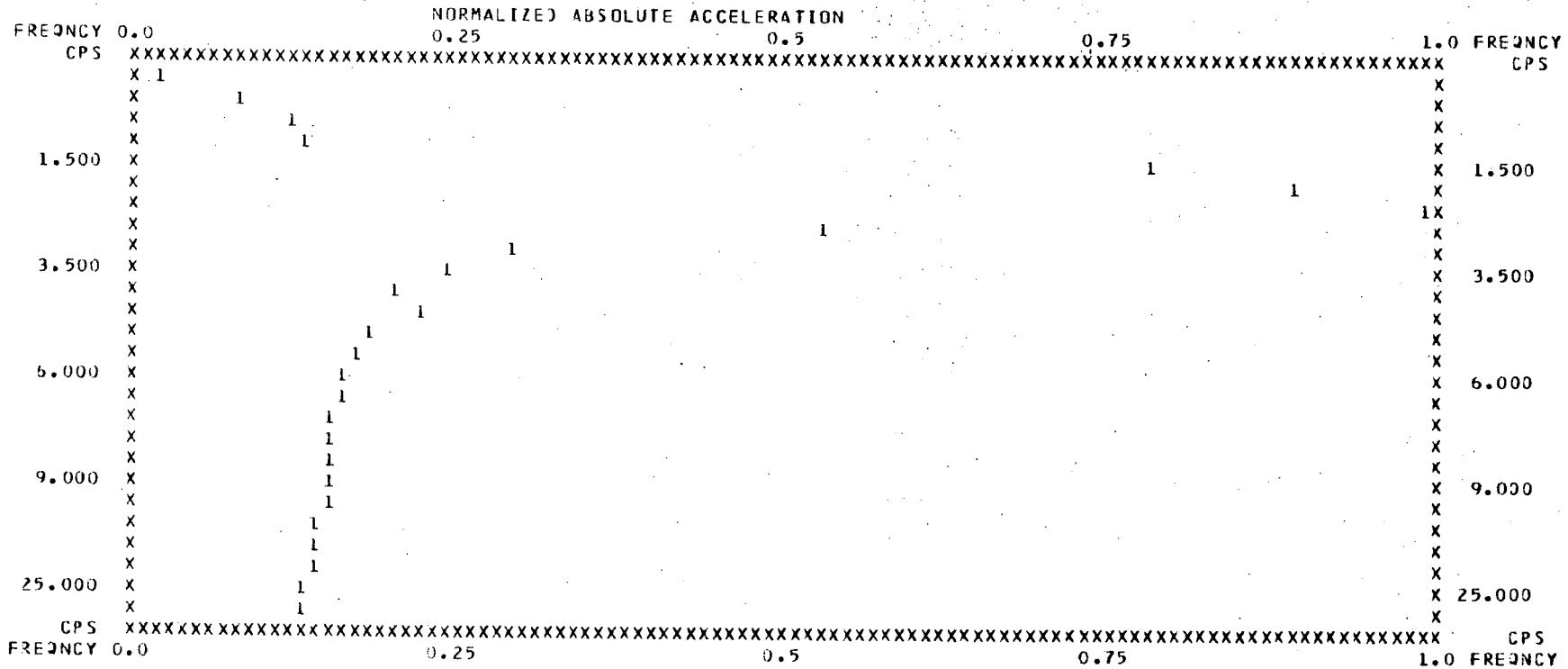
| | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| .3000 | .4000 | .7000 | 1.0000 | 1.5000 | 1.7000 | 2.0000 | 2.5000 | 3.0000 | 3.5000 |
| 4.0000 | 4.5000 | 5.0000 | 5.5000 | 6.0000 | 6.5000 | 7.0000 | 7.5000 | 8.0000 | 9.0000 |
| 10.0000 | 12.0000 | 15.0000 | 20.0000 | 25.0000 | 30.0000 | | | | |

| FREQUENCY (CPS) | PERIOD (SECS) | ABSOLUTE ACCELERATION | PSEUDO VELOCITY | TIME AT MAXIMUM |
|--------------------|------------------|--------------------------|--------------------|--------------------|
| .300 | 3.333 | .2376E+00 | .1260E+00 | .9060E+01 |
| .400 | 2.500 | .5539E+00 | .1715E+00 | .1077E+02 |
| .700 | 1.429 | .8226E+00 | .1870E+00 | .6335E+01 |
| 1.000 | 1.000 | .8491E+00 | .1351E+00 | .5300E+01 |
| 1.500 | .667 | .4824E+01 | .5118E+00 | .6835E+01 |
| 1.700 | .588 | .5479E+01 | .5130E+00 | .7300E+01 |
| 2.000 | .500 | .6093E+01 | .4849E+00 | .9950E+01 |
| 2.500 | .400 | .3295E+01 | .2098E+00 | .6585E+01 |
| 3.000 | .333 | .1823E+01 | .9674E-01 | .9905E+01 |
| 3.500 | .286 | .1510E+01 | .6866E-01 | .5070E+01 |
| 4.000 | .250 | .1309E+01 | .5209E-01 | .6295E+01 |
| 4.500 | .222 | .1397E+01 | .4939E-01 | .7095E+01 |
| 5.000 | .200 | .1204E+01 | .3831E-01 | .6515E+01 |
| 5.500 | .182 | .1087E+01 | .3145E-01 | .6600E+01 |
| 6.000 | .167 | .1068E+01 | .2832E-01 | .6595E+01 |
| 6.500 | .154 | .1039E+01 | .2545E-01 | .9340E+01 |
| 7.000 | .143 | .1003E+01 | .2281E-01 | .6290E+01 |
| 7.500 | .133 | .9738E+00 | .2067E-01 | .6300E+01 |
| 8.000 | .125 | .9755E+00 | .1941E-01 | .6300E+01 |
| 9.000 | .111 | .9911E+00 | .1753E-01 | .6285E+01 |
| 10.000 | .100 | .9713E+00 | .1546E-01 | .6515E+01 |
| 12.000 | .083 | .9349E+00 | .1240E-01 | .6605E+01 |
| 15.000 | .067 | .9126E+00 | .9683E-02 | .6610E+01 |
| 20.000 | .050 | .9160E+00 | .7289E-02 | .6600E+01 |
| 25.000 | .040 | .9019E+00 | .5742E-02 | .6600E+01 |
| 30.000 | .033 | .8999E+00 | .4774E-02 | .6600E+01 |

MAXIMUM ABSOLUTE SPECTRAL ACCELERATION .6093E+01
AT FREQUENCY (CPS) .2000E+01

NORMALIZED PLOT OF RESPONSE SPECTRA.....

| DAMPING VALUE | MAXIMUM VALUE | AT FREQUENCY | PLOT SYMBOL |
|---------------|---------------|--------------|-------------|
| .2000E-01 | .6093E+01 | .2000E+01 | 1 |



INPUT TIME HISTORY CONTROL

| | | |
|---------------------------|------|--------|
| TIME HISTORY NUMBER | | 4 |
| NUMBER OF TIME POINTS | NTP | 2001 |
| INPUT CODE | INPT | 1 |
| TIME STEP | DEL | .0050 |
| ACCELERATION SCALE FACTOR | SFTR | 1.0000 |

COMPUTATION AND OUTPUT CONTROL

| | | |
|--------------------------------|------|---------|
| INPUT HISTORY INTEGRATION CODE | INTR | 0 |
| SPECTRUM COMPUTATION CODES | ISPC | 1 |
| | IDUR | 0 |
| SPECTRUM OUTPUT CODE | IOUT | 3 |
| NUMBER OF FREQUENCY POINTS | NFP | 26 |
| NUMBER OF DAMPINGS | NDP | 1 |
| FREQUENCY SCALE TYPE CODE | IFSC | 2 |
| LOWEST FREQUENCY IN CPS | W1 | .3000 |
| HIGHEST FREQUENCY IN CPS | W2 | 30.0000 |
| TIME STEP TO PERIOD RATIO | DELP | .2000 |

FIELD LENGTH REQUIREMENTS
(IN OCTAL)

| | |
|-----------------------|--------|
| PROGRAM LENGTH | 040437 |
| BLANK COMMON REQUIRED | 007647 |
| FIELD LENGTH REQUIRED | 050306 |

FORMAT OF INPUT TIME HISTORY IS

(20500(I),(E16.8))

| TIME | ACCEL | TIME | ACCEL | TIME | ACCEL | TIME | ACCEL | TIME | ACCEL |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| .005 | .141E+00 | .010 | .108E+00 | .015 | .801E-01 | .020 | .560E-01 | .025 | .349E-01 |
| .030 | .137E-01 | .035 | -.108E-01 | .040 | -.418E-01 | .045 | -.810E-01 | .050 | -.128E+00 |
| .055 | -.180E+00 | .060 | -.234E+00 | .065 | -.286E+00 | .070 | -.331E+00 | .075 | -.368E+00 |
| .080 | -.398E+00 | .085 | -.420E+00 | .090 | -.440E+00 | .095 | -.459E+00 | .100 | -.480E+00 |
| .105 | -.505E+00 | .110 | -.531E+00 | .115 | -.558E+00 | .120 | -.581E+00 | .125 | -.599E+00 |
| .130 | -.609E+00 | .135 | -.610E+00 | .140 | -.602E+00 | .145 | -.587E+00 | .150 | -.566E+00 |
| .155 | -.543E+00 | .160 | -.521E+00 | .165 | -.500E+00 | .170 | -.482E+00 | .175 | -.467E+00 |
| .180 | -.456E+00 | .185 | -.447E+00 | .190 | -.438E+00 | .195 | -.428E+00 | .200 | -.417E+00 |
| .205 | -.402E+00 | .210 | -.385E+00 | .215 | -.364E+00 | .220 | -.341E+00 | .225 | -.318E+00 |
| .230 | -.294E+00 | .235 | -.272E+00 | .240 | -.252E+00 | .245 | -.234E+00 | .250 | -.216E+00 |
| .255 | -.198E+00 | .260 | -.178E+00 | .265 | -.156E+00 | .270 | -.131E+00 | .275 | -.102E+00 |
| .280 | -.724E-01 | .285 | -.414E-01 | .290 | -.109E-01 | .295 | .181E-01 | .300 | .449E-01 |
| .305 | .693E-01 | .310 | .913E-01 | .315 | .112E+00 | .320 | .131E+00 | .325 | .149E+00 |
| .330 | .167E+00 | .335 | .186E+00 | .340 | .205E+00 | .345 | .224E+00 | .350 | .243E+00 |
| .355 | .261E+00 | .360 | .280E+00 | .365 | .297E+00 | .370 | .313E+00 | .375 | .328E+00 |
| .380 | .341E+00 | .385 | .353E+00 | .390 | .364E+00 | .395 | .375E+00 | .400 | .385E+00 |
| .405 | .396E+00 | .410 | .407E+00 | .415 | .419E+00 | .420 | .431E+00 | .425 | .442E+00 |
| .430 | .453E+00 | .435 | .464E+00 | .440 | .473E+00 | .445 | .480E+00 | .450 | .484E+00 |
| .455 | .485E+00 | .460 | .480E+00 | .465 | .469E+00 | .470 | .451E+00 | .475 | .426E+00 |
| .480 | .397E+00 | .485 | .365E+00 | .490 | .335E+00 | .495 | .308E+00 | .500 | .287E+00 |
| .505 | .272E+00 | .510 | .253E+00 | .515 | .255E+00 | .520 | .246E+00 | .525 | .231E+00 |
| .530 | .210E+00 | .535 | .182E+00 | .540 | .148E+00 | .545 | .113E+00 | .550 | .800E-01 |
| .555 | .529E-01 | .560 | .331E-01 | .565 | .204E-01 | .570 | .122E-01 | .575 | .494E-02 |
| .580 | -.517E-02 | .585 | -.208E-01 | .590 | -.427E-01 | .595 | -.700E-01 | .600 | -.100E+00 |
| .605 | -.131E+00 | .610 | -.159E+00 | .615 | -.186E+00 | .620 | -.211E+00 | .625 | -.237E+00 |
| .630 | -.267E+00 | .635 | -.301E+00 | .640 | -.339E+00 | .645 | -.378E+00 | .650 | -.414E+00 |
| .655 | -.442E+00 | .660 | -.458E+00 | .665 | -.462E+00 | .670 | -.455E+00 | .675 | -.443E+00 |
| .680 | -.431E+00 | .685 | -.425E+00 | .690 | -.428E+00 | .695 | -.440E+00 | .700 | -.458E+00 |
| .705 | -.475E+00 | .710 | -.484E+00 | .715 | -.479E+00 | .720 | -.458E+00 | .725 | -.422E+00 |
| .730 | -.377E+00 | .735 | -.331E+00 | .740 | -.291E+00 | .745 | -.264E+00 | .750 | -.252E+00 |
| .755 | -.253E+00 | .760 | -.262E+00 | .765 | -.271E+00 | .770 | -.273E+00 | .775 | -.263E+00 |
| .780 | -.239E+00 | .785 | -.203E+00 | .790 | -.161E+00 | .795 | -.119E+00 | .800 | -.838E-01 |
| .805 | -.614E-01 | .810 | -.530E-01 | .815 | -.572E-01 | .820 | -.701E-01 | .825 | -.860E-01 |
| .830 | -.991E-01 | .835 | -.105E+00 | .840 | -.101E+00 | .845 | -.853E-01 | .850 | -.606E-01 |
| .855 | -.292E-01 | .860 | .540E-02 | .865 | .397E-01 | .870 | .705E-01 | .875 | .956E-01 |
| .880 | .114E+00 | .885 | .125E+00 | .890 | .130E+00 | .895 | .131E+00 | .900 | .132E+00 |
| .905 | .136E+00 | .910 | .145E+00 | .915 | .161E+00 | .920 | .186E+00 | .925 | .216E+00 |
| .930 | .250E+00 | .935 | .282E+00 | .940 | .309E+00 | .945 | .325E+00 | .950 | .329E+00 |
| .955 | .321E+00 | .960 | .303E+00 | .965 | .278E+00 | .970 | .251E+00 | .975 | .226E+00 |
| .980 | .207E+00 | .985 | .193E+00 | .990 | .186E+00 | .995 | .182E+00 | 1.000 | .180E+00 |
| 1.005 | .176E+00 | 1.010 | .159E+00 | 1.015 | .159E+00 | 1.020 | .146E+00 | 1.025 | .131E+00 |
| 1.030 | .116E+00 | 1.035 | .103E+00 | 1.040 | .921E-01 | 1.045 | .839E-01 | 1.050 | .778E-01 |
| 1.055 | .730E-01 | 1.060 | .685E-01 | 1.065 | .639E-01 | 1.070 | .587E-01 | 1.075 | .531E-01 |
| 1.080 | .471E-01 | 1.085 | .409E-01 | 1.090 | .342E-01 | 1.095 | .264E-01 | 1.100 | .168E-01 |
| 1.105 | .465E-02 | 1.110 | -.104E-01 | 1.115 | -.282E-01 | 1.120 | -.481E-01 | 1.125 | -.684E-01 |
| 1.130 | -.876E-01 | 1.135 | -.104E+00 | 1.140 | -.115E+00 | 1.145 | -.122E+00 | 1.150 | -.123E+00 |
| 1.155 | -.120E+00 | 1.160 | -.115E+00 | 1.165 | -.110E+00 | 1.170 | -.106E+00 | 1.175 | -.105E+00 |
| 1.180 | -.107E+00 | 1.185 | -.112E+00 | 1.190 | -.118E+00 | 1.195 | -.124E+00 | 1.200 | -.128E+00 |
| 1.205 | -.128E+00 | 1.210 | -.125E+00 | 1.215 | -.118E+00 | 1.220 | -.110E+00 | 1.225 | -.100E+00 |
| 1.230 | -.928E-01 | 1.235 | -.879E-01 | 1.240 | -.865E-01 | 1.245 | -.883E-01 | 1.250 | -.923E-01 |
| 1.255 | -.970E-01 | 1.260 | -.101E+00 | 1.265 | -.102E+00 | 1.270 | -.993E-01 | 1.275 | -.936E-01 |
| 1.280 | -.851E-01 | 1.285 | -.751E-01 | 1.290 | -.649E-01 | 1.295 | -.558E-01 | 1.300 | -.485E-01 |
| 1.305 | -.434E-01 | 1.310 | -.402E-01 | 1.315 | -.382E-01 | 1.320 | -.356E-01 | 1.325 | -.345E-01 |
| 1.330 | -.312E-01 | 1.335 | -.264E-01 | 1.340 | -.201E-01 | 1.345 | -.124E-01 | 1.350 | -.405E-02 |
| 1.355 | .445E-02 | 1.360 | .124E-01 | 1.365 | .193E-01 | 1.370 | .247E-01 | 1.375 | .285E-01 |
| 1.380 | .307E-01 | 1.385 | .313E-01 | 1.390 | .305E-01 | 1.395 | .285E-01 | 1.400 | .254E-01 |
| 1.405 | .211E-01 | 1.410 | .156E-01 | 1.415 | .895E-02 | 1.420 | .127E-02 | 1.425 | -.707E-02 |
| 1.430 | -.156E-01 | 1.435 | -.238E-01 | 1.440 | -.312E-01 | 1.445 | -.378E-01 | 1.450 | -.442E-01 |
| 1.455 | -.511E-01 | 1.460 | -.597E-01 | 1.465 | -.711E-01 | 1.470 | -.855E-01 | 1.475 | -.103E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 1.580 | .898E-01 | 1.585 | .105E+00 | 1.590 | .233E-01 | 1.595 | .480E-01 | 1.575 | .693E-01 |
| 1.605 | .122E+00 | 1.610 | .115E+00 | 1.595 | .115E+00 | 1.595 | .119E+00 | 1.600 | .121E+00 |
| 1.630 | .152E+00 | 1.635 | .126E+00 | 1.615 | .132E+00 | 1.620 | .140E+00 | 1.625 | .147E+00 |
| 1.655 | .130E+00 | 1.660 | .152E+00 | 1.640 | .148E+00 | 1.645 | .140E+00 | 1.650 | .133E+00 |
| 1.680 | .177E+00 | 1.685 | .133E+00 | 1.665 | .142E+00 | 1.670 | .155E+00 | 1.675 | .169E+00 |
| 1.705 | .719E-01 | 1.695 | .176E+00 | 1.690 | .163E+00 | 1.695 | .138E+00 | 1.700 | .106E+00 |
| 1.730 | .432E-01 | 1.710 | .437E-01 | 1.715 | .264E-01 | 1.720 | .223E-01 | 1.725 | .296E-01 |
| 1.755 | -.165E-01 | 1.735 | .556E-01 | 1.740 | .592E-01 | 1.745 | .488E-01 | 1.750 | .226E-01 |
| 1.780 | -.162E+00 | 1.760 | -.623E-01 | 1.765 | -.106E+00 | 1.770 | -.141E+00 | 1.775 | -.160E+00 |
| 1.805 | -.845E-01 | 1.785 | -.149E+00 | 1.790 | -.128E+00 | 1.795 | -.106E+00 | 1.800 | -.893E-01 |
| 1.830 | -.196E+00 | 1.810 | -.931E-01 | 1.815 | -.114E+00 | 1.820 | -.141E+00 | 1.825 | -.171E+00 |
| 1.855 | -.175E+00 | 1.835 | -.212E+00 | 1.840 | -.217E+00 | 1.845 | -.211E+00 | 1.850 | -.196E+00 |
| 1.880 | -.115E+00 | 1.860 | -.154E+00 | 1.865 | -.134E+00 | 1.870 | -.121E+00 | 1.875 | -.114E+00 |
| 1.905 | -.167E+00 | 1.885 | -.123E+00 | 1.890 | -.135E+00 | 1.895 | -.148E+00 | 1.900 | -.160E+00 |
| 1.930 | -.587E-01 | 1.910 | -.165E+00 | 1.915 | -.153E+00 | 1.920 | -.130E+00 | 1.925 | -.973E-01 |
| 1.955 | .786E-01 | 1.935 | -.183E-01 | 1.940 | .190E-01 | 1.945 | .491E-01 | 1.950 | .691E-01 |
| 1.980 | .681E-01 | 1.960 | .790E-01 | 1.965 | .740E-01 | 1.970 | .680E-01 | 1.975 | .650E-01 |
| 2.005 | .153E+00 | 1.985 | .784E-01 | 1.990 | .950E-01 | 1.995 | .115E+00 | 2.000 | .136E+00 |
| 2.030 | .151E+00 | 2.010 | .164E+00 | 2.015 | .169E+00 | 2.020 | .167E+00 | 2.025 | .160E+00 |
| 2.055 | .127E+00 | 2.035 | .142E+00 | 2.040 | .135E+00 | 2.045 | .130E+00 | 2.050 | .128E+00 |
| 2.080 | .127E+00 | 2.060 | .127E+00 | 2.065 | .128E+00 | 2.070 | .128E+00 | 2.075 | .127E+00 |
| 2.105 | .124E+00 | 2.085 | .126E+00 | 2.090 | .127E+00 | 2.095 | .127E+00 | 2.100 | .126E+00 |
| 2.130 | .847E-01 | 2.110 | .120E+00 | 2.115 | .113E+00 | 2.120 | .105E+00 | 2.125 | .946E-01 |
| 2.155 | .798E-01 | 2.135 | .766E-01 | 2.140 | .716E-01 | 2.145 | .706E-01 | 2.150 | .736E-01 |
| 2.180 | .905E-01 | 2.160 | .874E-01 | 2.165 | .943E-01 | 2.170 | .982E-01 | 2.175 | .973E-01 |
| 2.205 | .213E-02 | 2.185 | .780E-01 | 2.190 | .507E-01 | 2.195 | .407E-01 | 2.200 | .204E-01 |
| 2.230 | -.297E-01 | 2.210 | -.123E-01 | 2.215 | -.221E-01 | 2.220 | -.273E-01 | 2.225 | -.292E-01 |
| 2.255 | -.634E-01 | 2.235 | -.307E-01 | 2.240 | -.340E-01 | 2.245 | -.407E-01 | 2.250 | -.508E-01 |
| 2.280 | -.107E+00 | 2.260 | -.759E-01 | 2.265 | -.893E-01 | 2.270 | -.991E-01 | 2.275 | -.105E+00 |
| 2.305 | -.913E-01 | 2.285 | -.105E+00 | 2.290 | -.101E+00 | 2.295 | -.967E-01 | 2.300 | -.930E-01 |
| 2.330 | -.113E+00 | 2.310 | -.922E-01 | 2.315 | -.956E-01 | 2.320 | -.101E+00 | 2.325 | -.107E+00 |
| 2.355 | -.128E+00 | 2.335 | -.119E+00 | 2.340 | -.123E+00 | 2.345 | -.125E+00 | 2.350 | -.127E+00 |
| 2.380 | -.127E+00 | 2.360 | -.128E+00 | 2.365 | -.129E+00 | 2.370 | -.129E+00 | 2.375 | -.128E+00 |
| 2.405 | -.107E+00 | 2.385 | -.125E+00 | 2.390 | -.122E+00 | 2.395 | -.117E+00 | 2.400 | -.112E+00 |
| 2.430 | -.791E-01 | 2.410 | -.102E+00 | 2.415 | -.964E-01 | 2.420 | -.912E-01 | 2.425 | -.857E-01 |
| 2.455 | -.348E-01 | 2.435 | -.712E-01 | 2.440 | -.619E-01 | 2.445 | -.518E-01 | 2.450 | -.422E-01 |
| 2.480 | -.768E-01 | 2.460 | -.317E-01 | 2.465 | -.342E-01 | 2.470 | -.432E-01 | 2.475 | -.581E-01 |
| 2.505 | -.126E+00 | 2.485 | -.955E-01 | 2.490 | -.114E+00 | 2.495 | -.125E+00 | 2.500 | -.129E+00 |
| 2.530 | -.104E+00 | 2.510 | -.118E+00 | 2.515 | -.108E+00 | 2.520 | -.995E-01 | 2.525 | -.974E-01 |
| 2.555 | -.193E+00 | 2.535 | -.118E+00 | 2.540 | -.138E+00 | 2.545 | -.161E+00 | 2.550 | -.180E+00 |
| 2.580 | -.141E+00 | 2.560 | -.197E+00 | 2.565 | -.192E+00 | 2.570 | -.178E+00 | 2.575 | -.160E+00 |
| 2.605 | -.630E-01 | 2.585 | -.123E+00 | 2.590 | -.107E+00 | 2.595 | -.936E-01 | 2.600 | -.796E-01 |
| 2.630 | .634E-01 | 2.610 | -.422E-01 | 2.615 | -.170E-01 | 2.620 | .111E-01 | 2.625 | .391E-01 |
| 2.655 | .101E+00 | 2.635 | .815E-01 | 2.640 | .923E-01 | 2.645 | .970E-01 | 2.650 | .988E-01 |
| 2.680 | .168E+00 | 2.660 | .108E+00 | 2.665 | .120E+00 | 2.670 | .137E+00 | 2.675 | .155E+00 |
| 2.705 | .635E-01 | 2.685 | .171E+00 | 2.690 | .161E+00 | 2.695 | .137E+00 | 2.700 | .103E+00 |
| 2.730 | -.507E-02 | 2.710 | .268E-01 | 2.715 | -.716E-03 | 2.720 | -.150E-01 | 2.725 | -.154E-01 |
| 2.755 | .227E-01 | 2.735 | .103E-01 | 2.740 | .243E-01 | 2.745 | .319E-01 | 2.750 | .309E-01 |
| 2.780 | .599E-01 | 2.760 | .121E-01 | 2.765 | .563E-02 | 2.770 | .938E-02 | 2.775 | .273E-01 |
| 2.805 | .247E+00 | 2.785 | .103E+00 | 2.790 | .151E+00 | 2.795 | .196E+00 | 2.800 | .229E+00 |
| 2.830 | .168E+00 | 2.810 | .248E+00 | 2.815 | .235E+00 | 2.820 | .213E+00 | 2.825 | .188E+00 |
| 2.855 | .198E+00 | 2.835 | .157E+00 | 2.840 | .156E+00 | 2.845 | .165E+00 | 2.850 | .180E+00 |
| 2.880 | .202E+00 | 2.860 | .214E+00 | 2.865 | .223E+00 | 2.870 | .225E+00 | 2.875 | .217E+00 |
| 2.905 | .799E-01 | 2.885 | .180E+00 | 2.890 | .155E+00 | 2.895 | .128E+00 | 2.900 | .102E+00 |
| 2.930 | .313E-01 | 2.910 | .624E-01 | 2.915 | .501E-01 | 2.920 | .422E-01 | 2.925 | .369E-01 |
| 2.955 | -.881E-01 | 2.935 | .223E-01 | 2.940 | .695E-02 | 2.945 | -.167E-01 | 2.950 | -.489E-01 |
| 2.980 | -.266E+00 | 2.960 | -.131E+00 | 2.965 | -.174E+00 | 2.970 | -.213E+00 | 2.975 | -.244E+00 |
| 3.005 | -.303E+00 | 2.985 | -.279E+00 | 2.990 | -.236E+00 | 2.995 | -.290E+00 | 3.000 | -.295E+00 |
| 3.030 | -.395E+00 | 3.010 | -.317E+00 | 3.015 | -.335E+00 | 3.020 | -.356E+00 | 3.025 | -.377E+00 |
| 3.055 | -.402E+00 | 3.035 | -.408E+00 | 3.040 | -.415E+00 | 3.045 | -.416E+00 | 3.050 | -.411E+00 |
| 3.080 | -.329E+00 | 3.060 | -.391E+00 | 3.065 | -.378E+00 | 3.070 | -.363E+00 | 3.075 | -.347E+00 |
| | | 3.085 | -.310E+00 | 3.090 | -.289E+00 | 3.095 | -.259E+00 | 3.100 | -.251E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 3.230 | .558E+00 | 3.235 | .614E+00 | 3.240 | .660E+00 | 3.245 | .695E+00 | 3.250 | .718E+00 |
| 3.255 | .733E+00 | 3.260 | .740E+00 | 3.265 | .743E+00 | 3.270 | .743E+00 | 3.275 | .742E+00 |
| 3.280 | .740E+00 | 3.285 | .737E+00 | 3.290 | .732E+00 | 3.295 | .723E+00 | 3.300 | .710E+00 |
| 3.305 | .692E+00 | 3.310 | .671E+00 | 3.315 | .647E+00 | 3.320 | .623E+00 | 3.325 | .601E+00 |
| 3.330 | .581E+00 | 3.335 | .564E+00 | 3.340 | .551E+00 | 3.345 | .540E+00 | 3.350 | .531E+00 |
| 3.355 | .521E+00 | 3.360 | .511E+00 | 3.365 | .500E+00 | 3.370 | .487E+00 | 3.375 | .472E+00 |
| 3.380 | .456E+00 | 3.385 | .439E+00 | 3.390 | .421E+00 | 3.395 | .401E+00 | 3.400 | .379E+00 |
| 3.405 | .354E+00 | 3.410 | .327E+00 | 3.415 | .297E+00 | 3.420 | .266E+00 | 3.425 | .235E+00 |
| 3.430 | .205E+00 | 3.435 | .175E+00 | 3.440 | .148E+00 | 3.445 | .122E+00 | 3.450 | .960E-01 |
| 3.455 | .694E-01 | 3.460 | .409E-01 | 3.465 | .100E-01 | 3.470 | -.230E-01 | 3.475 | -.569E-01 |
| 3.480 | -.894E-01 | 3.485 | -.118E+00 | 3.490 | -.141E+00 | 3.495 | -.156E+00 | 3.500 | -.163E+00 |
| 3.505 | -.164E+00 | 3.510 | -.162E+00 | 3.515 | -.159E+00 | 3.520 | -.161E+00 | 3.525 | -.168E+00 |
| 3.530 | -.183E+00 | 3.535 | -.205E+00 | 3.540 | -.231E+00 | 3.545 | -.256E+00 | 3.550 | -.279E+00 |
| 3.555 | -.294E+00 | 3.560 | -.302E+00 | 3.565 | -.302E+00 | 3.570 | -.298E+00 | 3.575 | -.291E+00 |
| 3.580 | -.286E+00 | 3.585 | -.286E+00 | 3.590 | -.290E+00 | 3.595 | -.298E+00 | 3.600 | -.308E+00 |
| 3.605 | -.316E+00 | 3.610 | -.320E+00 | 3.615 | -.318E+00 | 3.620 | -.312E+00 | 3.625 | -.300E+00 |
| 3.630 | -.287E+00 | 3.635 | -.273E+00 | 3.640 | -.258E+00 | 3.645 | -.243E+00 | 3.650 | -.224E+00 |
| 3.655 | -.199E+00 | 3.660 | -.168E+00 | 3.665 | -.129E+00 | 3.670 | -.849E-01 | 3.675 | -.396E-01 |
| 3.680 | .240E-02 | 3.685 | .356E-01 | 3.690 | .604E-01 | 3.695 | .742E-01 | 3.700 | .812E-01 |
| 3.705 | .865E-01 | 3.710 | .962E-01 | 3.715 | .115E+00 | 3.720 | .145E+00 | 3.725 | .184E+00 |
| 3.730 | .226E+00 | 3.735 | .255E+00 | 3.740 | .292E+00 | 3.745 | .301E+00 | 3.750 | .289E+00 |
| 3.755 | .259E+00 | 3.760 | .214E+00 | 3.765 | .165E+00 | 3.770 | .117E+00 | 3.775 | .801E-01 |
| 3.780 | .562E-01 | 3.785 | .458E-01 | 3.790 | .456E-01 | 3.795 | .503E-01 | 3.800 | .542E-01 |
| 3.805 | .525E-01 | 3.810 | .427E-01 | 3.815 | .250E-01 | 3.820 | .155E-02 | 3.825 | -.236E-01 |
| 3.830 | -.467E-01 | 3.835 | -.643E-01 | 3.840 | -.738E-01 | 3.845 | -.744E-01 | 3.850 | -.661E-01 |
| 3.855 | -.501E-01 | 3.860 | -.285E-01 | 3.865 | -.379E-02 | 3.870 | .206E-01 | 3.875 | .412E-01 |
| 3.880 | .541E-01 | 3.885 | .561E-01 | 3.890 | .451E-01 | 3.895 | .210E-01 | 3.900 | -.141E-01 |
| 3.905 | -.560E-01 | 3.910 | -.989E-01 | 3.915 | -.137E+00 | 3.920 | -.165E+00 | 3.925 | -.181E+00 |
| 3.930 | -.186E+00 | 3.935 | -.182E+00 | 3.940 | -.176E+00 | 3.945 | -.173E+00 | 3.950 | -.179E+00 |
| 3.955 | -.195E+00 | 3.960 | -.220E+00 | 3.965 | -.251E+00 | 3.970 | -.281E+00 | 3.975 | -.303E+00 |
| 3.980 | -.315E+00 | 3.985 | -.313E+00 | 3.990 | -.299E+00 | 3.995 | -.276E+00 | 4.000 | -.249E+00 |
| 4.005 | -.224E+00 | 4.010 | -.203E+00 | 4.015 | -.187E+00 | 4.020 | -.175E+00 | 4.025 | -.163E+00 |
| 4.030 | -.149E+00 | 4.035 | -.130E+00 | 4.040 | -.105E+00 | 4.045 | -.752E-01 | 4.050 | -.431E-01 |
| 4.055 | -.126E-01 | 4.060 | .129E-01 | 4.065 | .312E-01 | 4.070 | .413E-01 | 4.075 | .441E-01 |
| 4.080 | .416E-01 | 4.085 | .352E-01 | 4.090 | .299E-01 | 4.095 | .242E-01 | 4.100 | .195E-01 |
| 4.105 | .153E-01 | 4.110 | .110E-01 | 4.115 | .584E-02 | 4.120 | -.295E-03 | 4.125 | -.705E-02 |
| 4.130 | -.135E-01 | 4.135 | -.182E-01 | 4.140 | -.200E-01 | 4.145 | -.176E-01 | 4.150 | -.104E-01 |
| 4.155 | .204E-02 | 4.160 | .194E-01 | 4.165 | .410E-01 | 4.170 | .559E-01 | 4.175 | .926E-01 |
| 4.180 | .120E+00 | 4.185 | .145E+00 | 4.190 | .168E+00 | 4.195 | .186E+00 | 4.200 | .198E+00 |
| 4.205 | .206E+00 | 4.210 | .209E+00 | 4.215 | .209E+00 | 4.220 | .207E+00 | 4.225 | .203E+00 |
| 4.230 | .199E+00 | 4.235 | .194E+00 | 4.240 | .187E+00 | 4.245 | .178E+00 | 4.250 | .165E+00 |
| 4.255 | .148E+00 | 4.260 | .127E+00 | 4.265 | .105E+00 | 4.270 | .841E-01 | 4.275 | .665E-01 |
| 4.280 | .545E-01 | 4.285 | .494E-01 | 4.290 | .515E-01 | 4.295 | .597E-01 | 4.300 | .723E-01 |
| 4.305 | .871E-01 | 4.310 | .102E+00 | 4.315 | .117E+00 | 4.320 | .129E+00 | 4.325 | .139E+00 |
| 4.330 | .146E+00 | 4.335 | .151E+00 | 4.340 | .152E+00 | 4.345 | .150E+00 | 4.350 | .144E+00 |
| 4.355 | .134E+00 | 4.360 | .120E+00 | 4.365 | .104E+00 | 4.370 | .859E-01 | 4.375 | .676E-01 |
| 4.380 | .500E-01 | 4.385 | .332E-01 | 4.390 | .168E-01 | 4.395 | -.551E-03 | 4.400 | -.199E-01 |
| 4.405 | -.423E-01 | 4.410 | -.675E-01 | 4.415 | -.946E-01 | 4.420 | -.121E+00 | 4.425 | -.146E+00 |
| 4.430 | -.165E+00 | 4.435 | -.178E+00 | 4.440 | -.184E+00 | 4.445 | -.185E+00 | 4.450 | -.184E+00 |
| 4.455 | -.182E+00 | 4.460 | -.182E+00 | 4.465 | -.187E+00 | 4.470 | -.193E+00 | 4.475 | -.201E+00 |
| 4.480 | -.206E+00 | 4.485 | -.205E+00 | 4.490 | -.194E+00 | 4.495 | -.172E+00 | 4.500 | -.140E+00 |
| 4.505 | -.100E+00 | 4.510 | -.562E-01 | 4.515 | -.130E-01 | 4.520 | .250E-01 | 4.525 | .545E-01 |
| 4.530 | .742E-01 | 4.535 | .846E-01 | 4.540 | .878E-01 | 4.545 | .868E-01 | 4.550 | .849E-01 |
| 4.555 | .843E-01 | 4.560 | .852E-01 | 4.565 | .901E-01 | 4.570 | .945E-01 | 4.575 | .973E-01 |
| 4.580 | .965E-01 | 4.585 | .909E-01 | 4.590 | .800E-01 | 4.595 | .649E-01 | 4.600 | .469E-01 |
| 4.605 | .279E-01 | 4.610 | .896E-02 | 4.615 | -.956E-02 | 4.620 | -.287E-01 | 4.625 | -.496E-01 |
| 4.630 | -.740E-01 | 4.635 | -.103E+00 | 4.640 | -.135E+00 | 4.645 | -.159E+00 | 4.650 | -.202E+00 |
| 4.655 | -.228E+00 | 4.660 | -.244E+00 | 4.665 | -.248E+00 | 4.670 | -.240E+00 | 4.675 | -.222E+00 |
| 4.680 | -.197E+00 | 4.685 | -.172E+00 | 4.690 | -.151E+00 | 4.695 | -.136E+00 | 4.700 | -.127E+00 |
| 4.705 | -.120E+00 | 4.710 | -.110E+00 | 4.715 | -.906E-01 | 4.720 | -.571E-01 | 4.725 | -.689E-02 |
| 4.730 | .586E-01 | 4.735 | .135E+00 | 4.740 | .213E+00 | 4.745 | .287E+00 | 4.750 | .349E+00 |
| 4.755 | .396E+00 | 4.760 | .427E+00 | 4.765 | .448E+00 | 4.770 | .454E+00 | 4.775 | .484E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 4.880 | .739E+00 | 4.885 | .685E+00 | 4.890 | .614E+00 | 4.895 | .531E+00 | 4.900 | .442E+00 |
| 4.905 | .353E+00 | 4.910 | .270E+00 | 4.915 | .197E+00 | 4.920 | .133E+00 | 4.925 | .794E-01 |
| 4.930 | .318E-01 | 4.935 | -.129E-01 | 4.940 | -.536E-01 | 4.945 | -.108E+00 | 4.950 | -.161E+00 |
| 4.955 | -.218E+00 | 4.960 | -.276E+00 | 4.965 | -.332E+00 | 4.970 | -.381E+00 | 4.975 | -.422E+00 |
| 4.980 | -.454E+00 | 4.985 | -.477E+00 | 4.990 | -.493E+00 | 4.995 | -.507E+00 | 5.000 | -.522E+00 |
| 5.005 | -.541E+00 | 5.010 | -.555E+00 | 5.015 | -.596E+00 | 5.020 | -.631E+00 | 5.025 | -.669E+00 |
| 5.030 | -.707E+00 | 5.035 | -.744E+00 | 5.040 | -.779E+00 | 5.045 | -.811E+00 | 5.050 | -.841E+00 |
| 5.055 | -.869E+00 | 5.060 | -.895E+00 | 5.065 | -.919E+00 | 5.070 | -.940E+00 | 5.075 | -.957E+00 |
| 5.080 | -.969E+00 | 5.085 | -.975E+00 | 5.090 | -.976E+00 | 5.095 | -.973E+00 | 5.100 | -.966E+00 |
| 5.105 | -.957E+00 | 5.110 | -.948E+00 | 5.115 | -.937E+00 | 5.120 | -.925E+00 | 5.125 | -.911E+00 |
| 5.130 | -.893E+00 | 5.135 | -.871E+00 | 5.140 | -.843E+00 | 5.145 | -.809E+00 | 5.150 | -.771E+00 |
| 5.155 | -.729E+00 | 5.160 | -.685E+00 | 5.165 | -.640E+00 | 5.170 | -.595E+00 | 5.175 | -.551E+00 |
| 5.180 | -.509E+00 | 5.185 | -.468E+00 | 5.190 | -.429E+00 | 5.195 | -.390E+00 | 5.200 | -.353E+00 |
| 5.205 | -.315E+00 | 5.210 | -.275E+00 | 5.215 | -.233E+00 | 5.220 | -.188E+00 | 5.225 | -.141E+00 |
| 5.230 | -.925E-01 | 5.235 | -.441E-01 | 5.240 | .218E-02 | 5.245 | .445E-01 | 5.250 | .818E-01 |
| 5.255 | .114E+00 | 5.260 | .143E+00 | 5.265 | .169E+00 | 5.270 | .197E+00 | 5.275 | .227E+00 |
| 5.280 | .261E+00 | 5.285 | .300E+00 | 5.290 | .340E+00 | 5.295 | .381E+00 | 5.300 | .419E+00 |
| 5.305 | .452E+00 | 5.310 | .479E+00 | 5.315 | .499E+00 | 5.320 | .514E+00 | 5.325 | .524E+00 |
| 5.330 | .533E+00 | 5.335 | .541E+00 | 5.340 | .548E+00 | 5.345 | .553E+00 | 5.350 | .556E+00 |
| 5.355 | .555E+00 | 5.360 | .549E+00 | 5.365 | .537E+00 | 5.370 | .521E+00 | 5.375 | .503E+00 |
| 5.380 | .484E+00 | 5.385 | .465E+00 | 5.390 | .448E+00 | 5.395 | .433E+00 | 5.400 | .421E+00 |
| 5.405 | .410E+00 | 5.410 | .400E+00 | 5.415 | .391E+00 | 5.420 | .384E+00 | 5.425 | .380E+00 |
| 5.430 | .377E+00 | 5.435 | .376E+00 | 5.440 | .374E+00 | 5.445 | .369E+00 | 5.450 | .359E+00 |
| 5.455 | .340E+00 | 5.460 | .312E+00 | 5.465 | .276E+00 | 5.470 | .232E+00 | 5.475 | .186E+00 |
| 5.480 | .140E+00 | 5.485 | .100E+00 | 5.490 | .690E-01 | 5.495 | .475E-01 | 5.500 | .352E-01 |
| 5.505 | .300E-01 | 5.510 | .285E-01 | 5.515 | .269E-01 | 5.520 | .221E-01 | 5.525 | .117E-01 |
| 5.530 | -.545E-02 | 5.535 | -.292E-01 | 5.540 | -.583E-01 | 5.545 | -.908E-01 | 5.550 | -.124E+00 |
| 5.555 | -.157E+00 | 5.560 | -.185E+00 | 5.565 | -.208E+00 | 5.570 | -.224E+00 | 5.575 | -.232E+00 |
| 5.580 | -.232E+00 | 5.585 | -.226E+00 | 5.590 | -.218E+00 | 5.595 | -.210E+00 | 5.600 | -.207E+00 |
| 5.605 | -.212E+00 | 5.610 | -.227E+00 | 5.615 | -.254E+00 | 5.620 | -.290E+00 | 5.625 | -.334E+00 |
| 5.630 | -.381E+00 | 5.635 | -.426E+00 | 5.640 | -.465E+00 | 5.645 | -.496E+00 | 5.650 | -.516E+00 |
| 5.655 | -.528E+00 | 5.660 | -.533E+00 | 5.665 | -.535E+00 | 5.670 | -.538E+00 | 5.675 | -.547E+00 |
| 5.680 | -.562E+00 | 5.685 | -.585E+00 | 5.690 | -.615E+00 | 5.695 | -.647E+00 | 5.700 | -.679E+00 |
| 5.705 | -.706E+00 | 5.710 | -.724E+00 | 5.715 | -.732E+00 | 5.720 | -.728E+00 | 5.725 | -.716E+00 |
| 5.730 | -.698E+00 | 5.735 | -.680E+00 | 5.740 | -.666E+00 | 5.745 | -.660E+00 | 5.750 | -.663E+00 |
| 5.755 | -.674E+00 | 5.760 | -.589E+00 | 5.765 | -.702E+00 | 5.770 | -.708E+00 | 5.775 | -.702E+00 |
| 5.780 | -.680E+00 | 5.785 | -.643E+00 | 5.790 | -.596E+00 | 5.795 | -.545E+00 | 5.800 | -.496E+00 |
| 5.805 | -.458E+00 | 5.810 | -.433E+00 | 5.815 | -.423E+00 | 5.820 | -.423E+00 | 5.825 | -.428E+00 |
| 5.830 | -.427E+00 | 5.835 | -.415E+00 | 5.840 | -.383E+00 | 5.845 | -.329E+00 | 5.850 | -.256E+00 |
| 5.855 | -.167E+00 | 5.860 | -.714E-01 | 5.865 | .224E-01 | 5.870 | .107E+00 | 5.875 | .177E+00 |
| 5.880 | .230E+00 | 5.885 | .269E+00 | 5.890 | .297E+00 | 5.895 | .320E+00 | 5.900 | .345E+00 |
| 5.905 | .377E+00 | 5.910 | .418E+00 | 5.915 | .471E+00 | 5.920 | .531E+00 | 5.925 | .597E+00 |
| 5.930 | .652E+00 | 5.935 | .722E+00 | 5.940 | .773E+00 | 5.945 | .813E+00 | 5.950 | .842E+00 |
| 5.955 | .861E+00 | 5.960 | .874E+00 | 5.965 | .885E+00 | 5.970 | .897E+00 | 5.975 | .914E+00 |
| 5.980 | .936E+00 | 5.985 | .954E+00 | 5.990 | .994E+00 | 5.995 | .102E+01 | 6.000 | .105E+01 |
| 6.005 | .106E+01 | 6.010 | .107E+01 | 6.015 | .106E+01 | 6.020 | .104E+01 | 6.025 | .102E+01 |
| 6.030 | .987E+00 | 6.035 | .957E+00 | 6.040 | .928E+00 | 6.045 | .902E+00 | 6.050 | .879E+00 |
| 6.055 | .861E+00 | 6.060 | .845E+00 | 6.065 | .833E+00 | 6.070 | .822E+00 | 6.075 | .815E+00 |
| 6.080 | .809E+00 | 6.085 | .804E+00 | 6.090 | .798E+00 | 6.095 | .788E+00 | 6.100 | .772E+00 |
| 6.105 | .745E+00 | 6.110 | .707E+00 | 6.115 | .657E+00 | 6.120 | .595E+00 | 6.125 | .525E+00 |
| 6.130 | .451E+00 | 6.135 | .378E+00 | 6.140 | .308E+00 | 6.145 | .246E+00 | 6.150 | .190E+00 |
| 6.155 | .141E+00 | 6.160 | .950E-01 | 6.165 | .493E-01 | 6.170 | .109E-02 | 6.175 | -.517E-01 |
| 6.180 | -.110E+00 | 6.185 | -.173E+00 | 6.190 | -.239E+00 | 6.195 | -.306E+00 | 6.200 | -.375E+00 |
| 6.205 | -.442E+00 | 6.210 | -.510E+00 | 6.215 | -.577E+00 | 6.220 | -.646E+00 | 6.225 | -.716E+00 |
| 6.230 | -.788E+00 | 6.235 | -.852E+00 | 6.240 | -.934E+00 | 6.245 | -.100E+01 | 6.250 | -.107E+01 |
| 6.255 | -.112E+01 | 6.260 | -.117E+01 | 6.265 | -.121E+01 | 6.270 | -.123E+01 | 6.275 | -.125E+01 |
| 6.280 | -.126E+01 | 6.285 | -.126E+01 | 6.290 | -.126E+01 | 6.295 | -.125E+01 | 6.300 | -.123E+01 |
| 6.305 | -.122E+01 | 6.310 | -.120E+01 | 6.315 | -.117E+01 | 6.320 | -.115E+01 | 6.325 | -.112E+01 |
| 6.330 | -.109E+01 | 6.335 | -.107E+01 | 6.340 | -.104E+01 | 6.345 | -.102E+01 | 6.350 | -.997E+00 |
| 6.355 | -.972E+00 | 6.360 | -.945E+00 | 6.365 | -.913E+00 | 6.370 | -.874E+00 | 6.375 | -.827E+00 |
| 6.380 | -.774E+00 | 6.385 | -.715E+00 | 6.390 | -.653E+00 | 6.395 | -.591E+00 | 6.400 | -.532E+00 |
| 6.405 | -.478E+00 | 6.410 | -.431E+00 | 6.415 | -.389E+00 | 6.420 | -.352E+00 | 6.425 | -.318E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 6.530 | .731E+00 | 6.535 | .785E+00 | 6.540 | .842E+00 | 6.545 | .901E+00 | 6.550 | .961E+00 |
| 6.555 | .102E+01 | 6.560 | .107E+01 | 6.565 | .112E+01 | 6.570 | .116E+01 | 6.575 | .118E+01 |
| 6.580 | .120E+01 | 6.585 | .121E+01 | 6.590 | .122E+01 | 6.595 | .122E+01 | 6.600 | .123E+01 |
| 6.605 | .124E+01 | 6.610 | .125E+01 | 6.615 | .126E+01 | 6.620 | .126E+01 | 6.625 | .125E+01 |
| 6.630 | .123E+01 | 6.635 | .121E+01 | 6.640 | .117E+01 | 6.645 | .113E+01 | 6.650 | .108E+01 |
| 6.655 | .103E+01 | 6.660 | .982E+00 | 6.665 | .938E+00 | 6.670 | .894E+00 | 6.675 | .850E+00 |
| 6.680 | .802E+00 | 6.685 | .748E+00 | 6.690 | .686E+00 | 6.695 | .616E+00 | 6.700 | .539E+00 |
| 6.705 | .457E+00 | 6.710 | .374E+00 | 6.715 | .293E+00 | 6.720 | .215E+00 | 6.725 | .142E+00 |
| 6.730 | .732E-01 | 6.735 | .607E-02 | 6.740 | -.612E-01 | 6.745 | -.130E+00 | 6.750 | -.202E+00 |
| 6.755 | -.277E+00 | 6.760 | -.351E+00 | 6.765 | -.422E+00 | 6.770 | -.487E+00 | 6.775 | -.542E+00 |
| 6.780 | -.586E+00 | 6.785 | -.619E+00 | 6.790 | -.644E+00 | 6.795 | -.656E+00 | 6.800 | -.689E+00 |
| 6.805 | -.716E+00 | 6.810 | -.751E+00 | 6.815 | -.794E+00 | 6.820 | -.842E+00 | 6.825 | -.891E+00 |
| 6.830 | -.936E+00 | 6.835 | -.971E+00 | 6.840 | -.992E+00 | 6.845 | -.996E+00 | 6.850 | -.984E+00 |
| 6.855 | -.959E+00 | 6.860 | -.925E+00 | 6.865 | -.887E+00 | 6.870 | -.852E+00 | 6.875 | -.822E+00 |
| 6.880 | -.799E+00 | 6.885 | -.785E+00 | 6.890 | -.778E+00 | 6.895 | -.773E+00 | 6.900 | -.766E+00 |
| 6.905 | -.754E+00 | 6.910 | -.733E+00 | 6.915 | -.700E+00 | 6.920 | -.654E+00 | 6.925 | -.596E+00 |
| 6.930 | -.529E+00 | 6.935 | -.456E+00 | 6.940 | -.379E+00 | 6.945 | -.304E+00 | 6.950 | -.232E+00 |
| 6.955 | -.164E+00 | 6.960 | -.102E+00 | 6.965 | -.423E-01 | 6.970 | .155E-01 | 6.975 | .774E-01 |
| 6.980 | .143E+00 | 6.985 | .215E+00 | 6.990 | .294E+00 | 6.995 | .378E+00 | 7.000 | .467E+00 |
| 7.005 | .556E+00 | 7.010 | .643E+00 | 7.015 | .724E+00 | 7.020 | .799E+00 | 7.025 | .866E+00 |
| 7.030 | .924E+00 | 7.035 | .975E+00 | 7.040 | .102E+01 | 7.045 | .106E+01 | 7.050 | .109E+01 |
| 7.055 | .113E+01 | 7.060 | .116E+01 | 7.065 | .119E+01 | 7.070 | .121E+01 | 7.075 | .124E+01 |
| 7.080 | .125E+01 | 7.085 | .126E+01 | 7.090 | .126E+01 | 7.095 | .125E+01 | 7.100 | .123E+01 |
| 7.105 | .119E+01 | 7.110 | .114E+01 | 7.115 | .109E+01 | 7.120 | .103E+01 | 7.125 | .961E+00 |
| 7.130 | .898E+00 | 7.135 | .838E+00 | 7.140 | .782E+00 | 7.145 | .728E+00 | 7.150 | .675E+00 |
| 7.155 | .619E+00 | 7.160 | .559E+00 | 7.165 | .493E+00 | 7.170 | .422E+00 | 7.175 | .346E+00 |
| 7.180 | .267E+00 | 7.185 | .190E+00 | 7.190 | .114E+00 | 7.195 | .437E-01 | 7.200 | -.219E-01 |
| 7.205 | -.827E-01 | 7.210 | -.139E+00 | 7.215 | -.193E+00 | 7.220 | -.245E+00 | 7.225 | -.296E+00 |
| 7.230 | -.346E+00 | 7.235 | -.394E+00 | 7.240 | -.441E+00 | 7.245 | -.486E+00 | 7.250 | -.531E+00 |
| 7.255 | -.574E+00 | 7.260 | -.617E+00 | 7.265 | -.659E+00 | 7.270 | -.700E+00 | 7.275 | -.739E+00 |
| 7.280 | -.775E+00 | 7.285 | -.805E+00 | 7.290 | -.831E+00 | 7.295 | -.851E+00 | 7.300 | -.867E+00 |
| 7.305 | -.878E+00 | 7.310 | -.886E+00 | 7.315 | -.893E+00 | 7.320 | -.898E+00 | 7.325 | -.901E+00 |
| 7.330 | -.901E+00 | 7.335 | -.896E+00 | 7.340 | -.884E+00 | 7.345 | -.865E+00 | 7.350 | -.837E+00 |
| 7.355 | -.801E+00 | 7.360 | -.758E+00 | 7.365 | -.711E+00 | 7.370 | -.662E+00 | 7.375 | -.611E+00 |
| 7.380 | -.562E+00 | 7.385 | -.514E+00 | 7.390 | -.467E+00 | 7.395 | -.421E+00 | 7.400 | -.376E+00 |
| 7.405 | -.330E+00 | 7.410 | -.283E+00 | 7.415 | -.235E+00 | 7.420 | -.188E+00 | 7.425 | -.143E+00 |
| 7.430 | -.102E+00 | 7.435 | -.658E-01 | 7.440 | -.365E-01 | 7.445 | -.145E-01 | 7.450 | .119E-03 |
| 7.455 | .853E-02 | 7.460 | .125E-01 | 7.465 | .144E-01 | 7.470 | .155E-01 | 7.475 | .209E-01 |
| 7.480 | .290E-01 | 7.485 | .413E-01 | 7.490 | .575E-01 | 7.495 | .770E-01 | 7.500 | .989E-01 |
| 7.505 | .123E+00 | 7.510 | .148E+00 | 7.515 | .175E+00 | 7.520 | .206E+00 | 7.525 | .241E+00 |
| 7.530 | .280E+00 | 7.535 | .323E+00 | 7.540 | .368E+00 | 7.545 | .415E+00 | 7.550 | .460E+00 |
| 7.555 | .501E+00 | 7.560 | .538E+00 | 7.565 | .569E+00 | 7.570 | .596E+00 | 7.575 | .620E+00 |
| 7.580 | .643E+00 | 7.585 | .665E+00 | 7.590 | .688E+00 | 7.595 | .710E+00 | 7.600 | .729E+00 |
| 7.605 | .741E+00 | 7.610 | .743E+00 | 7.615 | .733E+00 | 7.620 | .710E+00 | 7.625 | .676E+00 |
| 7.630 | .632E+00 | 7.635 | .583E+00 | 7.640 | .532E+00 | 7.645 | .482E+00 | 7.650 | .434E+00 |
| 7.655 | .389E+00 | 7.660 | .346E+00 | 7.665 | .304E+00 | 7.670 | .261E+00 | 7.675 | .215E+00 |
| 7.680 | .166E+00 | 7.685 | .114E+00 | 7.690 | .597E-01 | 7.695 | .602E-02 | 7.700 | -.453E-01 |
| 7.705 | -.924E-01 | 7.710 | -.134E+00 | 7.715 | -.169E+00 | 7.720 | -.199E+00 | 7.725 | -.224E+00 |
| 7.730 | -.246E+00 | 7.735 | -.258E+00 | 7.740 | -.291E+00 | 7.745 | -.316E+00 | 7.750 | -.344E+00 |
| 7.755 | -.375E+00 | 7.760 | -.406E+00 | 7.765 | -.435E+00 | 7.770 | -.458E+00 | 7.775 | -.473E+00 |
| 7.780 | -.477E+00 | 7.785 | -.471E+00 | 7.790 | -.456E+00 | 7.795 | -.436E+00 | 7.800 | -.416E+00 |
| 7.805 | -.401E+00 | 7.810 | -.394E+00 | 7.815 | -.399E+00 | 7.820 | -.415E+00 | 7.825 | -.440E+00 |
| 7.830 | -.468E+00 | 7.835 | -.496E+00 | 7.840 | -.516E+00 | 7.845 | -.525E+00 | 7.850 | -.522E+00 |
| 7.855 | -.508E+00 | 7.860 | -.487E+00 | 7.865 | -.452E+00 | 7.870 | -.438E+00 | 7.875 | -.421E+00 |
| 7.880 | -.410E+00 | 7.885 | -.408E+00 | 7.890 | -.412E+00 | 7.895 | -.418E+00 | 7.900 | -.424E+00 |
| 7.905 | -.426E+00 | 7.910 | -.421E+00 | 7.915 | -.409E+00 | 7.920 | -.389E+00 | 7.925 | -.363E+00 |
| 7.930 | -.334E+00 | 7.935 | -.301E+00 | 7.940 | -.268E+00 | 7.945 | -.234E+00 | 7.950 | -.200E+00 |
| 7.955 | -.155E+00 | 7.960 | -.129E+00 | 7.965 | -.900E-01 | 7.970 | -.482E-01 | 7.975 | -.359E-02 |
| 7.980 | .428E-01 | 7.985 | .896E-01 | 7.990 | .135E+00 | 7.995 | .177E+00 | 8.000 | .213E+00 |
| 8.005 | .241E+00 | 8.010 | .252E+00 | 8.015 | .275E+00 | 8.020 | .280E+00 | 8.025 | .278E+00 |
| 8.030 | .271E+00 | 8.035 | .250E+00 | 8.040 | .246E+00 | 8.045 | .230E+00 | 8.050 | .214E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 8.180 | -.163E+00 | 8.185 | -.159E+00 | 8.190 | -.158E+00 | 8.195 | -.152E+00 | 8.175 | -.157E+00 |
| 8.205 | -.167E+00 | 8.210 | -.162E+00 | 8.215 | -.158E+00 | 8.220 | -.173E+00 | 8.200 | -.171E+00 |
| 8.230 | -.150E+00 | 8.235 | -.146E+00 | 8.240 | -.140E+00 | 8.245 | -.130E+00 | 8.225 | -.152E+00 |
| 8.255 | -.977E-01 | 8.260 | -.785E-01 | 8.265 | -.595E-01 | 8.270 | -.425E-01 | 8.250 | -.115E+00 |
| 8.280 | -.188E-01 | 8.285 | -.113E-01 | 8.290 | -.477E-02 | 8.295 | .271E-02 | 8.275 | -.289E-01 |
| 8.305 | .263E-01 | 8.310 | .429E-01 | 8.315 | .613E-01 | 8.320 | .792E-01 | 8.300 | .128E-01 |
| 8.330 | .104E+00 | 8.335 | .107E+00 | 8.340 | .104E+00 | 8.345 | .956E-01 | 8.325 | .941E-01 |
| 8.355 | .695E-01 | 8.360 | .564E-01 | 8.365 | .455E-01 | 8.370 | .370E-01 | 8.350 | .832E-01 |
| 8.380 | .242E-01 | 8.385 | .156E-01 | 8.390 | .614E-02 | 8.395 | -.784E-02 | 8.375 | .304E-01 |
| 8.405 | -.437E-01 | 8.410 | -.615E-01 | 8.415 | -.759E-01 | 8.420 | -.844E-01 | 8.400 | -.250E-01 |
| 8.430 | -.799E-01 | 8.435 | -.683E-01 | 8.440 | -.536E-01 | 8.445 | -.389E-01 | 8.425 | -.857E-01 |
| 8.455 | -.200E-01 | 8.460 | -.184E-01 | 8.465 | -.215E-01 | 8.470 | -.274E-01 | 8.450 | -.270E-01 |
| 8.480 | -.379E-01 | 8.485 | -.386E-01 | 8.490 | -.351E-01 | 8.495 | -.281E-01 | 8.475 | -.337E-01 |
| 8.505 | -.905E-02 | 8.510 | .100E-03 | 8.515 | .789E-02 | 8.520 | .144E-01 | 8.500 | -.189E-01 |
| 8.530 | .261E-01 | 8.535 | .323E-01 | 8.540 | .386E-01 | 8.545 | .439E-01 | 8.525 | .202E-01 |
| 8.555 | .459E-01 | 8.560 | .406E-01 | 8.565 | .314E-01 | 8.570 | .202E-01 | 8.550 | .468E-01 |
| 8.580 | .428E-02 | 8.585 | .589E-02 | 8.590 | .166E-01 | 8.595 | .363E-01 | 8.575 | .100E-01 |
| 8.605 | .933E-01 | 8.610 | .123E+00 | 8.615 | .149E+00 | 8.620 | .168E+00 | 8.600 | .630E-01 |
| 8.630 | .186E+00 | 8.635 | .190E+00 | 8.640 | .195E+00 | 8.645 | .205E+00 | 8.625 | .180E+00 |
| 8.655 | .244E+00 | 8.660 | .271E+00 | 8.665 | .300E+00 | 8.670 | .327E+00 | 8.650 | .221E+00 |
| 8.680 | .358E+00 | 8.685 | .359E+00 | 8.690 | .352E+00 | 8.695 | .339E+00 | 8.675 | .347E+00 |
| 8.705 | .310E+00 | 8.710 | .302E+00 | 8.715 | .301E+00 | 8.720 | .305E+00 | 8.700 | .323E+00 |
| 8.730 | .319E+00 | 8.735 | .319E+00 | 8.740 | .310E+00 | 8.745 | .287E+00 | 8.725 | .312E+00 |
| 8.755 | .201E+00 | 8.760 | .145E+00 | 8.765 | .856E-01 | 8.770 | .301E-01 | 8.750 | .250E+00 |
| 8.780 | -.541E-01 | 8.785 | -.808E-01 | 8.790 | -.100E+00 | 8.795 | -.119E+00 | 8.775 | -.173E-01 |
| 8.805 | -.173E+00 | 8.810 | -.219E+00 | 8.815 | -.276E+00 | 8.820 | -.343E+00 | 8.800 | -.141E+00 |
| 8.830 | -.478E+00 | 8.835 | -.531E+00 | 8.840 | -.556E+00 | 8.845 | -.581E+00 | 8.825 | -.413E+00 |
| 8.855 | -.556E+00 | 8.860 | -.526E+00 | 8.865 | -.494E+00 | 8.870 | -.454E+00 | 8.850 | -.576E+00 |
| 8.880 | -.427E+00 | 8.885 | -.419E+00 | 8.890 | -.415E+00 | 8.895 | -.410E+00 | 8.875 | -.442E+00 |
| 8.905 | -.381E+00 | 8.910 | -.353E+00 | 8.915 | -.315E+00 | 8.920 | -.269E+00 | 8.900 | -.399E+00 |
| 8.930 | -.166E+00 | 8.935 | -.116E+00 | 8.940 | -.689E-01 | 8.945 | -.279E-01 | 8.925 | -.219E+00 |
| 8.955 | .353E-01 | 8.960 | .592E-01 | 8.965 | .805E-01 | 8.970 | .101E+00 | 8.950 | .669E-02 |
| 8.980 | .151E+00 | 8.985 | .181E+00 | 8.990 | .216E+00 | 8.995 | .253E+00 | 8.975 | .124E+00 |
| 9.005 | .326E+00 | 9.010 | .358E+00 | 9.015 | .385E+00 | 9.020 | .409E+00 | 9.000 | .290E+00 |
| 9.030 | .447E+00 | 9.035 | .465E+00 | 9.040 | .486E+00 | 9.045 | .510E+00 | 9.025 | .428E+00 |
| 9.055 | .563E+00 | 9.060 | .588E+00 | 9.065 | .610E+00 | 9.070 | .627E+00 | 9.050 | .536E+00 |
| 9.080 | .642E+00 | 9.085 | .640E+00 | 9.090 | .634E+00 | 9.095 | .623E+00 | 9.075 | .638E+00 |
| 9.105 | .595E+00 | 9.110 | .577E+00 | 9.115 | .558E+00 | 9.120 | .535E+00 | 9.100 | .610E+00 |
| 9.130 | .484E+00 | 9.135 | .455E+00 | 9.140 | .424E+00 | 9.145 | .392E+00 | 9.125 | .511E+00 |
| 9.155 | .324E+00 | 9.160 | .287E+00 | 9.165 | .248E+00 | 9.170 | .206E+00 | 9.150 | .359E+00 |
| 9.180 | .118E+00 | 9.185 | .738E-01 | 9.190 | .317E-01 | 9.195 | -.652E-02 | 9.175 | .163E+00 |
| 9.205 | -.652E-01 | 9.210 | -.861E-01 | 9.215 | -.997E-01 | 9.220 | -.108E+00 | 9.200 | -.396E-01 |
| 9.230 | -.117E+00 | 9.235 | -.122E+00 | 9.240 | -.131E+00 | 9.245 | -.146E+00 | 9.225 | -.113E+00 |
| 9.255 | -.196E+00 | 9.260 | -.230E+00 | 9.265 | -.267E+00 | 9.270 | -.302E+00 | 9.250 | -.168E+00 |
| 9.280 | -.359E+00 | 9.285 | -.377E+00 | 9.290 | -.386E+00 | 9.295 | -.390E+00 | 9.275 | -.334E+00 |
| 9.305 | -.393E+00 | 9.310 | -.399E+00 | 9.315 | -.412E+00 | 9.320 | -.431E+00 | 9.300 | -.391E+00 |
| 9.330 | -.485E+00 | 9.335 | -.515E+00 | 9.340 | -.543E+00 | 9.345 | -.568E+00 | 9.325 | -.456E+00 |
| 9.355 | -.607E+00 | 9.360 | -.622E+00 | 9.365 | -.636E+00 | 9.370 | -.647E+00 | 9.350 | -.590E+00 |
| 9.380 | -.662E+00 | 9.385 | -.662E+00 | 9.390 | -.655E+00 | 9.395 | -.637E+00 | 9.375 | -.656E+00 |
| 9.405 | -.572E+00 | 9.410 | -.525E+00 | 9.415 | -.471E+00 | 9.420 | -.411E+00 | 9.400 | -.610E+00 |
| 9.430 | -.283E+00 | 9.435 | -.221E+00 | 9.440 | -.162E+00 | 9.445 | -.109E+00 | 9.425 | -.348E+00 |
| 9.455 | -.283E-01 | 9.460 | -.180E-02 | 9.465 | .170E-01 | 9.470 | .311E-01 | 9.450 | -.640E-01 |
| 9.480 | .613E-01 | 9.485 | .859E-01 | 9.490 | .121E+00 | 9.495 | .157E+00 | 9.475 | .444E-01 |
| 9.505 | .286E+00 | 9.510 | .352E+00 | 9.515 | .416E+00 | 9.520 | .475E+00 | 9.500 | .223E+00 |
| 9.530 | .571E+00 | 9.535 | .609E+00 | 9.540 | .643E+00 | 9.545 | .675E+00 | 9.525 | .527E+00 |
| 9.555 | .746E+00 | 9.560 | .786E+00 | 9.565 | .828E+00 | 9.570 | .870E+00 | 9.550 | .709E+00 |
| 9.580 | .942E+00 | 9.585 | .955E+00 | 9.590 | .975E+00 | 9.595 | .969E+00 | 9.575 | .909E+00 |
| 9.605 | .905E+00 | 9.610 | .850E+00 | 9.615 | .784E+00 | 9.620 | .714E+00 | 9.600 | .945E+00 |
| 9.630 | .583E+00 | 9.635 | .533E+00 | 9.640 | .498E+00 | 9.645 | .475E+00 | 9.625 | .644E+00 |
| 9.655 | .457E+00 | 9.660 | .451E+00 | 9.665 | .441E+00 | 9.670 | .423E+00 | 9.650 | .464E+00 |
| 9.680 | .368E+00 | 9.685 | .336E+00 | 9.690 | .303E+00 | 9.695 | .274E+00 | 9.675 | .398E+00 |
| 9.705 | .255E+00 | 9.710 | .228E+00 | 9.715 | .199E+00 | 9.720 | .170E+00 | 9.700 | .246E+00 |
| 9.735 | .140E+00 | 9.740 | .114E+00 | 9.745 | .89E-01 | 9.750 | .64E-01 | 9.725 | .554E-01 |

SPECTRA FOR THE PRECEDING TIME HISTORY WILL BE
CALCULATED AT THE FOLLOWING FREQUENCIES (IN CPS)

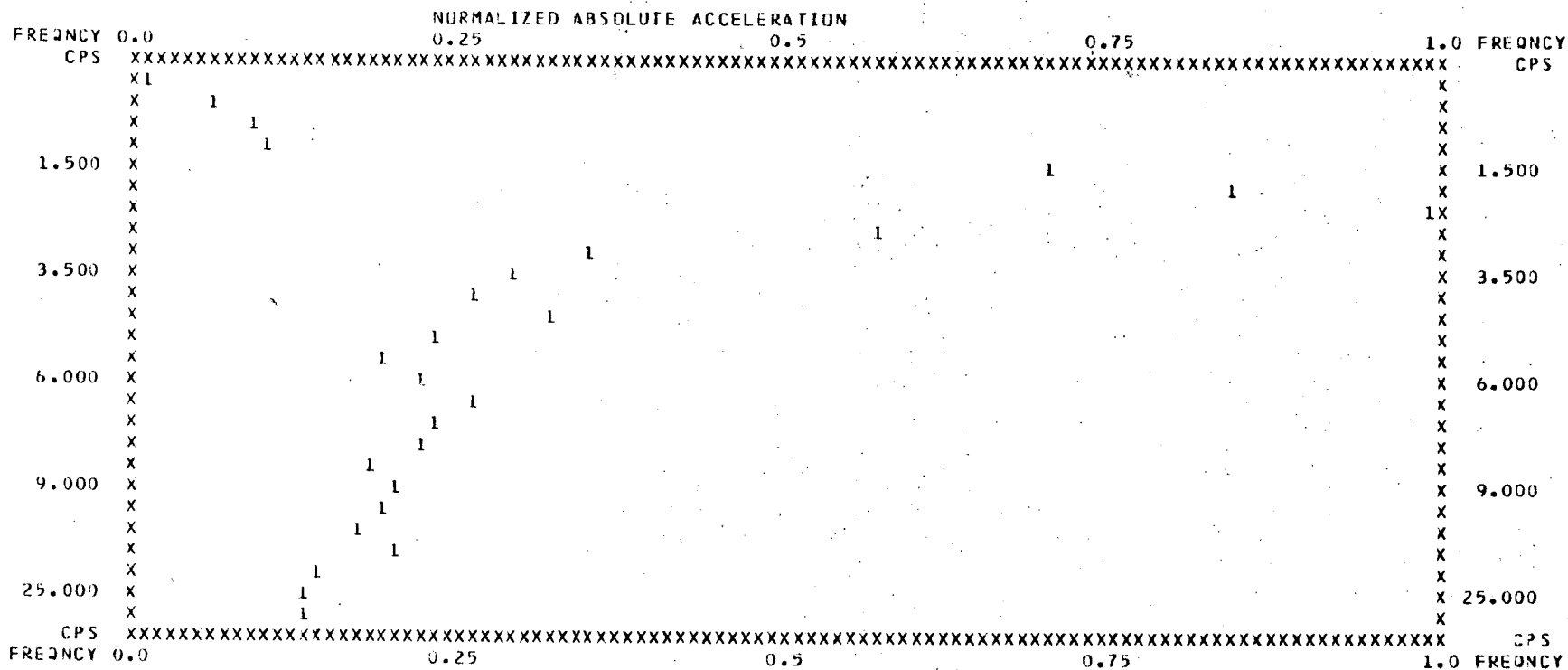
| | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| .3000 | .4000 | .7000 | 1.0000 | 1.5000 | 1.7000 | 2.0000 | 2.5000 | 3.0000 | 3.5000 |
| 4.0000 | 4.5000 | 5.0000 | 5.5000 | 6.0000 | 6.5000 | 7.0000 | 7.5000 | 8.0000 | 9.0000 |
| 10.0000 | 12.0000 | 15.0000 | 20.0000 | 25.0000 | 30.0000 | | | | |

| FREQUENCY (CPS) | PERIOD (SECS) | ABSOLUTE ACCELERATION | PSEUDO VELOCITY | TIME AT MAXIMUM |
|--------------------|------------------|--------------------------|--------------------|--------------------|
| .300 | 3.333 | .2256E+00 | .1197E+00 | .9060E+01 |
| .400 | 2.500 | .6261E+00 | .1826E+00 | .1075E+02 |
| .700 | 1.429 | .8951E+00 | .2035E+00 | .6335E+01 |
| 1.000 | 1.000 | .1021E+01 | .1625E+00 | .5305E+01 |
| 1.500 | .667 | .6180E+01 | .6557E+00 | .6835E+01 |
| 1.700 | .588 | .7461E+01 | .6985E+00 | .7305E+01 |
| 2.000 | .500 | .8763E+01 | .6973E+00 | .9955E+01 |
| 2.500 | .400 | .5047E+01 | .3213E+00 | .6585E+01 |
| 3.000 | .333 | .3169E+01 | .1681E+00 | .9110E+01 |
| 3.500 | .286 | .2656E+01 | .1208E+00 | .5070E+01 |
| 4.000 | .250 | .2362E+01 | .9399E-01 | .7295E+01 |
| 4.500 | .222 | .2899E+01 | .1025E+00 | .7105E+01 |
| 5.000 | .200 | .2164E+01 | .6889E-01 | .6530E+01 |
| 5.500 | .182 | .1792E+01 | .5186E-01 | .6605E+01 |
| 6.000 | .167 | .2076E+01 | .5507E-01 | .9870E+01 |
| 6.500 | .154 | .2386E+01 | .5842E-01 | .9350E+01 |
| 7.000 | .143 | .2117E+01 | .4813E-01 | .9840E+01 |
| 7.500 | .133 | .2032E+01 | .4311E-01 | .9920E+01 |
| 8.000 | .125 | .1691E+01 | .3363E-01 | .9805E+01 |
| 9.000 | .111 | .1898E+01 | .3357E-01 | .6300E+01 |
| 10.000 | .100 | .1766E+01 | .2810E-01 | .6280E+01 |
| 12.000 | .083 | .1632E+01 | .2165E-01 | .6260E+01 |
| 15.000 | .067 | .1834E+01 | .1946E-01 | .6025E+01 |
| 20.000 | .050 | .1360E+01 | .1082E-01 | .6525E+01 |
| 25.000 | .040 | .1284E+01 | .8174E-02 | .7090E+01 |
| 30.000 | .033 | .1278E+01 | .6778E-02 | .7090E+01 |

MAXIMUM ABSOLUTE SPECTRAL ACCELERATION .8763E+01
AT FREQUENCY (CPS) .2000E+01

NORMALIZED PLJT OF RESPONSE SPECTRA.....

| DAMPING VALUE | MAXIMUM VALUE | AT FREQUENCY | PLOT SYMBOL |
|---------------|---------------|--------------|-------------|
| .2000E-01 | .8763E+01 | .2000E+01 | 1 |



13.50.36.CR1,T7777,P3.
13.50.36.USER,SUNGS1,
13.50.36.CHARGE,PROJWC,03100681355.
13.50.36.%PROLOG,PROCL,,
13.50.38.%SETFS,PROCL/FS=AD.
13.50.38.PROCL.
13.50.38.//LOADER 587 .005 CP .083 RT//LOADER 014472/040000-040000 CM 1 TM
13.50.39.IFE,DT.EQ.TXD,FLASHIT.
13.50.39.ENDIF,FLASHIT.
13.50.39.IFE,DT.EQ.BCU,BULLIT.
13.50.39.CHGFTN.
13.50.39. END CHGFTN
13.50.39. 15600 MAXIMUM EXECUTION FL.
13.50.39. 0.002 CP SECONDS EXECUTION TIME.
13.50.39.GET,SYSHULL/UN=EDSOPER,NA.
13.50.40.IFE,FILE(SYSBULL,AS),OUTIT.
13.50.40.COPY,SYSBULL.
13.50.40. EDI ENCOUNTERED.
13.50.40.ENDIF,OUTIT.
13.50.40.ENDIF,BULLIT.
13.50.40.RETURN,PROCL.
13.50.41.REVERT.
13.50.41.ROUTE,OUTPUT,DC=PR,UN=CSOVAX1,UJN=VAX,FC=AD,DEF.
13.50.41. ROUTE COMPLETE.
13.50.41.REWIND,INPUT.
13.50.41.COPYSBF,INPUT,OUTPUT.
13.50.42. COPY COMPLETE.
13.50.42.REWIND,INPUT.
13.50.42.SKIPR,INPUT.
13.50.42.PURGE,NRCT9/NA.
13.50.42.DEFINE,NRCT9/M=W.
13.50.42.ATTACH,TAPE12=NRC1.
13.50.43.GET,RESPEC/UN=IMPLIB.
13.50.43.RESPEC.
13.50.43.//LOADER 587 .005 CP .114 RT//LOADER 014472/040000-040000 CM 1 TM
13.50.44.GET,ACCESSP/UN=QAERLIP.
13.50.44.BEGIN,ACCESSP,ACCESSP,RSPB.
13.50.45.NOTE(CODEX) RSPB ABS
13.50.45.REWIND,CODEX.
13.50.45.GET,ACCESSB/UN=QAERLIB.
13.50.45.ACCESSB.
13.50.45.//LOADER 587 .005 CP .060 RT//LOADER 014472/040000-040000 CM 1 TM
13.50.50. END ACCESS
13.50.50. 37600 MAXIMUM EXECUTION FL.
13.50.50. 0.426 CP SECONDS EXECUTION TIME.
13.50.50.REVERT.
13.50.50.ABS(INPUT,OUTPUT,PL=99999)
13.50.50.//LOADER 587 .006 CP .083 RT//LOADER 014476/040000-040000 CM 1 TM
13.54.11. END RESPEC
13.54.11. 050400 FINAL EXECUTION FL.
13.54.11. 40.587 CP SECONDS EXECUTION TIME.
13.54.11.RETURN,ABS.
13.54.11.REVERT.
13.54.11.REWIND,TAPE9.
13.54.11.COPYBF,TAPE9,NRCT9.
13.54.12. EDI ENCOUNTERED.
13.54.12.UEAD, 0.002KUNS.
13.54.12.UEPF, 0.137KUNS.
13.54.12.UEMS, 4.917KUNS.
13.54.12.UECP, 41.602SECS.

OPERATING SYSTEM = R03212 0907907 11. 01701703. RIMES 03701703
 UJN = VAX FAMILY = SYSTEM JOB ORIGIN = INTERACTIVE.
 CREATING JSN = DMMM USER NAME = SONGSI SERVICE CLASS = INTERACTIVE.

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AAAAAAAAAA  DDDDDDDDD  3333333333  IIIIIIIIIII  DDDDDDDDD  MM      MM  VN      NN  LL
AAAAAAAAAA  DDDDDDDDD  3333333333  IIIIIIIIIII  DDDDDDDDD  MMM     MMM  NNN     NN  LL
AA      AA  DD      DD  3      33      II      DD      DD  MMMM    MMMM  NNNN    NN  LL
AA      AA  DD      DD  33     33      II      DD      DD  MM  MM  MM  MM  NN  NN  NN  LL
AA      AA  DD      DD  33     33      II      DD      DD  MM  MMMM  MM  NN  NN  NN  LL
AA      AA  DD      DD  33     33      II      DD      DD  MM      MM  NN  NN  NN  LL
AA      AA  DD      DD  33     33      II      DD      DD  MM      MM  NN  NN  NN  LL
AAAAAAAAAA  DD      DD  33     33      II      DD      DD  MM      MM  NN  NN  NN  LL
AAAAAAAAAA  DD      DD  333    333     II      DD      DD  MM      MM  NN  NNNN  LL
AA      AA  DD      DD  33     33      II      DD      DD  MM      MM  VN  NNN  LL
AA      AA  DD      DD  33     33      II      DD      DD  MM      MM  NN  NN  LL
AA      AA  DD      DD  33     33      II      DD      DD  MM      MM  NN  NN  LL
AA      AA  DD      DD  33     33      II      DD      DD  MM      MM  NN  NN  LL
AA      AA  DD      DD  3      33     II      DD      DD  MM      MM  VN  NN  LL
AA      AA  DDDDDDDDD  3333333333  IIIIIIIIIII  DDDDDDDDD  MM      MM  VN  NN  LLLLLLLLLLLL
AA      AA  DDDDDDDDD  333333333  IIIIIIIIIII  DDDDDDDDD  MM      MM  VN  NN  LLLLLLLLLLLL
  
```

RESPEZ
 NRC test Problem 1

RESPONSE
 SPECTRA
 Solution with
 CLASS I IMPEADANCES

| DESIGN VERIFICATION | |
|---------------------|---------------|
| CLIENT | SCE |
| JOB NO. | 0310-068-1355 |
| CALC/PROB NO. | NRC TEST-1-17 |
| BY: MD | DATE: 4/14/85 |
| CHKD: SMD | DATE: 4/12/85 |

SYSTEM BULLETIN

IMPELL WALNUT CREEK COMPUTER CENTER OPERATIONS HOURS (PACIFIC TIME)

MONDAY AND FRIDAY 0600 TO 2130
TUESDAY TO THURSDAY 0600 TO 2330
SATURDAY AND SUNDAY 0700 TO 1700

OPERATORS WILL NOT BE ON SITE AT ALL OTHER TIMES. EXTENDED OPERATOR COVERAGE MAY BE ARRANGED BY CONTACTING BOB EARL AT (415) 943-4663/4666

THE CYBER SYSTEM WILL BE UNAVAILABLE TO USERS AS FOLLOWS:

| | | | | |
|-----------|------|----|------|-------------------------|
| MONDAY | 2000 | TO | 2100 | SYSTEM BACKUP |
| TUESDAY | 1930 | TO | 2300 | MAINTENANCE + BACKUP |
| WEDNESDAY | 2200 | TO | 2300 | SYSTEM BACKUP |
| THURSDAY | 2200 | TO | 2300 | SYSTEM BACKUP |
| FRIDAY | 2000 | TO | 2230 | SYSTEM BACKUP + TESTING |
| SATURDAY | 1600 | TO | 1700 | SYSTEM BACKUP |
| SUNDAY | 1400 | TO | 1700 | SYSTEM BACKUP |

HOLIDAY HOURS.

MONDAY, MAY 27, 1985. NO OPERATORS ON SITE. SYSTEM AVAILABLE TO USERS.

SPECIAL CYBER UPGRADE BLOCK TIME.

THE CYBER WILL BE UNAVAILABLE FOR PRODUCTION USE THURSDAYS FROM 2000 HRS. TO 2400 HRS. BEGINNING APRIL 11, 1985 THROUGH MAY 30 1985. COMPUTER SERVICES WILL BE TESTING NDS VERSION 2.3 . ANY USERS WISHING TO TEST THEIR CODES DURING THIS PERIOD WILL NEED TO CONTACT COMPUTER SERVICES AT (415)943-4666.

GENERAL INFORMATION.

DO NOT RELEASE MAGNETIC TAPES WHEN OPERATORS ARE NOT ON SITE.

USER ADVISORY. MAGNETIC TAPE BACKUPS.

MAGNETIC TAPES ARE SUSCEPTIBLE TO PHYSICAL DAMAGE. BACKUP TAPES ARE RECOMMENDED WHENEVER THE INFORMATION ON THE TAPE WOULD BE EXPENSIVE OR TIME CONSUMING TO RECREATE . PLEASE NOTE THAT IMPELL, CDC, AND UCC DO NOT GIVE REFUNDS FOR JOBS NECESSARY TO RECREATE A TAPE IF NO BACKUP EXISTS.

AS PER THE MEMO DISTRIBUTED TO DIVISIONS OVER A WEEK AGO, THE OLD OVERHEAD JOB NUMBERS BEGINNING WITH 0622 AND 0627 WILL NOT BE VALID AFTER 2/15/85. NEW NUMBERS (BEGINNING WITH 0625004 OR 0623004) MUST BE REQUESTED. A CONSOLIDATED LIST OF OLD VERSUS SUGGESTED NEW NUMBERS WAS DISTRIBUTED TO EACH DIVISION TO EXPEDITE THE REVIEW. THESE CHANGES ARE BEING MADE TO SUIT ACCOUNTING DEP'T. NUMBER CHANGES.

USER,SONGS1,.
CHARGE,PROJWC,03100681355.
RJUTE,0JTPUT,DC=PR,UN=CSOVAX1,UJN=VAX,FC=AD,DEF.
REWIND,INPUT.
COPYSBF,INPUT,OUTPUT.
REWIND,INPUT.
SKIPR,INPUT.
PJRGE,CLREST9/NA.
DEFINE,CLREST9/M=W.
ATTACH,TAPE12=NRCSSID.
GET,RESPEC/UN=IMPLIB.
RESPEC.
REWIND,TAPE9.
COPYBF,TAPE9,CLREST9.

2001 1 0.005 2% RESPONSE SPECTRA AT EL. 0.0 FT (BASEMAT)
 0 1 0 3 26 1 2 0.3 30.0
 (E16.8)
 0.3 0.4 0.7 1.0 1.5 1.7 2.0 2.5
 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5
 7.0 7.5 8.0 9.0 10.0 12.0 15.0 20.0
 25.0 30.0

0.02
 2001 1 0.005 2% RESPONSE SPECTRA AT EL. 83.8 FT (NODE 4)
 0 1 0 3 26 1 2 0.3 30.0
 (24588(/), (E16.8))
 0.3 0.4 0.7 1.0 1.5 1.7 2.0 2.5
 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5
 7.0 7.5 8.0 9.0 10.0 12.0 15.0 20.0
 25.0 30.0

0.02
 2001 1 0.005 2% RESPONSE SPECTRA AT EL. 143.8 FT (NODE 7)
 0 1 0 3 26 1 2 0.3 30.0
 (32784(/), (E16.8))
 0.3 0.4 0.7 1.0 1.5 1.7 2.0 2.5
 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5
 7.0 7.5 8.0 9.0 10.0 12.0 15.0 20.0
 25.0 30.0

0.02
 2001 1 0.005 2% RESPONSE SPECTRA AT EL. 207.0 FT (NODE 11)
 0 1 0 3 26 1 2 0.3 30.0
 (40980(/), (E16.8))
 0.3 0.4 0.7 1.0 1.5 1.7 2.0 2.5
 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5
 7.0 7.5 8.0 9.0 10.0 12.0 15.0 20.0
 25.0 30.0

VERIFIED - ALL PROJECTS

NOTICE

/ NRC TEST PROBLEM 1 / CLASSI ANALYSIS / 2% RESPONSE SPECTRA / X-DIR /

NUMBER OF ACCELERATION
TIME HISTORIES PROCESSED 4

INPUT TIME HISTORY CONTROL

| | | |
|---------------------------|------|--------|
| TIME HISTORY NUMBER | | 1 |
| NUMBER OF TIME POINTS | NTP | 2001 |
| INPJT CODE | INPT | 1 |
| TIME STEP | DEL | .0050 |
| ACCELERATION SCALE FACTOR | SFTR | 1.0000 |

COMPUTATION AND OUTPUT CONTROL

| | | |
|--------------------------------|------|---------|
| INPJT HISTORY INTEGRATION CODE | INTR | 0 |
| SPECTRUM COMPUTATION CODES | ISPC | 1 |
| | IDUR | 0 |
| SPECTRUM OUTPUT CODE | IDUT | 3 |
| NUMBER OF FREQUENCY POINTS | NFP | 26 |
| NUMBER OF DAMPINGS | NDP | 1 |
| FREQUENCY SCALE TYPE CODE | IFSC | 2 |
| LOWEST FREQUENCY IN CPS | W1 | .3000 |
| HIGHEST FREQUENCY IN CPS | W2 | 30.0000 |
| TIME STEP TO PERIOD RATIO | DELP | .2000 |

FIELD LENGTH REQUIREMENTS
(IN OCTAL)

| | |
|-----------------------|--------|
| PROGRAM LENGTH | 040437 |
| BLANK COMMON REQUIRED | 007647 |
| FIELD LENGTH REQUIRED | 050306 |

FORMAT OF INPUT TIME HISTORY IS

(E16.8)

| TIME | ACCEL | TIME | ACCEL | TIME | ACCEL | TIME | ACCEL | TIME | ACCEL |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| .005 | -.217E-01 | .010 | -.396E-01 | .015 | -.567E-01 | .020 | -.690E-01 | .025 | -.746E-01 |
| .030 | -.739E-01 | .035 | -.692E-01 | .040 | -.631E-01 | .045 | -.570E-01 | .050 | -.508E-01 |
| .055 | -.432E-01 | .060 | -.329E-01 | .065 | -.194E-01 | .070 | -.321E-02 | .075 | .145E-01 |
| .080 | .324E-01 | .085 | .497E-01 | .090 | .658E-01 | .095 | .806E-01 | .100 | .937E-01 |
| .105 | .105E+00 | .110 | .114E+00 | .115 | .120E+00 | .120 | .123E+00 | .125 | .122E+00 |
| .130 | .118E+00 | .135 | .110E+00 | .140 | .975E-01 | .145 | .825E-01 | .150 | .654E-01 |
| .155 | .475E-01 | .160 | .295E-01 | .165 | .124E-01 | .170 | -.308E-02 | .175 | -.161E-01 |
| .180 | -.258E-01 | .185 | -.316E-01 | .190 | -.336E-01 | .195 | -.328E-01 | .200 | -.308E-01 |
| .205 | -.288E-01 | .210 | -.273E-01 | .215 | -.260E-01 | .220 | -.238E-01 | .225 | -.197E-01 |
| .230 | -.137E-01 | .235 | -.662E-02 | .240 | .188E-03 | .245 | .552E-02 | .250 | .887E-02 |
| .255 | .105E-01 | .260 | .112E-01 | .265 | .115E-01 | .270 | .119E-01 | .275 | .121E-01 |
| .280 | .119E-01 | .285 | .113E-01 | .290 | .103E-01 | .295 | .938E-02 | .300 | .883E-02 |
| .305 | .900E-02 | .310 | .102E-01 | .315 | .125E-01 | .320 | .160E-01 | .325 | .205E-01 |
| .330 | .257E-01 | .335 | .312E-01 | .340 | .364E-01 | .345 | .413E-01 | .350 | .457E-01 |
| .355 | .496E-01 | .360 | .531E-01 | .365 | .559E-01 | .370 | .579E-01 | .375 | .591E-01 |
| .380 | .597E-01 | .385 | .601E-01 | .390 | .602E-01 | .395 | .595E-01 | .400 | .570E-01 |
| .405 | .517E-01 | .410 | .428E-01 | .415 | .305E-01 | .420 | .153E-01 | .425 | -.147E-02 |
| .430 | -.185E-01 | .435 | -.348E-01 | .440 | -.490E-01 | .445 | -.604E-01 | .450 | -.679E-01 |
| .455 | -.709E-01 | .460 | -.694E-01 | .465 | -.641E-01 | .470 | -.563E-01 | .475 | -.475E-01 |
| .480 | -.388E-01 | .485 | -.308E-01 | .490 | -.235E-01 | .495 | -.172E-01 | .500 | -.120E-01 |
| .505 | -.819E-02 | .510 | -.602E-02 | .515 | -.531E-02 | .520 | -.556E-02 | .525 | -.618E-02 |
| .530 | -.689E-02 | .535 | -.798E-02 | .540 | -.102E-01 | .545 | -.142E-01 | .550 | -.207E-01 |
| .555 | -.295E-01 | .560 | -.401E-01 | .565 | -.516E-01 | .570 | -.631E-01 | .575 | -.740E-01 |
| .580 | -.835E-01 | .585 | -.915E-01 | .590 | -.980E-01 | .595 | -.103E+00 | .600 | -.107E+00 |
| .605 | -.108E+00 | .610 | -.106E+00 | .615 | -.978E-01 | .620 | -.818E-01 | .625 | -.578E-01 |
| .630 | -.283E-01 | .635 | .195E-02 | .640 | .274E-01 | .645 | .438E-01 | .650 | .499E-01 |
| .655 | .485E-01 | .660 | .447E-01 | .665 | .443E-01 | .670 | .505E-01 | .675 | .632E-01 |
| .680 | .788E-01 | .685 | .922E-01 | .690 | .983E-01 | .695 | .948E-01 | .700 | .818E-01 |
| .705 | .623E-01 | .710 | .403E-01 | .715 | .197E-01 | .720 | .339E-02 | .725 | -.789E-02 |
| .730 | -.150E-01 | .735 | -.202E-01 | .740 | -.261E-01 | .745 | -.348E-01 | .750 | -.467E-01 |
| .755 | -.608E-01 | .760 | -.748E-01 | .765 | -.862E-01 | .770 | -.934E-01 | .775 | -.963E-01 |
| .780 | -.965E-01 | .785 | -.960E-01 | .790 | -.964E-01 | .795 | -.975E-01 | .800 | -.978E-01 |
| .805 | -.946E-01 | .810 | -.858E-01 | .815 | -.704E-01 | .820 | -.494E-01 | .825 | -.257E-01 |
| .830 | -.312E-02 | .835 | .151E-01 | .840 | .267E-01 | .845 | .314E-01 | .850 | .305E-01 |
| .855 | .264E-01 | .860 | .213E-01 | .865 | .172E-01 | .870 | .148E-01 | .875 | .137E-01 |
| .880 | .127E-01 | .885 | .106E-01 | .890 | .659E-02 | .895 | .370E-03 | .900 | -.790E-02 |
| .905 | -.180E-01 | .910 | -.299E-01 | .915 | -.438E-01 | .920 | -.599E-01 | .925 | -.778E-01 |
| .930 | -.962E-01 | .935 | -.113E+00 | .940 | -.127E+00 | .945 | -.134E+00 | .950 | -.136E+00 |
| .955 | -.131E+00 | .960 | -.121E+00 | .965 | -.107E+00 | .970 | -.919E-01 | .975 | -.754E-01 |
| .980 | -.586E-01 | .985 | -.417E-01 | .990 | -.255E-01 | .995 | -.108E-01 | 1.000 | .172E-02 |
| 1.005 | .112E-01 | 1.010 | .177E-01 | 1.015 | .215E-01 | 1.020 | .234E-01 | 1.025 | .244E-01 |
| 1.030 | .249E-01 | 1.035 | .251E-01 | 1.040 | .248E-01 | 1.045 | .235E-01 | 1.050 | .207E-01 |
| 1.055 | .161E-01 | 1.060 | .950E-02 | 1.065 | .163E-02 | 1.070 | -.715E-02 | 1.075 | -.158E-01 |
| 1.080 | -.231E-01 | 1.085 | -.280E-01 | 1.090 | -.297E-01 | 1.095 | -.278E-01 | 1.100 | -.224E-01 |
| 1.105 | -.139E-01 | 1.110 | -.332E-02 | 1.115 | .831E-02 | 1.120 | .197E-01 | 1.125 | .299E-01 |
| 1.130 | .379E-01 | 1.135 | .436E-01 | 1.140 | .470E-01 | 1.145 | .487E-01 | 1.150 | .490E-01 |
| 1.155 | .463E-01 | 1.160 | .454E-01 | 1.165 | .432E-01 | 1.170 | .389E-01 | 1.175 | .338E-01 |
| 1.180 | .288E-01 | 1.185 | .245E-01 | 1.190 | .212E-01 | 1.195 | .183E-01 | 1.200 | .151E-01 |
| 1.205 | .109E-01 | 1.210 | .566E-02 | 1.215 | .258E-03 | 1.220 | -.410E-02 | 1.225 | -.635E-02 |
| 1.230 | -.614E-02 | 1.235 | -.405E-02 | 1.240 | -.126E-02 | 1.245 | .104E-02 | 1.250 | .222E-02 |
| 1.255 | .235E-02 | 1.260 | .203E-02 | 1.265 | .188E-02 | 1.270 | .216E-02 | 1.275 | .265E-02 |
| 1.280 | .281E-02 | 1.285 | .208E-02 | 1.290 | .217E-03 | 1.295 | -.259E-02 | 1.300 | -.626E-02 |
| 1.305 | -.101E-01 | 1.310 | -.137E-01 | 1.315 | -.172E-01 | 1.320 | -.204E-01 | 1.325 | -.237E-01 |
| 1.330 | -.273E-01 | 1.335 | -.317E-01 | 1.340 | -.369E-01 | 1.345 | -.432E-01 | 1.350 | -.505E-01 |
| 1.355 | -.585E-01 | 1.360 | -.670E-01 | 1.365 | -.757E-01 | 1.370 | -.841E-01 | 1.375 | -.916E-01 |
| 1.380 | -.974E-01 | 1.385 | -.101E+00 | 1.390 | -.102E+00 | 1.395 | -.101E+00 | 1.400 | -.986E-01 |
| 1.405 | -.947E-01 | 1.410 | -.904E-01 | 1.415 | -.861E-01 | 1.420 | -.817E-01 | 1.425 | -.767E-01 |
| 1.430 | -.705E-01 | 1.435 | -.625E-01 | 1.440 | -.520E-01 | 1.445 | -.386E-01 | 1.450 | -.222E-01 |
| 1.455 | -.205E-01 | 1.460 | -.102E-01 | 1.465 | -.602E-01 | 1.470 | -.614E-01 | 1.475 | -.605E-01 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 1.580 | -.235E-01 | 1.585 | -.288E-01 | 1.590 | -.335E-01 | 1.595 | -.390E-01 | 1.600 | -.460E-01 |
| 1.605 | -.541E-01 | 1.610 | -.615E-01 | 1.615 | -.657E-01 | 1.620 | -.647E-01 | 1.625 | -.582E-01 |
| 1.630 | -.484E-01 | 1.635 | -.397E-01 | 1.640 | -.367E-01 | 1.645 | -.427E-01 | 1.650 | -.572E-01 |
| 1.655 | -.765E-01 | 1.660 | -.946E-01 | 1.665 | -.106E+00 | 1.670 | -.108E+00 | 1.675 | -.100E+00 |
| 1.680 | -.871E-01 | 1.685 | -.736E-01 | 1.690 | -.640E-01 | 1.695 | -.608E-01 | 1.700 | -.638E-01 |
| 1.705 | -.707E-01 | 1.710 | -.780E-01 | 1.715 | -.824E-01 | 1.720 | -.813E-01 | 1.725 | -.735E-01 |
| 1.730 | -.598E-01 | 1.735 | -.425E-01 | 1.740 | -.247E-01 | 1.745 | -.948E-02 | 1.750 | -.128E-02 |
| 1.755 | .773E-02 | 1.760 | .117E-01 | 1.765 | .156E-01 | 1.770 | .214E-01 | 1.775 | .289E-01 |
| 1.780 | .366E-01 | 1.785 | .418E-01 | 1.790 | .428E-01 | 1.795 | .394E-01 | 1.800 | .335E-01 |
| 1.805 | .285E-01 | 1.810 | .275E-01 | 1.815 | .320E-01 | 1.820 | .414E-01 | 1.825 | .529E-01 |
| 1.830 | .632E-01 | 1.835 | .693E-01 | 1.840 | .700E-01 | 1.845 | .657E-01 | 1.850 | .587E-01 |
| 1.855 | .517E-01 | 1.860 | .472E-01 | 1.865 | .469E-01 | 1.870 | .511E-01 | 1.875 | .591E-01 |
| 1.880 | .694E-01 | 1.885 | .805E-01 | 1.890 | .909E-01 | 1.895 | .996E-01 | 1.900 | .106E+00 |
| 1.905 | .108E+00 | 1.910 | .107E+00 | 1.915 | .101E+00 | 1.920 | .903E-01 | 1.925 | .749E-01 |
| 1.930 | .563E-01 | 1.935 | .363E-01 | 1.940 | .171E-01 | 1.945 | .554E-03 | 1.950 | -.122E-01 |
| 1.955 | -.209E-01 | 1.960 | -.263E-01 | 1.965 | -.294E-01 | 1.970 | -.314E-01 | 1.975 | -.332E-01 |
| 1.980 | -.350E-01 | 1.985 | -.359E-01 | 1.990 | -.387E-01 | 1.995 | -.400E-01 | 2.000 | -.407E-01 |
| 2.005 | -.407E-01 | 2.010 | -.400E-01 | 2.015 | -.385E-01 | 2.020 | -.359E-01 | 2.025 | -.319E-01 |
| 2.030 | -.264E-01 | 2.035 | -.191E-01 | 2.040 | -.105E-01 | 2.045 | -.110E-02 | 2.050 | .805E-02 |
| 2.055 | .159E-01 | 2.060 | .216E-01 | 2.065 | .246E-01 | 2.070 | .250E-01 | 2.075 | .234E-01 |
| 2.080 | .206E-01 | 2.085 | .178E-01 | 2.090 | .159E-01 | 2.095 | .156E-01 | 2.100 | .174E-01 |
| 2.105 | .209E-01 | 2.110 | .253E-01 | 2.115 | .294E-01 | 2.120 | .320E-01 | 2.125 | .318E-01 |
| 2.130 | .286E-01 | 2.135 | .225E-01 | 2.140 | .146E-01 | 2.145 | .578E-02 | 2.150 | -.312E-02 |
| 2.155 | -.119E-01 | 2.160 | -.206E-01 | 2.165 | -.290E-01 | 2.170 | -.365E-01 | 2.175 | -.416E-01 |
| 2.180 | -.432E-01 | 2.185 | -.406E-01 | 2.190 | -.348E-01 | 2.195 | -.274E-01 | 2.200 | -.208E-01 |
| 2.205 | -.164E-01 | 2.210 | -.142E-01 | 2.215 | -.132E-01 | 2.220 | -.116E-01 | 2.225 | -.835E-02 |
| 2.230 | -.354E-02 | 2.235 | .156E-02 | 2.240 | .535E-02 | 2.245 | .681E-02 | 2.250 | .601E-02 |
| 2.255 | .395E-02 | 2.260 | .184E-02 | 2.265 | .367E-03 | 2.270 | -.644E-03 | 2.275 | -.200E-02 |
| 2.280 | -.456E-02 | 2.285 | -.869E-02 | 2.290 | -.141E-01 | 2.295 | -.202E-01 | 2.300 | -.262E-01 |
| 2.305 | -.316E-01 | 2.310 | -.351E-01 | 2.315 | -.396E-01 | 2.320 | -.418E-01 | 2.325 | -.425E-01 |
| 2.330 | -.415E-01 | 2.335 | -.389E-01 | 2.340 | -.354E-01 | 2.345 | -.316E-01 | 2.350 | -.284E-01 |
| 2.355 | -.263E-01 | 2.360 | -.254E-01 | 2.365 | -.257E-01 | 2.370 | -.270E-01 | 2.375 | -.290E-01 |
| 2.380 | -.313E-01 | 2.385 | -.340E-01 | 2.390 | -.371E-01 | 2.395 | -.410E-01 | 2.400 | -.460E-01 |
| 2.405 | -.527E-01 | 2.410 | -.614E-01 | 2.415 | -.723E-01 | 2.420 | -.851E-01 | 2.425 | -.993E-01 |
| 2.430 | -.114E+00 | 2.435 | -.129E+00 | 2.440 | -.141E+00 | 2.445 | -.151E+00 | 2.450 | -.156E+00 |
| 2.455 | -.156E+00 | 2.460 | -.151E+00 | 2.465 | -.143E+00 | 2.470 | -.133E+00 | 2.475 | -.123E+00 |
| 2.480 | -.114E+00 | 2.485 | -.106E+00 | 2.490 | -.976E-01 | 2.495 | -.892E-01 | 2.500 | -.804E-01 |
| 2.505 | -.713E-01 | 2.510 | -.619E-01 | 2.515 | -.520E-01 | 2.520 | -.408E-01 | 2.525 | -.274E-01 |
| 2.530 | -.113E-01 | 2.535 | .715E-02 | 2.540 | .268E-01 | 2.545 | .462E-01 | 2.550 | .639E-01 |
| 2.555 | .790E-01 | 2.560 | .908E-01 | 2.565 | .995E-01 | 2.570 | .105E+00 | 2.575 | .107E+00 |
| 2.580 | .106E+00 | 2.585 | .101E+00 | 2.590 | .917E-01 | 2.595 | .770E-01 | 2.600 | .570E-01 |
| 2.605 | .325E-01 | 2.610 | .604E-02 | 2.615 | -.191E-01 | 2.620 | -.393E-01 | 2.625 | -.528E-01 |
| 2.630 | -.602E-01 | 2.635 | -.652E-01 | 2.640 | -.727E-01 | 2.645 | -.866E-01 | 2.650 | -.107E+00 |
| 2.655 | -.131E+00 | 2.660 | -.152E+00 | 2.665 | -.162E+00 | 2.670 | -.159E+00 | 2.675 | -.141E+00 |
| 2.680 | -.113E+00 | 2.685 | -.811E-01 | 2.690 | -.508E-01 | 2.695 | -.245E-01 | 2.700 | -.186E-02 |
| 2.705 | .196E-01 | 2.710 | .427E-01 | 2.715 | .693E-01 | 2.720 | .994E-01 | 2.725 | .132E+00 |
| 2.730 | .163E+00 | 2.735 | .191E+00 | 2.740 | .213E+00 | 2.745 | .225E+00 | 2.750 | .225E+00 |
| 2.755 | .215E+00 | 2.760 | .196E+00 | 2.765 | .171E+00 | 2.770 | .144E+00 | 2.775 | .118E+00 |
| 2.780 | .942E-01 | 2.785 | .708E-01 | 2.790 | .467E-01 | 2.795 | .214E-01 | 2.800 | -.412E-02 |
| 2.805 | -.268E-01 | 2.810 | -.434E-01 | 2.815 | -.517E-01 | 2.820 | -.522E-01 | 2.825 | -.480E-01 |
| 2.830 | -.436E-01 | 2.835 | -.436E-01 | 2.840 | -.500E-01 | 2.845 | -.625E-01 | 2.850 | -.781E-01 |
| 2.855 | -.930E-01 | 2.860 | -.104E+00 | 2.865 | -.112E+00 | 2.870 | -.115E+00 | 2.875 | -.118E+00 |
| 2.880 | -.122E+00 | 2.885 | -.126E+00 | 2.890 | -.132E+00 | 2.895 | -.137E+00 | 2.900 | -.140E+00 |
| 2.905 | -.141E+00 | 2.910 | -.142E+00 | 2.915 | -.144E+00 | 2.920 | -.147E+00 | 2.925 | -.151E+00 |
| 2.930 | -.153E+00 | 2.935 | -.152E+00 | 2.940 | -.147E+00 | 2.945 | -.136E+00 | 2.950 | -.122E+00 |
| 2.955 | -.106E+00 | 2.960 | -.906E-01 | 2.965 | -.764E-01 | 2.970 | -.632E-01 | 2.975 | -.507E-01 |
| 2.980 | -.388E-01 | 2.985 | -.277E-01 | 2.990 | -.179E-01 | 2.995 | -.959E-02 | 3.000 | -.280E-02 |
| 3.005 | .367E-02 | 3.010 | .107E-01 | 3.015 | .190E-01 | 3.020 | .284E-01 | 3.025 | .384E-01 |
| 3.030 | .480E-01 | 3.035 | .566E-01 | 3.040 | .637E-01 | 3.045 | .688E-01 | 3.050 | .715E-01 |
| 3.055 | .711E-01 | 3.060 | .670E-01 | 3.065 | .591E-01 | 3.070 | .482E-01 | 3.075 | .360E-01 |
| 3.080 | .246E-01 | 3.085 | .161E-01 | 3.090 | .120E-01 | 3.095 | .128E-01 | 3.100 | .187E-01 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 3.230 | .593E-01 | 3.235 | .261E-01 | 3.240 | -.482E-03 | 3.245 | -.211E-01 | 3.250 | -.360E-01 |
| 3.255 | -.448E-01 | 3.260 | -.466E-01 | 3.265 | -.408E-01 | 3.270 | -.273E-01 | 3.275 | -.759E-02 |
| 3.280 | .165E-01 | 3.285 | .429E-01 | 3.290 | .700E-01 | 3.295 | .958E-01 | 3.300 | .123E+00 |
| 3.305 | .148E+00 | 3.310 | .172E+00 | 3.315 | .194E+00 | 3.320 | .213E+00 | 3.325 | .229E+00 |
| 3.330 | .241E+00 | 3.335 | .249E+00 | 3.340 | .253E+00 | 3.345 | .252E+00 | 3.350 | .247E+00 |
| 3.355 | .239E+00 | 3.360 | .227E+00 | 3.365 | .213E+00 | 3.370 | .197E+00 | 3.375 | .182E+00 |
| 3.380 | .168E+00 | 3.385 | .156E+00 | 3.390 | .147E+00 | 3.395 | .140E+00 | 3.400 | .136E+00 |
| 3.405 | .132E+00 | 3.410 | .128E+00 | 3.415 | .124E+00 | 3.420 | .121E+00 | 3.425 | .119E+00 |
| 3.430 | .119E+00 | 3.435 | .121E+00 | 3.440 | .124E+00 | 3.445 | .130E+00 | 3.450 | .136E+00 |
| 3.455 | .142E+00 | 3.460 | .149E+00 | 3.465 | .155E+00 | 3.470 | .159E+00 | 3.475 | .160E+00 |
| 3.480 | .156E+00 | 3.485 | .149E+00 | 3.490 | .138E+00 | 3.495 | .123E+00 | 3.500 | .108E+00 |
| 3.505 | .929E-01 | 3.510 | .789E-01 | 3.515 | .665E-01 | 3.520 | .559E-01 | 3.525 | .475E-01 |
| 3.530 | .415E-01 | 3.535 | .381E-01 | 3.540 | .373E-01 | 3.545 | .383E-01 | 3.550 | .403E-01 |
| 3.555 | .420E-01 | 3.560 | .431E-01 | 3.565 | .438E-01 | 3.570 | .455E-01 | 3.575 | .494E-01 |
| 3.580 | .565E-01 | 3.585 | .662E-01 | 3.590 | .769E-01 | 3.595 | .857E-01 | 3.600 | .940E-01 |
| 3.605 | .990E-01 | 3.610 | .103E+00 | 3.615 | .109E+00 | 3.620 | .119E+00 | 3.625 | .132E+00 |
| 3.630 | .144E+00 | 3.635 | .151E+00 | 3.640 | .149E+00 | 3.645 | .135E+00 | 3.650 | .110E+00 |
| 3.655 | .777E-01 | 3.660 | .449E-01 | 3.665 | .167E-01 | 3.670 | -.431E-02 | 3.675 | -.185E-01 |
| 3.680 | -.293E-01 | 3.685 | -.411E-01 | 3.690 | -.581E-01 | 3.695 | -.824E-01 | 3.700 | -.114E+00 |
| 3.705 | -.149E+00 | 3.710 | -.186E+00 | 3.715 | -.219E+00 | 3.720 | -.244E+00 | 3.725 | -.261E+00 |
| 3.730 | -.270E+00 | 3.735 | -.272E+00 | 3.740 | -.269E+00 | 3.745 | -.262E+00 | 3.750 | -.252E+00 |
| 3.755 | -.237E+00 | 3.760 | -.215E+00 | 3.765 | -.187E+00 | 3.770 | -.153E+00 | 3.775 | -.117E+00 |
| 3.780 | -.830E-01 | 3.785 | -.533E-01 | 3.790 | -.295E-01 | 3.795 | -.111E-01 | 3.800 | .375E-02 |
| 3.805 | .167E-01 | 3.810 | .288E-01 | 3.815 | .399E-01 | 3.820 | .494E-01 | 3.825 | .561E-01 |
| 3.830 | .587E-01 | 3.835 | .558E-01 | 3.840 | .456E-01 | 3.845 | .267E-01 | 3.850 | -.129E-02 |
| 3.855 | -.368E-01 | 3.860 | -.759E-01 | 3.865 | -.114E+00 | 3.870 | -.145E+00 | 3.875 | -.166E+00 |
| 3.880 | -.177E+00 | 3.885 | -.180E+00 | 3.890 | -.178E+00 | 3.895 | -.172E+00 | 3.900 | -.164E+00 |
| 3.905 | -.152E+00 | 3.910 | -.137E+00 | 3.915 | -.117E+00 | 3.920 | -.948E-01 | 3.925 | -.723E-01 |
| 3.930 | -.513E-01 | 3.935 | -.323E-01 | 3.940 | -.147E-01 | 3.945 | .293E-02 | 3.950 | .213E-01 |
| 3.955 | .401E-01 | 3.960 | .582E-01 | 3.965 | .743E-01 | 3.970 | .875E-01 | 3.975 | .978E-01 |
| 3.980 | .106E+00 | 3.985 | .111E+00 | 3.990 | .114E+00 | 3.995 | .112E+00 | 4.000 | .106E+00 |
| 4.005 | .946E-01 | 4.010 | .786E-01 | 4.015 | .590E-01 | 4.020 | .368E-01 | 4.025 | .126E-01 |
| 4.030 | -.131E-01 | 4.035 | -.397E-01 | 4.040 | -.658E-01 | 4.045 | -.896E-01 | 4.050 | -.109E+00 |
| 4.055 | -.124E+00 | 4.060 | -.134E+00 | 4.065 | -.140E+00 | 4.070 | -.143E+00 | 4.075 | -.143E+00 |
| 4.080 | -.139E+00 | 4.085 | -.130E+00 | 4.090 | -.115E+00 | 4.095 | -.921E-01 | 4.100 | -.644E-01 |
| 4.105 | -.341E-01 | 4.110 | -.372E-02 | 4.115 | .248E-01 | 4.120 | .508E-01 | 4.125 | .742E-01 |
| 4.130 | .950E-01 | 4.135 | .113E+00 | 4.140 | .126E+00 | 4.145 | .134E+00 | 4.150 | .135E+00 |
| 4.155 | .128E+00 | 4.160 | .115E+00 | 4.165 | .957E-01 | 4.170 | .738E-01 | 4.175 | .509E-01 |
| 4.180 | .286E-01 | 4.185 | .740E-02 | 4.190 | -.126E-01 | 4.195 | -.316E-01 | 4.200 | -.494E-01 |
| 4.205 | -.648E-01 | 4.210 | -.761E-01 | 4.215 | -.815E-01 | 4.220 | -.801E-01 | 4.225 | -.718E-01 |
| 4.230 | -.580E-01 | 4.235 | -.405E-01 | 4.240 | -.208E-01 | 4.245 | .551E-03 | 4.250 | .233E-01 |
| 4.255 | .475E-01 | 4.260 | .723E-01 | 4.265 | .951E-01 | 4.270 | .116E+00 | 4.275 | .131E+00 |
| 4.280 | .139E+00 | 4.285 | .140E+00 | 4.290 | .135E+00 | 4.295 | .124E+00 | 4.300 | .108E+00 |
| 4.305 | .863E-01 | 4.310 | .605E-01 | 4.315 | .314E-01 | 4.320 | .127E-02 | 4.325 | -.273E-01 |
| 4.330 | -.521E-01 | 4.335 | -.720E-01 | 4.340 | -.870E-01 | 4.345 | -.980E-01 | 4.350 | -.106E+00 |
| 4.355 | -.111E+00 | 4.360 | -.114E+00 | 4.365 | -.113E+00 | 4.370 | -.108E+00 | 4.375 | -.986E-01 |
| 4.380 | -.850E-01 | 4.385 | -.680E-01 | 4.390 | -.487E-01 | 4.395 | -.281E-01 | 4.400 | -.678E-02 |
| 4.405 | .145E-01 | 4.410 | .355E-01 | 4.415 | .556E-01 | 4.420 | .745E-01 | 4.425 | .918E-01 |
| 4.430 | .107E+00 | 4.435 | .121E+00 | 4.440 | .133E+00 | 4.445 | .145E+00 | 4.450 | .156E+00 |
| 4.455 | .168E+00 | 4.460 | .180E+00 | 4.465 | .188E+00 | 4.470 | .192E+00 | 4.475 | .189E+00 |
| 4.480 | .178E+00 | 4.485 | .160E+00 | 4.490 | .136E+00 | 4.495 | .107E+00 | 4.500 | .754E-01 |
| 4.505 | .409E-01 | 4.510 | .505E-02 | 4.515 | -.312E-01 | 4.520 | -.665E-01 | 4.525 | -.994E-01 |
| 4.530 | -.129E+00 | 4.535 | -.154E+00 | 4.540 | -.175E+00 | 4.545 | -.190E+00 | 4.550 | -.201E+00 |
| 4.555 | -.207E+00 | 4.560 | -.210E+00 | 4.565 | -.208E+00 | 4.570 | -.205E+00 | 4.575 | -.199E+00 |
| 4.580 | -.191E+00 | 4.585 | -.180E+00 | 4.590 | -.167E+00 | 4.595 | -.151E+00 | 4.600 | -.133E+00 |
| 4.605 | -.112E+00 | 4.610 | -.852E-01 | 4.615 | -.544E-01 | 4.620 | -.141E-01 | 4.625 | .351E-01 |
| 4.630 | .910E-01 | 4.635 | .149E+00 | 4.640 | .203E+00 | 4.645 | .249E+00 | 4.650 | .285E+00 |
| 4.655 | .313E+00 | 4.660 | .339E+00 | 4.665 | .357E+00 | 4.670 | .398E+00 | 4.675 | .432E+00 |
| 4.680 | .464E+00 | 4.685 | .490E+00 | 4.690 | .508E+00 | 4.695 | .517E+00 | 4.700 | .517E+00 |
| 4.705 | .511E+00 | 4.710 | .500E+00 | 4.715 | .485E+00 | 4.720 | .465E+00 | 4.725 | .441E+00 |
| 4.730 | .414E+00 | 4.735 | .385E+00 | 4.740 | .355E+00 | 4.745 | .326E+00 | 4.750 | .296E+00 |
| 4.755 | .267E+00 | 4.760 | .239E+00 | 4.765 | .210E+00 | 4.770 | .180E+00 | 4.775 | .148E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 4.880 | -.303E+00 | 4.885 | -.294E+00 | 4.890 | -.276E+00 | 4.895 | -.252E+00 | 4.900 | -.222E+00 |
| 4.905 | -.189E+00 | 4.910 | -.156E+00 | 4.915 | -.123E+00 | 4.920 | -.927E-01 | 4.925 | -.663E-01 |
| 4.930 | -.448E-01 | 4.935 | -.284E-01 | 4.940 | -.174E-01 | 4.945 | -.120E-01 | 4.950 | -.121E-01 |
| 4.955 | -.178E-01 | 4.960 | -.286E-01 | 4.965 | -.440E-01 | 4.970 | -.629E-01 | 4.975 | -.847E-01 |
| 4.980 | -.109E+00 | 4.985 | -.135E+00 | 4.990 | -.164E+00 | 4.995 | -.194E+00 | 5.000 | -.224E+00 |
| 5.005 | -.253E+00 | 5.010 | -.277E+00 | 5.015 | -.295E+00 | 5.020 | -.305E+00 | 5.025 | -.309E+00 |
| 5.030 | -.308E+00 | 5.035 | -.302E+00 | 5.040 | -.293E+00 | 5.045 | -.281E+00 | 5.050 | -.266E+00 |
| 5.055 | -.250E+00 | 5.060 | -.234E+00 | 5.065 | -.218E+00 | 5.070 | -.204E+00 | 5.075 | -.193E+00 |
| 5.080 | -.184E+00 | 5.085 | -.177E+00 | 5.090 | -.171E+00 | 5.095 | -.164E+00 | 5.100 | -.156E+00 |
| 5.105 | -.148E+00 | 5.110 | -.142E+00 | 5.115 | -.137E+00 | 5.120 | -.134E+00 | 5.125 | -.134E+00 |
| 5.130 | -.135E+00 | 5.135 | -.137E+00 | 5.140 | -.140E+00 | 5.145 | -.144E+00 | 5.150 | -.148E+00 |
| 5.155 | -.153E+00 | 5.160 | -.160E+00 | 5.165 | -.157E+00 | 5.170 | -.173E+00 | 5.175 | -.176E+00 |
| 5.180 | -.176E+00 | 5.185 | -.172E+00 | 5.190 | -.167E+00 | 5.195 | -.161E+00 | 5.200 | -.157E+00 |
| 5.205 | -.155E+00 | 5.210 | -.154E+00 | 5.215 | -.153E+00 | 5.220 | -.150E+00 | 5.225 | -.143E+00 |
| 5.230 | -.135E+00 | 5.235 | -.125E+00 | 5.240 | -.115E+00 | 5.245 | -.106E+00 | 5.250 | -.984E-01 |
| 5.255 | -.922E-01 | 5.260 | -.855E-01 | 5.265 | -.810E-01 | 5.270 | -.757E-01 | 5.275 | -.714E-01 |
| 5.280 | -.687E-01 | 5.285 | -.680E-01 | 5.290 | -.696E-01 | 5.295 | -.730E-01 | 5.300 | -.776E-01 |
| 5.305 | -.825E-01 | 5.310 | -.859E-01 | 5.315 | -.898E-01 | 5.320 | -.907E-01 | 5.325 | -.889E-01 |
| 5.330 | -.843E-01 | 5.335 | -.758E-01 | 5.340 | -.668E-01 | 5.345 | -.543E-01 | 5.350 | -.396E-01 |
| 5.355 | -.226E-01 | 5.360 | -.383E-02 | 5.365 | .163E-01 | 5.370 | .372E-01 | 5.375 | .581E-01 |
| 5.380 | .782E-01 | 5.385 | .956E-01 | 5.390 | .112E+00 | 5.395 | .123E+00 | 5.400 | .129E+00 |
| 5.405 | .129E+00 | 5.410 | .122E+00 | 5.415 | .110E+00 | 5.420 | .940E-01 | 5.425 | .759E-01 |
| 5.430 | .573E-01 | 5.435 | .395E-01 | 5.440 | .240E-01 | 5.445 | .125E-01 | 5.450 | .684E-02 |
| 5.455 | .821E-02 | 5.460 | .154E-01 | 5.465 | .293E-01 | 5.470 | .435E-01 | 5.475 | .555E-01 |
| 5.480 | .627E-01 | 5.485 | .645E-01 | 5.490 | .617E-01 | 5.495 | .555E-01 | 5.500 | .467E-01 |
| 5.505 | .353E-01 | 5.510 | .206E-01 | 5.515 | .282E-02 | 5.520 | -.166E-01 | 5.525 | -.350E-01 |
| 5.530 | -.497E-01 | 5.535 | -.592E-01 | 5.540 | -.644E-01 | 5.545 | -.678E-01 | 5.550 | -.728E-01 |
| 5.555 | -.819E-01 | 5.560 | -.954E-01 | 5.565 | -.116E+00 | 5.570 | -.140E+00 | 5.575 | -.167E+00 |
| 5.580 | -.198E+00 | 5.585 | -.231E+00 | 5.590 | -.265E+00 | 5.595 | -.298E+00 | 5.600 | -.326E+00 |
| 5.605 | -.345E+00 | 5.610 | -.355E+00 | 5.615 | -.356E+00 | 5.620 | -.351E+00 | 5.625 | -.343E+00 |
| 5.630 | -.334E+00 | 5.635 | -.327E+00 | 5.640 | -.323E+00 | 5.645 | -.319E+00 | 5.650 | -.315E+00 |
| 5.655 | -.311E+00 | 5.660 | -.306E+00 | 5.665 | -.300E+00 | 5.670 | -.294E+00 | 5.675 | -.287E+00 |
| 5.680 | -.279E+00 | 5.685 | -.268E+00 | 5.690 | -.255E+00 | 5.695 | -.242E+00 | 5.700 | -.229E+00 |
| 5.705 | -.219E+00 | 5.710 | -.212E+00 | 5.715 | -.208E+00 | 5.720 | -.204E+00 | 5.725 | -.197E+00 |
| 5.730 | -.186E+00 | 5.735 | -.170E+00 | 5.740 | -.150E+00 | 5.745 | -.129E+00 | 5.750 | -.109E+00 |
| 5.755 | -.914E-01 | 5.760 | -.771E-01 | 5.765 | -.648E-01 | 5.770 | -.530E-01 | 5.775 | -.408E-01 |
| 5.780 | -.281E-01 | 5.785 | -.146E-01 | 5.790 | .103E-03 | 5.795 | .175E-01 | 5.800 | .395E-01 |
| 5.805 | .674E-01 | 5.810 | .101E+00 | 5.815 | .139E+00 | 5.820 | .177E+00 | 5.825 | .210E+00 |
| 5.830 | .234E+00 | 5.835 | .249E+00 | 5.840 | .254E+00 | 5.845 | .251E+00 | 5.850 | .244E+00 |
| 5.855 | .234E+00 | 5.860 | .223E+00 | 5.865 | .212E+00 | 5.870 | .200E+00 | 5.875 | .190E+00 |
| 5.880 | .183E+00 | 5.885 | .180E+00 | 5.890 | .183E+00 | 5.895 | .190E+00 | 5.900 | .200E+00 |
| 5.905 | .208E+00 | 5.910 | .214E+00 | 5.915 | .216E+00 | 5.920 | .216E+00 | 5.925 | .216E+00 |
| 5.930 | .216E+00 | 5.935 | .217E+00 | 5.940 | .218E+00 | 5.945 | .220E+00 | 5.950 | .220E+00 |
| 5.955 | .220E+00 | 5.960 | .220E+00 | 5.965 | .221E+00 | 5.970 | .222E+00 | 5.975 | .223E+00 |
| 5.980 | .221E+00 | 5.985 | .217E+00 | 5.990 | .211E+00 | 5.995 | .204E+00 | 6.000 | .200E+00 |
| 6.005 | .199E+00 | 6.010 | .203E+00 | 6.015 | .211E+00 | 6.020 | .222E+00 | 6.025 | .236E+00 |
| 6.030 | .252E+00 | 6.035 | .267E+00 | 6.040 | .281E+00 | 6.045 | .291E+00 | 6.050 | .293E+00 |
| 6.055 | .286E+00 | 6.060 | .270E+00 | 6.065 | .245E+00 | 6.070 | .211E+00 | 6.075 | .171E+00 |
| 6.080 | .126E+00 | 6.085 | .787E-01 | 6.090 | .321E-01 | 6.095 | -.108E-01 | 6.100 | -.469E-01 |
| 6.105 | -.745E-01 | 6.110 | -.936E-01 | 6.115 | -.106E+00 | 6.120 | -.113E+00 | 6.125 | -.119E+00 |
| 6.130 | -.125E+00 | 6.135 | -.132E+00 | 6.140 | -.140E+00 | 6.145 | -.148E+00 | 6.150 | -.158E+00 |
| 6.155 | -.169E+00 | 6.160 | -.183E+00 | 6.165 | -.200E+00 | 6.170 | -.220E+00 | 6.175 | -.241E+00 |
| 6.180 | -.262E+00 | 6.185 | -.281E+00 | 6.190 | -.297E+00 | 6.195 | -.307E+00 | 6.200 | -.311E+00 |
| 6.205 | -.308E+00 | 6.210 | -.297E+00 | 6.215 | -.280E+00 | 6.220 | -.258E+00 | 6.225 | -.231E+00 |
| 6.230 | -.203E+00 | 6.235 | -.173E+00 | 6.240 | -.144E+00 | 6.245 | -.115E+00 | 6.250 | -.882E-01 |
| 6.255 | -.638E-01 | 6.260 | -.436E-01 | 6.265 | -.295E-01 | 6.270 | -.229E-01 | 6.275 | -.244E-01 |
| 6.280 | -.334E-01 | 6.285 | -.483E-01 | 6.290 | -.673E-01 | 6.295 | -.890E-01 | 6.300 | -.113E+00 |
| 6.305 | -.137E+00 | 6.310 | -.162E+00 | 6.315 | -.186E+00 | 6.320 | -.205E+00 | 6.325 | -.218E+00 |
| 6.330 | -.225E+00 | 6.335 | -.225E+00 | 6.340 | -.222E+00 | 6.345 | -.217E+00 | 6.350 | -.214E+00 |
| 6.355 | -.213E+00 | 6.360 | -.213E+00 | 6.365 | -.214E+00 | 6.370 | -.215E+00 | 6.375 | -.216E+00 |
| 6.380 | -.218E+00 | 6.385 | -.223E+00 | 6.390 | -.228E+00 | 6.395 | -.233E+00 | 6.400 | -.234E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 6.530 | .358E+00 | 6.535 | .327E+00 | 6.540 | .316E+00 | 6.545 | .303E+00 | 6.550 | .288E+00 |
| 6.530 | .264E+00 | 6.535 | .239E+00 | 6.540 | .213E+00 | 6.545 | .189E+00 | 6.550 | .172E+00 |
| 6.555 | .160E+00 | 6.560 | .153E+00 | 6.565 | .146E+00 | 6.570 | .137E+00 | 6.575 | .124E+00 |
| 6.580 | .108E+00 | 6.585 | .929E-01 | 6.590 | .801E-01 | 6.595 | .707E-01 | 6.600 | .633E-01 |
| 6.605 | .557E-01 | 6.610 | .460E-01 | 6.615 | .341E-01 | 6.620 | .217E-01 | 6.625 | .114E-01 |
| 6.630 | .447E-02 | 6.635 | .653E-03 | 6.640 | -.216E-02 | 6.645 | -.643E-02 | 6.650 | -.133E-01 |
| 6.655 | -.221E-01 | 6.660 | -.302E-01 | 6.665 | -.353E-01 | 6.670 | -.352E-01 | 6.675 | -.335E-01 |
| 6.680 | -.292E-01 | 6.685 | -.253E-01 | 6.690 | -.224E-01 | 6.695 | -.197E-01 | 6.700 | -.158E-01 |
| 6.705 | -.939E-02 | 6.710 | -.181E-03 | 6.715 | .111E-01 | 6.720 | .237E-01 | 6.725 | .371E-01 |
| 6.730 | .516E-01 | 6.735 | .676E-01 | 6.740 | .848E-01 | 6.745 | .102E+00 | 6.750 | .116E+00 |
| 6.755 | .124E+00 | 6.760 | .127E+00 | 6.765 | .124E+00 | 6.770 | .117E+00 | 6.775 | .109E+00 |
| 6.780 | .100E+00 | 6.785 | .933E-01 | 6.790 | .883E-01 | 6.795 | .858E-01 | 6.800 | .869E-01 |
| 6.805 | .924E-01 | 6.810 | .103E+00 | 6.815 | .117E+00 | 6.820 | .133E+00 | 6.825 | .149E+00 |
| 6.830 | .162E+00 | 6.835 | .170E+00 | 6.840 | .174E+00 | 6.845 | .173E+00 | 6.850 | .168E+00 |
| 6.855 | .161E+00 | 6.860 | .153E+00 | 6.865 | .146E+00 | 6.870 | .142E+00 | 6.875 | .144E+00 |
| 6.880 | .152E+00 | 6.885 | .167E+00 | 6.890 | .187E+00 | 6.895 | .210E+00 | 6.900 | .234E+00 |
| 6.905 | .257E+00 | 6.910 | .278E+00 | 6.915 | .297E+00 | 6.920 | .312E+00 | 6.925 | .323E+00 |
| 6.930 | .329E+00 | 6.935 | .332E+00 | 6.940 | .331E+00 | 6.945 | .327E+00 | 6.950 | .324E+00 |
| 6.955 | .322E+00 | 6.960 | .320E+00 | 6.965 | .319E+00 | 6.970 | .315E+00 | 6.975 | .308E+00 |
| 6.980 | .295E+00 | 6.985 | .277E+00 | 6.990 | .255E+00 | 6.995 | .231E+00 | 7.000 | .205E+00 |
| 7.005 | .178E+00 | 7.010 | .148E+00 | 7.015 | .116E+00 | 7.020 | .838E-01 | 7.025 | .524E-01 |
| 7.030 | .241E-01 | 7.035 | -.352E-03 | 7.040 | -.215E-01 | 7.045 | -.415E-01 | 7.050 | -.628E-01 |
| 7.055 | -.869E-01 | 7.060 | -.114E+00 | 7.065 | -.142E+00 | 7.070 | -.168E+00 | 7.075 | -.189E+00 |
| 7.080 | -.203E+00 | 7.085 | -.212E+00 | 7.090 | -.214E+00 | 7.095 | -.213E+00 | 7.100 | -.207E+00 |
| 7.105 | -.198E+00 | 7.110 | -.184E+00 | 7.115 | -.165E+00 | 7.120 | -.144E+00 | 7.125 | -.121E+00 |
| 7.130 | -.987E-01 | 7.135 | -.786E-01 | 7.140 | -.612E-01 | 7.145 | -.452E-01 | 7.150 | -.324E-01 |
| 7.155 | -.189E-01 | 7.160 | -.547E-02 | 7.165 | .789E-02 | 7.170 | .207E-01 | 7.175 | .325E-01 |
| 7.180 | .430E-01 | 7.185 | .523E-01 | 7.190 | .602E-01 | 7.195 | .663E-01 | 7.200 | .702E-01 |
| 7.205 | .713E-01 | 7.210 | .695E-01 | 7.215 | .650E-01 | 7.220 | .585E-01 | 7.225 | .507E-01 |
| 7.230 | .423E-01 | 7.235 | .339E-01 | 7.240 | .261E-01 | 7.245 | .197E-01 | 7.250 | .156E-01 |
| 7.255 | .144E-01 | 7.260 | .152E-01 | 7.265 | .202E-01 | 7.270 | .254E-01 | 7.275 | .306E-01 |
| 7.280 | .352E-01 | 7.285 | .393E-01 | 7.290 | .440E-01 | 7.295 | .501E-01 | 7.300 | .583E-01 |
| 7.305 | .680E-01 | 7.310 | .780E-01 | 7.315 | .868E-01 | 7.320 | .933E-01 | 7.325 | .966E-01 |
| 7.330 | .965E-01 | 7.335 | .927E-01 | 7.340 | .852E-01 | 7.345 | .740E-01 | 7.350 | .589E-01 |
| 7.355 | .402E-01 | 7.360 | .197E-01 | 7.365 | -.525E-02 | 7.370 | -.310E-01 | 7.375 | -.581E-01 |
| 7.380 | -.865E-01 | 7.385 | -.116E+00 | 7.390 | -.144E+00 | 7.395 | -.172E+00 | 7.400 | -.198E+00 |
| 7.405 | -.221E+00 | 7.410 | -.241E+00 | 7.415 | -.257E+00 | 7.420 | -.268E+00 | 7.425 | -.273E+00 |
| 7.430 | -.271E+00 | 7.435 | -.260E+00 | 7.440 | -.241E+00 | 7.445 | -.215E+00 | 7.450 | -.183E+00 |
| 7.455 | -.146E+00 | 7.460 | -.107E+00 | 7.465 | -.648E-01 | 7.470 | -.204E-01 | 7.475 | .260E-01 |
| 7.480 | .728E-01 | 7.485 | .118E+00 | 7.490 | .158E+00 | 7.495 | .191E+00 | 7.500 | .215E+00 |
| 7.505 | .231E+00 | 7.510 | .239E+00 | 7.515 | .240E+00 | 7.520 | .236E+00 | 7.525 | .227E+00 |
| 7.530 | .212E+00 | 7.535 | .192E+00 | 7.540 | .168E+00 | 7.545 | .139E+00 | 7.550 | .108E+00 |
| 7.555 | .754E-01 | 7.560 | .419E-01 | 7.565 | .676E-02 | 7.570 | -.304E-01 | 7.575 | -.694E-01 |
| 7.580 | -.109E+00 | 7.585 | -.147E+00 | 7.590 | -.182E+00 | 7.595 | -.211E+00 | 7.600 | -.234E+00 |
| 7.605 | -.250E+00 | 7.610 | -.259E+00 | 7.615 | -.263E+00 | 7.620 | -.250E+00 | 7.625 | -.250E+00 |
| 7.630 | -.235E+00 | 7.635 | -.216E+00 | 7.640 | -.195E+00 | 7.645 | -.173E+00 | 7.650 | -.150E+00 |
| 7.655 | -.126E+00 | 7.660 | -.100E+00 | 7.665 | -.735E-01 | 7.670 | -.469E-01 | 7.675 | -.223E-01 |
| 7.680 | -.101E-02 | 7.685 | .163E-01 | 7.690 | .301E-01 | 7.695 | .415E-01 | 7.700 | .511E-01 |
| 7.705 | .585E-01 | 7.710 | .633E-01 | 7.715 | .646E-01 | 7.720 | .630E-01 | 7.725 | .596E-01 |
| 7.730 | .563E-01 | 7.735 | .544E-01 | 7.740 | .540E-01 | 7.745 | .540E-01 | 7.750 | .528E-01 |
| 7.755 | .486E-01 | 7.760 | .404E-01 | 7.765 | .275E-01 | 7.770 | .993E-02 | 7.775 | -.122E-01 |
| 7.780 | -.383E-01 | 7.785 | -.658E-01 | 7.790 | -.955E-01 | 7.795 | -.122E+00 | 7.800 | -.143E+00 |
| 7.805 | -.157E+00 | 7.810 | -.155E+00 | 7.815 | -.168E+00 | 7.820 | -.166E+00 | 7.825 | -.162E+00 |
| 7.830 | -.155E+00 | 7.835 | -.147E+00 | 7.840 | -.138E+00 | 7.845 | -.131E+00 | 7.850 | -.126E+00 |
| 7.855 | -.122E+00 | 7.860 | -.120E+00 | 7.865 | -.117E+00 | 7.870 | -.111E+00 | 7.875 | -.103E+00 |
| 7.880 | -.916E-01 | 7.885 | -.794E-01 | 7.890 | -.665E-01 | 7.895 | -.529E-01 | 7.900 | -.376E-01 |
| 7.905 | -.201E-01 | 7.910 | -.985E-03 | 7.915 | .178E-01 | 7.920 | .335E-01 | 7.925 | .437E-01 |
| 7.930 | .471E-01 | 7.935 | .440E-01 | 7.940 | .355E-01 | 7.945 | .228E-01 | 7.950 | .614E-02 |
| 7.955 | -.147E-01 | 7.960 | -.401E-01 | 7.965 | -.701E-01 | 7.970 | -.104E+00 | 7.975 | -.139E+00 |
| 7.980 | -.175E+00 | 7.985 | -.211E+00 | 7.990 | -.244E+00 | 7.995 | -.274E+00 | 8.000 | -.300E+00 |
| 8.005 | -.320E+00 | 8.010 | -.334E+00 | 8.015 | -.341E+00 | 8.020 | -.340E+00 | 8.025 | -.332E+00 |
| 8.030 | -.319E+00 | 8.035 | -.302E+00 | 8.040 | -.281E+00 | 8.045 | -.260E+00 | 8.050 | -.238E+00 |

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|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 8.180 | .621E-01 | 8.185 | .578E-01 | 8.190 | .538E-01 | 8.195 | .505E-01 | 8.200 | .488E-01 |
| 8.205 | .492E-01 | 8.210 | .515E-01 | 8.215 | .544E-01 | 8.220 | .559E-01 | 8.225 | .542E-01 |
| 8.230 | .481E-01 | 8.235 | .381E-01 | 8.240 | .262E-01 | 8.245 | .148E-01 | 8.250 | .550E-02 |
| 8.255 | -.136E-02 | 8.260 | -.717E-02 | 8.265 | -.141E-01 | 8.270 | -.239E-01 | 8.275 | -.372E-01 |
| 8.280 | -.529E-01 | 8.285 | -.591E-01 | 8.290 | -.841E-01 | 8.295 | -.972E-01 | 8.300 | -.109E+00 |
| 8.305 | -.121E+00 | 8.310 | -.134E+00 | 8.315 | -.148E+00 | 8.320 | -.160E+00 | 8.325 | -.170E+00 |
| 8.330 | -.175E+00 | 8.335 | -.174E+00 | 8.340 | -.169E+00 | 8.345 | -.152E+00 | 8.350 | -.154E+00 |
| 8.355 | -.146E+00 | 8.360 | -.137E+00 | 8.365 | -.125E+00 | 8.370 | -.109E+00 | 8.375 | -.882E-01 |
| 8.380 | -.634E-01 | 8.385 | -.370E-01 | 8.390 | -.115E-01 | 8.395 | .111E-01 | 8.400 | .297E-01 |
| 8.405 | .444E-01 | 8.410 | .555E-01 | 8.415 | .637E-01 | 8.420 | .692E-01 | 8.425 | .723E-01 |
| 8.430 | .734E-01 | 8.435 | .730E-01 | 8.440 | .716E-01 | 8.445 | .695E-01 | 8.450 | .667E-01 |
| 8.455 | .630E-01 | 8.460 | .590E-01 | 8.465 | .556E-01 | 8.470 | .542E-01 | 8.475 | .560E-01 |
| 8.480 | .611E-01 | 8.485 | .683E-01 | 8.490 | .752E-01 | 8.495 | .795E-01 | 8.500 | .799E-01 |
| 8.505 | .766E-01 | 8.510 | .716E-01 | 8.515 | .672E-01 | 8.520 | .652E-01 | 8.525 | .663E-01 |
| 8.530 | .702E-01 | 8.535 | .753E-01 | 8.540 | .845E-01 | 8.545 | .955E-01 | 8.550 | .110E+00 |
| 8.555 | .129E+00 | 8.560 | .150E+00 | 8.565 | .172E+00 | 8.570 | .191E+00 | 8.575 | .205E+00 |
| 8.580 | .212E+00 | 8.585 | .214E+00 | 8.590 | .211E+00 | 8.595 | .206E+00 | 8.600 | .200E+00 |
| 8.605 | .193E+00 | 8.610 | .186E+00 | 8.615 | .176E+00 | 8.620 | .155E+00 | 8.625 | .151E+00 |
| 8.630 | .134E+00 | 8.635 | .114E+00 | 8.640 | .923E-01 | 8.645 | .684E-01 | 8.650 | .442E-01 |
| 8.655 | .210E-01 | 8.660 | -.212E-03 | 8.665 | -.194E-01 | 8.670 | -.371E-01 | 8.675 | -.542E-01 |
| 8.680 | -.716E-01 | 8.685 | -.891E-01 | 8.690 | -.107E+00 | 8.695 | -.124E+00 | 8.700 | -.142E+00 |
| 8.705 | -.161E+00 | 8.710 | -.183E+00 | 8.715 | -.206E+00 | 8.720 | -.228E+00 | 8.725 | -.247E+00 |
| 8.730 | -.259E+00 | 8.735 | -.264E+00 | 8.740 | -.262E+00 | 8.745 | -.254E+00 | 8.750 | -.245E+00 |
| 8.755 | -.235E+00 | 8.760 | -.225E+00 | 8.765 | -.214E+00 | 8.770 | -.200E+00 | 8.775 | -.183E+00 |
| 8.780 | -.162E+00 | 8.785 | -.140E+00 | 8.790 | -.115E+00 | 8.795 | -.873E-01 | 8.800 | -.545E-01 |
| 8.805 | -.152E-01 | 8.810 | .305E-01 | 8.815 | .803E-01 | 8.820 | .130E+00 | 8.825 | .176E+00 |
| 8.830 | .214E+00 | 8.835 | .245E+00 | 8.840 | .267E+00 | 8.845 | .283E+00 | 8.850 | .293E+00 |
| 8.855 | .298E+00 | 8.860 | .298E+00 | 8.865 | .292E+00 | 8.870 | .281E+00 | 8.875 | .267E+00 |
| 8.880 | .254E+00 | 8.885 | .243E+00 | 8.890 | .235E+00 | 8.895 | .228E+00 | 8.900 | .222E+00 |
| 8.905 | .214E+00 | 8.910 | .201E+00 | 8.915 | .186E+00 | 8.920 | .158E+00 | 8.925 | .149E+00 |
| 8.930 | .133E+00 | 8.935 | .119E+00 | 8.940 | .109E+00 | 8.945 | .101E+00 | 8.950 | .950E-01 |
| 8.955 | .906E-01 | 8.960 | .883E-01 | 8.965 | .888E-01 | 8.970 | .923E-01 | 8.975 | .983E-01 |
| 8.980 | .105E+00 | 8.985 | .111E+00 | 8.990 | .115E+00 | 8.995 | .115E+00 | 9.000 | .113E+00 |
| 9.005 | .111E+00 | 9.010 | .109E+00 | 9.015 | .107E+00 | 9.020 | .105E+00 | 9.025 | .101E+00 |
| 9.030 | .923E-01 | 9.035 | .799E-01 | 9.040 | .644E-01 | 9.045 | .480E-01 | 9.050 | .321E-01 |
| 9.055 | .176E-01 | 9.060 | .365E-02 | 9.065 | -.107E-01 | 9.070 | -.261E-01 | 9.075 | -.417E-01 |
| 9.080 | -.558E-01 | 9.085 | -.663E-01 | 9.090 | -.721E-01 | 9.095 | -.733E-01 | 9.100 | -.713E-01 |
| 9.105 | -.680E-01 | 9.110 | -.644E-01 | 9.115 | -.508E-01 | 9.120 | -.564E-01 | 9.125 | -.505E-01 |
| 9.130 | -.429E-01 | 9.135 | -.337E-01 | 9.140 | -.235E-01 | 9.145 | -.125E-01 | 9.150 | -.330E-03 |
| 9.155 | .134E-01 | 9.160 | .291E-01 | 9.165 | .462E-01 | 9.170 | .640E-01 | 9.175 | .812E-01 |
| 9.180 | .967E-01 | 9.185 | .109E+00 | 9.190 | .117E+00 | 9.195 | .120E+00 | 9.200 | .114E+00 |
| 9.205 | .101E+00 | 9.210 | .795E-01 | 9.215 | .527E-01 | 9.220 | .235E-01 | 9.225 | -.480E-02 |
| 9.230 | -.303E-01 | 9.235 | -.523E-01 | 9.240 | -.714E-01 | 9.245 | -.883E-01 | 9.250 | -.103E+00 |
| 9.255 | -.115E+00 | 9.260 | -.123E+00 | 9.265 | -.128E+00 | 9.270 | -.132E+00 | 9.275 | -.136E+00 |
| 9.280 | -.142E+00 | 9.285 | -.150E+00 | 9.290 | -.159E+00 | 9.295 | -.168E+00 | 9.300 | -.176E+00 |
| 9.305 | -.180E+00 | 9.310 | -.182E+00 | 9.315 | -.180E+00 | 9.320 | -.173E+00 | 9.325 | -.162E+00 |
| 9.330 | -.144E+00 | 9.335 | -.119E+00 | 9.340 | -.891E-01 | 9.345 | -.536E-01 | 9.350 | -.145E-01 |
| 9.355 | .269E-01 | 9.360 | .693E-01 | 9.365 | .111E+00 | 9.370 | .151E+00 | 9.375 | .186E+00 |
| 9.380 | .216E+00 | 9.385 | .239E+00 | 9.390 | .254E+00 | 9.395 | .251E+00 | 9.400 | .258E+00 |
| 9.405 | .247E+00 | 9.410 | .225E+00 | 9.415 | .197E+00 | 9.420 | .154E+00 | 9.425 | .132E+00 |
| 9.430 | .103E+00 | 9.435 | .815E-01 | 9.440 | .679E-01 | 9.445 | .622E-01 | 9.450 | .643E-01 |
| 9.455 | .743E-01 | 9.460 | .924E-01 | 9.465 | .118E+00 | 9.470 | .148E+00 | 9.475 | .179E+00 |
| 9.480 | .206E+00 | 9.485 | .226E+00 | 9.490 | .238E+00 | 9.495 | .241E+00 | 9.500 | .239E+00 |
| 9.505 | .233E+00 | 9.510 | .224E+00 | 9.515 | .211E+00 | 9.520 | .193E+00 | 9.525 | .171E+00 |
| 9.530 | .146E+00 | 9.535 | .119E+00 | 9.540 | .904E-01 | 9.545 | .604E-01 | 9.550 | .271E-01 |
| 9.555 | -.109E-01 | 9.560 | -.528E-01 | 9.565 | -.960E-01 | 9.570 | -.136E+00 | 9.575 | -.168E+00 |
| 9.580 | -.190E+00 | 9.585 | -.199E+00 | 9.590 | -.197E+00 | 9.595 | -.185E+00 | 9.600 | -.163E+00 |
| 9.605 | -.131E+00 | 9.610 | -.907E-01 | 9.615 | -.443E-01 | 9.620 | .444E-02 | 9.625 | .504E-01 |
| 9.630 | .885E-01 | 9.635 | .115E+00 | 9.640 | .128E+00 | 9.645 | .128E+00 | 9.650 | .118E+00 |
| 9.655 | .999E-01 | 9.660 | .751E-01 | 9.665 | .441E-01 | 9.670 | .661E-02 | 9.675 | -.377E-01 |
| 9.680 | -.878E-01 | 9.685 | -.141E+00 | 9.690 | -.194E+00 | 9.695 | -.243E+00 | 9.700 | -.284E+00 |
| 9.705 | -.316E+00 | 9.710 | -.340E+00 | 9.715 | -.358E+00 | 9.720 | -.372E+00 | 9.725 | -.383E+00 |

SPECTRA FOR THE PRECEDING TIME HISTORY WILL BE
CALCULATED AT THE FOLLOWING FREQUENCIES (IN CPS)

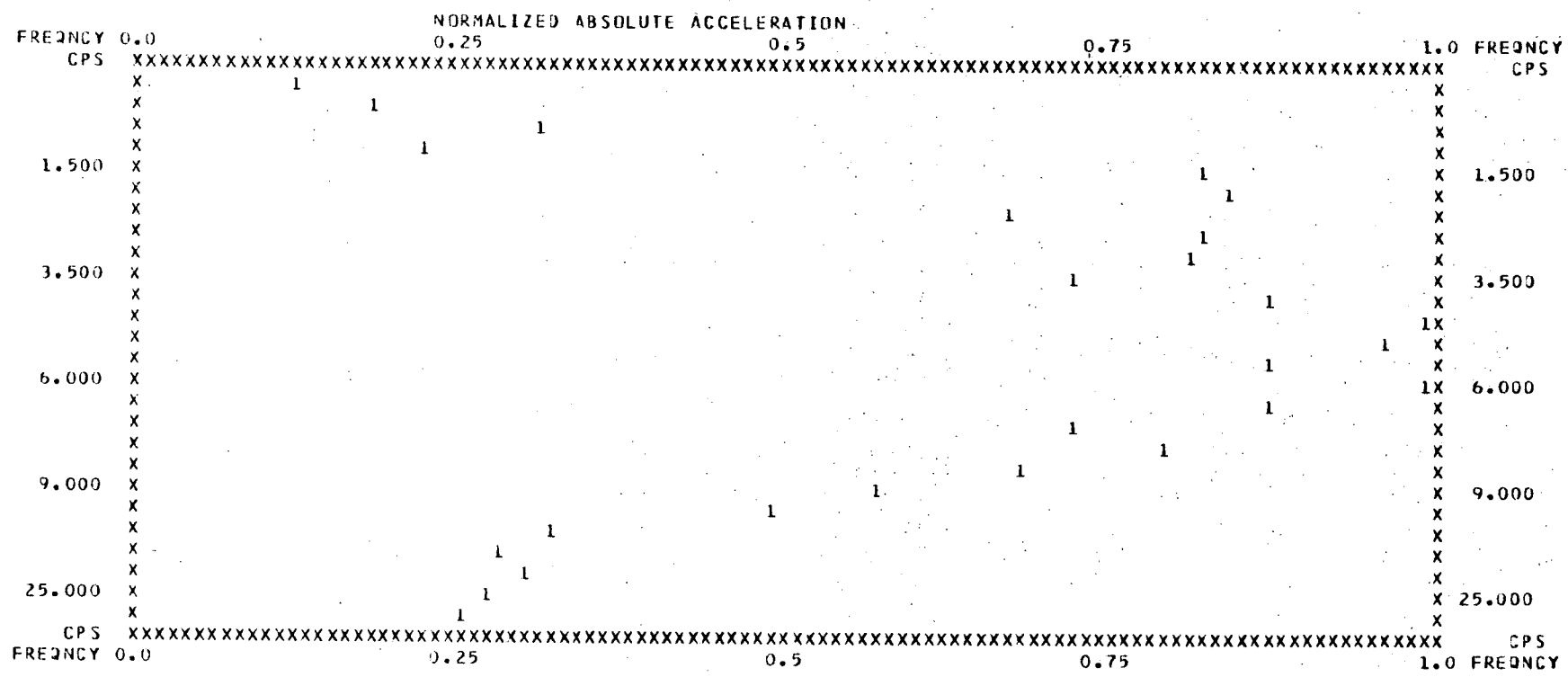
| | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| .3000 | .4000 | .7000 | 1.0000 | 1.5000 | 1.7000 | 2.0000 | 2.5000 | 3.0000 | 3.5000 |
| 4.0000 | 4.5000 | 5.0000 | 5.5000 | 6.0000 | 6.5000 | 7.0000 | 7.5000 | 8.0000 | 9.0000 |
| 10.0000 | 12.0000 | 15.0000 | 20.0000 | 25.0000 | 30.0000 | | | | |

| FREQUENCY (CPS) | PERIOD (SECS) | ABSOLUTE ACCELERATION | PSEUDO VELOCITY | TIME AT MAXIMUM |
|--------------------|------------------|--------------------------|--------------------|--------------------|
| .300 | 3.333 | .2717E+00 | .1441E+00 | .9085E+01 |
| .400 | 2.500 | .3890E+00 | .1472E+00 | .1084E+02 |
| .700 | 1.429 | .6579E+00 | .1496E+00 | .6345E+01 |
| 1.000 | 1.000 | .4726E+00 | .7522E-01 | .5230E+01 |
| 1.500 | .667 | .1696E+01 | .1799E+00 | .6810E+01 |
| 1.700 | .588 | .1731E+01 | .1621E+00 | .6675E+01 |
| 2.000 | .500 | .1391E+01 | .1107E+00 | .9835E+01 |
| 2.500 | .400 | .1684E+01 | .1072E+00 | .5990E+01 |
| 3.000 | .333 | .1677E+01 | .8899E-01 | .8960E+01 |
| 3.500 | .286 | .1493E+01 | .6791E-01 | .4940E+01 |
| 4.000 | .250 | .1783E+01 | .7093E-01 | .7930E+01 |
| 4.500 | .222 | .2044E+01 | .7230E-01 | .6545E+01 |
| 5.000 | .200 | .1973E+01 | .6280E-01 | .8070E+01 |
| 5.500 | .182 | .1792E+01 | .5185E-01 | .8035E+01 |
| 6.000 | .167 | .2025E+01 | .5371E-01 | .4690E+01 |
| 6.500 | .154 | .1801E+01 | .4409E-01 | .4470E+01 |
| 7.000 | .143 | .1480E+01 | .3365E-01 | .9765E+01 |
| 7.500 | .133 | .1631E+01 | .3461E-01 | .9750E+01 |
| 8.000 | .125 | .1403E+01 | .2791E-01 | .9740E+01 |
| 9.000 | .111 | .1174E+01 | .2076E-01 | .6515E+01 |
| 10.000 | .100 | .1017E+01 | .1618E-01 | .6490E+01 |
| 12.000 | .083 | .6682E+00 | .8863E-02 | .6215E+01 |
| 15.000 | .067 | .6051E+00 | .6420E-02 | .4715E+01 |
| 20.000 | .050 | .6307E+00 | .5019E-02 | .4705E+01 |
| 25.000 | .040 | .5736E+00 | .3652E-02 | .4695E+01 |
| 30.000 | .033 | .5295E+00 | .2809E-02 | .4690E+01 |

MAXIMUM ABSOLUTE SPECTRAL ACCELERATION .2044E+01
 AT FREQUENCY (CPS) .4500E+01

NORMALIZED PLOT OF RESPONSE SPECTRA.....

DAMPING VALUE MAXIMUM VALUE AT FREQUENCY PLOT SYMBOL
 .2000E-01 .2044E+01 .4500E+01 1



INPUT TIME HISTORY CONTROL

| | | |
|---------------------------|------|--------|
| TIME HISTORY NUMBER | | 2 |
| NUMBER OF TIME POINTS | NTP | 2001 |
| INPUT CODE | INPT | 1 |
| TIME STEP | DEL | .0050 |
| ACCELERATION SCALE FACTOR | SFTR | 1.0000 |

COMPUTATION AND OUTPUT CONTROL

| | | |
|--------------------------------|------|---------|
| INPUT HISTORY INTEGRATION CODE | INTR | 0 |
| SPECTRUM COMPUTATION CODES | ISPC | 1 |
| | IDUR | 0 |
| SPECTRUM OUTPUT CODE | IDUT | 3 |
| NUMBER OF FREQUENCY POINTS | NFP | 26 |
| NUMBER OF DAMPINGS | NDP | 1 |
| FREQUENCY SCALE TYPE CODE | IFSC | 2 |
| LOWEST FREQUENCY IN CPS | W1 | .3000 |
| HIGHEST FREQUENCY IN CPS | W2 | 30.0000 |
| TIME STEP TO PERIOD RATIO | DELP | .2000 |

FIELD LENGTH REQUIREMENTS
(IN OCTAL)

| | |
|-----------------------|--------|
| PROGRAM LENGTH | 040437 |
| BLANK COMMON REQUIRED | 007647 |
| FIELD LENGTH REQUIRED | 050306 |

FORMAT OF INPUT TIME HISTORY IS

(24588(I), (E16.8))

| TIME | ACCEL | TIME | ACCEL | TIME | ACCEL | TIME | ACCEL | TIME | ACCEL |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| .005 | .228E-02 | .010 | -.122E-03 | .015 | -.738E-02 | .020 | -.195E-01 | .025 | -.346E-01 |
| .030 | -.492E-01 | .035 | -.594E-01 | .040 | -.626E-01 | .045 | -.581E-01 | .050 | -.473E-01 |
| .055 | -.328E-01 | .060 | -.180E-01 | .065 | -.570E-02 | .070 | .248E-02 | .075 | .620E-02 |
| .080 | .641E-02 | .085 | .498E-02 | .090 | .413E-02 | .095 | .584E-02 | .100 | .112E-01 |
| .105 | .202E-01 | .110 | .315E-01 | .115 | .434E-01 | .120 | .537E-01 | .125 | .607E-01 |
| .130 | .634E-01 | .135 | .615E-01 | .140 | .553E-01 | .145 | .456E-01 | .150 | .338E-01 |
| .155 | .217E-01 | .160 | .111E-01 | .165 | .343E-02 | .170 | -.743E-03 | .175 | -.165E-02 |
| .180 | -.190E-03 | .185 | .256E-02 | .190 | .580E-02 | .195 | .921E-02 | .200 | .127E-01 |
| .205 | .161E-01 | .210 | .191E-01 | .215 | .211E-01 | .220 | .220E-01 | .225 | .219E-01 |
| .230 | .218E-01 | .235 | .227E-01 | .240 | .254E-01 | .245 | .299E-01 | .250 | .356E-01 |
| .255 | .411E-01 | .260 | .453E-01 | .265 | .472E-01 | .270 | .466E-01 | .275 | .438E-01 |
| .280 | .394E-01 | .285 | .343E-01 | .290 | .296E-01 | .295 | .252E-01 | .300 | .245E-01 |
| .305 | .248E-01 | .310 | .256E-01 | .315 | .292E-01 | .320 | .318E-01 | .325 | .339E-01 |
| .330 | .352E-01 | .335 | .359E-01 | .340 | .363E-01 | .345 | .366E-01 | .350 | .367E-01 |
| .355 | .369E-01 | .360 | .372E-01 | .365 | .379E-01 | .370 | .390E-01 | .375 | .401E-01 |
| .380 | .410E-01 | .385 | .413E-01 | .390 | .407E-01 | .395 | .395E-01 | .400 | .379E-01 |
| .405 | .363E-01 | .410 | .344E-01 | .415 | .315E-01 | .420 | .269E-01 | .425 | .199E-01 |
| .430 | .104E-01 | .435 | -.855E-03 | .440 | -.130E-01 | .445 | -.246E-01 | .450 | -.344E-01 |
| .455 | -.413E-01 | .460 | -.442E-01 | .465 | -.427E-01 | .470 | -.370E-01 | .475 | -.282E-01 |
| .480 | -.181E-01 | .485 | -.893E-02 | .490 | -.264E-02 | .495 | -.308E-03 | .500 | -.198E-02 |
| .505 | -.681E-02 | .510 | -.134E-01 | .515 | -.204E-01 | .520 | -.264E-01 | .525 | -.305E-01 |
| .530 | -.323E-01 | .535 | -.316E-01 | .540 | -.292E-01 | .545 | -.252E-01 | .550 | -.243E-01 |
| .555 | -.250E-01 | .560 | -.295E-01 | .565 | -.378E-01 | .570 | -.493E-01 | .575 | -.625E-01 |
| .580 | -.755E-01 | .585 | -.866E-01 | .590 | -.945E-01 | .595 | -.982E-01 | .600 | -.981E-01 |
| .605 | -.950E-01 | .610 | -.906E-01 | .615 | -.855E-01 | .620 | -.835E-01 | .625 | -.808E-01 |
| .630 | -.767E-01 | .635 | -.687E-01 | .640 | -.557E-01 | .645 | -.384E-01 | .650 | -.199E-01 |
| .655 | -.491E-02 | .660 | .236E-02 | .665 | -.143E-03 | .670 | -.111E-01 | .675 | -.259E-01 |
| .680 | -.384E-01 | .685 | -.431E-01 | .690 | -.371E-01 | .695 | -.212E-01 | .700 | .136E-03 |
| .705 | .204E-01 | .710 | .331E-01 | .715 | .337E-01 | .720 | .212E-01 | .725 | -.138E-02 |
| .730 | -.280E-01 | .735 | -.514E-01 | .740 | -.651E-01 | .745 | -.660E-01 | .750 | -.545E-01 |
| .755 | -.350E-01 | .760 | -.138E-01 | .765 | .261E-02 | .770 | .996E-02 | .775 | .696E-02 |
| .780 | -.456E-02 | .785 | -.206E-01 | .790 | -.366E-01 | .795 | -.485E-01 | .800 | -.536E-01 |
| .805 | -.512E-01 | .810 | -.418E-01 | .815 | -.271E-01 | .820 | -.901E-02 | .825 | .102E-01 |
| .830 | .284E-01 | .835 | .436E-01 | .840 | .541E-01 | .845 | .587E-01 | .850 | .566E-01 |
| .855 | .484E-01 | .860 | .355E-01 | .865 | .206E-01 | .870 | .718E-02 | .875 | -.180E-02 |
| .880 | -.432E-02 | .885 | -.183E-03 | .890 | .887E-02 | .895 | .196E-01 | .900 | .283E-01 |
| .905 | .317E-01 | .910 | .279E-01 | .915 | .158E-01 | .920 | -.229E-03 | .925 | -.208E-01 |
| .930 | -.422E-01 | .935 | -.615E-01 | .940 | -.767E-01 | .945 | -.862E-01 | .950 | -.894E-01 |
| .955 | -.866E-01 | .960 | -.788E-01 | .965 | -.679E-01 | .970 | -.562E-01 | .975 | -.458E-01 |
| .980 | -.384E-01 | .985 | -.348E-01 | .990 | -.346E-01 | .995 | -.369E-01 | 1.000 | -.401E-01 |
| 1.005 | -.427E-01 | 1.010 | -.440E-01 | 1.015 | -.435E-01 | 1.020 | -.417E-01 | 1.025 | -.395E-01 |
| 1.030 | -.378E-01 | 1.035 | -.373E-01 | 1.040 | -.383E-01 | 1.045 | -.408E-01 | 1.050 | -.444E-01 |
| 1.055 | -.485E-01 | 1.060 | -.527E-01 | 1.065 | -.566E-01 | 1.070 | -.602E-01 | 1.075 | -.636E-01 |
| 1.080 | -.667E-01 | 1.085 | -.695E-01 | 1.090 | -.715E-01 | 1.095 | -.721E-01 | 1.100 | -.707E-01 |
| 1.105 | -.667E-01 | 1.110 | -.599E-01 | 1.115 | -.505E-01 | 1.120 | -.391E-01 | 1.125 | -.268E-01 |
| 1.130 | -.150E-01 | 1.135 | -.518E-02 | 1.140 | .171E-02 | 1.145 | .510E-02 | 1.150 | .532E-02 |
| 1.155 | .341E-02 | 1.160 | .861E-03 | 1.165 | -.853E-03 | 1.170 | -.715E-03 | 1.175 | .160E-02 |
| 1.180 | .579E-02 | 1.185 | .111E-01 | 1.190 | .168E-01 | 1.195 | .223E-01 | 1.200 | .269E-01 |
| 1.205 | .303E-01 | 1.210 | .322E-01 | 1.215 | .324E-01 | 1.220 | .312E-01 | 1.225 | .294E-01 |
| 1.230 | .280E-01 | 1.235 | .286E-01 | 1.240 | .318E-01 | 1.245 | .379E-01 | 1.250 | .461E-01 |
| 1.255 | .550E-01 | 1.260 | .627E-01 | 1.265 | .679E-01 | 1.270 | .700E-01 | 1.275 | .691E-01 |
| 1.280 | .659E-01 | 1.285 | .618E-01 | 1.290 | .578E-01 | 1.295 | .549E-01 | 1.300 | .536E-01 |
| 1.305 | .538E-01 | 1.310 | .548E-01 | 1.315 | .559E-01 | 1.320 | .561E-01 | 1.325 | .550E-01 |
| 1.330 | .521E-01 | 1.335 | .477E-01 | 1.340 | .419E-01 | 1.345 | .352E-01 | 1.350 | .278E-01 |
| 1.355 | .202E-01 | 1.360 | .125E-01 | 1.365 | .487E-02 | 1.370 | -.259E-02 | 1.375 | -.999E-02 |
| 1.380 | -.174E-01 | 1.385 | -.249E-01 | 1.390 | -.323E-01 | 1.395 | -.390E-01 | 1.400 | -.447E-01 |
| 1.405 | -.490E-01 | 1.410 | -.518E-01 | 1.415 | -.537E-01 | 1.420 | -.553E-01 | 1.425 | -.573E-01 |
| 1.430 | -.603E-01 | 1.435 | -.643E-01 | 1.440 | -.689E-01 | 1.445 | -.732E-01 | 1.450 | -.762E-01 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 1.550 | -.381E-01 | 1.560 | -.350E-01 | 1.565 | -.367E-01 | 1.570 | -.400E-01 | 1.575 | -.448E-01 |
| 1.580 | -.496E-01 | 1.585 | -.526E-01 | 1.590 | -.524E-01 | 1.595 | -.483E-01 | 1.600 | -.409E-01 |
| 1.605 | -.317E-01 | 1.610 | -.230E-01 | 1.615 | -.168E-01 | 1.620 | -.142E-01 | 1.625 | -.143E-01 |
| 1.630 | -.150E-01 | 1.635 | -.135E-01 | 1.640 | -.807E-02 | 1.645 | .953E-03 | 1.650 | .110E-01 |
| 1.655 | .180E-01 | 1.660 | .184E-01 | 1.665 | .109E-01 | 1.670 | -.303E-02 | 1.675 | -.188E-01 |
| 1.680 | -.309E-01 | 1.685 | -.345E-01 | 1.690 | -.273E-01 | 1.695 | -.108E-01 | 1.700 | .107E-01 |
| 1.705 | .308E-01 | 1.710 | .434E-01 | 1.715 | .447E-01 | 1.720 | .338E-01 | 1.725 | .140E-01 |
| 1.730 | -.880E-02 | 1.735 | -.274E-01 | 1.740 | -.356E-01 | 1.745 | -.304E-01 | 1.750 | -.126E-01 |
| 1.755 | .129E-01 | 1.760 | .391E-01 | 1.765 | .590E-01 | 1.770 | .578E-01 | 1.775 | .642E-01 |
| 1.780 | .504E-01 | 1.785 | .308E-01 | 1.790 | .106E-01 | 1.795 | -.562E-02 | 1.800 | -.153E-01 |
| 1.805 | -.178E-01 | 1.810 | -.139E-01 | 1.815 | -.521E-02 | 1.820 | .607E-02 | 1.825 | .180E-01 |
| 1.830 | .287E-01 | 1.835 | .356E-01 | 1.840 | .403E-01 | 1.845 | .389E-01 | 1.850 | .322E-01 |
| 1.855 | .210E-01 | 1.860 | .749E-02 | 1.865 | -.549E-02 | 1.870 | -.146E-01 | 1.875 | -.169E-01 |
| 1.880 | -.110E-01 | 1.885 | .275E-02 | 1.890 | .220E-01 | 1.895 | .431E-01 | 1.900 | .620E-01 |
| 1.905 | .750E-01 | 1.910 | .801E-01 | 1.915 | .768E-01 | 1.920 | .655E-01 | 1.925 | .514E-01 |
| 1.930 | .343E-01 | 1.935 | .181E-01 | 1.940 | .502E-02 | 1.945 | -.321E-02 | 1.950 | -.599E-02 |
| 1.955 | -.358E-02 | 1.960 | .283E-02 | 1.965 | .114E-01 | 1.970 | .201E-01 | 1.975 | .268E-01 |
| 1.980 | .301E-01 | 1.985 | .295E-01 | 1.990 | .252E-01 | 1.995 | .184E-01 | 2.000 | .110E-01 |
| 2.005 | .481E-02 | 2.010 | .130E-02 | 2.015 | .130E-02 | 2.020 | .474E-02 | 2.025 | .107E-01 |
| 2.030 | .179E-01 | 2.035 | .248E-01 | 2.040 | .302E-01 | 2.045 | .335E-01 | 2.050 | .349E-01 |
| 2.055 | .348E-01 | 2.060 | .338E-01 | 2.065 | .325E-01 | 2.070 | .312E-01 | 2.075 | .297E-01 |
| 2.080 | .278E-01 | 2.085 | .253E-01 | 2.090 | .223E-01 | 2.095 | .188E-01 | 2.100 | .155E-01 |
| 2.105 | .130E-01 | 2.110 | .120E-01 | 2.115 | .129E-01 | 2.120 | .156E-01 | 2.125 | .193E-01 |
| 2.130 | .227E-01 | 2.135 | .242E-01 | 2.140 | .224E-01 | 2.145 | .167E-01 | 2.150 | .758E-02 |
| 2.155 | -.379E-02 | 2.160 | -.156E-01 | 2.165 | -.260E-01 | 2.170 | -.339E-01 | 2.175 | -.388E-01 |
| 2.180 | -.405E-01 | 2.185 | -.393E-01 | 2.190 | -.356E-01 | 2.195 | -.300E-01 | 2.200 | -.232E-01 |
| 2.205 | -.168E-01 | 2.210 | -.122E-01 | 2.215 | -.110E-01 | 2.220 | -.136E-01 | 2.225 | -.193E-01 |
| 2.230 | -.263E-01 | 2.235 | -.322E-01 | 2.240 | -.354E-01 | 2.245 | -.349E-01 | 2.250 | -.312E-01 |
| 2.255 | -.258E-01 | 2.260 | -.205E-01 | 2.265 | -.170E-01 | 2.270 | -.150E-01 | 2.275 | -.179E-01 |
| 2.280 | -.222E-01 | 2.285 | -.280E-01 | 2.290 | -.344E-01 | 2.295 | -.402E-01 | 2.300 | -.448E-01 |
| 2.305 | -.475E-01 | 2.310 | -.483E-01 | 2.315 | -.476E-01 | 2.320 | -.461E-01 | 2.325 | -.443E-01 |
| 2.330 | -.426E-01 | 2.335 | -.412E-01 | 2.340 | -.399E-01 | 2.345 | -.385E-01 | 2.350 | -.370E-01 |
| 2.355 | -.354E-01 | 2.360 | -.337E-01 | 2.365 | -.321E-01 | 2.370 | -.310E-01 | 2.375 | -.305E-01 |
| 2.380 | -.309E-01 | 2.385 | -.322E-01 | 2.390 | -.342E-01 | 2.395 | -.367E-01 | 2.400 | -.390E-01 |
| 2.405 | -.412E-01 | 2.410 | -.432E-01 | 2.415 | -.455E-01 | 2.420 | -.487E-01 | 2.425 | -.536E-01 |
| 2.430 | -.604E-01 | 2.435 | -.691E-01 | 2.440 | -.791E-01 | 2.445 | -.897E-01 | 2.450 | -.994E-01 |
| 2.455 | -.107E+00 | 2.460 | -.111E+00 | 2.465 | -.110E+00 | 2.470 | -.104E+00 | 2.475 | -.946E-01 |
| 2.480 | -.835E-01 | 2.485 | -.733E-01 | 2.490 | -.664E-01 | 2.495 | -.641E-01 | 2.500 | -.664E-01 |
| 2.505 | -.719E-01 | 2.510 | -.787E-01 | 2.515 | -.846E-01 | 2.520 | -.878E-01 | 2.525 | -.870E-01 |
| 2.530 | -.816E-01 | 2.535 | -.716E-01 | 2.540 | -.578E-01 | 2.545 | -.420E-01 | 2.550 | -.260E-01 |
| 2.555 | -.121E-01 | 2.560 | -.194E-02 | 2.565 | .360E-02 | 2.570 | .470E-02 | 2.575 | .240E-02 |
| 2.580 | -.178E-02 | 2.585 | -.620E-02 | 2.590 | -.957E-02 | 2.595 | -.113E-01 | 2.600 | -.116E-01 |
| 2.605 | -.117E-01 | 2.610 | -.134E-01 | 2.615 | -.185E-01 | 2.620 | -.274E-01 | 2.625 | -.392E-01 |
| 2.630 | -.509E-01 | 2.635 | -.590E-01 | 2.640 | -.607E-01 | 2.645 | -.558E-01 | 2.650 | -.468E-01 |
| 2.655 | -.384E-01 | 2.660 | -.352E-01 | 2.665 | -.400E-01 | 2.670 | -.516E-01 | 2.675 | -.656E-01 |
| 2.680 | -.755E-01 | 2.685 | -.752E-01 | 2.690 | -.616E-01 | 2.695 | -.356E-01 | 2.700 | -.146E-02 |
| 2.705 | .341E-01 | 2.710 | .645E-01 | 2.715 | .852E-01 | 2.720 | .947E-01 | 2.725 | .948E-01 |
| 2.730 | .899E-01 | 2.735 | .857E-01 | 2.740 | .870E-01 | 2.745 | .953E-01 | 2.750 | .113E+00 |
| 2.755 | .133E+00 | 2.760 | .191E+00 | 2.765 | .160E+00 | 2.770 | .157E+00 | 2.775 | .142E+00 |
| 2.780 | .117E+00 | 2.785 | .874E-01 | 2.790 | .599E-01 | 2.795 | .391E-01 | 2.800 | .275E-01 |
| 2.805 | .254E-01 | 2.810 | .306E-01 | 2.815 | .404E-01 | 2.820 | .519E-01 | 2.825 | .629E-01 |
| 2.830 | .715E-01 | 2.835 | .757E-01 | 2.840 | .773E-01 | 2.845 | .724E-01 | 2.850 | .617E-01 |
| 2.855 | .457E-01 | 2.860 | .256E-01 | 2.865 | .749E-02 | 2.870 | -.812E-02 | 2.875 | -.175E-01 |
| 2.880 | -.197E-01 | 2.885 | -.151E-01 | 2.890 | -.956E-02 | 2.895 | -.441E-02 | 2.900 | -.367E-02 |
| 2.905 | -.923E-02 | 2.910 | -.210E-01 | 2.915 | -.376E-01 | 2.920 | -.554E-01 | 2.925 | -.752E-01 |
| 2.930 | -.918E-01 | 2.935 | -.105E+00 | 2.940 | -.113E+00 | 2.945 | -.116E+00 | 2.950 | -.115E+00 |
| 2.955 | -.109E+00 | 2.960 | -.102E+00 | 2.965 | -.949E-01 | 2.970 | -.910E-01 | 2.975 | -.915E-01 |
| 2.980 | -.965E-01 | 2.985 | -.105E+00 | 2.990 | -.116E+00 | 2.995 | -.126E+00 | 3.000 | -.134E+00 |
| 3.005 | -.139E+00 | 3.010 | -.140E+00 | 3.015 | -.137E+00 | 3.020 | -.132E+00 | 3.025 | -.125E+00 |
| 3.030 | -.118E+00 | 3.035 | -.112E+00 | 3.040 | -.107E+00 | 3.045 | -.105E+00 | 3.050 | -.105E+00 |
| 3.055 | -.105E+00 | 3.060 | -.107E+00 | 3.065 | -.108E+00 | 3.070 | -.110E+00 | 3.075 | -.111E+00 |
| 3.080 | -.113E+00 | 3.085 | -.114E+00 | 3.090 | -.114E+00 | 3.095 | -.112E+00 | 3.100 | -.107E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 3.230 | .247E+00 | 3.235 | .236E+00 | 3.240 | .231E+00 | 3.245 | .232E+00 | 3.250 | .239E+00 |
| 3.255 | .251E+00 | 3.260 | .264E+00 | 3.265 | .277E+00 | 3.270 | .289E+00 | 3.275 | .298E+00 |
| 3.280 | .307E+00 | 3.285 | .315E+00 | 3.290 | .323E+00 | 3.295 | .333E+00 | 3.300 | .344E+00 |
| 3.305 | .355E+00 | 3.310 | .366E+00 | 3.315 | .376E+00 | 3.320 | .383E+00 | 3.325 | .386E+00 |
| 3.330 | .386E+00 | 3.335 | .382E+00 | 3.340 | .374E+00 | 3.345 | .364E+00 | 3.350 | .352E+00 |
| 3.355 | .338E+00 | 3.360 | .323E+00 | 3.365 | .308E+00 | 3.370 | .292E+00 | 3.375 | .275E+00 |
| 3.380 | .258E+00 | 3.385 | .240E+00 | 3.390 | .223E+00 | 3.395 | .207E+00 | 3.400 | .193E+00 |
| 3.405 | .180E+00 | 3.410 | .170E+00 | 3.415 | .160E+00 | 3.420 | .151E+00 | 3.425 | .141E+00 |
| 3.430 | .130E+00 | 3.435 | .117E+00 | 3.440 | .103E+00 | 3.445 | .906E-01 | 3.450 | .793E-01 |
| 3.455 | .702E-01 | 3.460 | .636E-01 | 3.465 | .592E-01 | 3.470 | .553E-01 | 3.475 | .538E-01 |
| 3.480 | .501E-01 | 3.485 | .438E-01 | 3.490 | .377E-01 | 3.495 | .192E-01 | 3.500 | .788E-03 |
| 3.505 | -.200E-01 | 3.510 | -.411E-01 | 3.515 | -.600E-01 | 3.520 | -.747E-01 | 3.525 | -.842E-01 |
| 3.530 | -.885E-01 | 3.535 | -.882E-01 | 3.540 | -.849E-01 | 3.545 | -.803E-01 | 3.550 | -.759E-01 |
| 3.555 | -.730E-01 | 3.560 | -.726E-01 | 3.565 | -.747E-01 | 3.570 | -.789E-01 | 3.575 | -.839E-01 |
| 3.580 | -.878E-01 | 3.585 | -.885E-01 | 3.590 | -.843E-01 | 3.595 | -.746E-01 | 3.600 | -.603E-01 |
| 3.605 | -.436E-01 | 3.610 | -.275E-01 | 3.615 | -.146E-01 | 3.620 | -.608E-02 | 3.625 | -.131E-02 |
| 3.630 | .202E-02 | 3.635 | .658E-02 | 3.640 | .140E-01 | 3.645 | .239E-01 | 3.650 | .338E-01 |
| 3.655 | .400E-01 | 3.660 | .393E-01 | 3.665 | .305E-01 | 3.670 | .154E-01 | 3.675 | -.190E-02 |
| 3.680 | -.159E-01 | 3.685 | -.223E-01 | 3.690 | -.190E-01 | 3.695 | -.743E-02 | 3.700 | .788E-02 |
| 3.705 | .208E-01 | 3.710 | .253E-01 | 3.715 | .177E-01 | 3.720 | -.218E-02 | 3.725 | -.306E-01 |
| 3.730 | -.612E-01 | 3.735 | -.864E-01 | 3.740 | -.100E+00 | 3.745 | -.992E-01 | 3.750 | -.845E-01 |
| 3.755 | -.600E-01 | 3.760 | -.317E-01 | 3.765 | -.520E-02 | 3.770 | .153E-01 | 3.775 | .280E-01 |
| 3.780 | .331E-01 | 3.785 | .322E-01 | 3.790 | .277E-01 | 3.795 | .217E-01 | 3.800 | .162E-01 |
| 3.805 | .127E-01 | 3.810 | .122E-01 | 3.815 | .146E-01 | 3.820 | .192E-01 | 3.825 | .244E-01 |
| 3.830 | .285E-01 | 3.835 | .295E-01 | 3.840 | .261E-01 | 3.845 | .173E-01 | 3.850 | .238E-02 |
| 3.855 | -.191E-01 | 3.860 | -.470E-01 | 3.865 | -.797E-01 | 3.870 | -.114E+00 | 3.875 | -.147E+00 |
| 3.880 | -.172E+00 | 3.885 | -.186E+00 | 3.890 | -.187E+00 | 3.895 | -.178E+00 | 3.900 | -.161E+00 |
| 3.905 | -.142E+00 | 3.910 | -.125E+00 | 3.915 | -.115E+00 | 3.920 | -.113E+00 | 3.925 | -.116E+00 |
| 3.930 | -.123E+00 | 3.935 | -.131E+00 | 3.940 | -.136E+00 | 3.945 | -.137E+00 | 3.950 | -.132E+00 |
| 3.955 | -.121E+00 | 3.960 | -.106E+00 | 3.965 | -.876E-01 | 3.970 | -.704E-01 | 3.975 | -.568E-01 |
| 3.980 | -.485E-01 | 3.985 | -.461E-01 | 3.990 | -.484E-01 | 3.995 | -.535E-01 | 4.000 | -.593E-01 |
| 4.005 | -.640E-01 | 4.010 | -.668E-01 | 4.015 | -.674E-01 | 4.020 | -.664E-01 | 4.025 | -.648E-01 |
| 4.030 | -.641E-01 | 4.035 | -.657E-01 | 4.040 | -.704E-01 | 4.045 | -.784E-01 | 4.050 | -.884E-01 |
| 4.055 | -.982E-01 | 4.060 | -.105E+00 | 4.065 | -.107E+00 | 4.070 | -.104E+00 | 4.075 | -.939E-01 |
| 4.080 | -.802E-01 | 4.085 | -.646E-01 | 4.090 | -.488E-01 | 4.095 | -.338E-01 | 4.100 | -.195E-01 |
| 4.105 | -.519E-02 | 4.110 | .987E-02 | 4.115 | .261E-01 | 4.120 | .436E-01 | 4.125 | .616E-01 |
| 4.130 | .792E-01 | 4.135 | .955E-01 | 4.140 | .109E+00 | 4.145 | .120E+00 | 4.150 | .128E+00 |
| 4.155 | .131E+00 | 4.160 | .130E+00 | 4.165 | .124E+00 | 4.170 | .115E+00 | 4.175 | .103E+00 |
| 4.180 | .899E-01 | 4.185 | .772E-01 | 4.190 | .669E-01 | 4.195 | .600E-01 | 4.200 | .568E-01 |
| 4.205 | .564E-01 | 4.210 | .571E-01 | 4.215 | .577E-01 | 4.220 | .573E-01 | 4.225 | .565E-01 |
| 4.230 | .566E-01 | 4.235 | .588E-01 | 4.240 | .642E-01 | 4.245 | .729E-01 | 4.250 | .842E-01 |
| 4.255 | .970E-01 | 4.260 | .110E+00 | 4.265 | .123E+00 | 4.270 | .134E+00 | 4.275 | .142E+00 |
| 4.280 | .147E+00 | 4.285 | .147E+00 | 4.290 | .143E+00 | 4.295 | .133E+00 | 4.300 | .119E+00 |
| 4.305 | .103E+00 | 4.310 | .856E-01 | 4.315 | .674E-01 | 4.320 | .489E-01 | 4.325 | .307E-01 |
| 4.330 | .132E-01 | 4.335 | -.268E-02 | 4.340 | -.161E-01 | 4.345 | -.263E-01 | 4.350 | -.334E-01 |
| 4.355 | -.380E-01 | 4.360 | -.409E-01 | 4.365 | -.433E-01 | 4.370 | -.458E-01 | 4.375 | -.487E-01 |
| 4.380 | -.516E-01 | 4.385 | -.540E-01 | 4.390 | -.548E-01 | 4.395 | -.533E-01 | 4.400 | -.492E-01 |
| 4.405 | -.427E-01 | 4.410 | -.345E-01 | 4.415 | -.258E-01 | 4.420 | -.179E-01 | 4.425 | -.118E-01 |
| 4.430 | -.806E-02 | 4.435 | -.652E-02 | 4.440 | -.672E-02 | 4.445 | -.780E-02 | 4.450 | -.865E-02 |
| 4.455 | -.805E-02 | 4.460 | -.488E-02 | 4.465 | .147E-02 | 4.470 | .107E-01 | 4.475 | .213E-01 |
| 4.480 | .308E-01 | 4.485 | .363E-01 | 4.490 | .355E-01 | 4.495 | .271E-01 | 4.500 | .116E-01 |
| 4.505 | -.896E-02 | 4.510 | -.318E-01 | 4.515 | -.538E-01 | 4.520 | -.724E-01 | 4.525 | -.859E-01 |
| 4.530 | -.936E-01 | 4.535 | -.961E-01 | 4.540 | -.946E-01 | 4.545 | -.912E-01 | 4.550 | -.876E-01 |
| 4.555 | -.855E-01 | 4.560 | -.854E-01 | 4.565 | -.869E-01 | 4.570 | -.892E-01 | 4.575 | -.910E-01 |
| 4.580 | -.913E-01 | 4.585 | -.894E-01 | 4.590 | -.848E-01 | 4.595 | -.777E-01 | 4.600 | -.683E-01 |
| 4.605 | -.574E-01 | 4.610 | -.460E-01 | 4.615 | -.349E-01 | 4.620 | -.240E-01 | 4.625 | -.120E-01 |
| 4.630 | .339E-02 | 4.635 | .246E-01 | 4.640 | .527E-01 | 4.645 | .854E-01 | 4.650 | .122E+00 |
| 4.655 | .154E+00 | 4.660 | .178E+00 | 4.665 | .192E+00 | 4.670 | .198E+00 | 4.675 | .198E+00 |
| 4.680 | .200E+00 | 4.685 | .208E+00 | 4.690 | .225E+00 | 4.695 | .249E+00 | 4.700 | .279E+00 |
| 4.705 | .308E+00 | 4.710 | .333E+00 | 4.715 | .348E+00 | 4.720 | .352E+00 | 4.725 | .347E+00 |
| 4.730 | .334E+00 | 4.735 | .317E+00 | 4.740 | .303E+00 | 4.745 | .294E+00 | 4.750 | .293E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 4.880 | .137E+00 | 4.885 | .152E+00 | 4.890 | .108E+00 | 4.875 | .648E-01 | 4.875 | .323E-01 |
| 4.880 | .119E-01 | 4.885 | .303E-02 | 4.890 | .377E-02 | 4.895 | .104E-01 | 4.900 | .183E-01 |
| 4.905 | .234E-01 | 4.910 | .225E-01 | 4.915 | .143E-01 | 4.920 | -.930E-03 | 4.925 | -.217E-01 |
| 4.930 | -.456E-01 | 4.935 | -.700E-01 | 4.940 | -.929E-01 | 4.945 | -.113E+00 | 4.950 | -.130E+00 |
| 4.955 | -.145E+00 | 4.960 | -.161E+00 | 4.965 | -.180E+00 | 4.970 | -.203E+00 | 4.975 | -.232E+00 |
| 4.980 | -.266E+00 | 4.985 | -.303E+00 | 4.990 | -.341E+00 | 4.995 | -.377E+00 | 5.000 | -.410E+00 |
| 5.005 | -.439E+00 | 5.010 | -.464E+00 | 5.015 | -.484E+00 | 5.020 | -.500E+00 | 5.025 | -.512E+00 |
| 5.030 | -.520E+00 | 5.035 | -.525E+00 | 5.040 | -.527E+00 | 5.045 | -.527E+00 | 5.050 | -.525E+00 |
| 5.055 | -.523E+00 | 5.060 | -.520E+00 | 5.065 | -.516E+00 | 5.070 | -.511E+00 | 5.075 | -.505E+00 |
| 5.080 | -.499E+00 | 5.085 | -.493E+00 | 5.090 | -.487E+00 | 5.095 | -.482E+00 | 5.100 | -.476E+00 |
| 5.105 | -.469E+00 | 5.110 | -.459E+00 | 5.115 | -.448E+00 | 5.120 | -.433E+00 | 5.125 | -.417E+00 |
| 5.130 | -.401E+00 | 5.135 | -.385E+00 | 5.140 | -.371E+00 | 5.145 | -.359E+00 | 5.150 | -.347E+00 |
| 5.155 | -.336E+00 | 5.160 | -.325E+00 | 5.165 | -.312E+00 | 5.170 | -.298E+00 | 5.175 | -.282E+00 |
| 5.180 | -.264E+00 | 5.185 | -.245E+00 | 5.190 | -.223E+00 | 5.195 | -.199E+00 | 5.200 | -.173E+00 |
| 5.205 | -.147E+00 | 5.210 | -.122E+00 | 5.215 | -.101E+00 | 5.220 | -.827E-01 | 5.225 | -.676E-01 |
| 5.230 | -.538E-01 | 5.235 | -.392E-01 | 5.240 | -.219E-01 | 5.245 | -.126E-02 | 5.250 | .224E-01 |
| 5.255 | .476E-01 | 5.260 | .723E-01 | 5.265 | .946E-01 | 5.270 | .113E+00 | 5.275 | .127E+00 |
| 5.280 | .137E+00 | 5.285 | .143E+00 | 5.290 | .148E+00 | 5.295 | .151E+00 | 5.300 | .155E+00 |
| 5.305 | .159E+00 | 5.310 | .163E+00 | 5.315 | .160E+00 | 5.320 | .172E+00 | 5.325 | .177E+00 |
| 5.330 | .180E+00 | 5.335 | .183E+00 | 5.340 | .186E+00 | 5.345 | .189E+00 | 5.350 | .192E+00 |
| 5.355 | .195E+00 | 5.360 | .200E+00 | 5.365 | .205E+00 | 5.370 | .210E+00 | 5.375 | .216E+00 |
| 5.380 | .222E+00 | 5.385 | .226E+00 | 5.390 | .228E+00 | 5.395 | .229E+00 | 5.400 | .226E+00 |
| 5.405 | .221E+00 | 5.410 | .211E+00 | 5.415 | .198E+00 | 5.420 | .180E+00 | 5.425 | .159E+00 |
| 5.430 | .135E+00 | 5.435 | .111E+00 | 5.440 | .875E-01 | 5.445 | .670E-01 | 5.450 | .502E-01 |
| 5.455 | .378E-01 | 5.460 | .302E-01 | 5.465 | .278E-01 | 5.470 | .300E-01 | 5.475 | .351E-01 |
| 5.480 | .406E-01 | 5.485 | .430E-01 | 5.490 | .393E-01 | 5.495 | .279E-01 | 5.500 | .907E-02 |
| 5.505 | -.152E-01 | 5.510 | -.419E-01 | 5.515 | -.680E-01 | 5.520 | -.914E-01 | 5.525 | -.111E+00 |
| 5.530 | -.126E+00 | 5.535 | -.136E+00 | 5.540 | -.143E+00 | 5.545 | -.145E+00 | 5.550 | -.146E+00 |
| 5.555 | -.147E+00 | 5.560 | -.150E+00 | 5.565 | -.159E+00 | 5.570 | -.174E+00 | 5.575 | -.195E+00 |
| 5.580 | -.221E+00 | 5.585 | -.250E+00 | 5.590 | -.280E+00 | 5.595 | -.308E+00 | 5.600 | -.334E+00 |
| 5.605 | -.354E+00 | 5.610 | -.368E+00 | 5.615 | -.374E+00 | 5.620 | -.374E+00 | 5.625 | -.367E+00 |
| 5.630 | -.357E+00 | 5.635 | -.346E+00 | 5.640 | -.338E+00 | 5.645 | -.337E+00 | 5.650 | -.341E+00 |
| 5.655 | -.352E+00 | 5.660 | -.357E+00 | 5.665 | -.381E+00 | 5.670 | -.393E+00 | 5.675 | -.400E+00 |
| 5.680 | -.399E+00 | 5.685 | -.392E+00 | 5.690 | -.380E+00 | 5.695 | -.365E+00 | 5.700 | -.350E+00 |
| 5.705 | -.337E+00 | 5.710 | -.329E+00 | 5.715 | -.326E+00 | 5.720 | -.328E+00 | 5.725 | -.335E+00 |
| 5.730 | -.342E+00 | 5.735 | -.347E+00 | 5.740 | -.345E+00 | 5.745 | -.334E+00 | 5.750 | -.312E+00 |
| 5.755 | -.284E+00 | 5.760 | -.252E+00 | 5.765 | -.222E+00 | 5.770 | -.198E+00 | 5.775 | -.182E+00 |
| 5.780 | -.175E+00 | 5.785 | -.173E+00 | 5.790 | -.173E+00 | 5.795 | -.171E+00 | 5.800 | -.162E+00 |
| 5.805 | -.144E+00 | 5.810 | -.115E+00 | 5.815 | -.759E-01 | 5.820 | -.284E-01 | 5.825 | .232E-01 |
| 5.830 | .735E-01 | 5.835 | .117E+00 | 5.840 | .148E+00 | 5.845 | .165E+00 | 5.850 | .168E+00 |
| 5.855 | .162E+00 | 5.860 | .151E+00 | 5.865 | .143E+00 | 5.870 | .142E+00 | 5.875 | .153E+00 |
| 5.880 | .175E+00 | 5.885 | .206E+00 | 5.890 | .243E+00 | 5.895 | .280E+00 | 5.900 | .315E+00 |
| 5.905 | .343E+00 | 5.910 | .365E+00 | 5.915 | .378E+00 | 5.920 | .384E+00 | 5.925 | .386E+00 |
| 5.930 | .387E+00 | 5.935 | .390E+00 | 5.940 | .398E+00 | 5.945 | .411E+00 | 5.950 | .430E+00 |
| 5.955 | .451E+00 | 5.960 | .472E+00 | 5.965 | .489E+00 | 5.970 | .500E+00 | 5.975 | .505E+00 |
| 5.980 | .504E+00 | 5.985 | .498E+00 | 5.990 | .490E+00 | 5.995 | .480E+00 | 6.000 | .471E+00 |
| 6.005 | .464E+00 | 6.010 | .451E+00 | 6.015 | .462E+00 | 6.020 | .467E+00 | 6.025 | .474E+00 |
| 6.030 | .481E+00 | 6.035 | .488E+00 | 6.040 | .492E+00 | 6.045 | .492E+00 | 6.050 | .488E+00 |
| 6.055 | .479E+00 | 6.060 | .463E+00 | 6.065 | .441E+00 | 6.070 | .412E+00 | 6.075 | .378E+00 |
| 6.080 | .340E+00 | 6.085 | .299E+00 | 6.090 | .256E+00 | 6.095 | .213E+00 | 6.100 | .172E+00 |
| 6.105 | .135E+00 | 6.110 | .103E+00 | 6.115 | .784E-01 | 6.120 | .598E-01 | 6.125 | .460E-01 |
| 6.130 | .344E-01 | 6.135 | .214E-01 | 6.140 | .412E-02 | 6.145 | -.194E-01 | 6.150 | -.495E-01 |
| 6.155 | -.851E-01 | 6.160 | -.124E+00 | 6.165 | -.164E+00 | 6.170 | -.203E+00 | 6.175 | -.239E+00 |
| 6.180 | -.271E+00 | 6.185 | -.301E+00 | 6.190 | -.328E+00 | 6.195 | -.354E+00 | 6.200 | -.380E+00 |
| 6.205 | -.404E+00 | 6.210 | -.427E+00 | 6.215 | -.446E+00 | 6.220 | -.461E+00 | 6.225 | -.470E+00 |
| 6.230 | -.473E+00 | 6.235 | -.471E+00 | 6.240 | -.467E+00 | 6.245 | -.450E+00 | 6.250 | -.455E+00 |
| 6.255 | -.451E+00 | 6.260 | -.450E+00 | 6.265 | -.452E+00 | 6.270 | -.456E+00 | 6.275 | -.461E+00 |
| 6.280 | -.469E+00 | 6.285 | -.477E+00 | 6.290 | -.486E+00 | 6.295 | -.496E+00 | 6.300 | -.505E+00 |
| 6.305 | -.512E+00 | 6.310 | -.518E+00 | 6.315 | -.521E+00 | 6.320 | -.522E+00 | 6.325 | -.521E+00 |
| 6.330 | -.516E+00 | 6.335 | -.506E+00 | 6.340 | -.491E+00 | 6.345 | -.471E+00 | 6.350 | -.447E+00 |
| 6.355 | -.421E+00 | 6.360 | -.395E+00 | 6.365 | -.373E+00 | 6.370 | -.354E+00 | 6.375 | -.339E+00 |
| 6.380 | -.328E+00 | 6.385 | -.317E+00 | 6.390 | -.306E+00 | 6.395 | -.293E+00 | 6.400 | -.278E+00 |
| 6.405 | -.259E+00 | 6.410 | -.237E+00 | 6.415 | -.210E+00 | 6.420 | -.179E+00 | 6.425 | -.145E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 6.530 | .466E+00 | 6.535 | .478E+00 | 6.540 | .478E+00 | 6.545 | .487E+00 | 6.550 | .490E+00 |
| 6.555 | .481E+00 | 6.560 | .475E+00 | 6.565 | .472E+00 | 6.570 | .475E+00 | 6.575 | .482E+00 |
| 6.580 | .491E+00 | 6.585 | .499E+00 | 6.590 | .502E+00 | 6.595 | .498E+00 | 6.600 | .488E+00 |
| 6.605 | .473E+00 | 6.610 | .454E+00 | 6.615 | .435E+00 | 6.620 | .416E+00 | 6.625 | .397E+00 |
| 6.630 | .380E+00 | 6.635 | .356E+00 | 6.640 | .352E+00 | 6.645 | .340E+00 | 6.650 | .327E+00 |
| 6.655 | .311E+00 | 6.660 | .290E+00 | 6.665 | .263E+00 | 6.670 | .232E+00 | 6.675 | .199E+00 |
| 6.680 | .167E+00 | 6.685 | .138E+00 | 6.690 | .115E+00 | 6.695 | .949E-01 | 6.700 | .780E-01 |
| 6.705 | .619E-01 | 6.710 | .450E-01 | 6.715 | .262E-01 | 6.720 | .517E-02 | 6.725 | -.179E-01 |
| 6.730 | -.420E-01 | 6.735 | -.657E-01 | 6.740 | -.872E-01 | 6.745 | -.105E+00 | 6.750 | -.118E+00 |
| 6.755 | -.128E+00 | 6.760 | -.135E+00 | 6.765 | -.144E+00 | 6.770 | -.157E+00 | 6.775 | -.175E+00 |
| 6.780 | -.199E+00 | 6.785 | -.226E+00 | 6.790 | -.253E+00 | 6.795 | -.278E+00 | 6.800 | -.297E+00 |
| 6.805 | -.308E+00 | 6.810 | -.309E+00 | 6.815 | -.301E+00 | 6.820 | -.285E+00 | 6.825 | -.265E+00 |
| 6.830 | -.244E+00 | 6.835 | -.226E+00 | 6.840 | -.213E+00 | 6.845 | -.208E+00 | 6.850 | -.210E+00 |
| 6.855 | -.215E+00 | 6.860 | -.223E+00 | 6.865 | -.229E+00 | 6.870 | -.230E+00 | 6.875 | -.222E+00 |
| 6.880 | -.206E+00 | 6.885 | -.179E+00 | 6.890 | -.144E+00 | 6.895 | -.103E+00 | 6.900 | -.587E-01 |
| 6.905 | -.151E-01 | 6.910 | .248E-01 | 6.915 | .590E-01 | 6.920 | .871E-01 | 6.925 | .110E+00 |
| 6.930 | .130E+00 | 6.935 | .149E+00 | 6.940 | .169E+00 | 6.945 | .191E+00 | 6.950 | .216E+00 |
| 6.955 | .245E+00 | 6.960 | .276E+00 | 6.965 | .308E+00 | 6.970 | .341E+00 | 6.975 | .372E+00 |
| 6.980 | .399E+00 | 6.985 | .422E+00 | 6.990 | .438E+00 | 6.995 | .448E+00 | 7.000 | .453E+00 |
| 7.005 | .455E+00 | 7.010 | .456E+00 | 7.015 | .457E+00 | 7.020 | .450E+00 | 7.025 | .464E+00 |
| 7.030 | .468E+00 | 7.035 | .472E+00 | 7.040 | .475E+00 | 7.045 | .476E+00 | 7.050 | .475E+00 |
| 7.055 | .472E+00 | 7.060 | .465E+00 | 7.065 | .453E+00 | 7.070 | .435E+00 | 7.075 | .413E+00 |
| 7.080 | .388E+00 | 7.085 | .363E+00 | 7.090 | .340E+00 | 7.095 | .322E+00 | 7.100 | .309E+00 |
| 7.105 | .301E+00 | 7.110 | .295E+00 | 7.115 | .288E+00 | 7.120 | .280E+00 | 7.125 | .268E+00 |
| 7.130 | .252E+00 | 7.135 | .232E+00 | 7.140 | .208E+00 | 7.145 | .181E+00 | 7.150 | .152E+00 |
| 7.155 | .123E+00 | 7.160 | .940E-01 | 7.165 | .659E-01 | 7.170 | .420E-01 | 7.175 | .193E-01 |
| 7.180 | -.216E-02 | 7.185 | -.233E-01 | 7.190 | -.453E-01 | 7.195 | -.689E-01 | 7.200 | -.946E-01 |
| 7.205 | -.122E+00 | 7.210 | -.152E+00 | 7.215 | -.182E+00 | 7.220 | -.212E+00 | 7.225 | -.240E+00 |
| 7.230 | -.268E+00 | 7.235 | -.292E+00 | 7.240 | -.314E+00 | 7.245 | -.334E+00 | 7.250 | -.351E+00 |
| 7.255 | -.366E+00 | 7.260 | -.378E+00 | 7.265 | -.388E+00 | 7.270 | -.394E+00 | 7.275 | -.398E+00 |
| 7.280 | -.400E+00 | 7.285 | -.399E+00 | 7.290 | -.398E+00 | 7.295 | -.396E+00 | 7.300 | -.393E+00 |
| 7.305 | -.389E+00 | 7.310 | -.382E+00 | 7.315 | -.372E+00 | 7.320 | -.359E+00 | 7.325 | -.344E+00 |
| 7.330 | -.327E+00 | 7.335 | -.309E+00 | 7.340 | -.293E+00 | 7.345 | -.279E+00 | 7.350 | -.268E+00 |
| 7.355 | -.260E+00 | 7.360 | -.254E+00 | 7.365 | -.249E+00 | 7.370 | -.244E+00 | 7.375 | -.237E+00 |
| 7.380 | -.229E+00 | 7.385 | -.218E+00 | 7.390 | -.205E+00 | 7.395 | -.192E+00 | 7.400 | -.179E+00 |
| 7.405 | -.167E+00 | 7.410 | -.156E+00 | 7.415 | -.145E+00 | 7.420 | -.134E+00 | 7.425 | -.121E+00 |
| 7.430 | -.107E+00 | 7.435 | -.898E-01 | 7.440 | -.679E-01 | 7.445 | -.409E-01 | 7.450 | -.855E-02 |
| 7.455 | .292E-01 | 7.460 | .674E-01 | 7.465 | .107E+00 | 7.470 | .145E+00 | 7.475 | .180E+00 |
| 7.480 | .211E+00 | 7.485 | .240E+00 | 7.490 | .267E+00 | 7.495 | .293E+00 | 7.500 | .317E+00 |
| 7.505 | .338E+00 | 7.510 | .356E+00 | 7.515 | .369E+00 | 7.520 | .377E+00 | 7.525 | .379E+00 |
| 7.530 | .377E+00 | 7.535 | .371E+00 | 7.540 | .362E+00 | 7.545 | .352E+00 | 7.550 | .341E+00 |
| 7.555 | .329E+00 | 7.560 | .316E+00 | 7.565 | .303E+00 | 7.570 | .290E+00 | 7.575 | .274E+00 |
| 7.580 | .255E+00 | 7.585 | .234E+00 | 7.590 | .208E+00 | 7.595 | .181E+00 | 7.600 | .152E+00 |
| 7.605 | .126E+00 | 7.610 | .103E+00 | 7.615 | .847E-01 | 7.620 | .717E-01 | 7.625 | .634E-01 |
| 7.630 | .585E-01 | 7.635 | .553E-01 | 7.640 | .520E-01 | 7.645 | .468E-01 | 7.650 | .383E-01 |
| 7.655 | .258E-01 | 7.660 | .100E-01 | 7.665 | -.762E-02 | 7.670 | -.249E-01 | 7.675 | -.400E-01 |
| 7.680 | -.519E-01 | 7.685 | -.610E-01 | 7.690 | -.687E-01 | 7.695 | -.758E-01 | 7.700 | -.871E-01 |
| 7.705 | -.100E+00 | 7.710 | -.117E+00 | 7.715 | -.136E+00 | 7.720 | -.157E+00 | 7.725 | -.180E+00 |
| 7.730 | -.201E+00 | 7.735 | -.221E+00 | 7.740 | -.237E+00 | 7.745 | -.248E+00 | 7.750 | -.254E+00 |
| 7.755 | -.256E+00 | 7.760 | -.257E+00 | 7.765 | -.258E+00 | 7.770 | -.263E+00 | 7.775 | -.272E+00 |
| 7.780 | -.287E+00 | 7.785 | -.306E+00 | 7.790 | -.329E+00 | 7.795 | -.354E+00 | 7.800 | -.376E+00 |
| 7.805 | -.392E+00 | 7.810 | -.399E+00 | 7.815 | -.397E+00 | 7.820 | -.384E+00 | 7.825 | -.364E+00 |
| 7.830 | -.341E+00 | 7.835 | -.319E+00 | 7.840 | -.299E+00 | 7.845 | -.285E+00 | 7.850 | -.276E+00 |
| 7.855 | -.272E+00 | 7.860 | -.271E+00 | 7.865 | -.272E+00 | 7.870 | -.271E+00 | 7.875 | -.264E+00 |
| 7.880 | -.250E+00 | 7.885 | -.229E+00 | 7.890 | -.201E+00 | 7.895 | -.170E+00 | 7.900 | -.139E+00 |
| 7.905 | -.111E+00 | 7.910 | -.873E-01 | 7.915 | -.672E-01 | 7.920 | -.499E-01 | 7.925 | -.342E-01 |
| 7.930 | -.193E-01 | 7.935 | -.496E-02 | 7.940 | .870E-02 | 7.945 | .213E-01 | 7.950 | .324E-01 |
| 7.955 | .414E-01 | 7.960 | .476E-01 | 7.965 | .503E-01 | 7.970 | .490E-01 | 7.975 | .439E-01 |
| 7.980 | .356E-01 | 7.985 | .256E-01 | 7.990 | .151E-01 | 7.995 | .541E-02 | 8.000 | -.255E-02 |
| 8.005 | -.811E-02 | 8.010 | -.108E-01 | 8.015 | -.105E-01 | 8.020 | -.715E-02 | 8.025 | -.122E-02 |
| 8.030 | .656E-02 | 8.035 | .153E-01 | 8.040 | .240E-01 | 8.045 | .320E-01 | 8.050 | .388E-01 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 8.180 | -.840E-01 | 8.185 | -.884E-01 | 8.190 | -.924E-01 | 8.195 | -.964E-01 | 8.200 | -.101E+00 |
| 8.205 | -.106E+00 | 8.210 | -.111E+00 | 8.215 | -.115E+00 | 8.220 | -.116E+00 | 8.225 | -.114E+00 |
| 8.230 | -.111E+00 | 8.235 | -.107E+00 | 8.240 | -.106E+00 | 8.245 | -.107E+00 | 8.250 | -.112E+00 |
| 8.255 | -.119E+00 | 8.260 | -.127E+00 | 8.265 | -.132E+00 | 8.270 | -.133E+00 | 8.275 | -.132E+00 |
| 8.280 | -.127E+00 | 8.285 | -.123E+00 | 8.290 | -.120E+00 | 8.295 | -.119E+00 | 8.300 | -.121E+00 |
| 8.305 | -.125E+00 | 8.310 | -.130E+00 | 8.315 | -.135E+00 | 8.320 | -.139E+00 | 8.325 | -.141E+00 |
| 8.330 | -.142E+00 | 8.335 | -.141E+00 | 8.340 | -.136E+00 | 8.345 | -.127E+00 | 8.350 | -.116E+00 |
| 8.355 | -.102E+00 | 8.360 | -.892E-01 | 8.365 | -.778E-01 | 8.370 | -.691E-01 | 8.375 | -.626E-01 |
| 8.380 | -.567E-01 | 8.385 | -.491E-01 | 8.390 | -.392E-01 | 8.395 | -.231E-01 | 8.400 | -.481E-02 |
| 8.405 | .148E-01 | 8.410 | .331E-01 | 8.415 | .476E-01 | 8.420 | .557E-01 | 8.425 | .600E-01 |
| 8.430 | .582E-01 | 8.435 | .531E-01 | 8.440 | .471E-01 | 8.445 | .427E-01 | 8.450 | .418E-01 |
| 8.455 | .452E-01 | 8.460 | .524E-01 | 8.465 | .620E-01 | 8.470 | .720E-01 | 8.475 | .806E-01 |
| 8.480 | .871E-01 | 8.485 | .918E-01 | 8.490 | .956E-01 | 8.495 | .994E-01 | 8.500 | .104E+00 |
| 8.505 | .108E+00 | 8.510 | .112E+00 | 8.515 | .114E+00 | 8.520 | .114E+00 | 8.525 | .114E+00 |
| 8.530 | .113E+00 | 8.535 | .114E+00 | 8.540 | .118E+00 | 8.545 | .124E+00 | 8.550 | .132E+00 |
| 8.555 | .143E+00 | 8.560 | .157E+00 | 8.565 | .172E+00 | 8.570 | .188E+00 | 8.575 | .204E+00 |
| 8.580 | .217E+00 | 8.585 | .226E+00 | 8.590 | .229E+00 | 8.595 | .225E+00 | 8.600 | .217E+00 |
| 8.605 | .205E+00 | 8.610 | .194E+00 | 8.615 | .185E+00 | 8.620 | .180E+00 | 8.625 | .180E+00 |
| 8.630 | .182E+00 | 8.635 | .185E+00 | 8.640 | .186E+00 | 8.645 | .182E+00 | 8.650 | .172E+00 |
| 8.655 | .156E+00 | 8.660 | .135E+00 | 8.665 | .112E+00 | 8.670 | .908E-01 | 8.675 | .739E-01 |
| 8.680 | .626E-01 | 8.685 | .563E-01 | 8.690 | .532E-01 | 8.695 | .506E-01 | 8.700 | .460E-01 |
| 8.705 | .372E-01 | 8.710 | .226E-01 | 8.715 | .181E-02 | 8.720 | -.248E-01 | 8.725 | -.554E-01 |
| 8.730 | -.870E-01 | 8.735 | -.116E+00 | 8.740 | -.137E+00 | 8.745 | -.150E+00 | 8.750 | -.152E+00 |
| 8.755 | -.147E+00 | 8.760 | -.139E+00 | 8.765 | -.132E+00 | 8.770 | -.130E+00 | 8.775 | -.136E+00 |
| 8.780 | -.149E+00 | 8.785 | -.156E+00 | 8.790 | -.184E+00 | 8.795 | -.200E+00 | 8.800 | -.209E+00 |
| 8.805 | -.210E+00 | 8.810 | -.201E+00 | 8.815 | -.181E+00 | 8.820 | -.154E+00 | 8.825 | -.122E+00 |
| 8.830 | -.905E-01 | 8.835 | -.648E-01 | 8.840 | -.488E-01 | 8.845 | -.444E-01 | 8.850 | -.504E-01 |
| 8.855 | -.637E-01 | 8.860 | -.794E-01 | 8.865 | -.927E-01 | 8.870 | -.100E+00 | 8.875 | -.996E-01 |
| 8.880 | -.916E-01 | 8.885 | -.777E-01 | 8.890 | -.603E-01 | 8.895 | -.419E-01 | 8.900 | -.248E-01 |
| 8.905 | -.104E-01 | 8.910 | .412E-03 | 8.915 | .732E-02 | 8.920 | .108E-01 | 8.925 | .118E-01 |
| 8.930 | .124E-01 | 8.935 | .145E-01 | 8.940 | .206E-01 | 8.945 | .320E-01 | 8.950 | .494E-01 |
| 8.955 | .717E-01 | 8.960 | .958E-01 | 8.965 | .122E+00 | 8.970 | .146E+00 | 8.975 | .166E+00 |
| 8.980 | .184E+00 | 8.985 | .198E+00 | 8.990 | .212E+00 | 8.995 | .224E+00 | 9.000 | .237E+00 |
| 9.005 | .249E+00 | 9.010 | .261E+00 | 9.015 | .272E+00 | 9.020 | .283E+00 | 9.025 | .295E+00 |
| 9.030 | .305E+00 | 9.035 | .314E+00 | 9.040 | .319E+00 | 9.045 | .319E+00 | 9.050 | .315E+00 |
| 9.055 | .307E+00 | 9.060 | .297E+00 | 9.065 | .287E+00 | 9.070 | .278E+00 | 9.075 | .271E+00 |
| 9.080 | .266E+00 | 9.085 | .260E+00 | 9.090 | .255E+00 | 9.095 | .249E+00 | 9.100 | .242E+00 |
| 9.105 | .236E+00 | 9.110 | .229E+00 | 9.115 | .221E+00 | 9.120 | .213E+00 | 9.125 | .203E+00 |
| 9.130 | .192E+00 | 9.135 | .181E+00 | 9.140 | .169E+00 | 9.145 | .157E+00 | 9.150 | .146E+00 |
| 9.155 | .135E+00 | 9.160 | .125E+00 | 9.165 | .116E+00 | 9.170 | .108E+00 | 9.175 | .101E+00 |
| 9.180 | .938E-01 | 9.185 | .854E-01 | 9.190 | .775E-01 | 9.195 | .688E-01 | 9.200 | .533E-01 |
| 9.205 | .363E-01 | 9.210 | .147E-01 | 9.215 | -.122E-01 | 9.220 | -.443E-01 | 9.225 | -.800E-01 |
| 9.230 | -.117E+00 | 9.235 | -.151E+00 | 9.240 | -.180E+00 | 9.245 | -.202E+00 | 9.250 | -.216E+00 |
| 9.255 | -.225E+00 | 9.260 | -.231E+00 | 9.265 | -.235E+00 | 9.270 | -.241E+00 | 9.275 | -.248E+00 |
| 9.280 | -.258E+00 | 9.285 | -.272E+00 | 9.290 | -.289E+00 | 9.295 | -.307E+00 | 9.300 | -.326E+00 |
| 9.305 | -.342E+00 | 9.310 | -.353E+00 | 9.315 | -.360E+00 | 9.320 | -.350E+00 | 9.325 | -.356E+00 |
| 9.330 | -.348E+00 | 9.335 | -.337E+00 | 9.340 | -.323E+00 | 9.345 | -.306E+00 | 9.350 | -.288E+00 |
| 9.355 | -.268E+00 | 9.360 | -.246E+00 | 9.365 | -.222E+00 | 9.370 | -.196E+00 | 9.375 | -.169E+00 |
| 9.380 | -.141E+00 | 9.385 | -.114E+00 | 9.390 | -.890E-01 | 9.395 | -.684E-01 | 9.400 | -.523E-01 |
| 9.405 | -.410E-01 | 9.410 | -.342E-01 | 9.415 | -.316E-01 | 9.420 | -.328E-01 | 9.425 | -.367E-01 |
| 9.430 | -.411E-01 | 9.435 | -.431E-01 | 9.440 | -.394E-01 | 9.445 | -.274E-01 | 9.450 | -.616E-02 |
| 9.455 | .237E-01 | 9.460 | .602E-01 | 9.465 | .101E+00 | 9.470 | .144E+00 | 9.475 | .187E+00 |
| 9.480 | .228E+00 | 9.485 | .265E+00 | 9.490 | .297E+00 | 9.495 | .320E+00 | 9.500 | .335E+00 |
| 9.505 | .343E+00 | 9.510 | .346E+00 | 9.515 | .349E+00 | 9.520 | .353E+00 | 9.525 | .358E+00 |
| 9.530 | .366E+00 | 9.535 | .374E+00 | 9.540 | .381E+00 | 9.545 | .386E+00 | 9.550 | .387E+00 |
| 9.555 | .383E+00 | 9.560 | .373E+00 | 9.565 | .355E+00 | 9.570 | .332E+00 | 9.575 | .304E+00 |
| 9.580 | .277E+00 | 9.585 | .254E+00 | 9.590 | .239E+00 | 9.595 | .235E+00 | 9.600 | .241E+00 |
| 9.605 | .256E+00 | 9.610 | .277E+00 | 9.615 | .300E+00 | 9.620 | .321E+00 | 9.625 | .338E+00 |
| 9.630 | .348E+00 | 9.635 | .349E+00 | 9.640 | .340E+00 | 9.645 | .321E+00 | 9.650 | .293E+00 |
| 9.655 | .257E+00 | 9.660 | .217E+00 | 9.665 | .175E+00 | 9.670 | .133E+00 | 9.675 | .937E-01 |
| 9.680 | .560E-01 | 9.685 | .186E-01 | 9.690 | -.208E-01 | 9.695 | -.634E-01 | 9.700 | -.110E+00 |

SPECTRA FOR THE PRECEDING TIME HISTORY WILL BE
CALCULATED AT THE FOLLOWING FREQUENCIES (IN CPS)

| | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| .3000 | .4000 | .7000 | 1.0000 | 1.5000 | 1.7000 | 2.0000 | 2.5000 | 3.0000 | 3.5000 |
| 4.0000 | 4.5000 | 5.0000 | 5.5000 | 6.0000 | 6.5000 | 7.0000 | 7.5000 | 8.0000 | 9.0000 |
| 10.0000 | 12.0000 | 15.0000 | 20.0000 | 25.0000 | 30.0000 | | | | |

| FREQUENCY (CPS) | PERIOD (SECS) | ABSOLUTE ACCELERATION | PSEUDO VELOCITY | TIME AT MAXIMUM |
|--------------------|------------------|--------------------------|--------------------|--------------------|
| .300 | 3.333 | .2320E+00 | .1496E+00 | .9070E+01 |
| .400 | 2.500 | .4472E+00 | .1519E+00 | .1080E+02 |
| .700 | 1.429 | .7643E+00 | .1738E+00 | .6325E+01 |
| 1.000 | 1.000 | .5860E+00 | .9327E-01 | .5275E+01 |
| 1.500 | .667 | .3302E+01 | .3503E+00 | .6820E+01 |
| 1.700 | .588 | .3694E+01 | .3458E+00 | .7275E+01 |
| 2.000 | .500 | .4288E+01 | .3412E+00 | .9925E+01 |
| 2.500 | .400 | .1668E+01 | .1062E+00 | .6570E+01 |
| 3.000 | .333 | .1077E+01 | .5715E-01 | .9840E+01 |
| 3.500 | .286 | .7842E+00 | .3566E-01 | .6295E+01 |
| 4.000 | .250 | .9992E+00 | .3976E-01 | .7060E+01 |
| 4.500 | .222 | .1197E+01 | .4232E-01 | .6560E+01 |
| 5.000 | .200 | .9216E+00 | .2934E-01 | .6545E+01 |
| 5.500 | .182 | .9591E+00 | .2775E-01 | .7845E+01 |
| 6.000 | .167 | .1071E+01 | .2841E-01 | .5100E+01 |
| 6.500 | .154 | .1212E+01 | .2967E-01 | .9780E+01 |
| 7.000 | .143 | .1068E+01 | .2427E-01 | .9770E+01 |
| 7.500 | .133 | .1098E+01 | .2330E-01 | .9755E+01 |
| 8.000 | .125 | .9389E+00 | .1868E-01 | .9745E+01 |
| 9.000 | .111 | .9897E+00 | .1750E-01 | .6520E+01 |
| 10.000 | .100 | .8711E+00 | .1386E-01 | .6335E+01 |
| 12.000 | .083 | .8008E+00 | .1062E-01 | .6215E+01 |
| 15.000 | .067 | .1044E+01 | .1108E-01 | .5990E+01 |
| 20.000 | .050 | .5804E+00 | .4619E-02 | .5050E+01 |
| 25.000 | .040 | .5493E+00 | .3497E-02 | .5975E+01 |
| 30.000 | .033 | .5278E+00 | .2800E-02 | .5050E+01 |

MAXIMUM ABSOLUTE SPECTRAL ACCELERATION .4288E+01
AT FREQUENCY (CPS) .2000E+01

INPUT TIME HISTORY CONTROL

| | | |
|---------------------------|------|--------|
| TIME HISTORY NUMBER | | 3 |
| NUMBER OF TIME POINTS | NTP | 2001 |
| INPUT CODE | INPT | 1 |
| TIME STEP | DEL | .0050 |
| ACCELERATION SCALE FACTOR | SFTR | 1.0000 |

COMPUTATION AND OUTPUT CONTROL

| | | |
|--------------------------------|------|---------|
| INPUT HISTORY INTEGRATION CODE | INTR | 0 |
| SPECTRUM COMPUTATION CODES | ISPC | 1 |
| | IDUR | 0 |
| SPECTRUM OUTPUT CODE | IDUT | 3 |
| NUMBER OF FREQUENCY POINTS | NFP | 26 |
| NUMBER OF DAMPINGS | NDP | 1 |
| FREQUENCY SCALE TYPE CODE | IFSC | 2 |
| LOWEST FREQUENCY IN CPS | W1 | .3000 |
| HIGHEST FREQUENCY IN CPS | W2 | 30.0000 |
| TIME STEP TO PERIOD RATIO | DELP | .2000 |

FIELD LENGTH REQUIREMENTS
(IN OCTAL)

| | |
|-----------------------|--------|
| PROGRAM LENGTH | 040437 |
| BLANK COMMON REQUIRED | 037647 |
| FIELD LENGTH REQUIRED | 050306 |

FORMAT OF INPUT TIME HISTORY IS

(32784(I),(E16.8))

| TIME | ACCEL | TIME | ACCEL | TIME | ACCEL | TIME | ACCEL | TIME | ACCEL |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| .005 | -.153E-02 | .010 | .762E-03 | .015 | .337E-02 | .020 | .419E-02 | .025 | .171E-02 |
| .030 | -.391E-02 | .035 | -.107E-01 | .040 | -.161E-01 | .045 | -.185E-01 | .050 | -.180E-01 |
| .055 | -.166E-01 | .060 | -.156E-01 | .065 | -.192E-01 | .070 | -.237E-01 | .075 | -.281E-01 |
| .080 | -.305E-01 | .085 | -.304E-01 | .090 | -.287E-01 | .095 | -.270E-01 | .100 | -.262E-01 |
| .105 | -.261E-01 | .110 | -.255E-01 | .115 | -.233E-01 | .120 | -.192E-01 | .125 | -.142E-01 |
| .130 | -.940E-02 | .135 | -.542E-02 | .140 | -.198E-02 | .145 | .180E-02 | .150 | .659E-02 |
| .155 | .122E-01 | .160 | .179E-01 | .165 | .226E-01 | .170 | .259E-01 | .175 | .285E-01 |
| .180 | .312E-01 | .185 | .343E-01 | .190 | .378E-01 | .195 | .409E-01 | .200 | .431E-01 |
| .205 | .446E-01 | .210 | .462E-01 | .215 | .485E-01 | .220 | .516E-01 | .225 | .545E-01 |
| .230 | .562E-01 | .235 | .563E-01 | .240 | .552E-01 | .245 | .542E-01 | .250 | .544E-01 |
| .255 | .560E-01 | .260 | .579E-01 | .265 | .589E-01 | .270 | .581E-01 | .275 | .559E-01 |
| .280 | .534E-01 | .285 | .516E-01 | .290 | .510E-01 | .295 | .510E-01 | .300 | .504E-01 |
| .305 | .486E-01 | .310 | .459E-01 | .315 | .428E-01 | .320 | .404E-01 | .325 | .388E-01 |
| .330 | .376E-01 | .335 | .351E-01 | .340 | .339E-01 | .345 | .315E-01 | .350 | .293E-01 |
| .355 | .280E-01 | .360 | .273E-01 | .365 | .267E-01 | .370 | .258E-01 | .375 | .245E-01 |
| .380 | .231E-01 | .385 | .220E-01 | .390 | .215E-01 | .395 | .214E-01 | .400 | .212E-01 |
| .405 | .208E-01 | .410 | .204E-01 | .415 | .203E-01 | .420 | .208E-01 | .425 | .214E-01 |
| .430 | .216E-01 | .435 | .206E-01 | .440 | .192E-01 | .445 | .150E-01 | .450 | .115E-01 |
| .455 | .829E-02 | .460 | .532E-02 | .465 | .219E-02 | .470 | -.138E-02 | .475 | -.523E-02 |
| .480 | -.879E-02 | .485 | -.116E-01 | .490 | -.135E-01 | .495 | -.151E-01 | .500 | -.172E-01 |
| .505 | -.201E-01 | .510 | -.237E-01 | .515 | -.272E-01 | .520 | -.299E-01 | .525 | -.320E-01 |
| .530 | -.338E-01 | .535 | -.360E-01 | .540 | -.390E-01 | .545 | -.422E-01 | .550 | -.450E-01 |
| .555 | -.469E-01 | .560 | -.479E-01 | .565 | -.488E-01 | .570 | -.507E-01 | .575 | -.536E-01 |
| .580 | -.574E-01 | .585 | -.613E-01 | .590 | -.647E-01 | .595 | -.675E-01 | .600 | -.701E-01 |
| .605 | -.731E-01 | .610 | -.766E-01 | .615 | -.805E-01 | .620 | -.844E-01 | .625 | -.884E-01 |
| .630 | -.923E-01 | .635 | -.959E-01 | .640 | -.985E-01 | .645 | -.990E-01 | .650 | -.967E-01 |
| .655 | -.918E-01 | .660 | -.859E-01 | .665 | -.814E-01 | .670 | -.799E-01 | .675 | -.815E-01 |
| .680 | -.843E-01 | .685 | -.852E-01 | .690 | -.818E-01 | .695 | -.737E-01 | .700 | -.624E-01 |
| .705 | -.510E-01 | .710 | -.418E-01 | .715 | -.358E-01 | .720 | -.320E-01 | .725 | -.290E-01 |
| .730 | -.253E-01 | .735 | -.204E-01 | .740 | -.146E-01 | .745 | -.825E-02 | .750 | -.166E-02 |
| .755 | .525E-02 | .760 | .123E-01 | .765 | .188E-01 | .770 | .238E-01 | .775 | .265E-01 |
| .780 | .271E-01 | .785 | .267E-01 | .790 | .270E-01 | .795 | .289E-01 | .800 | .321E-01 |
| .805 | .353E-01 | .810 | .368E-01 | .815 | .357E-01 | .820 | .327E-01 | .825 | .292E-01 |
| .830 | .271E-01 | .835 | .271E-01 | .840 | .290E-01 | .845 | .316E-01 | .850 | .337E-01 |
| .855 | .344E-01 | .860 | .339E-01 | .865 | .326E-01 | .870 | .308E-01 | .875 | .289E-01 |
| .880 | .271E-01 | .885 | .254E-01 | .890 | .241E-01 | .895 | .232E-01 | .900 | .228E-01 |
| .905 | .224E-01 | .910 | .214E-01 | .915 | .194E-01 | .920 | .166E-01 | .925 | .133E-01 |
| .930 | .988E-02 | .935 | .647E-02 | .940 | .262E-02 | .945 | -.234E-02 | .950 | -.881E-02 |
| .955 | -.166E-01 | .960 | -.249E-01 | .965 | -.327E-01 | .970 | -.394E-01 | .975 | -.450E-01 |
| .980 | -.500E-01 | .985 | -.551E-01 | .990 | -.607E-01 | .995 | -.665E-01 | 1.000 | -.719E-01 |
| 1.005 | -.764E-01 | 1.010 | -.799E-01 | 1.015 | -.825E-01 | 1.020 | -.851E-01 | 1.025 | -.879E-01 |
| 1.030 | -.911E-01 | 1.035 | -.943E-01 | 1.040 | -.970E-01 | 1.045 | -.987E-01 | 1.050 | -.995E-01 |
| 1.055 | -.995E-01 | 1.060 | -.992E-01 | 1.065 | -.985E-01 | 1.070 | -.976E-01 | 1.075 | -.965E-01 |
| 1.080 | -.950E-01 | 1.085 | -.935E-01 | 1.090 | -.921E-01 | 1.095 | -.908E-01 | 1.100 | -.896E-01 |
| 1.105 | -.880E-01 | 1.110 | -.857E-01 | 1.115 | -.824E-01 | 1.120 | -.782E-01 | 1.125 | -.733E-01 |
| 1.130 | -.678E-01 | 1.135 | -.619E-01 | 1.140 | -.556E-01 | 1.145 | -.491E-01 | 1.150 | -.423E-01 |
| 1.155 | -.357E-01 | 1.160 | -.291E-01 | 1.165 | -.226E-01 | 1.170 | -.159E-01 | 1.175 | -.882E-02 |
| 1.180 | -.130E-02 | 1.185 | .635E-02 | 1.190 | .137E-01 | 1.195 | .205E-01 | 1.200 | .269E-01 |
| 1.205 | .332E-01 | 1.210 | .400E-01 | 1.215 | .472E-01 | 1.220 | .546E-01 | 1.225 | .613E-01 |
| 1.230 | .669E-01 | 1.235 | .712E-01 | 1.240 | .749E-01 | 1.245 | .788E-01 | 1.250 | .836E-01 |
| 1.255 | .890E-01 | 1.260 | .944E-01 | 1.265 | .987E-01 | 1.270 | .101E+00 | 1.275 | .103E+00 |
| 1.280 | .104E+00 | 1.285 | .105E+00 | 1.290 | .107E+00 | 1.295 | .109E+00 | 1.300 | .110E+00 |
| 1.305 | .110E+00 | 1.310 | .109E+00 | 1.315 | .107E+00 | 1.320 | .105E+00 | 1.325 | .103E+00 |
| 1.330 | .100E+00 | 1.335 | .973E-01 | 1.340 | .936E-01 | 1.345 | .891E-01 | 1.350 | .841E-01 |
| 1.355 | .788E-01 | 1.360 | .733E-01 | 1.365 | .672E-01 | 1.370 | .603E-01 | 1.375 | .524E-01 |
| 1.380 | .437E-01 | 1.385 | .344E-01 | 1.390 | .247E-01 | 1.395 | .146E-01 | 1.400 | .428E-02 |
| 1.405 | -.639E-02 | 1.410 | -.172E-01 | 1.415 | -.278E-01 | 1.420 | -.382E-01 | 1.425 | -.484E-01 |
| 1.430 | -.586E-01 | 1.435 | -.691E-01 | 1.440 | -.800E-01 | 1.445 | -.909E-01 | 1.450 | -.101E+00 |
| 1.455 | -.111E+00 | 1.460 | -.120E+00 | 1.465 | -.128E+00 | 1.470 | -.135E+00 | 1.475 | -.140E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 1.580 | -.577E-01 | 1.585 | -.498E-01 | 1.590 | -.415E-01 | 1.595 | -.329E-01 | 1.600 | -.239E-01 |
| 1.605 | -.149E-01 | 1.610 | -.518E-02 | 1.615 | .202E-02 | 1.620 | .933E-02 | 1.625 | .155E-01 |
| 1.630 | .204E-01 | 1.635 | .247E-01 | 1.640 | .294E-01 | 1.645 | .357E-01 | 1.650 | .438E-01 |
| 1.655 | .530E-01 | 1.660 | .612E-01 | 1.665 | .652E-01 | 1.670 | .669E-01 | 1.675 | .638E-01 |
| 1.680 | .592E-01 | 1.685 | .559E-01 | 1.690 | .559E-01 | 1.695 | .591E-01 | 1.700 | .637E-01 |
| 1.705 | .672E-01 | 1.710 | .679E-01 | 1.715 | .653E-01 | 1.720 | .605E-01 | 1.725 | .548E-01 |
| 1.730 | .491E-01 | 1.735 | .439E-01 | 1.740 | .390E-01 | 1.745 | .345E-01 | 1.750 | .309E-01 |
| 1.755 | .286E-01 | 1.760 | .274E-01 | 1.765 | .264E-01 | 1.770 | .241E-01 | 1.775 | .196E-01 |
| 1.780 | .131E-01 | 1.785 | .625E-02 | 1.790 | .941E-03 | 1.795 | -.157E-02 | 1.800 | -.197E-02 |
| 1.805 | -.172E-02 | 1.810 | -.291E-02 | 1.815 | -.660E-02 | 1.820 | -.122E-01 | 1.825 | -.179E-01 |
| 1.830 | -.218E-01 | 1.835 | -.227E-01 | 1.840 | -.212E-01 | 1.845 | -.188E-01 | 1.850 | -.169E-01 |
| 1.855 | -.164E-01 | 1.860 | -.171E-01 | 1.865 | -.183E-01 | 1.870 | -.191E-01 | 1.875 | -.193E-01 |
| 1.880 | -.187E-01 | 1.885 | -.174E-01 | 1.890 | -.154E-01 | 1.895 | -.124E-01 | 1.900 | -.846E-02 |
| 1.905 | -.366E-02 | 1.910 | .157E-02 | 1.915 | .678E-02 | 1.920 | .118E-01 | 1.925 | .166E-01 |
| 1.930 | .216E-01 | 1.935 | .216E-01 | 1.940 | .315E-01 | 1.945 | .357E-01 | 1.950 | .387E-01 |
| 1.955 | .407E-01 | 1.960 | .420E-01 | 1.965 | .435E-01 | 1.970 | .456E-01 | 1.975 | .483E-01 |
| 1.980 | .512E-01 | 1.985 | .537E-01 | 1.990 | .554E-01 | 1.995 | .562E-01 | 2.000 | .565E-01 |
| 2.005 | .564E-01 | 2.010 | .563E-01 | 2.015 | .560E-01 | 2.020 | .552E-01 | 2.025 | .538E-01 |
| 2.030 | .518E-01 | 2.035 | .495E-01 | 2.040 | .470E-01 | 2.045 | .445E-01 | 2.050 | .421E-01 |
| 2.055 | .398E-01 | 2.060 | .377E-01 | 2.065 | .357E-01 | 2.070 | .341E-01 | 2.075 | .326E-01 |
| 2.080 | .310E-01 | 2.085 | .290E-01 | 2.090 | .264E-01 | 2.095 | .232E-01 | 2.100 | .197E-01 |
| 2.105 | .162E-01 | 2.110 | .131E-01 | 2.115 | .105E-01 | 2.120 | .839E-02 | 2.125 | .671E-02 |
| 2.130 | .545E-02 | 2.135 | .452E-02 | 2.140 | .369E-02 | 2.145 | .259E-02 | 2.150 | .865E-03 |
| 2.155 | -.165E-02 | 2.160 | -.475E-02 | 2.165 | -.798E-02 | 2.170 | -.109E-01 | 2.175 | -.133E-01 |
| 2.180 | -.156E-01 | 2.185 | -.183E-01 | 2.190 | -.218E-01 | 2.195 | -.259E-01 | 2.200 | -.298E-01 |
| 2.205 | -.326E-01 | 2.210 | -.339E-01 | 2.215 | -.340E-01 | 2.220 | -.341E-01 | 2.225 | -.353E-01 |
| 2.230 | -.381E-01 | 2.235 | -.419E-01 | 2.240 | -.452E-01 | 2.245 | -.459E-01 | 2.250 | -.467E-01 |
| 2.255 | -.453E-01 | 2.260 | -.442E-01 | 2.265 | -.445E-01 | 2.270 | -.462E-01 | 2.275 | -.484E-01 |
| 2.280 | -.498E-01 | 2.285 | -.495E-01 | 2.290 | -.479E-01 | 2.295 | -.460E-01 | 2.300 | -.449E-01 |
| 2.305 | -.450E-01 | 2.310 | -.459E-01 | 2.315 | -.466E-01 | 2.320 | -.464E-01 | 2.325 | -.453E-01 |
| 2.330 | -.441E-01 | 2.335 | -.435E-01 | 2.340 | -.438E-01 | 2.345 | -.444E-01 | 2.350 | -.444E-01 |
| 2.355 | -.434E-01 | 2.360 | -.413E-01 | 2.365 | -.390E-01 | 2.370 | -.373E-01 | 2.375 | -.364E-01 |
| 2.380 | -.361E-01 | 2.385 | -.358E-01 | 2.390 | -.351E-01 | 2.395 | -.340E-01 | 2.400 | -.328E-01 |
| 2.405 | -.320E-01 | 2.410 | -.317E-01 | 2.415 | -.316E-01 | 2.420 | -.316E-01 | 2.425 | -.314E-01 |
| 2.430 | -.314E-01 | 2.435 | -.322E-01 | 2.440 | -.340E-01 | 2.445 | -.369E-01 | 2.450 | -.406E-01 |
| 2.455 | -.448E-01 | 2.460 | -.492E-01 | 2.465 | -.537E-01 | 2.470 | -.582E-01 | 2.475 | -.624E-01 |
| 2.480 | -.661E-01 | 2.485 | -.693E-01 | 2.490 | -.723E-01 | 2.495 | -.754E-01 | 2.500 | -.793E-01 |
| 2.505 | -.839E-01 | 2.510 | -.888E-01 | 2.515 | -.933E-01 | 2.520 | -.958E-01 | 2.525 | -.995E-01 |
| 2.530 | -.102E+00 | 2.535 | -.104E+00 | 2.540 | -.106E+00 | 2.545 | -.108E+00 | 2.550 | -.109E+00 |
| 2.555 | -.108E+00 | 2.560 | -.105E+00 | 2.565 | -.100E+00 | 2.570 | -.950E-01 | 2.575 | -.918E-01 |
| 2.580 | -.875E-01 | 2.585 | -.825E-01 | 2.590 | -.762E-01 | 2.595 | -.688E-01 | 2.600 | -.607E-01 |
| 2.605 | -.527E-01 | 2.610 | -.452E-01 | 2.615 | -.382E-01 | 2.620 | -.319E-01 | 2.625 | -.263E-01 |
| 2.630 | -.218E-01 | 2.635 | -.182E-01 | 2.640 | -.148E-01 | 2.645 | -.103E-01 | 2.650 | -.376E-02 |
| 2.655 | .455E-02 | 2.660 | .129E-01 | 2.665 | .188E-01 | 2.670 | .199E-01 | 2.675 | .163E-01 |
| 2.680 | .103E-01 | 2.685 | .524E-02 | 2.690 | .435E-02 | 2.695 | .836E-02 | 2.700 | .155E-01 |
| 2.705 | .224E-01 | 2.710 | .265E-01 | 2.715 | .271E-01 | 2.720 | .256E-01 | 2.725 | .248E-01 |
| 2.730 | .255E-01 | 2.735 | .311E-01 | 2.740 | .377E-01 | 2.745 | .450E-01 | 2.750 | .523E-01 |
| 2.755 | .601E-01 | 2.760 | .689E-01 | 2.765 | .788E-01 | 2.770 | .884E-01 | 2.775 | .962E-01 |
| 2.780 | .101E+00 | 2.785 | .104E+00 | 2.790 | .106E+00 | 2.795 | .109E+00 | 2.800 | .115E+00 |
| 2.805 | .123E+00 | 2.810 | .129E+00 | 2.815 | .133E+00 | 2.820 | .133E+00 | 2.825 | .131E+00 |
| 2.830 | .128E+00 | 2.835 | .128E+00 | 2.840 | .130E+00 | 2.845 | .133E+00 | 2.850 | .135E+00 |
| 2.855 | .134E+00 | 2.860 | .129E+00 | 2.865 | .121E+00 | 2.870 | .112E+00 | 2.875 | .103E+00 |
| 2.880 | .951E-01 | 2.885 | .877E-01 | 2.890 | .800E-01 | 2.895 | .710E-01 | 2.900 | .601E-01 |
| 2.905 | .474E-01 | 2.910 | .336E-01 | 2.915 | .196E-01 | 2.920 | .605E-02 | 2.925 | -.702E-02 |
| 2.930 | -.201E-01 | 2.935 | -.340E-01 | 2.940 | -.493E-01 | 2.945 | -.650E-01 | 2.950 | -.834E-01 |
| 2.955 | -.100E+00 | 2.960 | -.116E+00 | 2.965 | -.129E+00 | 2.970 | -.142E+00 | 2.975 | -.154E+00 |
| 2.980 | -.166E+00 | 2.985 | -.179E+00 | 2.990 | -.192E+00 | 2.995 | -.203E+00 | 3.000 | -.213E+00 |
| 3.005 | -.220E+00 | 3.010 | -.227E+00 | 3.015 | -.233E+00 | 3.020 | -.240E+00 | 3.025 | -.246E+00 |
| 3.030 | -.250E+00 | 3.035 | -.253E+00 | 3.040 | -.252E+00 | 3.045 | -.251E+00 | 3.050 | -.248E+00 |
| 3.055 | -.244E+00 | 3.060 | -.241E+00 | 3.065 | -.235E+00 | 3.070 | -.228E+00 | 3.075 | -.220E+00 |
| 3.080 | -.210E+00 | 3.085 | -.201E+00 | 3.090 | -.192E+00 | 3.095 | -.184E+00 | 3.100 | -.175E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 3.230 | .418E+00 | 3.235 | .436E+00 | 3.240 | .451E+00 | 3.245 | .464E+00 | 3.250 | .477E+00 |
| 3.255 | .490E+00 | 3.260 | .502E+00 | 3.265 | .511E+00 | 3.270 | .516E+00 | 3.275 | .518E+00 |
| 3.280 | .518E+00 | 3.285 | .518E+00 | 3.290 | .518E+00 | 3.295 | .517E+00 | 3.300 | .515E+00 |
| 3.305 | .511E+00 | 3.310 | .504E+00 | 3.315 | .495E+00 | 3.320 | .486E+00 | 3.325 | .477E+00 |
| 3.330 | .467E+00 | 3.335 | .457E+00 | 3.340 | .445E+00 | 3.345 | .432E+00 | 3.350 | .418E+00 |
| 3.355 | .404E+00 | 3.360 | .390E+00 | 3.365 | .375E+00 | 3.370 | .360E+00 | 3.375 | .343E+00 |
| 3.380 | .325E+00 | 3.385 | .306E+00 | 3.390 | .287E+00 | 3.395 | .257E+00 | 3.400 | .248E+00 |
| 3.405 | .228E+00 | 3.410 | .208E+00 | 3.415 | .188E+00 | 3.420 | .159E+00 | 3.425 | .149E+00 |
| 3.430 | .130E+00 | 3.435 | .110E+00 | 3.440 | .898E-01 | 3.445 | .695E-01 | 3.450 | .497E-01 |
| 3.455 | .309E-01 | 3.460 | .133E-01 | 3.465 | -.320E-02 | 3.470 | -.189E-01 | 3.475 | -.341E-01 |
| 3.480 | -.487E-01 | 3.485 | -.622E-01 | 3.490 | -.746E-01 | 3.495 | -.858E-01 | 3.500 | -.963E-01 |
| 3.505 | -.107E+00 | 3.510 | -.118E+00 | 3.515 | -.128E+00 | 3.520 | -.138E+00 | 3.525 | -.147E+00 |
| 3.530 | -.154E+00 | 3.535 | -.150E+00 | 3.540 | -.165E+00 | 3.545 | -.170E+00 | 3.550 | -.174E+00 |
| 3.555 | -.177E+00 | 3.560 | -.179E+00 | 3.565 | -.179E+00 | 3.570 | -.178E+00 | 3.575 | -.176E+00 |
| 3.580 | -.174E+00 | 3.585 | -.173E+00 | 3.590 | -.170E+00 | 3.595 | -.157E+00 | 3.600 | -.161E+00 |
| 3.605 | -.153E+00 | 3.610 | -.143E+00 | 3.615 | -.132E+00 | 3.620 | -.122E+00 | 3.625 | -.113E+00 |
| 3.630 | -.103E+00 | 3.635 | -.932E-01 | 3.640 | -.803E-01 | 3.645 | -.641E-01 | 3.650 | -.453E-01 |
| 3.655 | -.255E-01 | 3.660 | -.719E-02 | 3.665 | .802E-02 | 3.670 | .197E-01 | 3.675 | .288E-01 |
| 3.680 | .376E-01 | 3.685 | .478E-01 | 3.690 | .604E-01 | 3.695 | .749E-01 | 3.700 | .899E-01 |
| 3.705 | .103E+00 | 3.710 | .114E+00 | 3.715 | .121E+00 | 3.720 | .125E+00 | 3.725 | .126E+00 |
| 3.730 | .125E+00 | 3.735 | .123E+00 | 3.740 | .120E+00 | 3.745 | .116E+00 | 3.750 | .113E+00 |
| 3.755 | .110E+00 | 3.760 | .105E+00 | 3.765 | .989E-01 | 3.770 | .904E-01 | 3.775 | .801E-01 |
| 3.780 | .693E-01 | 3.785 | .596E-01 | 3.790 | .518E-01 | 3.795 | .456E-01 | 3.800 | .397E-01 |
| 3.805 | .324E-01 | 3.810 | .231E-01 | 3.815 | .122E-01 | 3.820 | .130E-02 | 3.825 | -.821E-02 |
| 3.830 | -.159E-01 | 3.835 | -.223E-01 | 3.840 | -.286E-01 | 3.845 | -.355E-01 | 3.850 | -.429E-01 |
| 3.855 | -.501E-01 | 3.860 | -.564E-01 | 3.865 | -.625E-01 | 3.870 | -.698E-01 | 3.875 | -.797E-01 |
| 3.880 | -.925E-01 | 3.885 | -.107E+00 | 3.890 | -.121E+00 | 3.895 | -.132E+00 | 3.900 | -.140E+00 |
| 3.905 | -.146E+00 | 3.910 | -.153E+00 | 3.915 | -.161E+00 | 3.920 | -.171E+00 | 3.925 | -.182E+00 |
| 3.930 | -.191E+00 | 3.935 | -.196E+00 | 3.940 | -.199E+00 | 3.945 | -.201E+00 | 3.950 | -.203E+00 |
| 3.955 | -.207E+00 | 3.960 | -.212E+00 | 3.965 | -.214E+00 | 3.970 | -.214E+00 | 3.975 | -.210E+00 |
| 3.980 | -.204E+00 | 3.985 | -.198E+00 | 3.990 | -.193E+00 | 3.995 | -.188E+00 | 4.000 | -.182E+00 |
| 4.005 | -.173E+00 | 4.010 | -.161E+00 | 4.015 | -.148E+00 | 4.020 | -.135E+00 | 4.025 | -.124E+00 |
| 4.030 | -.115E+00 | 4.035 | -.105E+00 | 4.040 | -.942E-01 | 4.045 | -.822E-01 | 4.050 | -.701E-01 |
| 4.055 | -.593E-01 | 4.060 | -.506E-01 | 4.065 | -.435E-01 | 4.070 | -.365E-01 | 4.075 | -.282E-01 |
| 4.080 | -.182E-01 | 4.085 | -.779E-02 | 4.090 | .133E-02 | 4.095 | .798E-02 | 4.100 | .125E-01 |
| 4.105 | .166E-01 | 4.110 | .221E-01 | 4.115 | .301E-01 | 4.120 | .402E-01 | 4.125 | .508E-01 |
| 4.130 | .602E-01 | 4.135 | .681E-01 | 4.140 | .750E-01 | 4.145 | .823E-01 | 4.150 | .911E-01 |
| 4.155 | .101E+00 | 4.160 | .112E+00 | 4.165 | .122E+00 | 4.170 | .130E+00 | 4.175 | .136E+00 |
| 4.180 | .141E+00 | 4.185 | .145E+00 | 4.190 | .150E+00 | 4.195 | .154E+00 | 4.200 | .157E+00 |
| 4.205 | .159E+00 | 4.210 | .151E+00 | 4.215 | .161E+00 | 4.220 | .160E+00 | 4.225 | .158E+00 |
| 4.230 | .155E+00 | 4.235 | .151E+00 | 4.240 | .147E+00 | 4.245 | .144E+00 | 4.250 | .141E+00 |
| 4.255 | .139E+00 | 4.260 | .136E+00 | 4.265 | .132E+00 | 4.270 | .127E+00 | 4.275 | .122E+00 |
| 4.280 | .119E+00 | 4.285 | .117E+00 | 4.290 | .115E+00 | 4.295 | .113E+00 | 4.300 | .110E+00 |
| 4.305 | .105E+00 | 4.310 | .989E-01 | 4.315 | .933E-01 | 4.320 | .884E-01 | 4.325 | .836E-01 |
| 4.330 | .775E-01 | 4.335 | .693E-01 | 4.340 | .589E-01 | 4.345 | .476E-01 | 4.350 | .368E-01 |
| 4.355 | .274E-01 | 4.360 | .191E-01 | 4.365 | .107E-01 | 4.370 | .948E-02 | 4.375 | -.106E-01 |
| 4.380 | -.232E-01 | 4.385 | -.356E-01 | 4.390 | -.468E-01 | 4.395 | -.567E-01 | 4.400 | -.656E-01 |
| 4.405 | -.744E-01 | 4.410 | -.834E-01 | 4.415 | -.922E-01 | 4.420 | -.100E+00 | 4.425 | -.107E+00 |
| 4.430 | -.112E+00 | 4.435 | -.116E+00 | 4.440 | -.119E+00 | 4.445 | -.122E+00 | 4.450 | -.124E+00 |
| 4.455 | -.125E+00 | 4.460 | -.124E+00 | 4.465 | -.122E+00 | 4.470 | -.119E+00 | 4.475 | -.113E+00 |
| 4.480 | -.107E+00 | 4.485 | -.984E-01 | 4.490 | -.892E-01 | 4.495 | -.798E-01 | 4.500 | -.709E-01 |
| 4.505 | -.629E-01 | 4.510 | -.556E-01 | 4.515 | -.484E-01 | 4.520 | -.410E-01 | 4.525 | -.335E-01 |
| 4.530 | -.265E-01 | 4.535 | -.204E-01 | 4.540 | -.152E-01 | 4.545 | -.122E-01 | 4.550 | -.931E-02 |
| 4.555 | -.659E-02 | 4.560 | -.408E-02 | 4.565 | -.214E-02 | 4.570 | -.115E-02 | 4.575 | -.116E-02 |
| 4.580 | -.186E-02 | 4.585 | -.293E-02 | 4.590 | -.419E-02 | 4.595 | -.586E-02 | 4.600 | -.827E-02 |
| 4.605 | -.115E-01 | 4.610 | -.152E-01 | 4.615 | -.189E-01 | 4.620 | -.222E-01 | 4.625 | -.253E-01 |
| 4.630 | -.283E-01 | 4.635 | -.309E-01 | 4.640 | -.322E-01 | 4.645 | -.305E-01 | 4.650 | -.248E-01 |
| 4.655 | -.152E-01 | 4.660 | -.351E-02 | 4.665 | .747E-02 | 4.670 | .153E-01 | 4.675 | .233E-01 |
| 4.680 | .307E-01 | 4.685 | .417E-01 | 4.690 | .584E-01 | 4.695 | .805E-01 | 4.700 | .106E+00 |
| 4.705 | .131E+00 | 4.710 | .154E+00 | 4.715 | .175E+00 | 4.720 | .197E+00 | 4.725 | .221E+00 |
| 4.730 | .247E+00 | 4.735 | .274E+00 | 4.740 | .300E+00 | 4.745 | .325E+00 | 4.750 | .347E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 4.880 | .334E+00 | 4.885 | .297E+00 | 4.890 | .258E+00 | 4.895 | .219E+00 | 4.900 | .180E+00 |
| 4.905 | .141E+00 | 4.910 | .103E+00 | 4.915 | .634E-01 | 4.920 | .228E-01 | 4.925 | -.180E-01 |
| 4.930 | -.578E-01 | 4.935 | -.961E-01 | 4.940 | -.133E+00 | 4.945 | -.159E+00 | 4.950 | -.206E+00 |
| 4.955 | -.243E+00 | 4.960 | -.279E+00 | 4.965 | -.313E+00 | 4.970 | -.346E+00 | 4.975 | -.378E+00 |
| 4.980 | -.408E+00 | 4.985 | -.439E+00 | 4.990 | -.468E+00 | 4.995 | -.497E+00 | 5.000 | -.523E+00 |
| 5.005 | -.548E+00 | 5.010 | -.570E+00 | 5.015 | -.593E+00 | 5.020 | -.615E+00 | 5.025 | -.638E+00 |
| 5.030 | -.658E+00 | 5.035 | -.677E+00 | 5.040 | -.692E+00 | 5.045 | -.704E+00 | 5.050 | -.714E+00 |
| 5.055 | -.723E+00 | 5.060 | -.730E+00 | 5.065 | -.736E+00 | 5.070 | -.739E+00 | 5.075 | -.739E+00 |
| 5.080 | -.736E+00 | 5.085 | -.731E+00 | 5.090 | -.724E+00 | 5.095 | -.717E+00 | 5.100 | -.708E+00 |
| 5.105 | -.697E+00 | 5.110 | -.683E+00 | 5.115 | -.667E+00 | 5.120 | -.648E+00 | 5.125 | -.627E+00 |
| 5.130 | -.604E+00 | 5.135 | -.580E+00 | 5.140 | -.554E+00 | 5.145 | -.528E+00 | 5.150 | -.500E+00 |
| 5.155 | -.471E+00 | 5.160 | -.441E+00 | 5.165 | -.410E+00 | 5.170 | -.378E+00 | 5.175 | -.346E+00 |
| 5.180 | -.313E+00 | 5.185 | -.281E+00 | 5.190 | -.249E+00 | 5.195 | -.217E+00 | 5.200 | -.184E+00 |
| 5.205 | -.150E+00 | 5.210 | -.116E+00 | 5.215 | -.816E-01 | 5.220 | -.486E-01 | 5.225 | -.173E-01 |
| 5.230 | .122E-01 | 5.235 | .405E-01 | 5.240 | .684E-01 | 5.245 | .967E-01 | 5.250 | .125E+00 |
| 5.255 | .153E+00 | 5.260 | .180E+00 | 5.265 | .204E+00 | 5.270 | .227E+00 | 5.275 | .247E+00 |
| 5.280 | .267E+00 | 5.285 | .285E+00 | 5.290 | .303E+00 | 5.295 | .320E+00 | 5.300 | .334E+00 |
| 5.305 | .346E+00 | 5.310 | .356E+00 | 5.315 | .363E+00 | 5.320 | .370E+00 | 5.325 | .374E+00 |
| 5.330 | .377E+00 | 5.335 | .377E+00 | 5.340 | .376E+00 | 5.345 | .373E+00 | 5.350 | .368E+00 |
| 5.355 | .363E+00 | 5.360 | .357E+00 | 5.365 | .350E+00 | 5.370 | .341E+00 | 5.375 | .331E+00 |
| 5.380 | .321E+00 | 5.385 | .310E+00 | 5.390 | .299E+00 | 5.395 | .287E+00 | 5.400 | .275E+00 |
| 5.405 | .262E+00 | 5.410 | .249E+00 | 5.415 | .235E+00 | 5.420 | .221E+00 | 5.425 | .206E+00 |
| 5.430 | .190E+00 | 5.435 | .172E+00 | 5.440 | .153E+00 | 5.445 | .134E+00 | 5.450 | .115E+00 |
| 5.455 | .954E-01 | 5.460 | .751E-01 | 5.465 | .564E-01 | 5.470 | .366E-01 | 5.475 | .174E-01 |
| 5.480 | .219E-04 | 5.485 | -.152E-01 | 5.490 | -.286E-01 | 5.495 | -.419E-01 | 5.500 | -.563E-01 |
| 5.505 | -.725E-01 | 5.510 | -.898E-01 | 5.515 | -.107E+00 | 5.520 | -.121E+00 | 5.525 | -.134E+00 |
| 5.530 | -.147E+00 | 5.535 | -.160E+00 | 5.540 | -.175E+00 | 5.545 | -.191E+00 | 5.550 | -.206E+00 |
| 5.555 | -.219E+00 | 5.560 | -.227E+00 | 5.565 | -.234E+00 | 5.570 | -.240E+00 | 5.575 | -.249E+00 |
| 5.580 | -.260E+00 | 5.585 | -.271E+00 | 5.590 | -.282E+00 | 5.595 | -.292E+00 | 5.600 | -.301E+00 |
| 5.605 | -.310E+00 | 5.610 | -.322E+00 | 5.615 | -.336E+00 | 5.620 | -.351E+00 | 5.625 | -.365E+00 |
| 5.630 | -.375E+00 | 5.635 | -.382E+00 | 5.640 | -.387E+00 | 5.645 | -.393E+00 | 5.650 | -.401E+00 |
| 5.655 | -.410E+00 | 5.660 | -.419E+00 | 5.665 | -.427E+00 | 5.670 | -.433E+00 | 5.675 | -.438E+00 |
| 5.680 | -.442E+00 | 5.685 | -.447E+00 | 5.690 | -.451E+00 | 5.695 | -.455E+00 | 5.700 | -.457E+00 |
| 5.705 | -.458E+00 | 5.710 | -.456E+00 | 5.715 | -.453E+00 | 5.720 | -.449E+00 | 5.725 | -.445E+00 |
| 5.730 | -.441E+00 | 5.735 | -.437E+00 | 5.740 | -.432E+00 | 5.745 | -.425E+00 | 5.750 | -.417E+00 |
| 5.755 | -.405E+00 | 5.760 | -.391E+00 | 5.765 | -.375E+00 | 5.770 | -.359E+00 | 5.775 | -.343E+00 |
| 5.780 | -.327E+00 | 5.785 | -.310E+00 | 5.790 | -.293E+00 | 5.795 | -.273E+00 | 5.800 | -.251E+00 |
| 5.805 | -.227E+00 | 5.810 | -.204E+00 | 5.815 | -.180E+00 | 5.820 | -.155E+00 | 5.825 | -.128E+00 |
| 5.830 | -.974E-01 | 5.835 | -.637E-01 | 5.840 | -.277E-01 | 5.845 | .866E-02 | 5.850 | .437E-01 |
| 5.855 | .768E-01 | 5.860 | .109E+00 | 5.865 | .140E+00 | 5.870 | .172E+00 | 5.875 | .206E+00 |
| 5.880 | .239E+00 | 5.885 | .272E+00 | 5.890 | .304E+00 | 5.895 | .333E+00 | 5.900 | .362E+00 |
| 5.905 | .390E+00 | 5.910 | .419E+00 | 5.915 | .449E+00 | 5.920 | .478E+00 | 5.925 | .506E+00 |
| 5.930 | .531E+00 | 5.935 | .553E+00 | 5.940 | .573E+00 | 5.945 | .591E+00 | 5.950 | .609E+00 |
| 5.955 | .627E+00 | 5.960 | .643E+00 | 5.965 | .656E+00 | 5.970 | .667E+00 | 5.975 | .674E+00 |
| 5.980 | .680E+00 | 5.985 | .685E+00 | 5.990 | .689E+00 | 5.995 | .693E+00 | 6.000 | .694E+00 |
| 6.005 | .692E+00 | 6.010 | .686E+00 | 6.015 | .677E+00 | 6.020 | .658E+00 | 6.025 | .658E+00 |
| 6.030 | .647E+00 | 6.035 | .636E+00 | 6.040 | .623E+00 | 6.045 | .609E+00 | 6.050 | .593E+00 |
| 6.055 | .577E+00 | 6.060 | .561E+00 | 6.065 | .544E+00 | 6.070 | .527E+00 | 6.075 | .506E+00 |
| 6.080 | .482E+00 | 6.085 | .456E+00 | 6.090 | .427E+00 | 6.095 | .397E+00 | 6.100 | .366E+00 |
| 6.105 | .333E+00 | 6.110 | .297E+00 | 6.115 | .259E+00 | 6.120 | .220E+00 | 6.125 | .181E+00 |
| 6.130 | .144E+00 | 6.135 | .108E+00 | 6.140 | .711E-01 | 6.145 | .332E-01 | 6.150 | -.701E-02 |
| 6.155 | -.489E-01 | 6.160 | -.914E-01 | 6.165 | -.133E+00 | 6.170 | -.174E+00 | 6.175 | -.214E+00 |
| 6.180 | -.254E+00 | 6.185 | -.296E+00 | 6.190 | -.339E+00 | 6.195 | -.382E+00 | 6.200 | -.424E+00 |
| 6.205 | -.465E+00 | 6.210 | -.505E+00 | 6.215 | -.543E+00 | 6.220 | -.580E+00 | 6.225 | -.615E+00 |
| 6.230 | -.647E+00 | 6.235 | -.676E+00 | 6.240 | -.702E+00 | 6.245 | -.724E+00 | 6.250 | -.744E+00 |
| 6.255 | -.762E+00 | 6.260 | -.778E+00 | 6.265 | -.790E+00 | 6.270 | -.799E+00 | 6.275 | -.805E+00 |
| 6.280 | -.806E+00 | 6.285 | -.804E+00 | 6.290 | -.801E+00 | 6.295 | -.796E+00 | 6.300 | -.789E+00 |
| 6.305 | -.781E+00 | 6.310 | -.770E+00 | 6.315 | -.755E+00 | 6.320 | -.739E+00 | 6.325 | -.721E+00 |
| 6.330 | -.701E+00 | 6.335 | -.682E+00 | 6.340 | -.661E+00 | 6.345 | -.637E+00 | 6.350 | -.610E+00 |
| 6.355 | -.550E+00 | 6.360 | -.548E+00 | 6.365 | -.515E+00 | 6.370 | -.482E+00 | 6.375 | -.451E+00 |
| 6.380 | -.420E+00 | 6.385 | -.388E+00 | 6.390 | -.354E+00 | 6.395 | -.319E+00 | 6.400 | -.283E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 6.530 | .604E+00 | 6.535 | .632E+00 | 6.540 | .660E+00 | 6.545 | .686E+00 | 6.550 | .708E+00 |
| 6.555 | .724E+00 | 6.560 | .736E+00 | 6.565 | .746E+00 | 6.570 | .755E+00 | 6.575 | .765E+00 |
| 6.580 | .775E+00 | 6.585 | .782E+00 | 6.590 | .784E+00 | 6.595 | .780E+00 | 6.600 | .771E+00 |
| 6.605 | .759E+00 | 6.610 | .747E+00 | 6.615 | .734E+00 | 6.620 | .720E+00 | 6.625 | .703E+00 |
| 6.630 | .681E+00 | 6.635 | .654E+00 | 6.640 | .624E+00 | 6.645 | .592E+00 | 6.650 | .560E+00 |
| 6.655 | .529E+00 | 6.660 | .496E+00 | 6.665 | .460E+00 | 6.670 | .420E+00 | 6.675 | .377E+00 |
| 6.680 | .331E+00 | 6.685 | .286E+00 | 6.690 | .243E+00 | 6.695 | .201E+00 | 6.700 | .159E+00 |
| 6.705 | .115E+00 | 6.710 | .680E-01 | 6.715 | .201E-01 | 6.720 | -.271E-01 | 6.725 | -.719E-01 |
| 6.730 | -.114E+00 | 6.735 | -.154E+00 | 6.740 | -.194E+00 | 6.745 | -.234E+00 | 6.750 | -.273E+00 |
| 6.755 | -.310E+00 | 6.760 | -.343E+00 | 6.765 | -.372E+00 | 6.770 | -.397E+00 | 6.775 | -.422E+00 |
| 6.780 | -.447E+00 | 6.785 | -.473E+00 | 6.790 | -.496E+00 | 6.795 | -.516E+00 | 6.800 | -.532E+00 |
| 6.805 | -.544E+00 | 6.810 | -.554E+00 | 6.815 | -.562E+00 | 6.820 | -.558E+00 | 6.825 | -.571E+00 |
| 6.830 | -.570E+00 | 6.835 | -.564E+00 | 6.840 | -.554E+00 | 6.845 | -.541E+00 | 6.850 | -.527E+00 |
| 6.855 | -.512E+00 | 6.860 | -.495E+00 | 6.865 | -.476E+00 | 6.870 | -.455E+00 | 6.875 | -.430E+00 |
| 6.880 | -.403E+00 | 6.885 | -.376E+00 | 6.890 | -.348E+00 | 6.895 | -.317E+00 | 6.900 | -.284E+00 |
| 6.905 | -.246E+00 | 6.910 | -.205E+00 | 6.915 | -.162E+00 | 6.920 | -.118E+00 | 6.925 | -.743E-01 |
| 6.930 | -.298E-01 | 6.935 | .159E-01 | 6.940 | .635E-01 | 6.945 | .112E+00 | 6.950 | .162E+00 |
| 6.955 | .210E+00 | 6.960 | .257E+00 | 6.965 | .303E+00 | 6.970 | .349E+00 | 6.975 | .395E+00 |
| 6.980 | .443E+00 | 6.985 | .490E+00 | 6.990 | .536E+00 | 6.995 | .579E+00 | 7.000 | .619E+00 |
| 7.005 | .656E+00 | 7.010 | .691E+00 | 7.015 | .724E+00 | 7.020 | .754E+00 | 7.025 | .782E+00 |
| 7.030 | .807E+00 | 7.035 | .826E+00 | 7.040 | .841E+00 | 7.045 | .852E+00 | 7.050 | .859E+00 |
| 7.055 | .864E+00 | 7.060 | .867E+00 | 7.065 | .867E+00 | 7.070 | .862E+00 | 7.075 | .851E+00 |
| 7.080 | .834E+00 | 7.085 | .812E+00 | 7.090 | .786E+00 | 7.095 | .757E+00 | 7.100 | .727E+00 |
| 7.105 | .694E+00 | 7.110 | .658E+00 | 7.115 | .618E+00 | 7.120 | .575E+00 | 7.125 | .529E+00 |
| 7.130 | .482E+00 | 7.135 | .434E+00 | 7.140 | .385E+00 | 7.145 | .336E+00 | 7.150 | .285E+00 |
| 7.155 | .233E+00 | 7.160 | .179E+00 | 7.165 | .124E+00 | 7.170 | .696E-01 | 7.175 | .163E-01 |
| 7.180 | -.359E-01 | 7.185 | -.871E-01 | 7.190 | -.138E+00 | 7.195 | -.187E+00 | 7.200 | -.236E+00 |
| 7.205 | -.283E+00 | 7.210 | -.328E+00 | 7.215 | -.370E+00 | 7.220 | -.410E+00 | 7.225 | -.448E+00 |
| 7.230 | -.485E+00 | 7.235 | -.520E+00 | 7.240 | -.553E+00 | 7.245 | -.583E+00 | 7.250 | -.610E+00 |
| 7.255 | -.635E+00 | 7.260 | -.657E+00 | 7.265 | -.676E+00 | 7.270 | -.693E+00 | 7.275 | -.707E+00 |
| 7.280 | -.717E+00 | 7.285 | -.723E+00 | 7.290 | -.725E+00 | 7.295 | -.725E+00 | 7.300 | -.722E+00 |
| 7.305 | -.717E+00 | 7.310 | -.710E+00 | 7.315 | -.699E+00 | 7.320 | -.684E+00 | 7.325 | -.665E+00 |
| 7.330 | -.643E+00 | 7.335 | -.618E+00 | 7.340 | -.592E+00 | 7.345 | -.564E+00 | 7.350 | -.534E+00 |
| 7.355 | -.501E+00 | 7.360 | -.467E+00 | 7.365 | -.430E+00 | 7.370 | -.393E+00 | 7.375 | -.356E+00 |
| 7.380 | -.319E+00 | 7.385 | -.281E+00 | 7.390 | -.243E+00 | 7.395 | -.204E+00 | 7.400 | -.165E+00 |
| 7.405 | -.128E+00 | 7.410 | -.916E-01 | 7.415 | -.572E-01 | 7.420 | -.238E-01 | 7.425 | .889E-02 |
| 7.430 | .409E-01 | 7.435 | .716E-01 | 7.440 | .100E+00 | 7.445 | .127E+00 | 7.450 | .152E+00 |
| 7.455 | .177E+00 | 7.460 | .201E+00 | 7.465 | .226E+00 | 7.470 | .251E+00 | 7.475 | .274E+00 |
| 7.480 | .295E+00 | 7.485 | .315E+00 | 7.490 | .333E+00 | 7.495 | .353E+00 | 7.500 | .373E+00 |
| 7.505 | .394E+00 | 7.510 | .415E+00 | 7.515 | .433E+00 | 7.520 | .449E+00 | 7.525 | .462E+00 |
| 7.530 | .474E+00 | 7.535 | .485E+00 | 7.540 | .496E+00 | 7.545 | .506E+00 | 7.550 | .514E+00 |
| 7.555 | .519E+00 | 7.560 | .521E+00 | 7.565 | .521E+00 | 7.570 | .518E+00 | 7.575 | .515E+00 |
| 7.580 | .509E+00 | 7.585 | .501E+00 | 7.590 | .490E+00 | 7.595 | .474E+00 | 7.600 | .455E+00 |
| 7.605 | .432E+00 | 7.610 | .408E+00 | 7.615 | .381E+00 | 7.620 | .354E+00 | 7.625 | .325E+00 |
| 7.630 | .293E+00 | 7.635 | .259E+00 | 7.640 | .223E+00 | 7.645 | .187E+00 | 7.650 | .151E+00 |
| 7.655 | .115E+00 | 7.660 | .783E-01 | 7.665 | .407E-01 | 7.670 | .189E-02 | 7.675 | -.374E-01 |
| 7.680 | -.758E-01 | 7.685 | -.112E+00 | 7.690 | -.146E+00 | 7.695 | -.178E+00 | 7.700 | -.210E+00 |
| 7.705 | -.243E+00 | 7.710 | -.275E+00 | 7.715 | -.306E+00 | 7.720 | -.334E+00 | 7.725 | -.359E+00 |
| 7.730 | -.381E+00 | 7.735 | -.402E+00 | 7.740 | -.423E+00 | 7.745 | -.443E+00 | 7.750 | -.461E+00 |
| 7.755 | -.476E+00 | 7.760 | -.486E+00 | 7.765 | -.493E+00 | 7.770 | -.499E+00 | 7.775 | -.503E+00 |
| 7.780 | -.508E+00 | 7.785 | -.511E+00 | 7.790 | -.513E+00 | 7.795 | -.512E+00 | 7.800 | -.510E+00 |
| 7.805 | -.507E+00 | 7.810 | -.505E+00 | 7.815 | -.502E+00 | 7.820 | -.498E+00 | 7.825 | -.491E+00 |
| 7.830 | -.480E+00 | 7.835 | -.457E+00 | 7.840 | -.435E+00 | 7.845 | -.410E+00 | 7.850 | -.426E+00 |
| 7.855 | -.411E+00 | 7.860 | -.394E+00 | 7.865 | -.375E+00 | 7.870 | -.355E+00 | 7.875 | -.335E+00 |
| 7.880 | -.316E+00 | 7.885 | -.298E+00 | 7.890 | -.278E+00 | 7.895 | -.256E+00 | 7.900 | -.231E+00 |
| 7.905 | -.204E+00 | 7.910 | -.178E+00 | 7.915 | -.154E+00 | 7.920 | -.130E+00 | 7.925 | -.105E+00 |
| 7.930 | -.776E-01 | 7.935 | -.470E-01 | 7.940 | -.153E-01 | 7.945 | .149E-01 | 7.950 | .423E-01 |
| 7.955 | .668E-01 | 7.960 | .902E-01 | 7.965 | .114E+00 | 7.970 | .139E+00 | 7.975 | .163E+00 |
| 7.980 | .185E+00 | 7.985 | .203E+00 | 7.990 | .217E+00 | 7.995 | .229E+00 | 8.000 | .239E+00 |
| 8.005 | .249E+00 | 8.010 | .257E+00 | 8.015 | .263E+00 | 8.020 | .264E+00 | 8.025 | .262E+00 |
| 8.030 | .258E+00 | 8.035 | .253E+00 | 8.040 | .247E+00 | 8.045 | .241E+00 | 8.050 | .234E+00 |
| 8.055 | .223E+00 | 8.060 | .210E+00 | 8.065 | .196E+00 | 8.070 | .181E+00 | 8.075 | .166E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 8.180 | -.185E+00 | 8.185 | -.194E+00 | 8.190 | -.203E+00 | 8.195 | -.212E+00 | 8.200 | -.221E+00 |
| 8.205 | -.222E+00 | 8.210 | -.226E+00 | 8.215 | -.228E+00 | 8.220 | -.230E+00 | 8.225 | -.231E+00 |
| 8.230 | -.230E+00 | 8.235 | -.227E+00 | 8.240 | -.223E+00 | 8.245 | -.217E+00 | 8.250 | -.212E+00 |
| 8.255 | -.208E+00 | 8.250 | -.205E+00 | 8.265 | -.201E+00 | 8.270 | -.196E+00 | 8.275 | -.188E+00 |
| 8.280 | -.177E+00 | 8.285 | -.167E+00 | 8.290 | -.157E+00 | 8.295 | -.150E+00 | 8.300 | -.143E+00 |
| 8.305 | -.137E+00 | 8.310 | -.130E+00 | 8.315 | -.121E+00 | 8.320 | -.112E+00 | 8.325 | -.103E+00 |
| 8.330 | -.953E-01 | 8.335 | -.901E-01 | 8.340 | -.862E-01 | 8.345 | -.823E-01 | 8.350 | -.772E-01 |
| 8.355 | -.706E-01 | 8.360 | -.631E-01 | 8.365 | -.562E-01 | 8.370 | -.506E-01 | 8.375 | -.468E-01 |
| 8.380 | -.440E-01 | 8.385 | -.409E-01 | 8.390 | -.365E-01 | 8.395 | -.302E-01 | 8.400 | -.223E-01 |
| 8.405 | -.139E-01 | 8.410 | -.577E-02 | 8.415 | .155E-02 | 8.420 | .821E-02 | 8.425 | .148E-01 |
| 8.430 | .218E-01 | 8.435 | .293E-01 | 8.440 | .371E-01 | 8.445 | .446E-01 | 8.450 | .517E-01 |
| 8.455 | .585E-01 | 8.460 | .655E-01 | 8.465 | .730E-01 | 8.470 | .809E-01 | 8.475 | .886E-01 |
| 8.480 | .955E-01 | 8.485 | .101E+00 | 8.490 | .106E+00 | 8.495 | .112E+00 | 8.500 | .118E+00 |
| 8.505 | .126E+00 | 8.510 | .135E+00 | 8.515 | .143E+00 | 8.520 | .149E+00 | 8.525 | .152E+00 |
| 8.530 | .154E+00 | 8.535 | .156E+00 | 8.540 | .159E+00 | 8.545 | .163E+00 | 8.550 | .168E+00 |
| 8.555 | .172E+00 | 8.560 | .175E+00 | 8.565 | .176E+00 | 8.570 | .178E+00 | 8.575 | .182E+00 |
| 8.580 | .188E+00 | 8.585 | .195E+00 | 8.590 | .202E+00 | 8.595 | .208E+00 | 8.600 | .211E+00 |
| 8.605 | .212E+00 | 8.610 | .214E+00 | 8.615 | .216E+00 | 8.620 | .219E+00 | 8.625 | .223E+00 |
| 8.630 | .226E+00 | 8.635 | .227E+00 | 8.640 | .228E+00 | 8.645 | .227E+00 | 8.650 | .227E+00 |
| 8.655 | .226E+00 | 8.660 | .223E+00 | 8.665 | .219E+00 | 8.670 | .213E+00 | 8.675 | .205E+00 |
| 8.680 | .197E+00 | 8.685 | .190E+00 | 8.690 | .182E+00 | 8.695 | .173E+00 | 8.700 | .162E+00 |
| 8.705 | .149E+00 | 8.710 | .133E+00 | 8.715 | .117E+00 | 8.720 | .100E+00 | 8.725 | .831E-01 |
| 8.730 | .645E-01 | 8.735 | .432E-01 | 8.740 | .188E-01 | 8.745 | -.743E-02 | 8.750 | -.335E-01 |
| 8.755 | -.578E-01 | 8.760 | -.799E-01 | 8.765 | -.101E+00 | 8.770 | -.123E+00 | 8.775 | -.148E+00 |
| 8.780 | -.174E+00 | 8.785 | -.201E+00 | 8.790 | -.226E+00 | 8.795 | -.248E+00 | 8.800 | -.268E+00 |
| 8.805 | -.286E+00 | 8.810 | -.304E+00 | 8.815 | -.323E+00 | 8.820 | -.341E+00 | 8.825 | -.354E+00 |
| 8.830 | -.362E+00 | 8.835 | -.365E+00 | 8.840 | -.365E+00 | 8.845 | -.363E+00 | 8.850 | -.361E+00 |
| 8.855 | -.359E+00 | 8.860 | -.355E+00 | 8.865 | -.348E+00 | 8.870 | -.336E+00 | 8.875 | -.321E+00 |
| 8.880 | -.303E+00 | 8.885 | -.286E+00 | 8.890 | -.269E+00 | 8.895 | -.251E+00 | 8.900 | -.231E+00 |
| 8.905 | -.208E+00 | 8.910 | -.181E+00 | 8.915 | -.152E+00 | 8.920 | -.123E+00 | 8.925 | -.931E-01 |
| 8.930 | -.644E-01 | 8.935 | -.361E-01 | 8.940 | -.750E-02 | 8.945 | .215E-01 | 8.950 | .511E-01 |
| 8.955 | .810E-01 | 8.960 | .111E+00 | 8.965 | .140E+00 | 8.970 | .159E+00 | 8.975 | .196E+00 |
| 8.980 | .224E+00 | 8.985 | .250E+00 | 8.990 | .277E+00 | 8.995 | .303E+00 | 9.000 | .329E+00 |
| 9.005 | .354E+00 | 9.010 | .378E+00 | 9.015 | .399E+00 | 9.020 | .418E+00 | 9.025 | .434E+00 |
| 9.030 | .450E+00 | 9.035 | .456E+00 | 9.040 | .481E+00 | 9.045 | .495E+00 | 9.050 | .505E+00 |
| 9.055 | .512E+00 | 9.060 | .516E+00 | 9.065 | .517E+00 | 9.070 | .516E+00 | 9.075 | .516E+00 |
| 9.080 | .514E+00 | 9.085 | .510E+00 | 9.090 | .502E+00 | 9.095 | .490E+00 | 9.100 | .475E+00 |
| 9.105 | .458E+00 | 9.110 | .442E+00 | 9.115 | .425E+00 | 9.120 | .408E+00 | 9.125 | .388E+00 |
| 9.130 | .365E+00 | 9.135 | .339E+00 | 9.140 | .312E+00 | 9.145 | .285E+00 | 9.150 | .258E+00 |
| 9.155 | .232E+00 | 9.160 | .204E+00 | 9.165 | .175E+00 | 9.170 | .144E+00 | 9.175 | .114E+00 |
| 9.180 | .844E-01 | 9.185 | .571E-01 | 9.190 | .311E-01 | 9.195 | .567E-02 | 9.200 | -.201E-01 |
| 9.205 | -.461E-01 | 9.210 | -.714E-01 | 9.215 | -.954E-01 | 9.220 | -.118E+00 | 9.225 | -.141E+00 |
| 9.230 | -.164E+00 | 9.235 | -.190E+00 | 9.240 | -.216E+00 | 9.245 | -.241E+00 | 9.250 | -.263E+00 |
| 9.255 | -.282E+00 | 9.260 | -.300E+00 | 9.265 | -.318E+00 | 9.270 | -.336E+00 | 9.275 | -.355E+00 |
| 9.280 | -.373E+00 | 9.285 | -.388E+00 | 9.290 | -.400E+00 | 9.295 | -.411E+00 | 9.300 | -.421E+00 |
| 9.305 | -.433E+00 | 9.310 | -.445E+00 | 9.315 | -.457E+00 | 9.320 | -.467E+00 | 9.325 | -.473E+00 |
| 9.330 | -.477E+00 | 9.335 | -.480E+00 | 9.340 | -.483E+00 | 9.345 | -.485E+00 | 9.350 | -.485E+00 |
| 9.355 | -.482E+00 | 9.360 | -.474E+00 | 9.365 | -.462E+00 | 9.370 | -.449E+00 | 9.375 | -.434E+00 |
| 9.380 | -.417E+00 | 9.385 | -.398E+00 | 9.390 | -.375E+00 | 9.395 | -.348E+00 | 9.400 | -.319E+00 |
| 9.405 | -.289E+00 | 9.410 | -.259E+00 | 9.415 | -.228E+00 | 9.420 | -.196E+00 | 9.425 | -.162E+00 |
| 9.430 | -.128E+00 | 9.435 | -.940E-01 | 9.440 | -.616E-01 | 9.445 | -.305E-01 | 9.450 | .762E-03 |
| 9.455 | .339E-01 | 9.460 | .694E-01 | 9.465 | .106E+00 | 9.470 | .143E+00 | 9.475 | .179E+00 |
| 9.480 | .213E+00 | 9.485 | .248E+00 | 9.490 | .285E+00 | 9.495 | .324E+00 | 9.500 | .363E+00 |
| 9.505 | .399E+00 | 9.510 | .432E+00 | 9.515 | .460E+00 | 9.520 | .485E+00 | 9.525 | .512E+00 |
| 9.530 | .539E+00 | 9.535 | .566E+00 | 9.540 | .590E+00 | 9.545 | .609E+00 | 9.550 | .623E+00 |
| 9.555 | .634E+00 | 9.560 | .644E+00 | 9.565 | .654E+00 | 9.570 | .663E+00 | 9.575 | .666E+00 |
| 9.580 | .663E+00 | 9.585 | .653E+00 | 9.590 | .638E+00 | 9.595 | .621E+00 | 9.600 | .606E+00 |
| 9.605 | .590E+00 | 9.610 | .573E+00 | 9.615 | .552E+00 | 9.620 | .527E+00 | 9.625 | .499E+00 |
| 9.630 | .472E+00 | 9.635 | .447E+00 | 9.640 | .424E+00 | 9.645 | .401E+00 | 9.650 | .375E+00 |
| 9.655 | .344E+00 | 9.660 | .311E+00 | 9.665 | .275E+00 | 9.670 | .239E+00 | 9.675 | .203E+00 |
| 9.680 | .168E+00 | 9.685 | .131E+00 | 9.690 | .925E-01 | 9.695 | .512E-01 | 9.700 | .755E-02 |

SPECTRA FOR THE PRECEDING TIME HISTORY WILL BE
CALCULATED AT THE FOLLOWING FREQUENCIES (IN CPS)

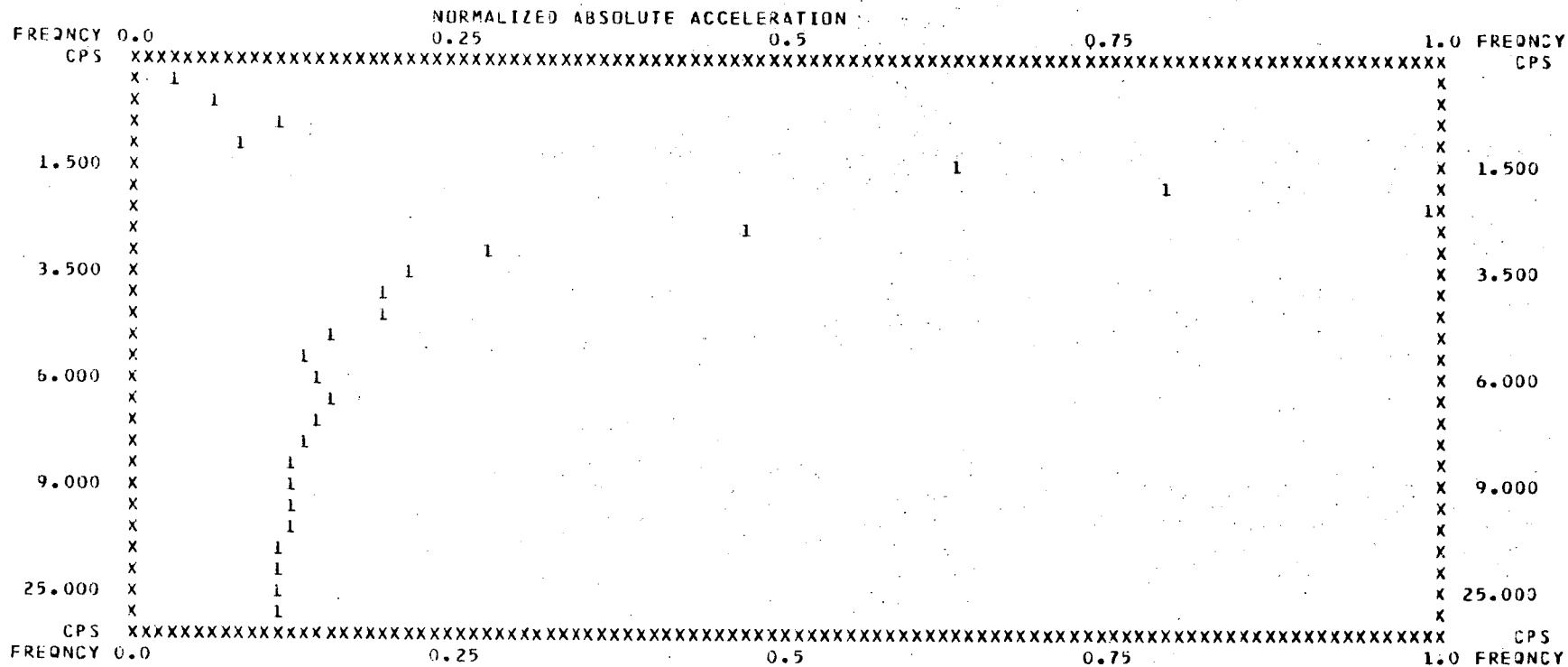
| | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| .3000 | .4000 | .7000 | 1.0000 | 1.5000 | 1.7000 | 2.0000 | 2.5000 | 3.0000 | 3.5000 |
| 4.0000 | 4.5000 | 5.0000 | 5.5000 | 6.0000 | 6.5000 | 7.0000 | 7.5000 | 8.0000 | 9.0000 |
| 10.0000 | 12.0000 | 15.0000 | 20.0000 | 25.0000 | 30.0000 | | | | |

| FREQUENCY (CPS) | PERIOD (SECS) | ABSOLUTE ACCELERATION | PSEUDO VELOCITY | TIME AT MAXIMUM |
|--------------------|------------------|--------------------------|--------------------|--------------------|
| .300 | 3.333 | .2896E+00 | .1536E+00 | .9065E+01 |
| .400 | 2.500 | .4911E+00 | .1574E+00 | .1078E+02 |
| .700 | 1.429 | .8427E+00 | .1916E+00 | .6320E+01 |
| 1.000 | 1.000 | .6827E+00 | .1087E+00 | .5290E+01 |
| 1.500 | .667 | .4463E+01 | .4736E+00 | .6820E+01 |
| 1.700 | .588 | .5561E+01 | .5206E+00 | .7280E+01 |
| 2.000 | .500 | .7012E+01 | .5580E+00 | .9935E+01 |
| 2.500 | .400 | .3343E+01 | .2128E+00 | .6580E+01 |
| 3.000 | .333 | .1990E+01 | .1056E+00 | .9100E+01 |
| 3.500 | .286 | .1578E+01 | .7174E-01 | .5065E+01 |
| 4.000 | .250 | .1425E+01 | .5672E-01 | .7285E+01 |
| 4.500 | .222 | .1453E+01 | .5139E-01 | .7085E+01 |
| 5.000 | .200 | .1157E+01 | .3683E-01 | .7055E+01 |
| 5.500 | .182 | .1027E+01 | .2971E-01 | .7070E+01 |
| 6.000 | .167 | .1096E+01 | .2907E-01 | .9350E+01 |
| 6.500 | .154 | .1142E+01 | .2795E-01 | .9835E+01 |
| 7.000 | .143 | .1069E+01 | .2430E-01 | .9825E+01 |
| 7.500 | .133 | .1005E+01 | .2132E-01 | .9815E+01 |
| 8.000 | .125 | .9508E+00 | .1892E-01 | .7060E+01 |
| 9.000 | .111 | .9524E+00 | .1684E-01 | .9840E+01 |
| 10.000 | .100 | .9148E+00 | .1456E-01 | .9330E+01 |
| 12.000 | .083 | .9225E+00 | .1223E-01 | .9820E+01 |
| 15.000 | .067 | .8980E+00 | .9528E-02 | .9825E+01 |
| 20.000 | .050 | .8941E+00 | .7115E-02 | .9830E+01 |
| 25.000 | .040 | .8842E+00 | .5629E-02 | .9845E+01 |
| 30.000 | .033 | .8838E+00 | .4689E-02 | .9835E+01 |

MAXIMUM ABSOLUTE SPECTRAL ACCELERATION .7012E+01
AT FREQUENCY (CPS) .2000E+01

NORMALIZED PLOT OF RESPONSE SPECTRA.....

| DAMPING VALUE | MAXIMUM VALUE | AT FREQUENCY | PLOT SYMBOL |
|---------------|---------------|--------------|-------------|
| .2000E-01 | .7012E+01 | .2000E+01 | 1 |



INPUT TIME HISTORY CONTROL

| | | |
|---------------------------|------|--------|
| TIME HISTORY NUMBER | | 4 |
| NUMBER OF TIME POINTS | NTP | 2001 |
| INPUT CODE | INPT | 1 |
| TIME STEP | DEL | .0050 |
| ACCELERATION SCALE FACTOR | SFTR | 1.0000 |

COMPUTATION AND OUTPUT CONTROL

| | | |
|--------------------------------|------|---------|
| INPUT HISTORY INTEGRATION CODE | INTR | 0 |
| SPECTRUM COMPUTATION CODES | ISPC | 1 |
| | IDUR | 0 |
| SPECTRUM OUTPUT CODE | IOUT | 3 |
| NUMBER OF FREQUENCY POINTS | NFP | 26 |
| NUMBER OF DAMPINGS | NOP | 1 |
| FREQUENCY SCALE TYPE CODE | IFSC | 2 |
| LOWEST FREQUENCY IN CPS | W1 | .3000 |
| HIGHEST FREQUENCY IN CPS | W2 | 30.0000 |
| TIME STEP TO PERIOD RATIO | DELP | .2000 |

FIELD LENGTH REQUIREMENTS
(IN OCTAL)

| | |
|-----------------------|--------|
| PROGRAM LENGTH | 040437 |
| BLANK COMMON REQUIRED | 007647 |
| FIELD LENGTH REQUIRED | 050306 |

FORMAT OF INPUT TIME HISTORY IS

(40980(I),(E16.8))

| TIME | ACCEL | TIME | ACCEL | TIME | ACCEL | TIME | ACCEL | TIME | ACCEL |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| .005 | .621E-03 | .010 | -.870E-03 | .015 | .935E-03 | .020 | .913E-02 | .025 | .240E-01 |
| .030 | .419E-01 | .035 | .559E-01 | .040 | .592E-01 | .045 | .482E-01 | .050 | .250E-01 |
| .055 | -.407E-02 | .060 | -.312E-01 | .065 | -.507E-01 | .070 | -.607E-01 | .075 | -.633E-01 |
| .080 | -.622E-01 | .085 | -.607E-01 | .090 | -.603E-01 | .095 | -.615E-01 | .100 | -.644E-01 |
| .105 | -.696E-01 | .110 | -.775E-01 | .115 | -.873E-01 | .120 | -.955E-01 | .125 | -.101E+00 |
| .130 | -.985E-01 | .135 | -.867E-01 | .140 | -.671E-01 | .145 | -.431E-01 | .150 | -.181E-01 |
| .155 | .536E-02 | .160 | .258E-01 | .165 | .429E-01 | .170 | .561E-01 | .175 | .650E-01 |
| .180 | .695E-01 | .185 | .706E-01 | .190 | .701E-01 | .195 | .699E-01 | .200 | .714E-01 |
| .205 | .743E-01 | .210 | .776E-01 | .215 | .804E-01 | .220 | .823E-01 | .225 | .841E-01 |
| .230 | .864E-01 | .235 | .889E-01 | .240 | .901E-01 | .245 | .881E-01 | .250 | .821E-01 |
| .255 | .733E-01 | .260 | .647E-01 | .265 | .596E-01 | .270 | .596E-01 | .275 | .642E-01 |
| .280 | .708E-01 | .285 | .753E-01 | .290 | .790E-01 | .295 | .785E-01 | .300 | .756E-01 |
| .305 | .715E-01 | .310 | .663E-01 | .315 | .601E-01 | .320 | .526E-01 | .325 | .447E-01 |
| .330 | .374E-01 | .335 | .321E-01 | .340 | .288E-01 | .345 | .259E-01 | .350 | .249E-01 |
| .355 | .221E-01 | .360 | .181E-01 | .365 | .138E-01 | .370 | .982E-02 | .375 | .677E-02 |
| .380 | .455E-02 | .385 | .290E-02 | .390 | .175E-02 | .395 | .135E-02 | .400 | .204E-02 |
| .405 | .386E-02 | .410 | .648E-02 | .415 | .960E-02 | .420 | .134E-01 | .425 | .185E-01 |
| .430 | .260E-01 | .435 | .361E-01 | .440 | .476E-01 | .445 | .585E-01 | .450 | .659E-01 |
| .455 | .679E-01 | .460 | .637E-01 | .465 | .538E-01 | .470 | .394E-01 | .475 | .221E-01 |
| .480 | .351E-02 | .485 | -.144E-01 | .490 | -.293E-01 | .495 | -.392E-01 | .500 | -.428E-01 |
| .505 | -.407E-01 | .510 | -.352E-01 | .515 | -.296E-01 | .520 | -.258E-01 | .525 | -.281E-01 |
| .530 | -.334E-01 | .535 | -.412E-01 | .540 | -.500E-01 | .545 | -.586E-01 | .550 | -.660E-01 |
| .555 | -.712E-01 | .560 | -.726E-01 | .565 | -.692E-01 | .570 | -.607E-01 | .575 | -.486E-01 |
| .580 | -.362E-01 | .585 | -.259E-01 | .590 | -.236E-01 | .595 | -.273E-01 | .600 | -.368E-01 |
| .605 | -.500E-01 | .610 | -.542E-01 | .615 | -.774E-01 | .620 | -.885E-01 | .625 | -.976E-01 |
| .630 | -.106E+00 | .635 | -.116E+00 | .640 | -.129E+00 | .645 | -.147E+00 | .650 | -.168E+00 |
| .655 | -.188E+00 | .660 | -.199E+00 | .665 | -.196E+00 | .670 | -.178E+00 | .675 | -.149E+00 |
| .680 | -.118E+00 | .685 | -.959E-01 | .690 | -.908E-01 | .695 | -.103E+00 | .700 | -.125E+00 |
| .705 | -.145E+00 | .710 | -.153E+00 | .715 | -.142E+00 | .720 | -.110E+00 | .725 | -.650E-01 |
| .730 | -.150E-01 | .735 | .297E-01 | .740 | .613E-01 | .745 | .755E-01 | .750 | .722E-01 |
| .755 | .560E-01 | .760 | .345E-01 | .765 | .171E-01 | .770 | .117E-01 | .775 | .220E-01 |
| .780 | .462E-01 | .785 | .779E-01 | .790 | .108E+00 | .795 | .129E+00 | .800 | .137E+00 |
| .805 | .132E+00 | .810 | .118E+00 | .815 | .978E-01 | .820 | .754E-01 | .825 | .524E-01 |
| .830 | .305E-01 | .835 | .112E-01 | .840 | -.277E-02 | .845 | -.880E-02 | .850 | -.531E-02 |
| .855 | .712E-02 | .860 | .256E-01 | .865 | .455E-01 | .870 | .522E-01 | .875 | .717E-01 |
| .880 | .718E-01 | .885 | .627E-01 | .890 | .466E-01 | .895 | .274E-01 | .900 | .102E-01 |
| .905 | -.444E-03 | .910 | -.117E-02 | .915 | .861E-02 | .920 | .267E-01 | .925 | .486E-01 |
| .930 | .694E-01 | .935 | .847E-01 | .940 | .919E-01 | .945 | .902E-01 | .950 | .800E-01 |
| .955 | .623E-01 | .960 | .385E-01 | .965 | .105E-01 | .970 | -.190E-01 | .975 | -.468E-01 |
| .980 | -.697E-01 | .985 | -.857E-01 | .990 | -.948E-01 | .995 | -.990E-01 | 1.000 | -.101E+00 |
| 1.005 | -.105E+00 | 1.010 | -.111E+00 | 1.015 | -.121E+00 | 1.020 | -.131E+00 | 1.025 | -.142E+00 |
| 1.030 | -.150E+00 | 1.035 | -.156E+00 | 1.040 | -.159E+00 | 1.045 | -.159E+00 | 1.050 | -.156E+00 |
| 1.055 | -.153E+00 | 1.060 | -.148E+00 | 1.065 | -.142E+00 | 1.070 | -.136E+00 | 1.075 | -.130E+00 |
| 1.080 | -.124E+00 | 1.085 | -.119E+00 | 1.090 | -.114E+00 | 1.095 | -.109E+00 | 1.100 | -.106E+00 |
| 1.105 | -.105E+00 | 1.110 | -.106E+00 | 1.115 | -.110E+00 | 1.120 | -.116E+00 | 1.125 | -.121E+00 |
| 1.130 | -.125E+00 | 1.135 | -.125E+00 | 1.140 | -.121E+00 | 1.145 | -.111E+00 | 1.150 | -.968E-01 |
| 1.155 | -.793E-01 | 1.160 | -.603E-01 | 1.165 | -.421E-01 | 1.170 | -.264E-01 | 1.175 | -.143E-01 |
| 1.180 | -.563E-02 | 1.185 | .102E-02 | 1.190 | .742E-02 | 1.195 | .151E-01 | 1.200 | .247E-01 |
| 1.205 | .361E-01 | 1.210 | .487E-01 | 1.215 | .621E-01 | 1.220 | .751E-01 | 1.225 | .907E-01 |
| 1.230 | .105E+00 | 1.235 | .118E+00 | 1.240 | .127E+00 | 1.245 | .130E+00 | 1.250 | .129E+00 |
| 1.255 | .125E+00 | 1.260 | .121E+00 | 1.265 | .120E+00 | 1.270 | .124E+00 | 1.275 | .133E+00 |
| 1.280 | .144E+00 | 1.285 | .154E+00 | 1.290 | .162E+00 | 1.295 | .157E+00 | 1.300 | .168E+00 |
| 1.305 | .167E+00 | 1.310 | .154E+00 | 1.315 | .160E+00 | 1.320 | .155E+00 | 1.325 | .151E+00 |
| 1.330 | .147E+00 | 1.335 | .145E+00 | 1.340 | .144E+00 | 1.345 | .144E+00 | 1.350 | .143E+00 |
| 1.355 | .141E+00 | 1.360 | .137E+00 | 1.365 | .131E+00 | 1.370 | .124E+00 | 1.375 | .116E+00 |
| 1.380 | .106E+00 | 1.385 | .962E-01 | 1.390 | .847E-01 | 1.395 | .716E-01 | 1.400 | .568E-01 |
| 1.405 | .402E-01 | 1.410 | .217E-01 | 1.415 | .151E-02 | 1.420 | -.196E-01 | 1.425 | -.406E-01 |
| 1.430 | -.602E-01 | 1.435 | -.778E-01 | 1.440 | -.935E-01 | 1.445 | -.108E+00 | 1.450 | -.123E+00 |
| 1.455 | -.141E+00 | 1.460 | -.161E+00 | 1.465 | -.188E+00 | 1.470 | -.210E+00 | 1.475 | -.236E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 1.580 | -.180E+00 | 1.585 | -.194E+00 | 1.590 | -.137E+00 | 1.595 | -.119E+00 | 1.600 | -.902E-01 |
| 1.605 | -.642E-01 | 1.595 | -.405E-01 | 1.590 | -.216E-01 | 1.595 | -.875E-02 | 1.600 | -.126E-02 |
| 1.630 | .562E-01 | 1.610 | .585E-02 | 1.615 | .132E-01 | 1.620 | .239E-01 | 1.625 | .389E-01 |
| 1.655 | .811E-01 | 1.635 | .722E-01 | 1.640 | .830E-01 | 1.645 | .857E-01 | 1.650 | .845E-01 |
| 1.680 | .171E+00 | 1.660 | .829E-01 | 1.665 | .950E-01 | 1.670 | .118E+00 | 1.675 | .146E+00 |
| 1.705 | .853E-01 | 1.685 | .183E+00 | 1.690 | .176E+00 | 1.695 | .152E+00 | 1.700 | .118E+00 |
| 1.730 | .116E+00 | 1.710 | .633E-01 | 1.715 | .578E-01 | 1.720 | .687E-01 | 1.725 | .907E-01 |
| 1.755 | .559E-01 | 1.735 | .135E+00 | 1.740 | .140E+00 | 1.745 | .128E+00 | 1.750 | .982E-01 |
| 1.780 | -.416E-01 | 1.760 | .969E-02 | 1.765 | -.296E-01 | 1.770 | -.531E-01 | 1.775 | -.563E-01 |
| 1.805 | .208E-01 | 1.785 | -.157E-01 | 1.790 | .831E-02 | 1.795 | .248E-01 | 1.800 | .287E-01 |
| 1.830 | -.678E-01 | 1.810 | .499E-02 | 1.815 | -.141E-01 | 1.820 | -.334E-01 | 1.825 | -.515E-01 |
| 1.855 | -.663E-01 | 1.835 | -.813E-01 | 1.840 | -.897E-01 | 1.845 | -.905E-01 | 1.850 | -.824E-01 |
| 1.880 | -.125E-01 | 1.860 | -.457E-01 | 1.865 | -.258E-01 | 1.870 | -.117E-01 | 1.875 | -.684E-02 |
| 1.905 | -.976E-01 | 1.885 | -.274E-01 | 1.890 | -.482E-01 | 1.895 | -.702E-01 | 1.900 | -.883E-01 |
| 1.930 | .111E-01 | 1.910 | -.752E-01 | 1.915 | -.802E-01 | 1.920 | -.546E-01 | 1.925 | -.225E-01 |
| 1.955 | .913E-01 | 1.935 | .414E-01 | 1.940 | .654E-01 | 1.945 | .815E-01 | 1.950 | .898E-01 |
| 1.980 | .658E-01 | 1.960 | .876E-01 | 1.965 | .806E-01 | 1.970 | .729E-01 | 1.975 | .672E-01 |
| 2.005 | .116E+00 | 1.985 | .701E-01 | 1.990 | .797E-01 | 1.995 | .927E-01 | 2.000 | .106E+00 |
| 2.030 | .850E-01 | 2.010 | .120E+00 | 2.015 | .119E+00 | 2.020 | .111E+00 | 2.025 | .995E-01 |
| 2.055 | .441E-01 | 2.035 | .727E-01 | 2.040 | .613E-01 | 2.045 | .527E-01 | 2.050 | .472E-01 |
| 2.080 | .325E-01 | 2.060 | .424E-01 | 2.065 | .408E-01 | 2.070 | .387E-01 | 2.075 | .358E-01 |
| 2.105 | .225E-01 | 2.085 | .296E-01 | 2.090 | .274E-01 | 2.095 | .260E-01 | 2.100 | .247E-01 |
| 2.130 | -.133E-01 | 2.110 | .186E-01 | 2.115 | .124E-01 | 2.120 | .439E-02 | 2.125 | -.469E-02 |
| 2.155 | -.323E-02 | 2.135 | -.198E-01 | 2.140 | -.225E-01 | 2.145 | -.204E-01 | 2.150 | -.135E-01 |
| 2.180 | .135E-01 | 2.160 | .786E-02 | 2.165 | .168E-01 | 2.170 | .211E-01 | 2.175 | .198E-01 |
| 2.205 | -.449E-01 | 2.185 | .360E-02 | 2.190 | -.803E-02 | 2.195 | -.203E-01 | 2.200 | -.327E-01 |
| 2.230 | -.555E-01 | 2.210 | -.558E-01 | 2.215 | -.635E-01 | 2.220 | -.661E-01 | 2.225 | -.630E-01 |
| 2.255 | -.662E-01 | 2.235 | -.474E-01 | 2.240 | -.428E-01 | 2.245 | -.448E-01 | 2.250 | -.536E-01 |
| 2.280 | -.746E-01 | 2.250 | -.781E-01 | 2.265 | -.853E-01 | 2.270 | -.853E-01 | 2.275 | -.819E-01 |
| 2.305 | -.433E-01 | 2.285 | -.668E-01 | 2.290 | -.597E-01 | 2.295 | -.536E-01 | 2.300 | -.480E-01 |
| 2.330 | -.495E-01 | 2.310 | -.402E-01 | 2.315 | -.397E-01 | 2.320 | -.420E-01 | 2.325 | -.459E-01 |
| 2.355 | -.467E-01 | 2.335 | -.512E-01 | 2.340 | -.506E-01 | 2.345 | -.487E-01 | 2.350 | -.470E-01 |
| 2.380 | -.431E-01 | 2.360 | -.477E-01 | 2.365 | -.488E-01 | 2.370 | -.488E-01 | 2.375 | -.468E-01 |
| 2.405 | -.238E-01 | 2.385 | -.386E-01 | 2.390 | -.343E-01 | 2.395 | -.305E-01 | 2.400 | -.271E-01 |
| 2.430 | -.543E-02 | 2.410 | -.205E-01 | 2.415 | -.172E-01 | 2.420 | -.138E-01 | 2.425 | -.101E-01 |
| 2.455 | .252E-01 | 2.435 | .827E-03 | 2.440 | .848E-02 | 2.445 | .154E-01 | 2.450 | .227E-01 |
| 2.480 | -.459E-01 | 2.460 | .222E-01 | 2.465 | .128E-01 | 2.470 | -.273E-02 | 2.475 | -.231E-01 |
| 2.505 | -.102E+00 | 2.485 | -.680E-01 | 2.490 | -.853E-01 | 2.495 | -.982E-01 | 2.500 | -.103E+00 |
| 2.530 | -.118E+00 | 2.510 | -.976E-01 | 2.515 | -.948E-01 | 2.520 | -.955E-01 | 2.525 | -.104E+00 |
| 2.555 | -.208E+00 | 2.535 | -.135E+00 | 2.540 | -.154E+00 | 2.545 | -.174E+00 | 2.550 | -.193E+00 |
| 2.580 | -.177E+00 | 2.550 | -.217E+00 | 2.565 | -.218E+00 | 2.570 | -.211E+00 | 2.575 | -.196E+00 |
| 2.605 | -.990E-01 | 2.585 | -.156E+00 | 2.590 | -.138E+00 | 2.595 | -.123E+00 | 2.600 | -.111E+00 |
| 2.630 | .782E-02 | 2.610 | -.990E-01 | 2.615 | -.673E-01 | 2.620 | -.450E-01 | 2.625 | -.191E-01 |
| 2.655 | .481E-01 | 2.635 | .320E-01 | 2.640 | .492E-01 | 2.645 | .557E-01 | 2.650 | .548E-01 |
| 2.680 | .116E+00 | 2.660 | .438E-01 | 2.665 | .489E-01 | 2.670 | .662E-01 | 2.675 | .918E-01 |
| 2.705 | -.867E-02 | 2.685 | .127E+00 | 2.690 | .117E+00 | 2.695 | .855E-01 | 2.700 | .393E-01 |
| 2.730 | -.297E-01 | 2.710 | -.457E-01 | 2.715 | -.643E-01 | 2.720 | -.539E-01 | 2.725 | -.497E-01 |
| 2.755 | -.118E-01 | 2.735 | -.114E-01 | 2.740 | .256E-03 | 2.745 | .324E-02 | 2.750 | -.180E-02 |
| 2.780 | .639E-01 | 2.760 | -.212E-01 | 2.765 | -.233E-01 | 2.770 | -.114E-01 | 2.775 | .182E-01 |
| 2.805 | .238E+00 | 2.785 | .118E+00 | 2.790 | .171E+00 | 2.795 | .211E+00 | 2.800 | .234E+00 |
| 2.830 | .192E+00 | 2.810 | .230E+00 | 2.815 | .217E+00 | 2.820 | .206E+00 | 2.825 | .197E+00 |
| 2.855 | .207E+00 | 2.835 | .188E+00 | 2.840 | .185E+00 | 2.845 | .187E+00 | 2.850 | .194E+00 |
| 2.880 | .232E+00 | 2.860 | .225E+00 | 2.865 | .242E+00 | 2.870 | .251E+00 | 2.875 | .249E+00 |
| 2.905 | .923E-01 | 2.885 | .204E+00 | 2.890 | .170E+00 | 2.895 | .137E+00 | 2.900 | .110E+00 |
| 2.930 | .590E-01 | 2.910 | .827E-01 | 2.915 | .784E-01 | 2.920 | .752E-01 | 2.925 | .696E-01 |
| 2.955 | -.823E-01 | 2.935 | .424E-01 | 2.940 | .196E-01 | 2.945 | -.906E-02 | 2.950 | -.433E-01 |
| 2.980 | -.251E+00 | 2.960 | -.124E+00 | 2.965 | -.165E+00 | 2.970 | -.202E+00 | 2.975 | -.231E+00 |
| 3.005 | -.247E+00 | 2.985 | -.252E+00 | 2.990 | -.269E+00 | 2.995 | -.275E+00 | 3.000 | -.284E+00 |
| 3.030 | -.384E+00 | 3.010 | -.315E+00 | 3.015 | -.334E+00 | 3.020 | -.352E+00 | 3.025 | -.369E+00 |
| 3.055 | -.392E+00 | 3.035 | -.396E+00 | 3.040 | -.404E+00 | 3.045 | -.406E+00 | 3.050 | -.402E+00 |
| 3.080 | -.315E+00 | 3.060 | -.378E+00 | 3.065 | -.363E+00 | 3.070 | -.347E+00 | 3.075 | -.331E+00 |
| 3.105 | -.222E+00 | 3.085 | -.296E+00 | 3.090 | -.276E+00 | 3.095 | -.256E+00 | 3.100 | -.237E+00 |
| | | 3.110 | -.212E+00 | 3.115 | -.206E+00 | 3.120 | -.203E+00 | 3.125 | -.199E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 3.230 | .590E+00 | 3.235 | .645E+00 | 3.240 | .690E+00 | 3.245 | .722E+00 | 3.250 | .740E+00 |
| 3.255 | .746E+00 | 3.260 | .745E+00 | 3.265 | .743E+00 | 3.270 | .741E+00 | 3.275 | .742E+00 |
| 3.280 | .742E+00 | 3.285 | .738E+00 | 3.290 | .728E+00 | 3.295 | .711E+00 | 3.300 | .690E+00 |
| 3.305 | .667E+00 | 3.310 | .542E+00 | 3.315 | .617E+00 | 3.320 | .592E+00 | 3.325 | .568E+00 |
| 3.330 | .546E+00 | 3.335 | .527E+00 | 3.340 | .512E+00 | 3.345 | .499E+00 | 3.350 | .487E+00 |
| 3.355 | .474E+00 | 3.360 | .460E+00 | 3.365 | .444E+00 | 3.370 | .427E+00 | 3.375 | .410E+00 |
| 3.380 | .393E+00 | 3.385 | .375E+00 | 3.390 | .355E+00 | 3.395 | .333E+00 | 3.400 | .308E+00 |
| 3.405 | .281E+00 | 3.410 | .251E+00 | 3.415 | .219E+00 | 3.420 | .187E+00 | 3.425 | .156E+00 |
| 3.430 | .126E+00 | 3.435 | .988E-01 | 3.440 | .737E-01 | 3.445 | .496E-01 | 3.450 | .246E-01 |
| 3.455 | -.272E-02 | 3.460 | -.328E-01 | 3.465 | -.648E-01 | 3.470 | -.970E-01 | 3.475 | -.127E+00 |
| 3.480 | -.154E+00 | 3.485 | -.176E+00 | 3.490 | -.191E+00 | 3.495 | -.201E+00 | 3.500 | -.204E+00 |
| 3.505 | -.202E+00 | 3.510 | -.198E+00 | 3.515 | -.194E+00 | 3.520 | -.194E+00 | 3.525 | -.200E+00 |
| 3.530 | -.212E+00 | 3.535 | -.230E+00 | 3.540 | -.249E+00 | 3.545 | -.266E+00 | 3.550 | -.279E+00 |
| 3.555 | -.287E+00 | 3.560 | -.291E+00 | 3.565 | -.289E+00 | 3.570 | -.284E+00 | 3.575 | -.275E+00 |
| 3.580 | -.265E+00 | 3.585 | -.255E+00 | 3.590 | -.249E+00 | 3.595 | -.249E+00 | 3.600 | -.253E+00 |
| 3.605 | -.261E+00 | 3.610 | -.258E+00 | 3.615 | -.268E+00 | 3.620 | -.258E+00 | 3.625 | -.239E+00 |
| 3.630 | -.212E+00 | 3.635 | -.185E+00 | 3.640 | -.161E+00 | 3.645 | -.142E+00 | 3.650 | -.126E+00 |
| 3.655 | -.108E+00 | 3.660 | -.810E-01 | 3.665 | -.425E-01 | 3.670 | .694E-02 | 3.675 | .611E-01 |
| 3.680 | .111E+00 | 3.685 | .149E+00 | 3.690 | .170E+00 | 3.695 | .176E+00 | 3.700 | .173E+00 |
| 3.705 | .171E+00 | 3.710 | .178E+00 | 3.715 | .199E+00 | 3.720 | .234E+00 | 3.725 | .279E+00 |
| 3.730 | .323E+00 | 3.735 | .359E+00 | 3.740 | .376E+00 | 3.745 | .370E+00 | 3.750 | .341E+00 |
| 3.755 | .296E+00 | 3.760 | .242E+00 | 3.765 | .190E+00 | 3.770 | .149E+00 | 3.775 | .119E+00 |
| 3.780 | .101E+00 | 3.785 | .911E-01 | 3.790 | .835E-01 | 3.795 | .747E-01 | 3.800 | .633E-01 |
| 3.805 | .492E-01 | 3.810 | .325E-01 | 3.815 | .128E-01 | 3.820 | -.102E-01 | 3.825 | -.357E-01 |
| 3.830 | -.614E-01 | 3.835 | -.834E-01 | 3.840 | -.980E-01 | 3.845 | -.103E+00 | 3.850 | -.986E-01 |
| 3.855 | -.868E-01 | 3.860 | -.701E-01 | 3.865 | -.509E-01 | 3.870 | -.312E-01 | 3.875 | -.137E-01 |
| 3.880 | -.293E-02 | 3.885 | -.421E-02 | 3.890 | -.220E-01 | 3.895 | -.571E-01 | 3.900 | -.105E+00 |
| 3.905 | -.157E+00 | 3.910 | -.202E+00 | 3.915 | -.234E+00 | 3.920 | -.249E+00 | 3.925 | -.253E+00 |
| 3.930 | -.251E+00 | 3.935 | -.250E+00 | 3.940 | -.255E+00 | 3.945 | -.254E+00 | 3.950 | -.278E+00 |
| 3.955 | -.295E+00 | 3.960 | -.315E+00 | 3.965 | -.336E+00 | 3.970 | -.357E+00 | 3.975 | -.373E+00 |
| 3.980 | -.380E+00 | 3.985 | -.374E+00 | 3.990 | -.356E+00 | 3.995 | -.329E+00 | 4.000 | -.300E+00 |
| 4.005 | -.273E+00 | 4.010 | -.251E+00 | 4.015 | -.232E+00 | 4.020 | -.215E+00 | 4.025 | -.195E+00 |
| 4.030 | -.172E+00 | 4.035 | -.146E+00 | 4.040 | -.118E+00 | 4.045 | -.881E-01 | 4.050 | -.569E-01 |
| 4.055 | -.247E-01 | 4.060 | .638E-02 | 4.065 | .327E-01 | 4.070 | .503E-01 | 4.075 | .573E-01 |
| 4.080 | .550E-01 | 4.085 | .479E-01 | 4.090 | .413E-01 | 4.095 | .390E-01 | 4.100 | .413E-01 |
| 4.105 | .455E-01 | 4.110 | .479E-01 | 4.115 | .462E-01 | 4.120 | .408E-01 | 4.125 | .346E-01 |
| 4.130 | .307E-01 | 4.135 | .311E-01 | 4.140 | .359E-01 | 4.145 | .440E-01 | 4.150 | .546E-01 |
| 4.155 | .677E-01 | 4.160 | .847E-01 | 4.165 | .107E+00 | 4.170 | .134E+00 | 4.175 | .164E+00 |
| 4.180 | .195E+00 | 4.185 | .222E+00 | 4.190 | .243E+00 | 4.195 | .257E+00 | 4.200 | .265E+00 |
| 4.205 | .268E+00 | 4.210 | .267E+00 | 4.215 | .265E+00 | 4.220 | .263E+00 | 4.225 | .261E+00 |
| 4.230 | .258E+00 | 4.235 | .253E+00 | 4.240 | .243E+00 | 4.245 | .227E+00 | 4.250 | .206E+00 |
| 4.255 | .182E+00 | 4.260 | .157E+00 | 4.265 | .135E+00 | 4.270 | .116E+00 | 4.275 | .101E+00 |
| 4.280 | .893E-01 | 4.285 | .813E-01 | 4.290 | .781E-01 | 4.295 | .807E-01 | 4.300 | .892E-01 |
| 4.305 | .102E+00 | 4.310 | .115E+00 | 4.315 | .126E+00 | 4.320 | .133E+00 | 4.325 | .137E+00 |
| 4.330 | .139E+00 | 4.335 | .139E+00 | 4.340 | .138E+00 | 4.345 | .133E+00 | 4.350 | .122E+00 |
| 4.355 | .105E+00 | 4.360 | .842E-01 | 4.365 | .617E-01 | 4.370 | .410E-01 | 4.375 | .231E-01 |
| 4.380 | .702E-02 | 4.385 | -.969E-02 | 4.390 | -.293E-01 | 4.395 | -.528E-01 | 4.400 | -.795E-01 |
| 4.405 | -.108E+00 | 4.410 | -.135E+00 | 4.415 | -.162E+00 | 4.420 | -.185E+00 | 4.425 | -.206E+00 |
| 4.430 | -.222E+00 | 4.435 | -.234E+00 | 4.440 | -.240E+00 | 4.445 | -.242E+00 | 4.450 | -.242E+00 |
| 4.455 | -.241E+00 | 4.460 | -.241E+00 | 4.465 | -.244E+00 | 4.470 | -.248E+00 | 4.475 | -.251E+00 |
| 4.480 | -.251E+00 | 4.485 | -.246E+00 | 4.490 | -.231E+00 | 4.495 | -.206E+00 | 4.500 | -.171E+00 |
| 4.505 | -.127E+00 | 4.510 | -.802E-01 | 4.515 | -.356E-01 | 4.520 | .235E-02 | 4.525 | .310E-01 |
| 4.530 | .500E-01 | 4.535 | .612E-01 | 4.540 | .659E-01 | 4.545 | .696E-01 | 4.550 | .713E-01 |
| 4.555 | .735E-01 | 4.560 | .771E-01 | 4.565 | .824E-01 | 4.570 | .885E-01 | 4.575 | .937E-01 |
| 4.580 | .959E-01 | 4.585 | .931E-01 | 4.590 | .847E-01 | 4.595 | .713E-01 | 4.600 | .544E-01 |
| 4.605 | .356E-01 | 4.610 | .164E-01 | 4.615 | -.252E-02 | 4.620 | -.207E-01 | 4.625 | -.385E-01 |
| 4.630 | -.569E-01 | 4.635 | -.779E-01 | 4.640 | -.103E+00 | 4.645 | -.134E+00 | 4.650 | -.167E+00 |
| 4.655 | -.197E+00 | 4.660 | -.215E+00 | 4.665 | -.217E+00 | 4.670 | -.199E+00 | 4.675 | -.166E+00 |
| 4.680 | -.129E+00 | 4.685 | -.983E-01 | 4.690 | -.804E-01 | 4.695 | -.754E-01 | 4.700 | -.765E-01 |
| 4.705 | -.737E-01 | 4.710 | -.581E-01 | 4.715 | -.255E-01 | 4.720 | .237E-01 | 4.725 | .855E-01 |
| 4.730 | .155E+00 | 4.735 | .227E+00 | 4.740 | .297E+00 | 4.745 | .362E+00 | 4.750 | .417E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 4.880 | .679E+00 | 4.885 | .615E+00 | 4.890 | .536E+00 | 4.895 | .446E+00 | 4.900 | .350E+00 |
| 4.905 | .256E+00 | 4.910 | .171E+00 | 4.915 | .972E-01 | 4.920 | .350E-01 | 4.925 | -.164E-01 |
| 4.930 | -.651E-01 | 4.935 | -.115E+00 | 4.940 | -.168E+00 | 4.945 | -.225E+00 | 4.950 | -.285E+00 |
| 4.955 | -.345E+00 | 4.960 | -.403E+00 | 4.965 | -.456E+00 | 4.970 | -.502E+00 | 4.975 | -.539E+00 |
| 4.980 | -.566E+00 | 4.985 | -.585E+00 | 4.990 | -.599E+00 | 4.995 | -.512E+00 | 5.000 | -.629E+00 |
| 5.005 | -.651E+00 | 5.010 | -.677E+00 | 5.015 | -.705E+00 | 5.020 | -.734E+00 | 5.025 | -.764E+00 |
| 5.030 | -.793E+00 | 5.035 | -.824E+00 | 5.040 | -.855E+00 | 5.045 | -.885E+00 | 5.050 | -.911E+00 |
| 5.055 | -.933E+00 | 5.060 | -.949E+00 | 5.065 | -.961E+00 | 5.070 | -.970E+00 | 5.075 | -.977E+00 |
| 5.080 | -.981E+00 | 5.085 | -.981E+00 | 5.090 | -.976E+00 | 5.095 | -.965E+00 | 5.100 | -.948E+00 |
| 5.105 | -.929E+00 | 5.110 | -.908E+00 | 5.115 | -.887E+00 | 5.120 | -.856E+00 | 5.125 | -.843E+00 |
| 5.130 | -.817E+00 | 5.135 | -.786E+00 | 5.140 | -.749E+00 | 5.145 | -.706E+00 | 5.150 | -.659E+00 |
| 5.155 | -.610E+00 | 5.160 | -.559E+00 | 5.165 | -.509E+00 | 5.170 | -.460E+00 | 5.175 | -.411E+00 |
| 5.180 | -.364E+00 | 5.185 | -.317E+00 | 5.190 | -.273E+00 | 5.195 | -.231E+00 | 5.200 | -.191E+00 |
| 5.205 | -.152E+00 | 5.210 | -.112E+00 | 5.215 | -.702E-01 | 5.220 | -.240E-01 | 5.225 | .262E-01 |
| 5.230 | .781E-01 | 5.235 | .128E+00 | 5.240 | .173E+00 | 5.245 | .210E+00 | 5.250 | .238E+00 |
| 5.255 | .262E+00 | 5.260 | .284E+00 | 5.265 | .307E+00 | 5.270 | .335E+00 | 5.275 | .366E+00 |
| 5.280 | .399E+00 | 5.285 | .432E+00 | 5.290 | .464E+00 | 5.295 | .493E+00 | 5.300 | .518E+00 |
| 5.305 | .539E+00 | 5.310 | .556E+00 | 5.315 | .567E+00 | 5.320 | .574E+00 | 5.325 | .577E+00 |
| 5.330 | .578E+00 | 5.335 | .576E+00 | 5.340 | .572E+00 | 5.345 | .565E+00 | 5.350 | .554E+00 |
| 5.355 | .540E+00 | 5.360 | .522E+00 | 5.365 | .500E+00 | 5.370 | .477E+00 | 5.375 | .451E+00 |
| 5.380 | .424E+00 | 5.385 | .397E+00 | 5.390 | .370E+00 | 5.395 | .344E+00 | 5.400 | .320E+00 |
| 5.405 | .300E+00 | 5.410 | .283E+00 | 5.415 | .268E+00 | 5.420 | .257E+00 | 5.425 | .249E+00 |
| 5.430 | .241E+00 | 5.435 | .234E+00 | 5.440 | .225E+00 | 5.445 | .210E+00 | 5.450 | .190E+00 |
| 5.455 | .162E+00 | 5.460 | .129E+00 | 5.465 | .908E-01 | 5.470 | .494E-01 | 5.475 | .612E-02 |
| 5.480 | -.371E-01 | 5.485 | -.772E-01 | 5.490 | -.110E+00 | 5.495 | -.133E+00 | 5.500 | -.144E+00 |
| 5.505 | -.144E+00 | 5.510 | -.139E+00 | 5.515 | -.135E+00 | 5.520 | -.137E+00 | 5.525 | -.148E+00 |
| 5.530 | -.167E+00 | 5.535 | -.189E+00 | 5.540 | -.212E+00 | 5.545 | -.235E+00 | 5.550 | -.259E+00 |
| 5.555 | -.283E+00 | 5.560 | -.305E+00 | 5.565 | -.322E+00 | 5.570 | -.330E+00 | 5.575 | -.325E+00 |
| 5.580 | -.311E+00 | 5.585 | -.292E+00 | 5.590 | -.274E+00 | 5.595 | -.264E+00 | 5.600 | -.261E+00 |
| 5.605 | -.265E+00 | 5.610 | -.275E+00 | 5.615 | -.291E+00 | 5.620 | -.314E+00 | 5.625 | -.343E+00 |
| 5.630 | -.379E+00 | 5.635 | -.417E+00 | 5.640 | -.450E+00 | 5.645 | -.473E+00 | 5.650 | -.482E+00 |
| 5.655 | -.481E+00 | 5.660 | -.472E+00 | 5.665 | -.464E+00 | 5.670 | -.461E+00 | 5.675 | -.466E+00 |
| 5.680 | -.480E+00 | 5.685 | -.499E+00 | 5.690 | -.522E+00 | 5.695 | -.546E+00 | 5.700 | -.568E+00 |
| 5.705 | -.585E+00 | 5.710 | -.595E+00 | 5.715 | -.595E+00 | 5.720 | -.585E+00 | 5.725 | -.567E+00 |
| 5.730 | -.545E+00 | 5.735 | -.523E+00 | 5.740 | -.506E+00 | 5.745 | -.500E+00 | 5.750 | -.504E+00 |
| 5.755 | -.518E+00 | 5.760 | -.534E+00 | 5.765 | -.546E+00 | 5.770 | -.546E+00 | 5.775 | -.531E+00 |
| 5.780 | -.500E+00 | 5.785 | -.457E+00 | 5.790 | -.409E+00 | 5.795 | -.364E+00 | 5.800 | -.327E+00 |
| 5.805 | -.300E+00 | 5.810 | -.283E+00 | 5.815 | -.276E+00 | 5.820 | -.275E+00 | 5.825 | -.276E+00 |
| 5.830 | -.274E+00 | 5.835 | -.262E+00 | 5.840 | -.234E+00 | 5.845 | -.184E+00 | 5.850 | -.114E+00 |
| 5.855 | -.279E-01 | 5.860 | .650E-01 | 5.865 | .154E+00 | 5.870 | .228E+00 | 5.875 | .284E+00 |
| 5.880 | .322E+00 | 5.885 | .346E+00 | 5.890 | .363E+00 | 5.895 | .380E+00 | 5.900 | .402E+00 |
| 5.905 | .432E+00 | 5.910 | .470E+00 | 5.915 | .515E+00 | 5.920 | .566E+00 | 5.925 | .621E+00 |
| 5.930 | .676E+00 | 5.935 | .726E+00 | 5.940 | .766E+00 | 5.945 | .793E+00 | 5.950 | .808E+00 |
| 5.955 | .812E+00 | 5.960 | .812E+00 | 5.965 | .814E+00 | 5.970 | .823E+00 | 5.975 | .838E+00 |
| 5.980 | .859E+00 | 5.985 | .880E+00 | 5.990 | .900E+00 | 5.995 | .914E+00 | 6.000 | .923E+00 |
| 6.005 | .925E+00 | 6.010 | .921E+00 | 6.015 | .908E+00 | 6.020 | .886E+00 | 6.025 | .856E+00 |
| 6.030 | .821E+00 | 6.035 | .784E+00 | 6.040 | .750E+00 | 6.045 | .721E+00 | 6.050 | .697E+00 |
| 6.055 | .676E+00 | 6.060 | .658E+00 | 6.065 | .644E+00 | 6.070 | .632E+00 | 6.075 | .625E+00 |
| 6.080 | .620E+00 | 6.085 | .615E+00 | 6.090 | .607E+00 | 6.095 | .593E+00 | 6.100 | .571E+00 |
| 6.105 | .541E+00 | 6.110 | .502E+00 | 6.115 | .455E+00 | 6.120 | .400E+00 | 6.125 | .336E+00 |
| 6.130 | .266E+00 | 6.135 | .194E+00 | 6.140 | .127E+00 | 6.145 | .689E-01 | 6.150 | .209E-01 |
| 6.155 | -.187E-01 | 6.160 | -.547E-01 | 6.165 | -.922E-01 | 6.170 | -.135E+00 | 6.175 | -.183E+00 |
| 6.180 | -.237E+00 | 6.185 | -.293E+00 | 6.190 | -.351E+00 | 6.195 | -.409E+00 | 6.200 | -.467E+00 |
| 6.205 | -.525E+00 | 6.210 | -.582E+00 | 6.215 | -.638E+00 | 6.220 | -.695E+00 | 6.225 | -.754E+00 |
| 6.230 | -.814E+00 | 6.235 | -.877E+00 | 6.240 | -.940E+00 | 6.245 | -.999E+00 | 6.250 | -.105E+01 |
| 6.255 | -.109E+01 | 6.260 | -.112E+01 | 6.265 | -.114E+01 | 6.270 | -.115E+01 | 6.275 | -.116E+01 |
| 6.280 | -.116E+01 | 6.285 | -.115E+01 | 6.290 | -.113E+01 | 6.295 | -.111E+01 | 6.300 | -.108E+01 |
| 6.305 | -.105E+01 | 6.310 | -.102E+01 | 6.315 | -.993E+00 | 6.320 | -.961E+00 | 6.325 | -.928E+00 |
| 6.330 | -.894E+00 | 6.335 | -.859E+00 | 6.340 | -.825E+00 | 6.345 | -.794E+00 | 6.350 | -.767E+00 |
| 6.355 | -.740E+00 | 6.360 | -.712E+00 | 6.365 | -.676E+00 | 6.370 | -.631E+00 | 6.375 | -.577E+00 |
| 6.380 | -.516E+00 | 6.385 | -.454E+00 | 6.390 | -.395E+00 | 6.395 | -.340E+00 | 6.400 | -.289E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 6.530 | .756E+00 | 6.535 | .795E+00 | 6.540 | .832E+00 | 6.545 | .869E+00 | 6.550 | .916E+00 |
| 6.555 | .963E+00 | 6.560 | .101E+01 | 6.565 | .105E+01 | 6.570 | .107E+01 | 6.575 | .108E+01 |
| 6.580 | .107E+01 | 6.585 | .106E+01 | 6.590 | .105E+01 | 6.595 | .105E+01 | 6.600 | .105E+01 |
| 6.605 | .106E+01 | 6.610 | .106E+01 | 6.615 | .105E+01 | 6.620 | .104E+01 | 6.625 | .101E+01 |
| 6.630 | .984E+00 | 6.635 | .950E+00 | 6.640 | .910E+00 | 6.645 | .853E+00 | 6.650 | .810E+00 |
| 6.655 | .752E+00 | 6.660 | .696E+00 | 6.655 | .645E+00 | 6.670 | .599E+00 | 6.675 | .557E+00 |
| 6.680 | .513E+00 | 6.685 | .459E+00 | 6.690 | .394E+00 | 6.695 | .319E+00 | 6.700 | .238E+00 |
| 6.705 | .157E+00 | 6.710 | .809E-01 | 6.715 | .103E-01 | 6.720 | -.562E-01 | 6.725 | -.121E+00 |
| 6.730 | -.184E+00 | 6.735 | -.246E+00 | 6.740 | -.307E+00 | 6.745 | -.356E+00 | 6.750 | -.425E+00 |
| 6.755 | -.485E+00 | 6.760 | -.547E+00 | 6.765 | -.607E+00 | 6.770 | -.659E+00 | 6.775 | -.699E+00 |
| 6.780 | -.723E+00 | 6.785 | -.735E+00 | 6.790 | -.741E+00 | 6.795 | -.746E+00 | 6.800 | -.756E+00 |
| 6.805 | -.774E+00 | 6.810 | -.799E+00 | 6.815 | -.826E+00 | 6.820 | -.855E+00 | 6.825 | -.881E+00 |
| 6.830 | -.903E+00 | 6.835 | -.916E+00 | 6.840 | -.918E+00 | 6.845 | -.903E+00 | 6.850 | -.872E+00 |
| 6.855 | -.828E+00 | 6.860 | -.775E+00 | 6.865 | -.721E+00 | 6.870 | -.672E+00 | 6.875 | -.631E+00 |
| 6.880 | -.598E+00 | 6.885 | -.572E+00 | 6.890 | -.550E+00 | 6.895 | -.530E+00 | 6.900 | -.510E+00 |
| 6.905 | -.485E+00 | 6.910 | -.451E+00 | 6.915 | -.406E+00 | 6.920 | -.347E+00 | 6.925 | -.276E+00 |
| 6.930 | -.196E+00 | 6.935 | -.115E+00 | 6.940 | -.363E-01 | 6.945 | .375E-01 | 6.950 | .106E+00 |
| 6.955 | .172E+00 | 6.960 | .235E+00 | 6.965 | .298E+00 | 6.970 | .350E+00 | 6.975 | .422E+00 |
| 6.980 | .485E+00 | 6.985 | .551E+00 | 6.990 | .623E+00 | 6.995 | .700E+00 | 7.000 | .781E+00 |
| 7.005 | .863E+00 | 7.010 | .940E+00 | 7.015 | .101E+01 | 7.020 | .106E+01 | 7.025 | .111E+01 |
| 7.030 | .115E+01 | 7.035 | .119E+01 | 7.040 | .121E+01 | 7.045 | .124E+01 | 7.050 | .126E+01 |
| 7.055 | .127E+01 | 7.060 | .128E+01 | 7.065 | .129E+01 | 7.070 | .129E+01 | 7.075 | .129E+01 |
| 7.080 | .129E+01 | 7.085 | .128E+01 | 7.090 | .126E+01 | 7.095 | .122E+01 | 7.100 | .117E+01 |
| 7.105 | .111E+01 | 7.110 | .103E+01 | 7.115 | .952E+00 | 7.120 | .873E+00 | 7.125 | .795E+00 |
| 7.130 | .718E+00 | 7.135 | .642E+00 | 7.140 | .567E+00 | 7.145 | .492E+00 | 7.150 | .418E+00 |
| 7.155 | .344E+00 | 7.160 | .268E+00 | 7.165 | .189E+00 | 7.170 | .106E+00 | 7.175 | .196E-01 |
| 7.180 | -.685E-01 | 7.185 | -.155E+00 | 7.190 | -.238E+00 | 7.195 | -.315E+00 | 7.200 | -.385E+00 |
| 7.205 | -.450E+00 | 7.210 | -.509E+00 | 7.215 | -.564E+00 | 7.220 | -.615E+00 | 7.225 | -.663E+00 |
| 7.230 | -.709E+00 | 7.235 | -.753E+00 | 7.240 | -.795E+00 | 7.245 | -.836E+00 | 7.250 | -.875E+00 |
| 7.255 | -.912E+00 | 7.260 | -.945E+00 | 7.265 | -.973E+00 | 7.270 | -.998E+00 | 7.275 | -.102E+01 |
| 7.280 | -.104E+01 | 7.285 | -.105E+01 | 7.290 | -.106E+01 | 7.295 | -.107E+01 | 7.300 | -.107E+01 |
| 7.305 | -.106E+01 | 7.310 | -.104E+01 | 7.315 | -.103E+01 | 7.320 | -.101E+01 | 7.325 | -.993E+00 |
| 7.330 | -.971E+00 | 7.335 | -.944E+00 | 7.340 | -.908E+00 | 7.345 | -.864E+00 | 7.350 | -.811E+00 |
| 7.355 | -.752E+00 | 7.360 | -.688E+00 | 7.365 | -.620E+00 | 7.370 | -.550E+00 | 7.375 | -.479E+00 |
| 7.380 | -.409E+00 | 7.385 | -.342E+00 | 7.390 | -.278E+00 | 7.395 | -.216E+00 | 7.400 | -.154E+00 |
| 7.405 | -.928E-01 | 7.410 | -.302E-01 | 7.415 | .323E-01 | 7.420 | .928E-01 | 7.425 | .149E+00 |
| 7.430 | .199E+00 | 7.435 | .242E+00 | 7.440 | .278E+00 | 7.445 | .307E+00 | 7.450 | .328E+00 |
| 7.455 | .341E+00 | 7.460 | .347E+00 | 7.465 | .350E+00 | 7.470 | .354E+00 | 7.475 | .360E+00 |
| 7.480 | .372E+00 | 7.485 | .388E+00 | 7.490 | .405E+00 | 7.495 | .422E+00 | 7.500 | .436E+00 |
| 7.505 | .450E+00 | 7.510 | .464E+00 | 7.515 | .483E+00 | 7.520 | .508E+00 | 7.525 | .539E+00 |
| 7.530 | .572E+00 | 7.535 | .605E+00 | 7.540 | .636E+00 | 7.545 | .663E+00 | 7.550 | .688E+00 |
| 7.555 | .711E+00 | 7.560 | .730E+00 | 7.565 | .746E+00 | 7.570 | .757E+00 | 7.575 | .764E+00 |
| 7.580 | .768E+00 | 7.585 | .770E+00 | 7.590 | .771E+00 | 7.595 | .770E+00 | 7.600 | .767E+00 |
| 7.605 | .757E+00 | 7.610 | .736E+00 | 7.615 | .702E+00 | 7.620 | .656E+00 | 7.625 | .599E+00 |
| 7.630 | .536E+00 | 7.635 | .459E+00 | 7.640 | .400E+00 | 7.645 | .333E+00 | 7.650 | .266E+00 |
| 7.655 | .202E+00 | 7.660 | .142E+00 | 7.665 | .848E-01 | 7.670 | .294E-01 | 7.675 | -.272E-01 |
| 7.680 | -.878E-01 | 7.685 | -.153E+00 | 7.690 | -.222E+00 | 7.695 | -.289E+00 | 7.700 | -.350E+00 |
| 7.705 | -.403E+00 | 7.710 | -.445E+00 | 7.715 | -.480E+00 | 7.720 | -.511E+00 | 7.725 | -.540E+00 |
| 7.730 | -.567E+00 | 7.735 | -.592E+00 | 7.740 | -.616E+00 | 7.745 | -.639E+00 | 7.750 | -.663E+00 |
| 7.755 | -.690E+00 | 7.760 | -.717E+00 | 7.765 | -.741E+00 | 7.770 | -.757E+00 | 7.775 | -.759E+00 |
| 7.780 | -.749E+00 | 7.785 | -.728E+00 | 7.790 | -.701E+00 | 7.795 | -.672E+00 | 7.800 | -.644E+00 |
| 7.805 | -.621E+00 | 7.810 | -.604E+00 | 7.815 | -.596E+00 | 7.820 | -.597E+00 | 7.825 | -.605E+00 |
| 7.830 | -.618E+00 | 7.835 | -.628E+00 | 7.840 | -.629E+00 | 7.845 | -.617E+00 | 7.850 | -.592E+00 |
| 7.855 | -.557E+00 | 7.860 | -.517E+00 | 7.865 | -.477E+00 | 7.870 | -.440E+00 | 7.875 | -.406E+00 |
| 7.880 | -.378E+00 | 7.885 | -.357E+00 | 7.890 | -.343E+00 | 7.895 | -.334E+00 | 7.900 | -.326E+00 |
| 7.905 | -.313E+00 | 7.910 | -.291E+00 | 7.915 | -.257E+00 | 7.920 | -.215E+00 | 7.925 | -.169E+00 |
| 7.930 | -.125E+00 | 7.935 | -.844E-01 | 7.940 | -.454E-01 | 7.945 | -.514E-02 | 7.950 | .388E-01 |
| 7.955 | .863E-01 | 7.960 | .136E+00 | 7.965 | .184E+00 | 7.970 | .231E+00 | 7.975 | .278E+00 |
| 7.980 | .327E+00 | 7.985 | .376E+00 | 7.990 | .424E+00 | 7.995 | .458E+00 | 8.000 | .502E+00 |
| 8.005 | .525E+00 | 8.010 | .538E+00 | 8.015 | .543E+00 | 8.020 | .542E+00 | 8.025 | .536E+00 |
| 8.030 | .525E+00 | 8.035 | .507E+00 | 8.040 | .484E+00 | 8.045 | .456E+00 | 8.050 | .428E+00 |

| | | | | | | | | | |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 8.180 | -.289E+00 | 8.185 | -.305E+00 | 8.190 | -.319E+00 | 8.195 | -.329E+00 | 8.200 | -.337E+00 |
| 8.205 | -.341E+00 | 8.210 | -.344E+00 | 8.215 | -.344E+00 | 8.220 | -.345E+00 | 8.225 | -.346E+00 |
| 8.230 | -.347E+00 | 8.235 | -.349E+00 | 8.240 | -.348E+00 | 8.245 | -.342E+00 | 8.250 | -.329E+00 |
| 8.255 | -.310E+00 | 8.260 | -.286E+00 | 8.265 | -.263E+00 | 8.270 | -.245E+00 | 8.275 | -.233E+00 |
| 8.280 | -.226E+00 | 8.285 | -.220E+00 | 8.290 | -.210E+00 | 8.295 | -.194E+00 | 8.300 | -.172E+00 |
| 8.305 | -.147E+00 | 8.310 | -.123E+00 | 8.315 | -.101E+00 | 8.320 | -.823E-01 | 8.325 | -.661E-01 |
| 8.330 | -.514E-01 | 8.335 | -.385E-01 | 8.340 | -.289E-01 | 8.345 | -.245E-01 | 8.350 | -.259E-01 |
| 8.355 | -.319E-01 | 8.360 | -.392E-01 | 8.365 | -.440E-01 | 8.370 | -.436E-01 | 8.375 | -.379E-01 |
| 8.380 | -.295E-01 | 8.385 | -.224E-01 | 8.390 | -.203E-01 | 8.395 | -.248E-01 | 8.400 | -.347E-01 |
| 8.405 | -.465E-01 | 8.410 | -.556E-01 | 8.415 | -.584E-01 | 8.420 | -.530E-01 | 8.425 | -.396E-01 |
| 8.430 | -.199E-01 | 8.435 | .339E-02 | 8.440 | .275E-01 | 8.445 | .497E-01 | 8.450 | .678E-01 |
| 8.455 | .802E-01 | 8.460 | .856E-01 | 8.465 | .884E-01 | 8.470 | .883E-01 | 8.475 | .896E-01 |
| 8.480 | .950E-01 | 8.485 | .105E+00 | 8.490 | .118E+00 | 8.495 | .131E+00 | 8.500 | .142E+00 |
| 8.505 | .150E+00 | 8.510 | .157E+00 | 8.515 | .164E+00 | 8.520 | .173E+00 | 8.525 | .186E+00 |
| 8.530 | .199E+00 | 8.535 | .209E+00 | 8.540 | .214E+00 | 8.545 | .212E+00 | 8.550 | .206E+00 |
| 8.555 | .199E+00 | 8.560 | .191E+00 | 8.565 | .183E+00 | 8.570 | .175E+00 | 8.575 | .166E+00 |
| 8.580 | .159E+00 | 8.585 | .155E+00 | 8.590 | .159E+00 | 8.595 | .171E+00 | 8.600 | .193E+00 |
| 8.605 | .218E+00 | 8.610 | .242E+00 | 8.615 | .261E+00 | 8.620 | .270E+00 | 8.625 | .272E+00 |
| 8.630 | .270E+00 | 8.635 | .256E+00 | 8.640 | .264E+00 | 8.645 | .257E+00 | 8.650 | .275E+00 |
| 8.655 | .289E+00 | 8.660 | .307E+00 | 8.665 | .327E+00 | 8.670 | .344E+00 | 8.675 | .354E+00 |
| 8.680 | .353E+00 | 8.685 | .340E+00 | 8.690 | .319E+00 | 8.695 | .294E+00 | 8.700 | .270E+00 |
| 8.705 | .251E+00 | 8.710 | .239E+00 | 8.715 | .232E+00 | 8.720 | .227E+00 | 8.725 | .224E+00 |
| 8.730 | .218E+00 | 8.735 | .208E+00 | 8.740 | .189E+00 | 8.745 | .159E+00 | 8.750 | .114E+00 |
| 8.755 | .549E-01 | 8.760 | -.126E-01 | 8.765 | -.801E-01 | 8.770 | -.139E+00 | 8.775 | -.184E+00 |
| 8.780 | -.214E+00 | 8.785 | -.236E+00 | 8.790 | -.256E+00 | 8.795 | -.280E+00 | 8.800 | -.314E+00 |
| 8.805 | -.356E+00 | 8.810 | -.406E+00 | 8.815 | -.461E+00 | 8.820 | -.520E+00 | 8.825 | -.581E+00 |
| 8.830 | -.638E+00 | 8.835 | -.686E+00 | 8.840 | -.716E+00 | 8.845 | -.723E+00 | 8.850 | -.708E+00 |
| 8.855 | -.674E+00 | 8.860 | -.633E+00 | 8.865 | -.592E+00 | 8.870 | -.559E+00 | 8.875 | -.536E+00 |
| 8.880 | -.520E+00 | 8.885 | -.506E+00 | 8.890 | -.490E+00 | 8.895 | -.459E+00 | 8.900 | -.443E+00 |
| 8.905 | -.410E+00 | 8.910 | -.371E+00 | 8.915 | -.324E+00 | 8.920 | -.270E+00 | 8.925 | -.210E+00 |
| 8.930 | -.146E+00 | 8.935 | -.834E-01 | 8.940 | -.263E-01 | 8.945 | .227E-01 | 8.950 | .630E-01 |
| 8.955 | .960E-01 | 8.960 | .125E+00 | 8.965 | .154E+00 | 8.970 | .185E+00 | 8.975 | .220E+00 |
| 8.980 | .260E+00 | 8.985 | .303E+00 | 8.990 | .346E+00 | 8.995 | .387E+00 | 9.000 | .426E+00 |
| 9.005 | .461E+00 | 9.010 | .494E+00 | 9.015 | .525E+00 | 9.020 | .554E+00 | 9.025 | .581E+00 |
| 9.030 | .604E+00 | 9.035 | .625E+00 | 9.040 | .645E+00 | 9.045 | .665E+00 | 9.050 | .688E+00 |
| 9.055 | .714E+00 | 9.060 | .740E+00 | 9.065 | .761E+00 | 9.070 | .775E+00 | 9.075 | .778E+00 |
| 9.080 | .773E+00 | 9.085 | .752E+00 | 9.090 | .748E+00 | 9.095 | .734E+00 | 9.100 | .717E+00 |
| 9.105 | .697E+00 | 9.110 | .671E+00 | 9.115 | .640E+00 | 9.120 | .605E+00 | 9.125 | .570E+00 |
| 9.130 | .536E+00 | 9.135 | .501E+00 | 9.140 | .465E+00 | 9.145 | .425E+00 | 9.150 | .380E+00 |
| 9.155 | .332E+00 | 9.160 | .282E+00 | 9.165 | .232E+00 | 9.170 | .182E+00 | 9.175 | .133E+00 |
| 9.180 | .818E-01 | 9.185 | .304E-01 | 9.190 | -.196E-01 | 9.195 | -.654E-01 | 9.200 | -.105E+00 |
| 9.205 | -.138E+00 | 9.210 | -.154E+00 | 9.215 | -.185E+00 | 9.220 | -.201E+00 | 9.225 | -.213E+00 |
| 9.230 | -.221E+00 | 9.235 | -.229E+00 | 9.240 | -.241E+00 | 9.245 | -.251E+00 | 9.250 | -.291E+00 |
| 9.255 | -.330E+00 | 9.260 | -.373E+00 | 9.265 | -.414E+00 | 9.270 | -.447E+00 | 9.275 | -.472E+00 |
| 9.280 | -.490E+00 | 9.285 | -.504E+00 | 9.290 | -.514E+00 | 9.295 | -.522E+00 | 9.300 | -.527E+00 |
| 9.305 | -.530E+00 | 9.310 | -.535E+00 | 9.315 | -.543E+00 | 9.320 | -.559E+00 | 9.325 | -.582E+00 |
| 9.330 | -.608E+00 | 9.335 | -.633E+00 | 9.340 | -.653E+00 | 9.345 | -.669E+00 | 9.350 | -.681E+00 |
| 9.355 | -.692E+00 | 9.360 | -.701E+00 | 9.365 | -.709E+00 | 9.370 | -.713E+00 | 9.375 | -.711E+00 |
| 9.380 | -.703E+00 | 9.385 | -.689E+00 | 9.390 | -.670E+00 | 9.395 | -.643E+00 | 9.400 | -.607E+00 |
| 9.405 | -.560E+00 | 9.410 | -.503E+00 | 9.415 | -.437E+00 | 9.420 | -.356E+00 | 9.425 | -.293E+00 |
| 9.430 | -.220E+00 | 9.435 | -.148E+00 | 9.440 | -.812E-01 | 9.445 | -.212E-01 | 9.450 | .282E-01 |
| 9.455 | .656E-01 | 9.460 | .924E-01 | 9.465 | .113E+00 | 9.470 | .135E+00 | 9.475 | .161E+00 |
| 9.480 | .193E+00 | 9.485 | .231E+00 | 9.490 | .274E+00 | 9.495 | .321E+00 | 9.500 | .375E+00 |
| 9.505 | .436E+00 | 9.510 | .503E+00 | 9.515 | .572E+00 | 9.520 | .636E+00 | 9.525 | .689E+00 |
| 9.530 | .730E+00 | 9.535 | .752E+00 | 9.540 | .790E+00 | 9.545 | .822E+00 | 9.550 | .856E+00 |
| 9.555 | .893E+00 | 9.560 | .929E+00 | 9.565 | .953E+00 | 9.570 | .994E+00 | 9.575 | .102E+01 |
| 9.580 | .105E+01 | 9.585 | .107E+01 | 9.590 | .107E+01 | 9.595 | .105E+01 | 9.600 | .101E+01 |
| 9.605 | .949E+00 | 9.610 | .876E+00 | 9.615 | .799E+00 | 9.620 | .727E+00 | 9.625 | .662E+00 |
| 9.630 | .603E+00 | 9.635 | .549E+00 | 9.640 | .502E+00 | 9.645 | .454E+00 | 9.650 | .435E+00 |
| 9.655 | .416E+00 | 9.660 | .401E+00 | 9.665 | .384E+00 | 9.670 | .361E+00 | 9.675 | .328E+00 |
| 9.680 | .287E+00 | 9.685 | .242E+00 | 9.690 | .198E+00 | 9.695 | .157E+00 | 9.700 | .121E+00 |
| 9.705 | .868E-01 | 9.710 | .512E-01 | 9.715 | .942E-02 | 9.720 | -.421E-01 | 9.725 | -.105E+00 |

SPECTRA FOR THE PRECEDING TIME HISTORY WILL BE
CALCULATED AT THE FOLLOWING FREQUENCIES (IN CPS)

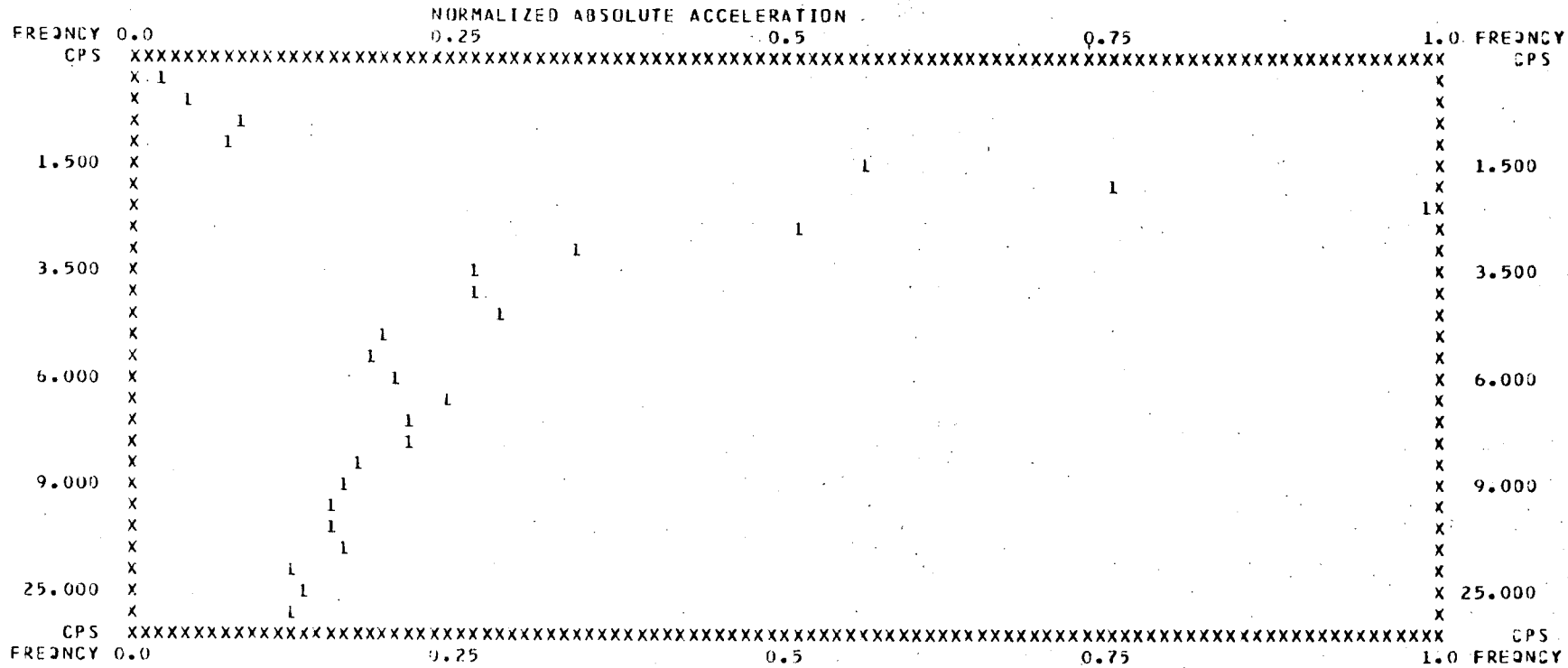
| | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| .3000 | .4000 | .7000 | 1.0000 | 1.5000 | 1.7000 | 2.0000 | 2.5000 | 3.0000 | 3.5000 |
| 4.0000 | 4.5000 | 5.0000 | 5.5000 | 6.0000 | 6.5000 | 7.0000 | 7.5000 | 8.0000 | 9.0000 |
| 10.0000 | 12.0000 | 15.0000 | 20.0000 | 25.0000 | 30.0000 | | | | |

| FREQUENCY (CPS) | PERIOD (SECS) | ABSOLUTE ACCELERATION | PSEUDO VELOCITY | TIME AT MAXIMUM |
|--------------------|------------------|--------------------------|--------------------|--------------------|
| .300 | 3.333 | .2973E+00 | .1577E+00 | .9065E+01 |
| .400 | 2.500 | .5377E+00 | .1643E+00 | .1077E+02 |
| .700 | 1.429 | .9242E+00 | .2101E+00 | .6315E+01 |
| 1.000 | 1.000 | .7861E+00 | .1251E+00 | .5295E+01 |
| 1.500 | .667 | .5659E+01 | .6004E+00 | .6825E+01 |
| 1.700 | .588 | .7485E+01 | .7008E+00 | .7280E+01 |
| 2.000 | .500 | .9861E+01 | .7847E+00 | .9940E+01 |
| 2.500 | .400 | .5081E+01 | .3235E+00 | .6580E+01 |
| 3.000 | .333 | .3456E+01 | .1833E+00 | .9105E+01 |
| 3.500 | .286 | .2718E+01 | .1236E+00 | .5065E+01 |
| 4.000 | .250 | .2674E+01 | .1064E+00 | .7290E+01 |
| 4.500 | .222 | .2860E+01 | .1011E+00 | .7100E+01 |
| 5.000 | .200 | .1977E+01 | .6292E-01 | .7055E+01 |
| 5.500 | .182 | .1868E+01 | .5405E-01 | .7750E+01 |
| 6.000 | .167 | .2101E+01 | .5573E-01 | .9370E+01 |
| 6.500 | .154 | .2462E+01 | .6028E-01 | .9345E+01 |
| 7.000 | .143 | .2220E+01 | .5048E-01 | .9335E+01 |
| 7.500 | .133 | .2162E+01 | .4588E-01 | .9320E+01 |
| 8.000 | .125 | .1845E+01 | .3670E-01 | .9805E+01 |
| 9.000 | .111 | .1742E+01 | .3080E-01 | .6295E+01 |
| 10.000 | .100 | .1651E+01 | .2627E-01 | .6280E+01 |
| 12.000 | .083 | .1652E+01 | .2191E-01 | .7060E+01 |
| 15.000 | .067 | .1661E+01 | .1762E-01 | .7095E+01 |
| 20.000 | .050 | .1352E+01 | .1076E-01 | .9315E+01 |
| 25.000 | .040 | .1390E+01 | .8849E-02 | .9330E+01 |
| 30.000 | .033 | .1331E+01 | .7062E-02 | .9325E+01 |

MAXIMUM ABSOLUTE SPECTRAL ACCELERATION .9861E+01
 AT FREQUENCY (CPS) .2000E+01

NORMALIZED PLT OF RESPONSE SPECTRA.....

DAMPING VALJE MAXIMUM VALJE AT FREQUENCY PLOT SYMBOL
 .2000E-01 .9861E+01 .2000E+01 1



13.49.05.CLRESP,T7777,P3.
13.49.05.USER,SONGS1,,
13.49.05.CHARGE,PROJWC,03100681355.
13.49.06.\$PROLOG,PROCL,,.
13.49.06.\$SETFS,PROCL/FS=AD.
13.49.07.PROCL.
13.49.07.//LOADER 587 .004 CP .068 RT//LOADER 014472/040000-040000 CM 1 TM
13.49.07.IFE,DT.EQ.TXU,FLASHIT.
13.49.07.ENDIF,FLASHIT.
13.49.07.IFE,DT.EQ.BCD,BULLIT.
13.49.07.CHGFTN.
13.49.03. END CHGFTN
13.49.08. 15600 MAXIMUM EXECUTION FL.
13.49.08. 0.002 CP SECONDS EXECUTION TIME.
13.49.08.GET,SYSBULL/UN=EDSOPE,NA.
13.49.08.IFE,=ILE(SYSBULL,AS),OUTIT.
13.49.08.COPY,SYSBULL.
13.49.08. EOI ENCOUNTERED.
13.49.08.ENDIF,OUTIT.
13.49.09.ENDIF,BULLIT.
13.49.09.RETURN,PROCL.
13.49.09.REVERT.
13.49.09.ROUTE,OUTPUT,DC=PR,UN=CSDVAX1,UJN=VAX,FC=AD,DEF.
13.49.09. ROUTE COMPLETE.
13.49.09.REWIND,INPUT.
13.49.09.COPYSBF,INPUT,OUTPUT.
13.49.10. COPY COMPLETE.
13.49.10.REWIND,INPUT.
13.49.10.SKIPR,INPUT.
13.49.10.PURGE,CLREST9/NA.
13.49.10.DEFINE,CLREST9/M=W.
13.49.10.ATTACH,TAPE12=NRCSSID.
13.49.10.GET,RESPEC/UN=IMPLI8.
13.49.11.RESPEC.
13.49.11.//LOADER 587 .005 CP .135 RT//LOADER 014472/040000-040000 CM 1 TM
13.49.12.GET,ACCESSP/UN=QAERLIB.
13.49.12.BEGIN,ACCESSP,ACCESSP,RSPB.
13.49.13.NOTE(CODEX) RSPB ABS
13.49.13.REWIND,CODEX.
13.49.13.GET,ACCESSP/UN=QAERLIB.
13.49.14.ACCESSP.
13.49.14.//LOADER 587 .005 CP .069 RT//LOADER 014472/040000-040000 CM 1 TM
13.49.17. END ACCESS
13.49.17. 37600 MAXIMUM EXECUTION FL.
13.49.17. 0.421 CP SECONDS EXECUTION TIME.
13.49.17.REVERT.
13.49.17.ABS(INPUT,OUTPUT,PL=99999)
13.49.17.//LOADER 587 .005 CP .108 RT//LOADER 014476/040000-040000 CM 1 TM
13.53.47. END RESPEC
13.53.47. 050400 FINAL EXECUTION FL.
13.53.47. 53.224 CP SECONDS EXECUTION TIME.
13.53.47.RETURN,ABS.
13.53.47.REVERT.
13.53.47.REWIND,TAPE9.
13.53.47.COPYBF,TAPE9,CLREST9.
13.53.47. EOI ENCOUNTERED.
13.53.48.UEAD, 0.002KUNS.
13.53.48.UEPF, 0.137KUNS.
13.53.48.UEMS, 6.692KUNS.

2.0 METHODOLOGY TEST PROBLEMS

2.2 Complete Quadratic Combination Method for Modal Combination

Test Problem II

This problem involved the calculation of pipe moments and support forces for the RHR piping system from the Zion Plant using the CQC method for modal response combinations. For this problem, the geometry and properties of the piping system are presented in a listing of the SAP4 input file (Appendix A). The unit system used in the SAP4 listing was foot-pound-second and the vertical direction was designated by the y-axis.

The seismic input was a 3% damped horizontal and a 3% damped vertical floor spectra at the top of the sacrificial shield. The same horizontal spectrum was used for the two horizontal directions. A detailed description of the model is contained in Appendix A, Problem II and a view of the piping system is shown in Figure II.1.

Deliverables

The input and output listings from the computer codes are required as well as output resultant moments at 31 locations shown in Table 2.1, and the forces in all 24 supports. The results are provided for each of the three earthquake inputs and directional combination between the components was not requested.

Results

Impell has performed this task using the SUPERPIPE code with the following options removed to compare with the SAP4 model: a) pipe elbow flexibility and b) missing mass from high frequency modes (greater than 33 Hz). This approach was requested by NCT consultants per the attached ROC dated 4/8/85 to match assumptions believed to be equivalent to the SAP4 results. In addition, Impell has also run the test problem with these options at the request of SCE and the results are also provided.

In summary, the following two cases were considered in the analysis of the piping system:

- Case 1 - Elbow flexibility was excluded
- Missing mass effects from the high frequency modes were not considered (cut off frequency was 33 Hz).

2.0 METHODOLOGY TEST PROBLEMS

- Case 2 - Elbow flexibility was included
- Missing mass effect was considered (cutoff frequency was 33 Hz).

For the SONGS-1 long term service effort, elbow flexibilities and missing mass effects will be used in production runs of piping analysis. Elbow flexibility is required by code for any piping analyses. In addition, the missing mass was treated in SUPERPIPE as a "pseudo-mode" to account for the aggregate effects of all the modes not calculated. The frequency of this additional mode is the cutoff frequency (usually 33 Hz) of the analysis and the "pseudo-mode" is added to the system's existing modes for a complete modal response.

The solution of the eigenvalues shows that the frequencies of the piping system are affected by the consideration of elbow flexibilities. For this piping system the first frequency changed from 4.49 Hz to 3.80 Hz when the elbow flexibilities were considered.

The piping responses are also affected by the shift in the frequencies. For the two horizontal response spectrum analyses, the piping stresses of Case 2 are generally higher than those of Case 1. The piping stresses increased as much as 100%, particularly at elbow locations, and the same increases were observed in the support reactions. The increases in the response are caused by more modes being subjected to higher spectral accelerations. For the vertical response analysis, the piping stresses and support reactions are essentially the same for Case 1 and Case 2.

To locate the results of each analysis, the pages of the computer output are identified below:

| | Freq. | Horiz. Mom. | Reactions | Vert. Mom. & Reaction |
|--------|--------|------------------------|------------------------|--------------------------|
| Case 1 | pg. 31 | pg. 57-60 pg. 83-86 | pg. 61-63 pg. 87-89 | pg. 70-76 |
| Case 2 | pg. 31 | pg. 57-60 pg. 83-86 | pg. 61-63 pg. 87-89 | pg. 70-76 |

2.0 METHODOLOGY TEST PROBLEMS

Output Locations of Pipe Moment Resultants

| <u>No.</u> | <u>Pipe Element No.*</u> | <u>Node No.*</u> | <u>No.</u> | <u>Pipe Element No.*</u> | <u>Node No.*</u> |
|------------|----------------------------------|----------------------|------------|----------------------------------|----------------------|
| 1 | 1 | 5 | 17 | 32 | 35 |
| 2 | 3 | 6 | 18 | 33 | 36 |
| 3 | 4 | 8 | 19 | 34 | 38 |
| 4 | 6 | 9 | 20 | 36 | 39 |
| 5 | 9 | 12 | 21 | 39 | 42 |
| 6 | 11 | 15 | 22 | 42 | 45 |
| 7 | 14 | 17 | 23 | 44 | 48 |
| 8 | 15 | 18 | 24 | 47 | 50 |
| 9 | 16 | 19 | 25 | 51 | 55 |
| 10 | 17 | 21 | 26 | 54 | 57 |
| 11 | 19 | 22 | 27 | 57 | 60 |
| 12 | 20 | 23 | 28 | 60 | 25 |
| 13 | 21 | 25 | 29 | 61 | 67 |
| 14 | 22 | 26 | 30 | 62 | 68 |
| 15 | 24 | 28 | 31 | 66 | 73 |
| 16 | 28 | 32 | | | |

Table II.1

2.0 METHODOLOGY TEST PROBLEMS

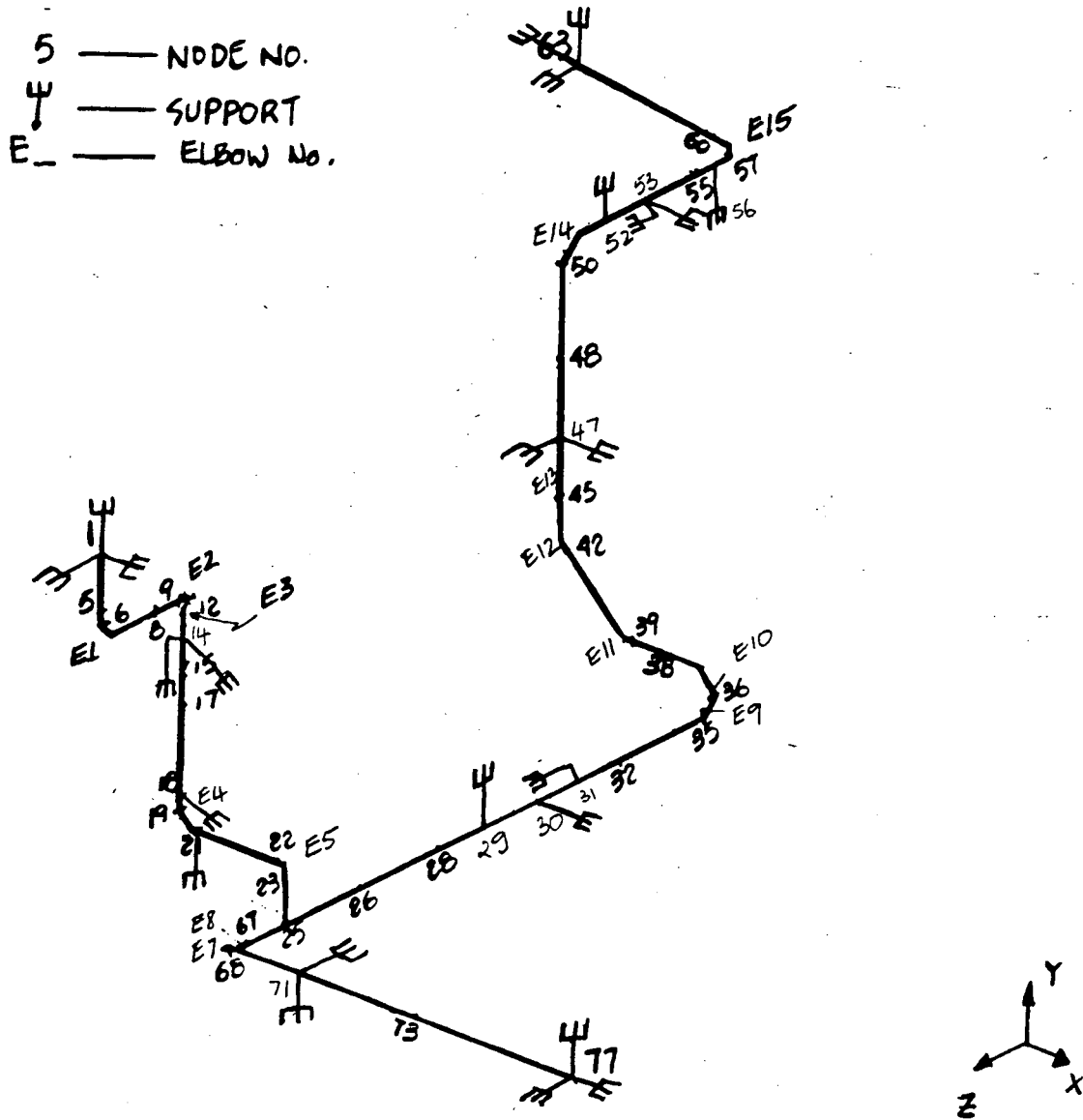


Figure II.1

RHR PIPING MODEL, PROBLEM II

Record of Conversation

File: 0310-068-1355

Copy: MSSwatta
 MAManrique
 TTsai, NCT Engineer
 AAsfura
 JYann, SCE
 GStawniczy, SCE

Telephone Meeting Other _____

To: T. Tsai From: A. Asfura

Company: NCT Engineering Inc. Phone No.: 285-0471 Date: 4/8/85

Subject: Test Problems for SONGS-1 LTS

Summary of Conversation:

In order to use consistent analysis parameters with the analyses performed by NCT Engineering, Tom and I agreed that the SUPERPIPE piping analyses of the NRC test problems will be performed as follows:

- a) without including factor to account for elbow flexibility effects.
- b) without including "missing mass" correction for modes higher than 33 Hz.

TEST PROBLEM FOR THE CQC METHOD (PROBLEM II)

Structure Description:


The Residual heat removal and safety injection piping system (RHR) of the Zion Nuclear plant is analyzed. The piping system is shown in figure 1.

Input:

- The geometry and properties of the piping system are from SAP4 input listing. (see attachment#1)
- The seismic loads at top of sacrificial shield at 3% damping are used (see attachment#2)
- The seismic loads in the x and z directions are the same.

Tasks to be performed

- To calculate pipe moments and support reactions for the RHR piping using CQC method for modal response combination.
- To analyze the RHR piping with and without consideration of the missing mass effect and the flexibility of elbows.

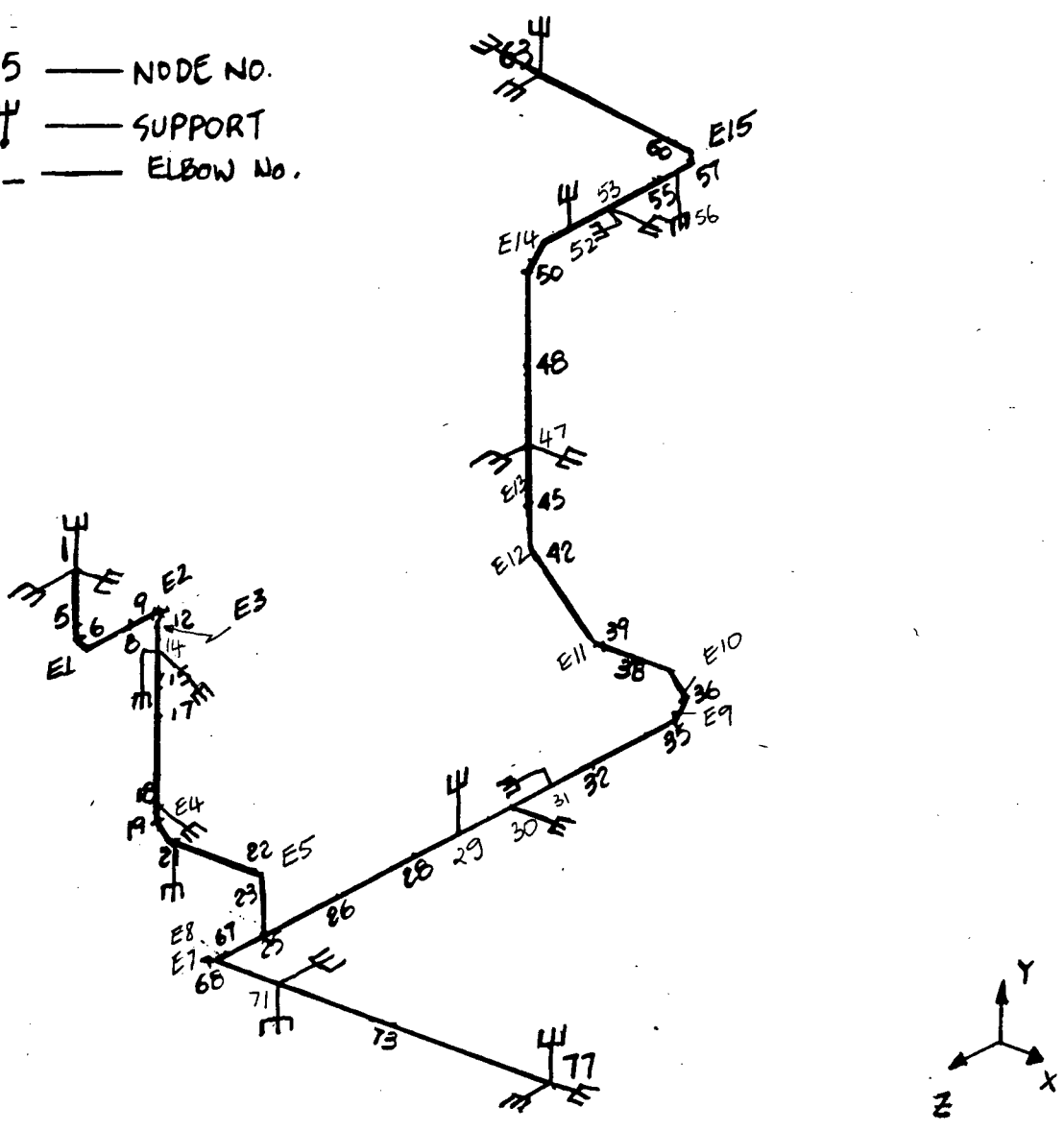
| | | | | | | | |
|---|----|---------|---------|---------|---------------------------------|-----------------|--|
| | | | | | SCE/SONGS-1 | | |
| 0 | KH | 4/11/85 | Lsm | 4/11/85 | JOB NO 0310-068-1355 CALC NO | PAGE / OF | |
| REV | BY | DATE | CHECKED | DATE | | | |
|  | | | | | | | |
| | | | | | | | |

Procedure

- Program SUPERPIPE is used to perform the response spectra analysis for the RHR piping system.
- Two cases are considered
 - Response Spectra analysis using cqc method for modal response combination with the consideration of missing mass effect and the flexibility of elbows.
 - Response Spectra analysis using cqc method for modal response combination without the consideration of missing mass effect and the flexibility of elbows.
- Copies of SUPERPIPE input and output are included in "Analysis Results" section.

| | | | | | | | |
|-----|----|---------|---------|---------|----------------------|---------|-----------|
| | | | | | SCE/SONGS-1 | | |
| | | | | | | | |
| 0 | KH | 4/11/85 | LSM | 4/11/85 | JOB NO 0310-068-1355 | CALC NO | PAGE 2 OF |
| REV | BY | DATE | CHECKED | DATE | | | |

S — NODE NO.
 Ψ — SUPPORT
 E_ — ELBOW No.



RHR PIPING MODEL , PROBLEM II

FIGURE 1

BY : KH DATE : 4/11/85
 CHECKED : LSM DATE : 4/11/85

Analysis Results

SUPERPIPE COMPUTER OUTPUTS OF:

1. RHR PIPING RESPONSE SPECTRA ANALYSIS
WITH ELBOW FLEXIBILITY AND MISSING MASS
EFFECTS EXCLUDED.
2. RHR PIPING RESPONSE SPECTRA ANALYSIS
WITH ELBOW FLEXIBILITY AND MISSING MASS
EFFECTS INCLUDED

| | | | | | | | |
|-----|----|---------|---------|------|--|----------------------|--------|
| | | | | | | SCE / SONGS - 1 | |
| | | | | | | | |
| 0 | KH | 4/11/85 | | | | JOB NO 0310-068-1355 | PAGE 4 |
| REV | BY | DATE | CHECKED | DATE | | CALC NO | OF |
| | | | | | | | |



| | | | | | | | | | | | | | |
|--------------|--------------|--------------|--------------|----|----|------------|------------|----|----|----|----|----|----|
| AAAAAAAAAA | BBBBBBBBBB | BBBBBBB | AAAAAAAAAA | X | X | PPPPPPPPPP | <K | KK | HH | HH | | | |
| AAAAAAAAAAAA | BBBBBBBBBBBB | BBBBBBBBBBBB | AAAAAAAAAAAA | XX | XX | PPPPPPPPPP | <K | KK | HH | HH | | | |
| AA | AA | BB | BB | AA | AA | PP | PP | KK | KK | HH | HH | | |
| AA | AA | BB | BB | AA | AA | XX | XX | PP | PP | KK | KK | HH | HH |
| AA | AA | BB | BB | AA | AA | XX | XX | PP | PP | KK | KK | HH | HH |
| AA | AA | BB | BB | AA | AA | XX | XX | PP | PP | KK | KK | HH | HH |
| AA | AA | BB | BB | AA | AA | XXXX | XXXX | PP | PP | KK | KK | HH | HH |
| AAAAAAAAAAAA | BBBBBBBBBBBB | BBBBBBBBBBBB | AAAAAAAAAAAA | XX | XX | PPPPPPPPPP | PPPPPPPPPP | KK | KK | HH | HH | HH | HH |
| AAAAAAAAAAAA | BBBBBBBBBBBB | BBBBBBBBBBBB | AAAAAAAAAAAA | XX | XX | PP | PP | KK | KK | HH | HH | HH | HH |
| AA | AA | BB | BB | AA | AA | XXXX | XXXX | PP | PP | KK | KK | HH | HH |
| AA | AA | BB | BB | AA | AA | XX | XX | PP | PP | KK | KK | HH | HH |
| AA | AA | BB | BB | AA | AA | XX | XX | PP | PP | KK | KK | HH | HH |
| AA | AA | BB | BB | AA | AA | XX | XX | PP | PP | KK | KK | HH | HH |
| AA | AA | BB | BB | AA | AA | XX | XX | PP | PP | KK | KK | HH | HH |
| AA | AA | BB | BB | AA | AA | XX | XX | PP | PP | KK | KK | HH | HH |
| AA | AA | BB | BB | AA | AA | X | X | PP | PP | KK | KK | HH | HH |

NRC / RHR PROBLEM II
w/ MISSING MASS, FLEX ELB.

SYSTEM BULLETIN

IMPELL WALNUT CREEK COMPUTER CENTER OPERATIONS HOURS (PACIFIC TIME!)

MONDAY AND FRIDAY 0600 TO 2130
TUESDAY TO THURSDAY 0600 TO 2330
SATURDAY AND SUNDAY 0700 TO 1700

OPERATORS WILL NOT BE ON SITE AT ALL OTHER TIMES. EXTENDED OPERATOR COVERAGE MAY BE ARRANGED BY CONTACTING BOB EARL AT (415) 943-4663/4666

THE CYBER SYSTEM WILL BE UNAVAILABLE TO USERS AS FOLLOWS:

| | | | | |
|-----------|------|----|------|-------------------------|
| MONDAY | 2000 | TO | 2100 | SYSTEM BACKUP |
| TUESDAY | 1930 | TO | 2300 | MAINTENANCE + BACKUP |
| WEDNESDAY | 2200 | TO | 2300 | SYSTEM BACKUP |
| THURSDAY | 2200 | TO | 2300 | SYSTEM BACKUP |
| FRIDAY | 2000 | TO | 2230 | SYSTEM BACKUP + TESTING |
| SATURDAY | 1600 | TO | 1700 | SYSTEM BACKUP |
| SUNDAY | 1400 | TO | 1700 | SYSTEM BACKUP |

HOLIDAY HOURS.

MONDAY, MAY 27, 1985. NO OPERATORS ON SITE. SYSTEM AVAILABLE TO USERS.

SPECIAL CYBER UPGRADE BLOCK TIME.

THE CYBER WILL BE UNAVAILABLE FOR PRODUCTION USE THURSDAYS FROM 2000 HRS. TO 2400 HRS. BEGINNING APRIL 11, 1985 THROUGH MAY 30 1985. COMPUTER SERVICES WILL BE TESTING NOS VERSION 2.3 . ANY USERS WISHING TO TEST THEIR CODES DURING THIS PERIOD WILL NEED TO CONTACT COMPUTER SERVICES AT (415)943-4666.

GENERAL INFORMATION.

DO NOT RELEASE MAGNETIC TAPES WHEN OPERATORS ARE NOT ON SITE.

USER ADVISORY. MAGNETIC TAPE BACKUPS.

MAGNETIC TAPES ARE SUSCEPTIBLE TO PHYSICAL DAMAGE. BACKUP TAPES ARE RECOMMENDED WHENEVER THE INFORMATION ON THE TAPE WOULD BE EXPENSIVE OR TIME CONSUMING TO RECREATE . PLEASE NOTE THAT IMPELL, CDC, AND UCC DO NOT GIVE REFUNDS FOR JOBS NECESSARY TO RECREATE A TAPE IF NO BACKUP EXISTS.

AS PER THE MEMO DISTRIBUTED TO DIVISIONS OVER A WEEK AGO, THE OLD OVERHEAD JOB NUMBERS BEGINNING WITH 0622 AND 0627 WILL NOT BE VALID AFTER 2/15/85. NEW NUMBERS (BEGINNING WITH 0625004 OR 0623004) MUST BE REQUESTED. A CONSOLIDATED LIST OF OLD VERSUS SUGGESTED NEW NUMBERS WAS DISTRIBUTED TO EACH DIVISION TO EXPIDITE THE REVIEW. THESE CHANGES ARE BEING MADE TO SUIT ACCOUNTING DEPT. NUMBER CHANGES.

DIAL-IN PHONE NUMBERS

SUPERPIPE NEWS

UPDATED : 06/12/84

SUPERPIPE VERSION 17A 06/12/84 PROGRAM RELEASE

SUPERPIPE VERSION 17A 06/12/84 IS RELEASED FOR PRODUCTION USE.
THIS VERSION ADDS THE FOLLOWING STRESS CHECKS TO THE PREVIOUS VERSION OF
SUPERPIPE:

. ASME/ANSI B31.1,B31.3,B31.4,AND B31.8

. MITI CLASS 1,AND CLASS 3,4

ECHO PRINT OF INPUT DATA

| COLUMN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | INPUT CARD SEQUENCE |
|-------------------|---|---|--------------|----------|-----------|---|---|---|---------------------------|
| 74 - | | | DIR -23.000 | 555.25 | -258.584 | | | | 41 |
| 73 - | | | DIR -26.0833 | 555.25 | -258.584 | | | | 42 |
| 72 - | | | DIR -29.1667 | 555.25 | -258.584 | | | | 43 |
| 71 - | | | DIR -32.25 | 555.25 | -258.584 | | | | 44 |
| 70 - | | | DIR -36.5 | 555.25 | -258.584 | | | | 45 |
| 59 - TNP - | | | TAN - | | | | | | 46 |
| E7 - TIP - 1.5 - | | | DIR -38.5 | 555.25 | -258.584 | | | | 47 |
| 58 - TNP - | | | TAN - | | | | | | 48 |
| E8 - TIP - 1.5 - | | | DIR -38.5 | 553.75 | -260.084 | | | | 49 |
| 57 - TNP - | | | TAN - | | | | | | 50 |
| 25 - BRP - | | | DUP - | | | | | | 51 |
| 26 - | | | DIR -38.5 | 553.75 | -270.5 | | | | 52 |
| 27 - | | | DIR -38.5 | 553.75 | -276.2183 | | | | 53 |
| 28 - | | | DIR -38.5 | 553.75 | -281.9367 | | | | 54 |
| 29 - | | | DIR -38.5 | 553.75 | -287.655 | | | | 55 |
| 30 - | | | DIR -38.5 | 553.75 | -291.009 | | | | 56 |
| 31 - | | | DIR -38.5 | 553.75 | -292.842 | | | | 57 |
| 32 - | | | DIR -38.5 | 553.75 | -296.9737 | | | | 58 |
| 33 - | | | DIR -38.5 | 553.75 | -301.1053 | | | | 59 |
| 34 - | | | DIR -38.5 | 553.75 | -305.2370 | | | | 60 |
| 35 - TNP - | | | TAN - | | | | | | 61 |
| E9 - TIP - 1.0 - | | | DIR -38.5 | 553.75 | -307.029 | | | | 62 |
| 36 - TNP - | | | TAN - | | | | | | 63 |
| E10 - TIP - 1.5 - | | | DIR -38.5 | 556.25 | -307.029 | | | | 64 |
| 37 - TNP - | | | TAN - | | | | | | 65 |
| 38 - | | | DIR -43.5 | 556.25 | -307.029 | | | | 66 |
| 39 - TNP - | | | TAN - | | | | | | 67 |
| E11 - TIP - 1.5 - | | | DIR -46.25 | 556.25 | -307.029 | | | | 68 |
| 40 - TNP - | | | TAN - | | | | | | 69 |
| 41 - | | | DIR -48.75 | 558.75 | -307.029 | | | | 70 |
| 42 - TNP - | | | TAN - | | | | | | 71 |
| E12 - TIP - 1.5 - | | | DIR -51.25 | 561.25 | -307.029 | | | | 72 |
| 43 - TNP - | | | TAN - | | | | | | 73 |
| 44 - | | | DIR -52 | 562.3130 | -307.7790 | | | | 74 |
| 45 - TNP - | | | TAN - | | | | | | 75 |
| E13 - TIP - | | | DIR -52.75 | 563.376 | -308.529 | | | | 76 |
| 46 - TNP - | | | TAN - | | | | | | 77 |
| 47 - | | | DIR -52.750 | 567.001 | -308.529 | | | | 78 |
| 48 - | | | DIR -52.750 | 570.862 | -308.5290 | | | | 79 |
| 49 - | | | DIR -52.750 | 574.7230 | -308.5290 | | | | 80 |

ECHO PRINT OF INPUT DATA

| COLUMN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | INPUT CARD SEQUENCE |
|--------|-------|----------|-----------|----------|----------|---------|-----------|---|---------------------------|
| | 50 | TNP | | TAN | | | | | 81 |
| | E14 | TIP 1.5 | | DIR | -52.75 | 580.084 | -308.529 | | 82 |
| | 51 | TNP | | TAN | | | | | 83 |
| | 52 | | | DIR | -52.75 | 580.084 | -311.029 | | 84 |
| | 53 | | | DIR | -52.75 | 580.084 | -314.029 | | 85 |
| | 54 | | | DIR | -52.75 | 580.084 | -317.029 | | 86 |
| | 55 | | | DIR | -52.75 | 580.084 | -320.029 | | 87 |
| | 56 | | | DIR | -52.75 | 580.084 | -323.029 | | 88 |
| | 57 | TNP | | TAN | | | | | 89 |
| | E15 | TIP 1.5 | | DIR | -52.75 | 580.084 | -325.529 | | 90 |
| | 58 | TNP | | TAN | | | | | 91 |
| | 59 | | | DIR | -55.2641 | 580.084 | -325.9052 | | 92 |
| | 60 | | | DIR | -55.5001 | 580.084 | -326.0902 | | 93 |
| | 61 | | | DIR | -60.3328 | 580.084 | -326.6628 | | 94 |
| | 62 | | | DIR | -64.1654 | 580.084 | -327.2355 | | 95 |
| | * 63 | | | DIR | -67.9981 | 580.084 | -327.8082 | | 96 |
| | * 64 | MND | | DIR | -55.2641 | 580.084 | -325.9052 | | 97 |
| | STRP | SAP4N01 | | 12.75 | .4056 | | | | 98 |
| | | MASS | | 9.375 | | | | | 99 |
| | BELB | SAP4N01B | | 12.75 | .4056 | | | | 100 |
| | | MASS | | 9.375 | | | | | 101 |
| | STRP | SAP4N02 | | 8.6256 | .3216 | | | | 102 |
| | | MASS | | 4.6567 | | | | | 103 |
| | BELB | SAP4N02B | | 8.6256 | .3216 | | | | 104 |
| | | MASS | | 4.6567 | | | | | 105 |
| | VALV | SAP4N03 | | 8.6256 | .6444 | | | | 106 |
| | | MASS | | 33.15 | | | | | 107 |
| | VALV | SAP4N04 | | 12.75 | 2.6244 | | | | 108 |
| | | MASS | | 101.8333 | | | | | 109 |
| | STRP | SAP4N05 | | 12.75 | 1.3116 | | | | 110 |
| | | MASS | | 17.325 | | | | | 111 |
| | BELB | SAP4N05 | | 12.75 | 1.3116 | | | | 112 |
| | | MASS | | 17.325 | | | | | 113 |
| | *VLDP | VALVE UP | | 12.75 | 2.6244 | | | | 114 |
| | SA304 | SS | | | | | | | 115 |
| | | SSLB | | | | | | | 116 |
| | | TEMP | 70 | | | | | | 117 |
| | | YMOD | 2829800.0 | | | | | | 118 |
| | | ALPH | 3 | | | | | | 119 |
| | | CL2S | 17500. | | | | | | 120 |
| | * AL | STRP | SAP4N01 | SA304 | SS | | | | |

.959E-05

NRC/RHR PIPING MODEL PROBLEM II***ELBOW FLEX. AND MISS. MASS. INCLUDED***

ECHO PRINT OF INPUT DATA

| COLUMN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | INPUT CARD SEQUENCE |
|--------|-------------|-------------|---------------------|----------------------|----------------------|----------------------|----------------------|------------|---------------------------|
| | 12345678901 | 23456789012 | 3456789012345678901 | 23456789012345678901 | 23456789012345678901 | 23456789012345678901 | 23456789012345678901 | 2345678901 | |
| | A2 | STRP | SAP4N02 | SA304 | SS | | 5 | | 121 |
| | A31 | BFLB | SAP4N02 | SA304 | SS | | 7 | | 122 |
| | A4 | STRP | SAP4N02 | | | | 9 | | 123 |
| | A32 | BELB | SAP4N02 | | | | 10 | | 124 |
| | A5 | STRP | SAP4N02 | | | | 12 | | 125 |
| | A13 | BELB | SAP4N02 | | | | 13 | | 126 |
| | A6 | STRP | SAP4N02 | | | | 15 | | 127 |
| | A7 | VALV | SAP4N03 | SA304 | SS | | 17 | | 128 |
| | A8 | STRP | SAP4N02 | | | | 17 | | 129 |
| | A9 | BELB | SAP4N02 | | | | 20 | | 130 |
| | A10 | STRP | SAP4N02 | | | | 22 | | 131 |
| | A11 | BELB | SAP4N02 | | | | 23 | | 132 |
| | A12 | BELB | | | | | 24 | | 133 |
| * | A13 | STRP | | | | | 25 | | 134 |
| | B1 | STRP | SAP4N01 | SA304 | SS | | 69 | | 135 |
| | B11 | BELB | SAP4N01 | SA304 | SS | | 68 | | 136 |
| | B32 | BELB | SAP4N01 | SA304 | SS | | 67 | | 137 |
| | B3 | STRP | SAP4N01 | | | | 35 | | 138 |
| | B33 | BELB | | | | | 36 | | 139 |
| | B34 | BELB | | | | | 37 | | 140 |
| | B4 | STRP | | | | | 39 | | 141 |
| | B35 | BELB | | | | | 40 | | 142 |
| | B5 | STRP | | | | | 42 | | 143 |
| | B36 | BELB | | | | | 43 | | 144 |
| | B6 | STRP | | | | | 45 | | 145 |
| | B37 | BELB | | | | | 46 | | 146 |
| | B7 | STRP | | | | | 50 | | 147 |
| | B38 | BELB | | | | | 51 | | 148 |
| | B8 | STRP | | | | | 57 | | 149 |
| | B9 | BELB | | | | | 58 | | 150 |
| | B9A | VALV | SAP4N04 | SA304 | SS | | 60 | | 151 |
| * | B10 | STRP | SAP4N05 | SA304 | SS | | 63 | | 152 |
| | MISC | | VALVE OPERATOR | | | | | | 153 |
| * | U1 | VLOP | VALVE OP | SA304 | SS | | 59 | BL | 154 |
| * | X1 | B1 | 1018 | | | | | | 155 |
| | LX | 1 | SNGL | | .01E+12 | | | X | 156 |
| | LY | 1 | SNGL | | .01E+12 | | | Y | 157 |
| | LZ | 1 | SNGL | | .01E+12 | | | Z | 158 |
| | 77X | 77 | SNGL | | .01E+12 | | | X | 159 |
| | 77Y | 77 | SNGL | | .01E+12 | | | Y | 160 |

NRC/RHR PIPING MODEL PROBLEM II***ELBOW FLEX. AND MISS. MASS. INCLUDED***

DATA STORAGE INDICATORS

DATA FILE = NOFL (NO FILE)

REMAINING INDICATORS IGNORED

ANALYSIS CONTROL INDICATORS

DATA EXECUTION = EXEC (EXECUTION REQUIRED)

ANALYSES TO BE EXECUTED

- DYNP (COMPUTE DYNAMIC PROPERTIES)
- SPEC (RESPONSE SPECTRUM ANALYSIS)

UNITS SPECIFICATION

- TEMPERATURE SCALE = (DEFAULT TO F)
- COORDINATE INPUT = FT
- COMPONENT DIMENSIONS = (DEFAULT TO IN)
- DISPLACEMENTS, ETC. = (DEFAULT TO IN)
- SUPPORT, ETC. STIFFNESSES = (DEFAULT TO LBIN)
- FORCES AND MOMENTS = (DEFAULT TO LBIN)
- COMPONENT WTS, UNIF LOADS = (DEFAULT TO LBIN)
- STRESSES, MODULI, PRESSURES = (DEFAULT TO LBIN)

NRC/RHR PIPING MODEL PROBLEM II***ELBOW FLEX. AND MISS. MASS. INCLUDED***

GEOMETRY DATA CONTROL INFORMATION

DATA NAME = GEOM
DATA TITLE = PIPING GEOMETRY

NO. OF PIPE RUNS = 2
NO. OF MISC. MEMBER GROUPS = 1

ASME CODE EDITION = (BLANK - DEFAULTS TO E-80)

COORDINATE CODE = (BLANK - NO COORDINATE TRANSFORMATION)

NRC/RHR PIPING MODEL PROBLEM II***ELBOW FLEX. AND MISS. MASS. INCLUDED***

CONTROL POINT COORDINATES, AS COMPUTED AND STORED

| RUN NAME | POINT NAME | POINT TYPE | GLOBAL COORDINATES | | |
|-------------|---------------|---------------|--------------------|-----------|-----------|
| | | | X (FT) | Y (FT) | Z (FT) |
| RUN1 | 1 | | -46.500 | 579.000 | -257.000 |
| | 5 | | -46.500 | 574.667 | -257.000 |
| | 6 | TNP | -46.500 | 574.333 | -257.000 |
| | E1 | TIP | -46.500 | 573.333 | -257.000 |
| | 7 | TNP | -46.500 | 573.333 | -258.000 |
| | 8 | | -46.500 | 573.333 | -251.750 |
| | 9 | TNP | -46.500 | 573.333 | -265.750 |
| | E2 | TIP | -46.500 | 573.333 | -266.750 |
| | 10 | TNP | -47.207 | 572.626 | -266.750 |
| | 11 | | -47.500 | 572.333 | -266.750 |
| | 12 | TNP | -47.707 | 572.126 | -256.750 |
| | E3 | TIP | -48.000 | 571.833 | -256.750 |
| | 13 | TNP | -48.000 | 571.419 | -266.750 |
| | 14 | | -48.000 | 570.999 | -266.750 |
| | 83 | RFP | -47.000 | 570.999 | -255.750 |
| | 15 | | -48.000 | 570.187 | -266.750 |
| | 16 | | -48.000 | 569.500 | -256.750 |
| | 17 | | -48.000 | 568.812 | -266.750 |
| | 18 | | -48.000 | 559.062 | -266.750 |
| | 84 | RFP | -47.000 | 559.062 | -257.750 |
| | 19 | TNP | -48.000 | 558.250 | -266.750 |
| | E4 | TIP | -48.000 | 557.250 | -256.750 |
| | 20 | TNP | -47.000 | 557.250 | -256.750 |
| | 21 | | -46.645 | 557.250 | -266.750 |
| | 22 | TNP | -39.914 | 557.250 | -266.750 |
| E5 | TIP | -39.500 | 557.250 | -266.750 | |
| 23 | TNP | -39.207 | 557.250 | -266.457 | |
| E6 | TIP | -38.500 | 557.250 | -255.750 | |
| 24 | TNP | -38.500 | 556.250 | -265.750 | |
| 25 | BRP | -38.500 | 553.750 | -265.750 | |
| RUN2 | 77 | | -8.750 | 555.250 | -258.584 |
| | 76 | | -13.500 | 555.250 | -258.584 |
| | 75 | | -18.250 | 555.250 | -258.584 |
| | 74 | | -23.000 | 555.250 | -258.584 |
| | 73 | | -26.083 | 555.250 | -258.584 |
| | 72 | | -29.167 | 555.250 | -258.584 |
| | 71 | | -32.250 | 555.250 | -258.584 |
| | 70 | | -36.500 | 555.250 | -258.584 |
| | 69 | TNP | -37.000 | 555.250 | -258.584 |
| | E7 | TIP | -38.500 | 555.250 | -258.544 |
| | 68 | TNP | -38.500 | 554.189 | -259.645 |
| | E8 | TIP | -38.500 | 553.750 | -250.084 |
| | 67 | TNP | -38.500 | 553.750 | -250.705 |

NRC/RHR PIPING MODEL PROBLEM II***ELBOW FLEX. AND MISS. MASS. INCLUDED***

CONTROL POINT COORDINATES, AS COMPUTED AND STORED (CONTD.)

| RUN NAME | POINT NAME | POINT TYPE | GLOBAL COORDINATES | | |
|------------------|------------|------------|--------------------|---------|----------|
| | | | X (FT) | Y (FT) | Z (FT) |
| RUN2 (CONTD.) | 25 | BRP | -38.500 | 553.750 | -265.750 |
| | 26 | | -38.500 | 553.750 | -270.500 |
| | 27 | | -38.500 | 553.750 | -276.218 |
| | 28 | | -38.500 | 553.750 | -281.937 |
| | 29 | | -38.500 | 553.750 | -287.655 |
| | 30 | | -38.500 | 553.750 | -291.009 |
| | 31 | | -38.500 | 553.750 | -292.842 |
| | 32 | | -38.500 | 553.750 | -296.974 |
| | 33 | | -38.500 | 553.750 | -301.105 |
| | 34 | | -38.500 | 553.750 | -305.237 |
| | 35 | TNP | -38.500 | 553.750 | -306.029 |
| | E9 | TIP | -38.500 | 553.750 | -307.029 |
| | 36 | TNP | -38.500 | 554.750 | -307.029 |
| | E10 | TIP | -38.500 | 555.250 | -307.029 |
| | 37 | TNP | -40.000 | 555.250 | -307.029 |
| | 38 | | -43.500 | 555.250 | -307.029 |
| | 39 | TNP | -45.629 | 555.250 | -307.029 |
| | E11 | TIP | -46.250 | 555.250 | -307.029 |
| | 40 | TNP | -46.689 | 556.689 | -307.029 |
| | 41 | | -48.750 | 558.750 | -307.029 |
| | 42 | TNP | -50.952 | 560.952 | -307.029 |
| | E12 | TIP | -51.250 | 561.250 | -307.029 |
| | 43 | TNP | -51.460 | 561.548 | -307.239 |
| | 44 | | -52.000 | 562.313 | -307.779 |
| | 45 | TNP | -52.440 | 562.937 | -308.219 |
| | E13 | TIP | -52.750 | 563.376 | -308.529 |
| | 46 | TNP | -52.750 | 563.996 | -308.529 |
| | 47 | | -52.750 | 567.001 | -308.529 |
| | 48 | | -52.750 | 570.862 | -308.529 |
| | 49 | | -52.750 | 574.723 | -308.529 |
| | 50 | TNP | -52.750 | 579.584 | -308.529 |
| | E14 | TIP | -52.750 | 580.084 | -308.529 |
| | 51 | TNP | -52.750 | 580.084 | -310.029 |
| | 52 | | -52.750 | 580.084 | -311.029 |
| | 53 | | -52.750 | 580.084 | -314.029 |
| | 54 | | -52.750 | 580.084 | -317.029 |
| | 55 | | -52.750 | 580.084 | -320.029 |
| | 56 | | -52.750 | 580.084 | -323.029 |
| | 57 | TNP | -52.750 | 580.084 | -324.237 |
| | E15 | TIP | -52.750 | 580.084 | -325.529 |
| | 58 | TNP | -54.028 | 580.084 | -325.720 |
| | 59 | | -55.264 | 580.084 | -325.705 |
| | 60 | | -56.500 | 580.084 | -326.090 |
| | 61 | | -60.333 | 580.084 | -326.663 |
| | 62 | | -64.155 | 580.084 | -327.236 |
| | 63 | | -67.998 | 580.084 | -327.808 |

NRC/RHR PIPING MODEL PROBLEM II***ELBOW FLEX. AND MISS. MASS. INCLUDED***

CONTROL POINT COORDINATES, AS COMPUTED AND STORED (CONT.)

| RUN NAME | POINT NAME | POINT TYPE | GLOBAL COORDINATES | | |
|----------------|---------------|---------------|--------------------|-----------|-----------|
| | | | X (FT) | Y (FT) | Z (FT) |
| MISC. NODES | 81 | MJD | -55.264 | 582.084 | -325.905 |

NRC/RHR PIPING MODEL PROBLEM II***ELBOW FLEX. AND MISS. MASS. INCLUDED***

COMPONENT PROPERTIES

LENGTH UNIT = IN , WEIGHT UNIT = LB/IN OR LB

| COMP TYPE | SECTION NAME | SEAM TYPE | CARD TYPE | ITEM 1 | ITEM 2 | ITEM 3 | ITEM 4 | ITEM 5 | ITEM 6 | ITEM LIST |
|-----------|--------------|-----------|-----------|---------|--------|--------|--------|--------|--------|-----------------------|
| STRP | SAP4N01 | | NAME | 12.750 | .406 | 0.000 | 0.000 | | | DS,TS,DK,TK |
| | | | NAME** | 12.750 | .406 | 12.750 | .406 | | | DS,TS,DK,TK |
| | | | XDIM** | 0.000 | .355 | 0.000 | | | | DDIF/T, TM, A |
| | | | MASS | 9.375 | 0.000 | 0.000 | 0.000 | 0.000 | | UAC,UWF,UWI,MAXF,MAXD |
| | | | MASS** | 9.375 | 0.000 | 0.000 | 30.000 | 85.265 | | UAC,UWF,UWI,MAXF,MAXD |
| BELB | SAP4N01B | | NAME | 12.750 | .406 | 0.000 | 0.000 | 0.000 | 0.000 | DS,TS,DK,TK,R/DN, DN |
| | | | NAME** | 12.750 | .406 | 12.750 | .406 | 0.000 | 0.000 | DS,TS,DK,TK,R/DN, DN |
| | | | XDIM** | 0.000 | .355 | 0.000 | | | | DDIF/T, TM, A |
| | | | MASS | 9.375 | 0.000 | 0.000 | 0.000 | 0.000 | | UAC,UWF,UWI,MAXF,MAXD |
| | | | MASS** | 9.375 | 0.000 | 0.000 | 30.000 | 85.265 | | UAC,UWF,UWI,MAXF,MAXD |
| STRP | SAP4N02 | | NAME | 8.626 | .322 | 0.000 | 0.000 | | | DS,TS,DK,TK |
| | | | NAME** | 8.626 | .322 | 8.626 | .322 | | | DS,TS,DK,TK |
| | | | XDIM** | 0.000 | .281 | 0.000 | | | | DDIF/T, TM, A |
| | | | MASS | 4.657 | 0.000 | 0.000 | 0.000 | 0.000 | | UAC,UWF,UWI,MAXF,MAXD |
| | | | MASS** | 4.657 | 0.000 | 0.000 | 30.000 | 71.196 | | UAC,UWF,UWI,MAXF,MAXD |
| BELB | SAP4N02B | | NAME | 8.626 | .322 | 0.000 | 0.000 | 0.000 | 0.000 | DS,TS,DK,TK,R/DN, DN |
| | | | NAME** | 8.626 | .322 | 8.626 | .322 | 0.000 | 0.000 | DS,TS,DK,TK,R/DN, DN |
| | | | XDIM** | 0.000 | .281 | 0.000 | | | | DDIF/T, TM, A |
| | | | MASS | 4.657 | 0.000 | 0.000 | 0.000 | 0.000 | | UAC,UWF,UWI,MAXF,MAXD |
| | | | MASS** | 4.657 | 0.000 | 0.000 | 30.000 | 71.196 | | UAC,UWF,UWI,MAXF,MAXD |
| VALV | SAP4N03 | | NAME | 8.626 | .644 | 0.000 | 0.000 | 0.000 | 0.000 | DS,TS,DK,TK,DP,TP |
| | | | NAME** | 8.626 | .644 | 8.626 | .644 | 7.337 | .644 | DS,TS,DK,TK,DP,TP |
| | | | MASS | 33.150 | 0.000 | 0.000 | | | | UAC,UWF,UWI |
| VALV | SAP4N04 | | NAME | 12.750 | 2.624 | 0.000 | 0.000 | 0.000 | 0.000 | DS,TS,DK,TK,DP,TP |
| | | | NAME** | 12.750 | 2.624 | 12.750 | 2.624 | 7.501 | 2.624 | DS,TS,DK,TK,DP,TP |
| | | | MASS | 101.833 | 0.000 | 0.000 | | | | UAC,UWF,UWI |
| STRP | SAP4N05 | | NAME | 12.750 | 1.312 | 0.000 | 0.000 | | | DS,TS,DK,TK |
| | | | NAME** | 12.750 | 1.312 | 12.750 | 1.312 | | | DS,TS,DK,TK |
| | | | XDIM** | 0.000 | 1.148 | 0.000 | | | | DDIF/T, TM, A |
| | | | MASS | 17.325 | 0.000 | 0.000 | 0.000 | 0.000 | | UAC,UWF,UWI,MAXF,MAXD |
| | | | MASS** | 17.325 | 0.000 | 0.000 | 30.000 | 92.895 | | UAC,UWF,UWI,MAXF,MAXD |

NRC/RHR PIPING MODEL PROBLEM II***ELBOW FLEX. AND MISS. MASS. INCLUDED***

COMPONENT PROPERTIES (CONTD.)

LENGTH UNIT = IN , WEIGHT UNIT = LB/IN OR LB

| COMP TYPE | SECTION NAME | SEAM TYPE | CARD TYPE | ITEM 1 | ITEM 2 | ITEM 3 | ITEM 4 | ITEM 5 | ITEM 6 | ITEM LIST |
|-----------|--------------|-----------|-----------|----------|----------|--------|--------|--------|--------|-----------------------|
| BELB | SAP4N05 | | NAME | 12.750 | 1.312 | 0.030 | 0.000 | 0.000 | 0.000 | DS,TS,DK,TK,R/DN,DN |
| | | | NAME** | 12.750 | 1.312 | 12.750 | 1.312 | 0.000 | 0.000 | DS,TS,DK,TK,R/DN,DN |
| | | | XDIM** | 0.000 | 1.148 | 0.000 | 0.000 | 0.000 | 0.000 | DDIF/T,TH,A |
| | | | MASS | 17.325 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | U4C,UWF,UWI,MAXF,MAXD |
| | | | MASS** | 17.325 | 0.000 | 0.000 | 30.000 | 92.895 | | U4C,UWF,UWI,MAXF,MAXD |
| VLOP | VALVE OP | | NAME | .128E+02 | .262E+01 | | | | | DX,TK |

NRC/RHR PIPING MODEL PROBLEM II***ELBOW FLEX. AND MISS. MASS. INCLUDED***

MATERIAL PROPERTIES, AS STORED

TEMP SCALE = F, MODULUS AND STRESS UNITS = LB/SQ.IN

| MATERIAL NAME | DATA TYPE | ITEM 1 | ITEM 2 | ITEM 3 | ITEM 4 | ITEM 5 | ITEM 6 | ITEM 7 | ITEM 8 |
|---------------|--------------|-----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|----------|
| SA304 SS | | | | | | | | | |
| | TEMP | 70. | | | | | | | |
| | YMOD | 28298600. | | | | | | | |
| | ALPH | .300E+00 | | | | | | | |
| | CL2S | 17500.00 | | | | | | | |
| | NCYC** | .100E+02 | .200E+02 | .500E+02 | .100E+03 | .200E+03 | .500E+03 | .100E+04 | .200E+04 |
| | FTGS** | 550000.00 | 470000.00 | 317000.00 | 240000.00 | 185000.00 | 136000.00 | 109000.00 | 89000.00 |
| | NCYC** | .500E+04 | .100E+05 | .200E+05 | .500E+05 | .100E+06 | .200E+06 | .500E+06 | .100E+07 |
| | FTGS** | 70000.00 | 59000.00 | 51000.00 | 42500.00 | 37500.00 | 33000.00 | 28500.00 | 26000.00 |
| | FATG. PARAM. | M = 1.70, N = .30 (DEFAULT) | | | | | | | |
| | | C4 = 1.3 (DEFAULT) | | | | | | | |

NONSTANDARD MATER

MISCELLANEOUS MEMBERS, GROUP NO. 1 (MISC)

VALVE OPERATOR

| MEMB NAME | COMP TYPE | SECTION NAME | MATERIAL NAME | NODE | NODE | POINT | LENGTH | POINT | POINT | END RELEASE CODES ---[--- ---J--- |
|--------------|--------------|-----------------|------------------|------|------|-------|--------|-------|-------|--------------------------------------|
| | | | | I | J | K | (FT) | L | M | |
| OPI | VLDP | VALVE OP | SA304 SS | 59 | 81 | | 2.00 | | | |

COMPONENT ALIGNMENT SUMMARY, PIPE RUN NO. 1

RUN NAME = RUN1

| SEGM NO. | SEGM TYPE | DCP LIST | DCP TYPE | COMP NAME | COMP TYPE | SECTION NAME | MATERIAL NAME | BRANCH ANGLE (DEG) | SEGM LENGTH (FT) | COMP LENGTH (FT) | EXTRA MASSES | CURVE RADIUS (FT) | CURVE ANGLE (DEG) |
|----------|-----------|----------|----------|-----------|-----------|--------------|---------------|--------------------|------------------|------------------|--------------|-------------------|-------------------|
| 1 | STRT | 1 | | | | | | | 4.67 | | | | |
| | | 5 | | A1 | STRP | SAP4ND1 | SA304 SS | | | 4.33 | 0 | | |
| 2 | CURV | 6 | TNP | A2 | STRP | SAP4ND2 | SA304 SS | | 1.57 | .33 | 0 | 1.00 | 90.00 |
| 3 | STRT | 7 | TNP | AB1 | BELB | SAP4ND2B | SA304 SS | | 7.75 | 1.57 | 0 | | |
| | | 8 | | A4 | STRP | SAP4ND2 | SA304 SS | | | 3.75 | 0 | | |
| 4 | CURV | 9 | TNP | A4 | STRP | SAP4ND2 | SA304 SS | | 1.57 | 4.00 | 0 | 1.00 | 90.00 |
| 5 | STRT | 10 | TNP | AB2 | BELB | SAP4ND23 | SA304 SS | | .71 | 1.57 | 0 | | |
| | | 11 | | A5 | STRP | SAP4ND2 | SA304 SS | | | .41 | 0 | | |
| 6 | CURV | 12 | TNP | A5 | STRP | SAP4ND2 | SA304 SS | | .79 | .29 | 0 | 1.00 | 45.00 |
| 7 | STRT | 13 | TNP | AB3 | BELB | SAP4ND2B | SA304 SS | | 13.17 | .79 | 0 | | |
| | | 14 | | A6 | STRP | SAP4ND2 | SA304 SS | | | .42 | 0 | | |
| | | 15 | | A6 | STRP | SAP4ND2 | SA304 SS | | | .81 | 0 | | |
| | | 16 | | A7 | VALV | SAP4ND3 | SA304 SS | | | .69 | 0 | | |
| | | 17 | | A7 | VALV | SAP4ND3 | SA304 SS | | | .69 | 0 | | |
| | | 18 | | A8 | STRP | SAP4ND2 | SA304 SS | | | 9.75 | 1 | | |
| 8 | CURV | 19 | TNP | A8 | STRP | SAP4ND2 | SA304 SS | | 1.57 | .91 | 0 | 1.00 | 90.00 |
| 9 | STRT | 20 | TNP | A9 | BELB | SAP4ND2B | SA304 SS | | 7.09 | 1.57 | 0 | | |
| | | 21 | | A10 | STRP | SAP4ND2 | SA304 SS | | | .36 | 0 | | |
| 10 | CURV | 22 | TNP | A10 | STRP | SAP4ND2 | SA304 SS | | .79 | 6.73 | 1 | 1.00 | 45.00 |

NRC/RHR PIPING MODEL PROBLEM II***ELBOW FLEX. AND MISS. MASS. INCLUDED***

COMPONENT ALIGNMENT SUMMARY, PIPE RUN NO. 1 (CONTD.)

RUN NAME = RJN1

| SEGM NO. | SEGM TYPE | DCP LIST | DCP TYPE | COMP NAME | COMP TYPE | SECTION NAME | MATERIAL NAME | BRANCH ANGLE (DEG) | SEGM LENGTH (FT) | COMP LENGTH (FT) | EXTRA MASSES | CURVE RADIUS (FT) | CURVE ANGLE (DEG) |
|----------|-----------|----------|----------|-----------|-----------|--------------|---------------|--------------------|------------------|------------------|--------------|-------------------|-------------------|
| 11 | CURV | 23 | TNP | A11 | BELB | SAP4N02B | SA304 SS | | | .79 | 0 | | |
| | | | | A12 | BELB | SAP4N023 | SA304 SS | | 1.57 | 1.57 | 0 | 1.00 | 90.00 |
| 12 | STRT | 24 | TNP | A13 | STRP | SAP4N02 | SA304 SS | | 2.50 | 2.50 | 0 | | |
| | | 25 | BRP | | | | | 90.00 | | | | | |

COMPONENT ALIGNMENT SUMMARY, PIPE RUN NO. 2

RUN NAME = RUN2

| SEGM NO. | SEGM TYPE | DCP LIST | DCP TYPE | COMP NAME | COMP TYPE | SECTION NAME | MATERIAL NAME | BRANCH ANGLE (DEG) | SEGM LENGTH (FT) | COMP LENGTH (FT) | EXTRA MASSES | CURVE RADIUS (FT) | CURVE ANGLE (DEG) |
|----------|-----------|----------|----------|-----------|-----------|--------------|---------------|--------------------|------------------|------------------|--------------|-------------------|-------------------|
| 1 | STRT | 77 | | | | | | | 28.25 | | | | |
| | | 76 | | B1 | STRP | SAP4N01 | SA304 SS | | | 4.75 | 0 | | |
| | | 75 | | B1 | STRP | SAP4N01 | SA304 SS | | | 4.75 | 0 | | |
| | | 74 | | B1 | STRP | SAP4N01 | SA304 SS | | | 4.75 | 0 | | |
| | | 73 | | B1 | STRP | SAP4N01 | SA304 SS | | | 3.08 | 0 | | |
| | | 72 | | B1 | STRP | SAP4N01 | SA304 SS | | | 3.08 | 0 | | |
| | | 71 | | B1 | STRP | SAP4N01 | SA304 SS | | | 3.08 | 0 | | |
| | | 70 | | B1 | STRP | SAP4N01 | SA304 SS | | | 4.25 | 0 | | |
| | | | | B1 | STRP | SAP4N01 | SA304 SS | | | .50 | 0 | | |
| 2 | CURV | 69 | TNP | | | | | | 2.36 | 2.36 | 0 | 1.50 | 90.00 |
| 3 | CURV | 68 | TNP | BB1 | BELB | SAP4N013 | SA304 SS | | 1.18 | 1.18 | 0 | 1.50 | 45.00 |
| 4 | STRT | 67 | TNP | BB2 | BELB | SAP4N013 | SA304 SS | | 45.32 | 1.18 | 0 | | |
| | | 25 | BRP | B3 | STRP | SAP4N01 | SA304 SS | | | 5.04 | 0 | | |
| | | 26 | | B3 | STRP | SAP4N01 | SA304 SS | | | 4.75 | 0 | | |
| | | 27 | | B3 | STRP | SAP4N01 | SA304 SS | | | 5.72 | 0 | | |

COMPONENT ALIGNMENT SUMMARY, PIPE RUN NO. 2 (CONTD.) RUN NAME = RUN2

| SEG# NO. | SEG# TYPE | DCP LIST | DCP TYPE | COMP NAME | COMP TYPE | SECTION NAME | MATERIAL NAME | BRANCH ANGLE (DEG) | SEGM LENGTH (FT) | COMP LENGTH (FT) | EXTRA MASSES | CURVE RADIUS (FT) | CURVE ANGLE (DEG) |
|----------|-----------|----------|----------|-----------|-----------|--------------|---------------|--------------------|------------------|------------------|--------------|-------------------|-------------------|
| | | 28 | | B3 | STRP | SAP4N01 | SA304 SS | | | 5.72 | 0 | | |
| | | 29 | | B3 | STRP | SAP4N01 | SA304 SS | | | 5.72 | 0 | | |
| | | 30 | | B3 | STRP | SAP4N01 | SA304 SS | | | 3.35 | 0 | | |
| | | 31 | | B3 | STRP | SAP4N01 | SA304 SS | | | 1.83 | 0 | | |
| | | 32 | | B3 | STRP | SAP4N01 | SA304 SS | | | 4.13 | 0 | | |
| | | 33 | | B3 | STRP | SAP4N01 | SA304 SS | | | 4.13 | 0 | | |
| | | 34 | | B3 | STRP | SAP4N01 | SA304 SS | | | 4.13 | 0 | | |
| 5 | CURV | 35 | TNP | B3 | STRP | SAP4N01 | SA304 SS | | | .79 | 0 | | |
| | | | | 383 | BELB | SAP4N013 | SA304 SS | | 1.57 | 1.57 | 0 | 1.00 | 90.00 |
| 6 | CURV | 36 | TNP | 384 | BELB | SAP4N013 | SA304 SS | | 2.35 | 2.35 | 0 | 1.50 | 90.00 |
| 7 | STRT | 37 | TNP | B4 | STRP | SAP4N01 | SA304 SS | | 5.63 | 3.50 | 0 | | |
| | | 38 | | B4 | STRP | SAP4N01 | SA304 SS | | | 2.13 | 0 | | |
| 8 | CURV | 39 | TNP | 385 | BELB | SAP4N013 | SA304 SS | | 1.18 | 1.18 | 0 | 1.50 | 45.00 |
| 9 | STRT | 40 | TNP | B5 | STRP | SAP4N01 | SA304 SS | | 6.03 | 2.91 | 0 | | |
| | | 41 | | B5 | STRP | SAP4N01 | SA304 SS | | | 3.11 | 0 | | |
| 10 | CURV | 42 | TNP | 386 | BELB | SAP4N013 | SA304 SS | | .82 | .82 | 0 | 1.50 | 31.38 |
| 11 | STRT | 43 | TNP | B6 | STRP | SAP4N01 | SA304 SS | | 1.95 | 1.08 | 0 | | |
| | | 44 | | B6 | STRP | SAP4N01 | SA304 SS | | | .88 | 0 | | |
| 12 | CURV | 45 | TNP | 187 | BELB | SAP4N013 | SA304 SS | | 1.18 | 1.18 | 0 | 1.50 | 44.94 |
| 13 | STRT | 46 | TNP | | | | | | 14.59 | | 0 | | |

NRC/RHR PIPING MODEL PROBLEM II***ELBOW FLEX. AND MISS. MASS. INCLUDED***

COMPONENT ALIGNMENT SUMMARY, PIPE RUN NO. 2 (CONTD.) RUN NAME = RUN2

| SEGM NO. | SEGM TYPE | DCP LIST | DCP TYPE | COMP NAME | COMP TYPE | SECTION NAME | MATERIAL NAME | BRANCH ANGLE (DEG) | SEGM LENGTH (FT) | COMP LENGTH (FT) | EXTRA MASSES | CURVE RADIUS (FT) | CURVE ANGLE (DEG) |
|----------|-----------|----------|----------|-----------|-----------|--------------|---------------|--------------------|------------------|------------------|--------------|-------------------|-------------------|
| | | 47 | | B7 | STRP | SAP4N01 | SA304 SS | | | 3.00 | 0 | | |
| | | 48 | | B7 | STRP | SAP4N01 | SA304 SS | | | 3.86 | 0 | | |
| | | 49 | | B7 | STRP | SAP4N01 | SA304 SS | | | 3.96 | 0 | | |
| 14 | CURV | 50 | TNP | B7 | STRP | SAP4N01 | SA304 SS | | | 3.86 | 0 | | |
| 15 | STRT | 51 | TNP | B88 | RELB | SAP4N018 | SA304 SS | | 2.35 | 2.36 | 0 | 1.50 | 90.00 |
| | | 52 | | B8 | STRP | SAP4N01 | SA304 SS | | 14.21 | 1.00 | 0 | | |
| | | 53 | | B8 | STRP | SAP4N01 | SA304 SS | | | 3.00 | 0 | | |
| | | 54 | | B8 | STRP | SAP4N01 | SA304 SS | | | 3.00 | 0 | | |
| | | 55 | | B8 | STRP | SAP4N01 | SA304 SS | | | 3.00 | 0 | | |
| | | 56 | | B8 | STRP | SAP4N01 | SA304 SS | | | 3.00 | 0 | | |
| 16 | CURV | 57 | TNP | B8 | STRP | SAP4N01 | SA304 SS | | | 1.21 | 0 | | |
| 17 | STRT | 58 | TNP | B9 | BELB | SAP4N018 | SA304 SS | | 2.13 | 2.13 | 0 | 1.50 | 81.50 |
| | | 59 | | B9A | VALV | SAP4N04 | SA304 SS | | 14.13 | 1.25 | 0 | | |
| | | 60 | | B9A | VALV | SAP4N04 | SA304 SS | | | 1.25 | 0 | | |
| | | 61 | | B10 | STRP | SAP4N05 | SA304 SS | | | 3.88 | 0 | | |
| | | 62 | | B10 | STRP | SAP4N05 | SA304 SS | | | 3.88 | 0 | | |
| | | 63 | | B10 | STRP | SAP4N05 | SA304 SS | | | 3.88 | 0 | | |

NRC/RHR PIPING MODEL PROBLEM II***ELBOW FLEX. AND MISS. MASS. INCLUDED***

LUMPED WEIGHTS (LB)

| NAME | LOCN | WEIGHT |
|------|------|----------|
| W1 | 81 | 1018.000 |

SUPPORT LOCATIONS AND PROPERTIES

| SUPP NAME | SUPP LOCN | SUPP TYPE | PARTICIPATION CODES | | | | TRANSLATIONAL STIFFNESS (LB/IN) | ROTATIONAL STIFFNESS (LB.IN/RAD) | EFFECTIVE WEIGHT (LB) | ANCHJR CODE | DIRN CODE | POINT J | POINT K |
|--------------|--------------|--------------|---------------------|------|------|-----|---------------------------------------|--|-----------------------------|----------------|--------------|------------|------------|
| | | | THRM | GRAV | STAT | DYN | | | | | | | |
| 1X | 1 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | X | | |
| 1Y | 1 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | Y | | |
| 1Z | 1 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | Z | | |
| 77X | 77 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | X | | |
| 77Y | 77 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | Y | | |
| 77Z | 77 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | Z | | |
| 63X | 63 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | X | | |
| 63Y | 63 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | Y | | |
| 63Z | 63 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | Z | | |
| 14XZ | 14 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | INCL | 83 | |
| 14Y | 14 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | Y | | |
| 18XZ | 18 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | INCL | 84 | |
| 21Y | 21 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | Y | | |
| 29Y | 29 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | Y | | |
| 30X | 30 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | X | | |
| 31Z | 31 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | Z | | |
| 47X | 47 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | X | | |
| 47Z | 47 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | Z | | |
| 52Y | 52 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | Y | | |
| 53X | 53 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | X | | |
| 53Z | 53 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | Z | | |
| 56Y | 56 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | Y | | |
| 71Y | 71 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | Y | | |
| 71Z | 71 | SNGL | T | G | S | D | .10000E+11 | ZERO | 0.000 | | Z | | |

NRC/RHR PIPING MODEL PROBLEM II***ELBOW FLEX. AND MISS. MASS. INCLUDED***

OUTPUT POINT SPECIFICATION

NO OUTPUT POINT SPECIFICATION

PROPERTIES AT STRESS OUTPUT POINTS

| SJP NO. | DCP NAME | COMP NAME | COMP TYPE | SECTION NAME | OUTSIDE DIAM (IN) | WALL THCKNS (IN) | SIF | SJP NO. | DCP NAME | COMP NAME | COMP TYPE | SECTION NAME | OUTSIDE DIAM (IN) | WALL THCKNS (IN) | SIF |
|-----------------|----------|-----------|-----------|--------------|-------------------|------------------|------|---------|----------|-----------|-----------|--------------|-------------------|------------------|------|
| RJN NAME = RUN1 | | | | | | | | | | | | | | | |
| 1 | 1 | A1 | STRP | SAP4N01 | 12.750 | .406 | 1.00 | 2L | 5 | A1 | STRP | SAP4N01 | 12.750 | .406 | 1.00 |
| 2R | 5 | A2 | STRP | SAP4N02 | 8.626 | .322 | 1.00 | 3L | 6 | A2 | STRP | SAP4N02 | 8.626 | .322 | 1.00 |
| 3R | 6 | AB1 | BELB | SAP4N02B | 8.626 | .322 | 2.44 | 4L | 7 | AB1 | BELB | SAP4N02B | 8.626 | .322 | 2.44 |
| 4R | 7 | A4 | STRP | SAP4N02 | 8.626 | .322 | 1.00 | 5 | 8 | A4 | STRP | SAP4N02 | 8.626 | .322 | 1.00 |
| 6L | 9 | A4 | STRP | SAP4N02 | 8.626 | .322 | 1.00 | 6R | 9 | AB2 | BELB | SAP4N02B | 8.626 | .322 | 2.44 |
| 7L | 10 | AB2 | BELB | SAP4N02B | 8.626 | .322 | 2.44 | 7R | 10 | A5 | STRP | SAP4N02 | 8.626 | .322 | 1.00 |
| 8 | 11 | A5 | STRP | SAP4N02 | 8.626 | .322 | 1.00 | 9L | 12 | A5 | STRP | SAP4N02 | 8.626 | .322 | 1.00 |
| 9R | 12 | AB3 | BELB | SAP4N02B | 8.626 | .322 | 2.44 | 10L | 13 | AB3 | BELB | SAP4N02B | 8.626 | .322 | 2.44 |
| 10R | 13 | A6 | STRP | SAP4N02 | 8.626 | .322 | 1.00 | 11 | 14 | A6 | STRP | SAP4N02 | 8.626 | .322 | 1.00 |
| 12L | 15 | A6 | STRP | SAP4N02 | 8.626 | .322 | 1.00 | 12R | 15 | A7 | VALV | SAP4N03 | | | N/A |
| 13 | 16 | A7 | VALV | SAP4N03 | | N/A | | 14L | 17 | A7 | VALV | SAP4N03 | | | N/A |
| 14R | 17 | A8 | STRP | SAP4N02 | 8.626 | .322 | 1.00 | 15 | 18 | A8 | STRP | SAP4N02 | 8.626 | .322 | 1.00 |
| 16L | 19 | A8 | STRP | SAP4N02 | 8.626 | .322 | 1.00 | 16R | 19 | A9 | BELB | SAP4N02B | 8.626 | .322 | 2.44 |
| 17L | 20 | A9 | BELB | SAP4N02B | 8.626 | .322 | 2.44 | 17R | 20 | A10 | STRP | SAP4N02 | 8.626 | .322 | 1.00 |
| 18 | 21 | A10 | STRP | SAP4N02 | 8.626 | .322 | 1.00 | 19L | 22 | A10 | STRP | SAP4N02 | 8.626 | .322 | 1.00 |
| 19R | 22 | A11 | BELB | SAP4N02B | 8.626 | .322 | 2.44 | 20 | 23 | A11 | BELB | SAP4N02B | 8.626 | .322 | 2.44 |
| 21L | 24 | A12 | BELB | SAP4N02B | 8.626 | .322 | 2.44 | 21R | 24 | A13 | STRP | SAP4N02 | 8.626 | .322 | 1.00 |
| 22 | 25 | A13 | STRP | SAP4N02 | 8.626 | .322 | 1.00 | | | | | | | | |
| RJN NAME = RUN2 | | | | | | | | | | | | | | | |
| 23 | 77 | B1 | STRP | SAP4N01 | 12.750 | .406 | 1.00 | 24 | 76 | B1 | STRP | SAP4N01 | 12.750 | .406 | 1.00 |
| 25 | 75 | B1 | STRP | SAP4N01 | 12.750 | .406 | 1.00 | 26 | 74 | B1 | STRP | SAP4N01 | 12.750 | .406 | 1.00 |
| 27 | 73 | B1 | STRP | SAP4N01 | 12.750 | .406 | 1.00 | 28 | 72 | B1 | STRP | SAP4N01 | 12.750 | .406 | 1.00 |
| 29 | 71 | B1 | STRP | SAP4N01 | 12.750 | .406 | 1.00 | 30 | 70 | B1 | STRP | SAP4N01 | 12.750 | .406 | 1.00 |
| 31L | 69 | B1 | STRP | SAP4N01 | 12.750 | .406 | 1.00 | 31R | 69 | BB1 | BELB | SAP4N01B | 12.750 | .406 | 2.71 |
| 32 | 68 | BB1 | BELB | SAP4N01B | 12.750 | .406 | 2.71 | 33L | 67 | BB2 | BELB | SAP4N01B | 12.750 | .406 | 2.71 |
| 33R | 67 | B3 | STRP | SAP4N01 | 12.750 | .406 | 1.00 | 34 | 25 | B3 | STRP | SAP4N01 | 12.750 | .406 | 1.00 |
| 35 | 26 | B3 | STRP | SAP4N01 | 12.750 | .406 | 1.00 | 36 | 27 | B3 | STRP | SAP4N01 | 12.750 | .406 | 1.00 |
| 37 | 28 | B3 | STRP | SAP4N01 | 12.750 | .406 | 1.00 | 38 | 29 | B3 | STRP | SAP4N01 | 12.750 | .406 | 1.00 |
| 39 | 30 | B3 | STRP | SAP4N01 | 12.750 | .406 | 1.00 | 40 | 31 | B3 | STRP | SAP4N01 | 12.750 | .406 | 1.00 |
| 41 | 32 | B3 | STRP | SAP4N01 | 12.750 | .406 | 1.00 | 42 | 33 | B3 | STRP | SAP4N01 | 12.750 | .406 | 1.00 |
| 43 | 34 | B3 | STRP | SAP4N01 | 12.750 | .406 | 1.00 | 44L | 35 | B3 | STRP | SAP4N01 | 12.750 | .406 | 1.00 |
| 44R | 35 | BB3 | BELB | SAP4N01B | 12.750 | .406 | 3.55 | 45 | 36 | BB3 | BELB | SAP4N01B | 12.750 | .406 | 3.55 |

NODE RENUMBERING INFORMATION

(1) STATIC CASE

NUMBER OF NODES IN SYSTEM = 72
 STIFFNESS MATRIX LENGTH BEFORE RENUMBERING = 4932
 STIFFNESS MATRIX LENGTH AFTER RENUMBERING = 4824

(2) DYNAMIC CASE

NUMBER OF NODES IN SYSTEM = 74
 STIFFNESS MATRIX LENGTH BEFORE RENUMBERING = 5046
 STIFFNESS MATRIX LENGTH AFTER RENUMBERING = 4938

APPROXIMATE FIELD LENGTH REQUIREMENTS (OCTAL) FOR THIS GEOMETRY

GEOMETRY INPUT PHASE = 162000
 STATIC ANALYSIS PHASE = 147000
 DYNAMIC PROPERTIES PHASE = 127000

NRC/RHR PIPING MODEL PROBLEM II***ELBOW FLEX. AND MISS. MASS. INCLUDED***

DYNAMIC PROPERTIES CONTROL INFORMATION

PROPERTIES NAME = DYNP
 PROPERTIES TITLE = DYNAMIC PROPERTIES

 MAX. NO. OF MODES REQUIRED = 0
 CUT-OFF FREQUENCY = 33.

 NO. OF SUPPORT LEVELS = 0

 PRINT CODE = PRN2 (FREQUENCIES AND MODE SHAPES)
 MASS REDISTRIBUTION CODE = (NO REDISTRIBUTION - SUBSPACE ITERATION WILL BE USED)
 MINIMUM SUBSPACE SIZE = 3
 PROPERTY MODIFICATION CODE = PMOD (PROPERTIES TO BE MODIFIED)

PROPERTY MODIFICATION DATA

| CARD TYPE | RUN OR GROUP | FIRST DCP,MMB | LAST DCP,MMB | ITEM 1 | ITEM 2 | ITEM 3 | ITEM LIST |
|--------------|-----------------|------------------|-----------------|-----------|-----------|-----------|-----------|
| TEME | | | | 70.00 | | | T(HOT) |

ELEMENT PROPERTIES FOR CURRENT STIFFNESS

| RJN OR GROUP | ELEM NO. | NODE I | NODE J | NO. OF SUBELS | COMP NAME | COMP TYPE | SECTION NAME | MATERIAL NAME | HOT MODULUS | UNIT WEIGHT | TOTAL WEIGHT | FLEX FACTOR |
|-----------------|-------------|-----------|-----------|------------------|--------------|--------------|-----------------|------------------|----------------|----------------|-----------------|----------------|
| RUN1 | | | | | | | | | | | | |
| | 1 | 1 | 5 | 1 | A1 | STRP | SAP4N01 | SA304 SS | 28298600. | 9.38 | 487.46 | 1.000 |
| | 2 | 5 | 6 | 1 | A2 | STRP | SAP4N02 | SA304 SS | 28298600. | 4.66 | 18.66 | 1.000 |
| | 3 | 6 | 7 | 1 | AB1 | BELB | SAP4N02B | SA304 SS | 28298600. | 4.66 | 87.78 | 7.371 |
| | 4 | 7 | 8 | 1 | A4 | STRP | SAP4N02 | SA304 SS | 28298600. | 4.66 | 209.55 | 1.000 |
| | 5 | 8 | 9 | 1 | A4 | STRP | SAP4N02 | SA304 SS | 28298600. | 4.66 | 223.52 | 1.000 |
| | 6 | 9 | 10 | 1 | AB2 | BELB | SAP4N02B | SA304 SS | 28298600. | 4.66 | 87.78 | 7.371 |
| | 7 | 10 | 11 | 1 | A5 | STRP | SAP4N02 | SA304 SS | 28298600. | 4.66 | 23.15 | 1.000 |
| | 8 | 11 | 12 | 1 | A5 | STRP | SAP4N02 | SA304 SS | 28298600. | 4.66 | 16.37 | 1.000 |
| | 9 | 12 | 13 | 1 | AB3 | BELB | SAP4N02B | SA304 SS | 28298600. | 4.66 | 43.89 | 7.371 |
| | 10 | 13 | 14 | 1 | A6 | STRP | SAP4N02 | SA304 SS | 28298600. | 4.66 | 23.46 | 1.000 |
| | 11 | 14 | 15 | 1 | A6 | STRP | SAP4N02 | SA304 SS | 28298600. | 4.66 | 45.37 | 1.000 |
| | 12 | 15 | 16 | 1 | A7 | VALV | SAP4N03 | SA304 SS | 28298600. | 33.15 | 273.29 | 1.000 |
| | 13 | 16 | 17 | 1 | A7 | VALV | SAP4N03 | SA304 SS | 28298600. | 33.15 | 273.69 | 1.000 |
| | 14 | 17 | 18 | 2 | A8 | STRP | SAP4N02 | SA304 SS | 28298600. | 4.66 | 544.83 | 1.000 |
| | 16 | 18 | 19 | 1 | A8 | STRP | SAP4N02 | SA304 SS | 28298600. | 4.66 | 45.37 | 1.000 |
| | 17 | 19 | 20 | 1 | A9 | BELB | SAP4N02B | SA304 SS | 28298600. | 4.66 | 87.78 | 7.371 |
| | 18 | 20 | 21 | 1 | A10 | STRP | SAP4N02 | SA304 SS | 28298600. | 4.66 | 19.84 | 1.000 |
| | 19 | 21 | 22 | 2 | A10 | STRP | SAP4N02 | SA304 SS | 28298600. | 4.66 | 376.12 | 1.000 |
| | 21 | 22 | 23 | 1 | A11 | BELB | SAP4N02B | SA304 SS | 28298600. | 4.66 | 43.89 | 7.371 |
| | 22 | 23 | 24 | 1 | A12 | BELB | SAP4N02B | SA304 SS | 28298600. | 4.66 | 87.78 | 7.371 |
| | 23 | 24 | 25 | 1 | A13 | STRP | SAP4N02 | SA304 SS | 28298600. | 4.66 | 139.70 | 1.000 |
| RUN2 | | | | | | | | | | | | |
| | 24 | 77 | 76 | 1 | B1 | STRP | SAP4N01 | SA304 SS | 28298600. | 9.38 | 534.37 | 1.000 |
| | 25 | 76 | 75 | 1 | B1 | STRP | SAP4N01 | SA304 SS | 28298600. | 9.38 | 534.37 | 1.000 |
| | 26 | 75 | 74 | 1 | B1 | STRP | SAP4N01 | SA304 SS | 28298600. | 9.38 | 534.37 | 1.000 |
| | 27 | 74 | 73 | 1 | B1 | STRP | SAP4N01 | SA304 SS | 28298600. | 9.38 | 346.87 | 1.000 |
| | 28 | 73 | 72 | 1 | B1 | STRP | SAP4N01 | SA304 SS | 28298600. | 9.38 | 346.88 | 1.000 |
| | 29 | 72 | 71 | 1 | B1 | STRP | SAP4N01 | SA304 SS | 28298600. | 9.38 | 346.87 | 1.000 |
| | 30 | 71 | 70 | 1 | B1 | STRP | SAP4N01 | SA304 SS | 28298600. | 9.38 | 478.13 | 1.000 |
| | 31 | 70 | 69 | 1 | B1 | STRP | SAP4N01 | SA304 SS | 28298600. | 9.38 | 56.25 | 1.000 |
| | 32 | 69 | 68 | 1 | BB1 | BELB | SAP4N01B | SA304 SS | 28298600. | 9.38 | 265.07 | 8.610 |
| | 33 | 68 | 67 | 1 | BB2 | BELB | SAP4N01B | SA304 SS | 28298600. | 9.38 | 132.54 | 8.610 |
| | 34 | 67 | 25 | 1 | B3 | STRP | SAP4N01 | SA304 SS | 28298600. | 9.38 | 567.53 | 1.000 |
| | 35 | 25 | 26 | 1 | B3 | STRP | SAP4N01 | SA304 SS | 28298600. | 9.38 | 534.37 | 1.000 |
| | 36 | 26 | 27 | 1 | B3 | STRP | SAP4N01 | SA304 SS | 28298600. | 9.38 | 643.31 | 1.000 |
| | 37 | 27 | 28 | 1 | B3 | STRP | SAP4N01 | SA304 SS | 28298600. | 9.38 | 643.32 | 1.000 |
| | 38 | 28 | 29 | 1 | B3 | STRP | SAP4N01 | SA304 SS | 28298600. | 9.38 | 643.31 | 1.000 |
| | 39 | 29 | 30 | 1 | B3 | STRP | SAP4N01 | SA304 SS | 28298600. | 9.38 | 377.32 | 1.000 |
| | 40 | 30 | 31 | 1 | B3 | STRP | SAP4N01 | SA304 SS | 28298600. | 9.38 | 206.21 | 1.000 |
| | 41 | 31 | 32 | 1 | B3 | STRP | SAP4N01 | SA304 SS | 28298600. | 9.38 | 464.82 | 1.000 |
| | 42 | 32 | 33 | 1 | B3 | STRP | SAP4N01 | SA304 SS | 28298600. | 9.38 | 464.80 | 1.000 |
| | 43 | 33 | 34 | 1 | B3 | STRP | SAP4N01 | SA304 SS | 28298600. | 9.38 | 464.82 | 1.000 |
| | 44 | 34 | 35 | 1 | B3 | STRP | SAP4N01 | SA304 SS | 28298600. | 9.38 | 89.10 | 1.000 |
| | 45 | 35 | 36 | 1 | BB3 | BELB | SAP4N01B | SA304 SS | 28298600. | 9.38 | 175.71 | 12.915 |

NRC/RHR PIPING MODEL PROBLEM II***ELBOW FLEX. AND MISS. MASS. INCLUDED***

ELEMENT PROPERTIES FOR CURRENT STIFFNESS (CONTD.)

| RJN OR GROUP | ELEM NJ. | NODE I | NODE J | NO. OF SURELS | COMP NAME | COMP TYPE | SECTION NAME | MATERIAL NAME | HOT MODULUS | UNIT WEIGHT | TOTAL WEIGHT | FLEX FACTOR |
|---------------|----------|--------|--------|---------------|-----------|-----------|--------------|---------------|-------------|-------------|--------------|-------------|
| RUNZ (CONTD.) | | | | | | | | | | | | |
| | 46 | 36 | 37 | 1 | B34 | BELB | SAP4ND1B | SA304 SS | 28298600. | 9.38 | 265.07 | 8.610 |
| | 47 | 37 | 38 | 1 | B4 | STRP | SAP4ND1 | SA304 SS | 28298600. | 9.38 | 393.75 | 1.000 |
| | 48 | 38 | 39 | 1 | B4 | STRP | SAP4ND1 | SA304 SS | 28298600. | 9.38 | 239.48 | 1.000 |
| | 49 | 39 | 40 | 1 | B35 | BELB | SAP4ND1B | SA304 SS | 28298600. | 9.38 | 132.54 | 8.610 |
| | 50 | 40 | 41 | 1 | B5 | STRP | SAP4ND1 | SA304 SS | 28298600. | 9.38 | 327.85 | 1.000 |
| | 51 | 41 | 42 | 1 | B5 | STRP | SAP4ND1 | SA304 SS | 28298600. | 9.38 | 350.34 | 1.000 |
| | 52 | 42 | 43 | 1 | B36 | BELB | SAP4ND1B | SA304 SS | 28298600. | 9.38 | 92.43 | 8.610 |
| | 53 | 43 | 44 | 1 | B6 | STRP | SAP4ND1 | SA304 SS | 28298600. | 9.38 | 121.53 | 1.000 |
| | 54 | 44 | 45 | 1 | B6 | STRP | SAP4ND1 | SA304 SS | 28298600. | 9.38 | 99.15 | 1.000 |
| | 55 | 45 | 46 | 1 | B37 | BELB | SAP4ND1B | SA304 SS | 28298600. | 9.38 | 132.35 | 8.610 |
| | 56 | 46 | 47 | 1 | B7 | STRP | SAP4ND1 | SA304 SS | 28298600. | 9.38 | 338.02 | 1.000 |
| | 57 | 47 | 48 | 1 | B7 | STRP | SAP4ND1 | SA304 SS | 28298600. | 9.38 | 434.36 | 1.000 |
| | 58 | 48 | 49 | 1 | B7 | STRP | SAP4ND1 | SA304 SS | 28298600. | 9.38 | 434.36 | 1.000 |
| | 59 | 49 | 50 | 1 | B7 | STRP | SAP4ND1 | SA304 SS | 28298600. | 9.38 | 434.36 | 1.000 |
| | 60 | 50 | 51 | 1 | B38 | BELB | SAP4ND1B | SA304 SS | 28298600. | 9.38 | 265.07 | 8.610 |
| | 61 | 51 | 52 | 1 | B8 | STRP | SAP4ND1 | SA304 SS | 28298600. | 9.38 | 112.50 | 1.000 |
| | 62 | 52 | 53 | 1 | B8 | STRP | SAP4ND1 | SA304 SS | 28298600. | 9.38 | 337.50 | 1.000 |
| | 63 | 53 | 54 | 1 | B8 | STRP | SAP4ND1 | SA304 SS | 28298600. | 9.38 | 337.50 | 1.000 |
| | 64 | 54 | 55 | 1 | B8 | STRP | SAP4ND1 | SA304 SS | 28298600. | 9.38 | 337.50 | 1.000 |
| | 65 | 55 | 56 | 1 | B8 | STRP | SAP4ND1 | SA304 SS | 28298600. | 9.38 | 337.50 | 1.000 |
| | 66 | 56 | 57 | 1 | B8 | STRP | SAP4ND1 | SA304 SS | 28298600. | 9.38 | 135.85 | 1.000 |
| | 67 | 57 | 58 | 1 | B9 | BELB | SAP4ND1B | SA304 SS | 28298600. | 9.38 | 240.03 | 8.610 |
| | 68 | 58 | 59 | 1 | B9A | VALV | SAP4ND4 | SA304 SS | 28298600. | 101.83 | 1527.06 | 1.000 |
| | 69 | 59 | 60 | 1 | B9A | VALV | SAP4ND4 | SA304 SS | 28298600. | 101.83 | 1527.22 | 1.000 |
| | 70 | 60 | 61 | 1 | B10 | STRP | SAP4ND5 | SA304 SS | 28298600. | 17.33 | 805.66 | 1.000 |
| | 71 | 61 | 62 | 1 | B10 | STRP | SAP4ND5 | SA304 SS | 28298600. | 17.33 | 805.64 | 1.000 |
| | 72 | 62 | 63 | 1 | B10 | STRP | SAP4ND5 | SA304 SS | 28298600. | 17.33 | 805.66 | 1.000 |
| MISC | | | | | | | | | | | | |
| | 73 | 59 | 61 | 1 | OP1 | VLOP | VALVE OP | SA304 SS | 28298600. | 0.00 | 0.00 | 1.000 |

TOTAL DISTRIBUTED WEIGHT = 23380.92

NO. OF MODES BELOW CUT-OFF = 19
NO. OF MODES TO BE FOUND = 19

REQUIRED FIELD LENGTH (OCTAL) = 0127570
AVAILABLE FIELD LENGTH (OCTAL) = 0376000
SUBSPACE SIZE = 3

NATURAL MODE FREQUENCIES

| | | | | | | | | | | |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| MODE NO. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| FREQUENCY (CPS) | 3.796 | 4.531 | 6.479 | 8.033 | 8.950 | 10.471 | 12.097 | 13.539 | 14.157 | 15.503 |
| PERIOD (SEC) | .2634 | .2207 | .1543 | .1245 | .1117 | .0955 | .0827 | .0739 | .0706 | .0645 |
| MODE NO. | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | |
| FREQUENCY (CPS) | 15.902 | 20.759 | 21.114 | 22.340 | 22.453 | 25.196 | 26.325 | 26.472 | 28.826 | |
| PERIOD (SEC) | .0629 | .0482 | .0474 | .0448 | .0445 | .0397 | .0380 | .0378 | .0347 | |

ORTHOGONALITY CHECK

| | | |
|------------------------|---|-----------|
| MAX. DIAGONAL TERM | = | .1000E+01 |
| MIN. DIAGONAL TERM | = | .1000E+01 |
| MAX. OFF-DIAGONAL TERM | = | .2247E-06 |

MASS PARTICIPATION

| MODE NO. | MASS PARTICIPATION FACTORS | | | EFFECTIVE WEIGHT RATIOS | | |
|----------|----------------------------|--------|--------|-------------------------|--------|--------|
| | X-AXIS | Y-AXIS | Z-AXIS | X-AXIS | Y-AXIS | Z-AXIS |
| 1 | .0318 | .0543 | -.0024 | .0160 | .0467 | .0031 |
| 2 | -.0355 | -.0030 | .0518 | .0199 | .0001 | .0424 |
| 3 | .0580 | .0019 | .0042 | .0531 | .0001 | .0033 |
| 4 | -.0435 | .0211 | -.0085 | .0300 | .0070 | .0011 |
| 5 | -.0663 | -.0503 | -.0049 | .0694 | .0401 | .0034 |
| 6 | .0639 | -.0408 | -.0115 | .0647 | .0264 | .0021 |
| 7 | -.0007 | -.0867 | .0137 | .0000 | .1189 | .0031 |
| 8 | .0101 | -.0052 | .0598 | .0016 | .0004 | .0567 |
| 9 | .0062 | -.1168 | -.0346 | .0006 | .2158 | .0189 |
| 10 | .0043 | .0190 | .0645 | .0003 | .0057 | .0659 |
| 11 | .0269 | -.0323 | -.0127 | .0114 | .0165 | .0025 |
| 12 | .0040 | -.0628 | .0086 | .0003 | .0524 | .0012 |
| 13 | .0338 | .0138 | -.0379 | .0181 | .0030 | .0227 |
| 14 | -.0302 | .0050 | -.0135 | .0144 | .0004 | .0029 |
| 15 | -.0519 | .0027 | .0325 | .0427 | .0001 | .0167 |
| 16 | -.0088 | .0339 | -.1003 | .0012 | .0182 | .1590 |
| 17 | .0091 | .0011 | -.0104 | .0013 | .0000 | .0017 |
| 18 | .0003 | .0303 | .0024 | .0000 | .0145 | .0031 |
| 19 | -.0138 | -.0114 | -.0031 | .0030 | .0021 | .0032 |

ACCUMULATED EFFECTIVE WEIGHT RATIOS .3481 .5785 .3980

NRC/RHR PIPING MODEL PROBLEM II***ELBOW FLEX. AND MISS. MASS. INCLUDED***

037047108 17.21.74.

MODE SHAPES (GLOBAL DISPLS AT MASS POINTS, NORMALIZED TO MAX. DISPL = 1.0), MODES 1 THRU 10

| RUN NAME | DCP NAME | DISP DIRN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------|----------|-----------|----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|
| RUN1 | 1 | X | -.000000 | -.000000 | .000000 | .000000 | .000000 | -.000000 | -.000000 | .000000 | .000000 | .000000 |
| | 1 | Y | -.000000 | .000000 | .000000 | -.000000 | -.000000 | .000000 | .000000 | .000000 | -.000000 | -.000000 |
| | 1 | Z | .000000 | .000000 | -.000000 | .000000 | -.000000 | -.000000 | -.000000 | .000000 | -.000000 | .000000 |
| | 5 | X | -.044018 | .020405 | .888841 | .782938 | .408540 | -.051308 | -.126570 | -.032030 | .015375 | .017659 |
| | 5 | Y | -.000006 | .000176 | .000039 | -.000016 | -.000042 | .000023 | .000018 | .000030 | -.000016 | -.000017 |
| | 5 | Z | .011732 | .736445 | -.068789 | .101582 | .033752 | -.031614 | -.035539 | -.023243 | .011728 | .014805 |
| | 5 | X | -.047396 | .022183 | .956362 | .842002 | .439135 | -.055092 | -.135895 | -.034303 | .016456 | .018895 |
| | 5 | Y | -.000007 | .000201 | .000045 | -.000018 | -.000048 | .000027 | .000021 | .000034 | -.000018 | -.000020 |
| | 5 | Z | .012633 | .791454 | -.074084 | .109200 | .036370 | -.034019 | -.038267 | -.025031 | .012631 | .015935 |
| | 7 | X | -.048442 | -.082865 | 1.000000 | .884184 | .474715 | -.061503 | -.146771 | -.041887 | .020403 | .022743 |
| | 7 | Y | -.002502 | -.072788 | .015907 | -.012671 | -.009124 | .006214 | .006940 | .006064 | -.003155 | -.003614 |
| | 7 | Z | .015228 | .903812 | -.089990 | .126220 | .044954 | -.040652 | -.045655 | -.030771 | .015580 | .019424 |
| | 8 | X | -.015304 | -.503636 | .460414 | .451554 | .313698 | -.052077 | -.108077 | -.054871 | .028388 | .030015 |
| | 8 | Y | -.010245 | -.076948 | .070137 | -.026024 | -.041374 | .023333 | .027571 | .027322 | -.014446 | -.015971 |
| | 8 | Z | .015227 | .904219 | -.089963 | .126220 | .044930 | -.040626 | -.045614 | -.030728 | .015555 | .019391 |
| | 9 | X | .019641 | -.932769 | -.102215 | .014482 | .152983 | -.042531 | -.081351 | -.068581 | .035829 | .039334 |
| | 9 | Y | -.014808 | .029541 | .109320 | -.011366 | -.058221 | .028722 | .039952 | .038379 | -.020525 | -.022514 |
| | 9 | Z | .015226 | .904569 | -.089916 | .126184 | .044878 | -.040578 | -.045542 | -.030656 | .015516 | .019334 |
| | 10 | X | .021793 | -1.000000 | -.169635 | -.053992 | .113834 | -.033974 | -.075023 | -.061276 | .033129 | .036498 |
| | 10 | Y | -.007281 | .040950 | .051258 | -.005164 | -.032621 | .013498 | .021748 | .019451 | -.010471 | -.011440 |
| | 10 | Z | .007573 | .936977 | -.004059 | .152743 | .041638 | -.031814 | -.028411 | -.018082 | .008728 | .010545 |
| | 11 | X | .019093 | -.985708 | -.149166 | -.053969 | .103134 | -.029255 | -.067444 | -.054320 | .029373 | .032375 |
| | 11 | Y | -.004582 | .026697 | .030779 | -.005212 | -.021947 | .008785 | .014186 | .012505 | -.005721 | -.007324 |
| | 11 | Z | .003933 | .945874 | .029585 | .153553 | .032810 | -.025949 | -.016372 | -.010511 | .004678 | .005327 |
| | 12 | X | .017187 | -.975397 | -.135088 | -.054457 | .095209 | -.025847 | -.061952 | -.049332 | .026683 | .029424 |
| | 12 | Y | -.002676 | .016415 | .016695 | -.004742 | -.014040 | .005383 | .008706 | .007525 | -.004034 | -.004378 |
| | 12 | Z | .001334 | .951827 | .053246 | .153562 | .026158 | -.021693 | -.007604 | -.005049 | .001758 | .001569 |
| | 13 | X | .010734 | -.933081 | -.098673 | -.070859 | .057813 | -.012153 | -.039354 | -.030621 | .016685 | .018645 |
| | 13 | Y | .000001 | -.000034 | -.000003 | -.000000 | .000007 | -.000001 | .000002 | .000000 | -.000000 | -.000001 |
| | 13 | Z | -.004564 | .932124 | .084105 | .120195 | -.007152 | -.006405 | .015539 | .010754 | -.006419 | -.007980 |
| | 14 | X | .006926 | -.904009 | -.083232 | -.083326 | .030260 | -.002965 | -.025137 | -.018754 | .010401 | .011994 |
| | 14 | Y | .000000 | -.000001 | .000000 | -.000002 | .000003 | .000001 | .000001 | -.000000 | -.000000 | -.000000 |
| | 14 | Z | -.006926 | .904009 | .083232 | .083326 | -.030250 | .002966 | .025137 | .018754 | -.010401 | -.011994 |

MODE SHAPES (GLOBAL DISPLS AT MASS POINTS, NORMALIZED TO MAX. DISPL = 1.0), MODES 1 THRU 10 (CONTO.)

| RUN NAME | DCP NAME | DISP DIRN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|-----------------|-------------|--------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| RUN1 (CONT.) | | | | | | | | | | | | |
| 15 | X | | -.000446 | -.846404 | -.055655 | -.124976 | -.024972 | .015199 | .003512 | .004382 | -.001817 | -.000845 |
| 15 | Y | | .000177 | -.000279 | .000034 | -.000676 | .001337 | .000338 | .000267 | -.000011 | -.000020 | -.000059 |
| 15 | Z | | -.011721 | .847830 | .082387 | .025365 | -.075857 | .021484 | .043739 | .034419 | -.018173 | -.019691 |
| 15 | X | | -.006647 | -.796395 | -.034118 | -.157715 | -.072589 | .030661 | .027790 | .023782 | -.012036 | -.011518 |
| 15 | Y | | .000255 | -.000401 | .000049 | -.000972 | .001924 | .000486 | .000393 | -.000016 | -.000028 | -.000085 |
| 15 | Z | | -.015915 | .798796 | .082224 | -.027206 | -.114685 | .037217 | .059199 | .047536 | -.024654 | -.026001 |
| 17 | X | | -.012821 | -.745507 | -.013662 | -.191405 | -.120602 | .046130 | .051779 | .042980 | -.022128 | -.022012 |
| 17 | Y | | .000333 | -.000523 | .000065 | -.001268 | .002510 | .000634 | .000500 | -.000021 | -.000037 | -.000111 |
| 17 | Z | | -.020191 | .748692 | .082370 | -.080348 | -.153584 | .052930 | .074475 | .060488 | -.031035 | -.032139 |
| | X | | -.052858 | -.368198 | .084275 | -.448919 | -.440645 | .146287 | .202085 | .153532 | -.079140 | -.078887 |
| | Y | | .001395 | -.002190 | .000271 | -.005315 | .010517 | .002656 | .002096 | -.000090 | -.000154 | -.000464 |
| | Z | | -.051973 | .360203 | .094315 | -.432831 | -.416434 | .152655 | .174877 | .138148 | -.068825 | -.066001 |
| 18 | X | | -.080440 | -.036413 | .117219 | -.683750 | -.634731 | .211968 | .283126 | .189733 | -.095221 | -.089852 |
| 18 | Y | | .002457 | -.003857 | .000477 | -.009358 | .018519 | .004677 | .003690 | -.000158 | -.000271 | -.000815 |
| 18 | Z | | -.080440 | -.036413 | .117219 | -.683750 | -.634731 | .211968 | .283127 | .189733 | -.095221 | -.089852 |
| 19 | X | | -.083369 | .005837 | .118910 | -.718071 | -.649612 | .219455 | .289913 | .188584 | -.094067 | -.087736 |
| 19 | Y | | .002634 | -.004134 | .000511 | -.010032 | .019850 | .005013 | .003955 | -.000169 | -.000290 | -.000874 |
| 19 | Z | | -.084315 | -.096937 | .121648 | -.712847 | -.668290 | .217893 | .306976 | .198677 | -.100320 | -.095430 |
| 20 | X | | -.083903 | .028685 | .119392 | -.743554 | -.646983 | .225338 | .293957 | .185580 | -.092241 | -.085464 |
| 20 | Y | | .002134 | .002449 | .000447 | -.015534 | .018231 | .005757 | .004201 | -.001310 | .000442 | .000080 |
| 20 | Z | | -.079350 | -.155341 | .091001 | -.653978 | -.635965 | .204347 | .270706 | .189932 | -.095609 | -.087737 |
| 21 | X | | -.083906 | .028681 | .119375 | -.743547 | -.646951 | .225311 | .293910 | .185529 | -.092211 | -.085431 |
| 21 | Y | | -.000001 | .000001 | -.000000 | .000002 | -.000004 | -.000001 | -.000001 | .000000 | -.000000 | .000000 |
| 21 | Z | | -.076433 | -.149958 | .081714 | -.621033 | -.607510 | .198528 | .241325 | .182016 | -.092299 | -.081054 |
| | X | | -.083933 | .028647 | .119202 | -.743400 | -.646558 | .225013 | .293385 | .184985 | -.091901 | -.085080 |
| | Y | | -.044346 | -.012271 | -.000216 | .271362 | -.361850 | -.107973 | -.085630 | .017346 | -.003171 | .004582 |
| | Z | | -.050633 | -.085688 | .013936 | -.276799 | -.330363 | .142878 | -.043769 | .104222 | -.049582 | -.015925 |
| 22 | X | | -.083956 | .028611 | .119012 | -.743095 | -.645995 | .224633 | .292719 | .184331 | -.091530 | -.084662 |
| 22 | Y | | -.107094 | -.020350 | -.025564 | .627790 | -.847753 | -.259144 | -.245515 | .019299 | .007615 | .023699 |
| 22 | Z | | -.030946 | -.011399 | -.023891 | -.002989 | -.078827 | .094131 | -.312921 | .029933 | -.007674 | .045799 |
| 23 | X | | -.084267 | .023524 | .119313 | -.753234 | -.655253 | .225515 | .308971 | .187613 | -.093717 | -.088098 |
| 23 | Y | | -.118714 | -.027507 | -.027645 | .703165 | -.938620 | -.298304 | -.273091 | .011103 | .014933 | .027434 |
| 23 | Z | | -.029391 | .001767 | -.025988 | .029905 | -.049470 | .090039 | -.356104 | .020024 | -.001452 | .055253 |

MODE SHAPES (GLOBAL DISPLS AT MASS POINTS, NORMALIZED TO MAX. DISPL = 1.0), MODES 1 THRU 10 (CONTD.)

| RUN NAME | DCP NAME | DISP DIRN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------------|----------|-----------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|
| RUN1 (CONTD.) | | | | | | | | | | | | |
| 24 | X | | -.085392 | .019530 | .102310 | -.698582 | -.651519 | .185637 | .207765 | .141007 | -.061027 | -.065973 |
| 24 | Y | | -.121895 | -.034567 | -.029541 | .761722 | -.973179 | -.346281 | -.285350 | -.016827 | .033441 | .030617 |
| 24 | Z | | -.025991 | .001273 | -.013985 | .027323 | -.052727 | .066473 | -.281926 | .013843 | .000512 | .041242 |
| 25 | X | | -.074818 | .030004 | .072914 | -.725627 | -.521663 | .141358 | -.151304 | .000062 | .043693 | .005269 |
| 25 | Y | | -.121986 | -.034536 | -.029539 | .762120 | -.973732 | -.346348 | -.285171 | -.016710 | .033360 | .030553 |
| 25 | Z | | .000638 | -.000537 | -.000679 | .001387 | .002633 | -.000650 | -.000664 | -.000111 | .000376 | -.013738 |
| RUN2 | | | | | | | | | | | | |
| 77 | X | | -.000000 | .000000 | .000000 | -.000001 | -.000001 | .000000 | -.000000 | .000000 | -.000000 | -.000000 |
| 77 | Y | | .000000 | .000000 | -.000000 | -.000000 | .000001 | .000000 | -.000001 | .000000 | -.000000 | .000000 |
| 77 | Z | | .000000 | .000000 | .000000 | -.000000 | .000000 | -.000000 | .000000 | -.000000 | -.000000 | .000000 |
| 75 | X | | -.000104 | .000024 | .000192 | -.001413 | -.001407 | .000502 | -.000047 | .000326 | -.000058 | -.000090 |
| 75 | Y | | .012256 | .007430 | -.002608 | -.194846 | .356563 | .277133 | -.624786 | .049877 | -.020625 | .088187 |
| 75 | Z | | .007570 | .000909 | .001041 | -.016487 | .064637 | -.008675 | .226684 | -.002067 | -.031155 | .658982 |
| 75 | X | | -.000208 | .000049 | .000385 | -.002824 | -.002811 | .001003 | -.000094 | .000651 | -.000115 | -.000179 |
| 75 | Y | | .021195 | .012801 | -.004437 | -.327065 | .593063 | .453066 | -1.000000 | .078161 | -.032010 | .133823 |
| 75 | Z | | .013091 | .001565 | .001771 | -.027674 | .107510 | -.014183 | .362819 | -.003239 | -.048351 | 1.000000 |
| 74 | X | | -.000312 | .000073 | .000577 | -.004234 | -.004215 | .001503 | -.000141 | .000976 | -.000173 | -.000269 |
| 74 | Y | | .023703 | .014233 | -.004832 | -.348369 | .621936 | .461035 | -.979170 | .073522 | -.029541 | .117972 |
| 74 | Z | | .014640 | .001741 | .001928 | -.029477 | .112744 | -.014432 | .355251 | -.003047 | -.044622 | .891555 |
| 73 | X | | -.000380 | .000089 | .000701 | -.005148 | -.005124 | .001827 | -.000172 | .001185 | -.000210 | -.000326 |
| 73 | Y | | .020562 | .012287 | -.004100 | -.289985 | .510620 | .368239 | -.753623 | .054306 | -.021377 | .081034 |
| 73 | Z | | .012700 | .001503 | .001636 | -.024537 | .092555 | -.011527 | .273428 | -.002250 | -.032290 | .605531 |
| 72 | X | | -.000447 | .000105 | .000826 | -.006062 | -.006032 | .002150 | -.000202 | .001395 | -.000247 | -.000384 |
| 72 | Y | | .012862 | .007644 | -.002500 | -.172808 | .299152 | .208263 | -.405194 | .027473 | -.010468 | .036256 |
| 72 | Z | | .007944 | .000935 | .000998 | -.014622 | .054231 | -.006519 | .147012 | -.001138 | -.015812 | .270925 |
| 71 | X | | -.000515 | .000121 | .000950 | -.006374 | -.006939 | .002473 | -.000232 | .001603 | -.000284 | -.000441 |
| 71 | Y | | -.000000 | -.000000 | -.000000 | .000000 | -.000001 | -.000000 | -.000001 | .000000 | .000000 | .000001 |
| 71 | Z | | -.000000 | .000000 | .000000 | -.000000 | -.000001 | .000000 | .000000 | .000000 | -.000000 | .000000 |
| 70 | X | | -.000608 | .000143 | .001121 | -.009229 | -.008187 | .002916 | -.000274 | .001889 | -.000334 | -.000519 |
| 70 | Y | | -.026099 | -.015295 | .005077 | .310167 | -.511401 | -.320691 | .535782 | -.025020 | .006542 | -.014369 |
| 70 | Z | | -.014734 | -.002113 | -.003173 | .035767 | -.083733 | .006827 | -.191734 | -.000700 | .013893 | -.097739 |

MODE SHAPES (GLOBAL DISPLS AT MASS POINTS, NORMALIZED TO MAX. DISPL = 1.0), MODES 1 THRU 10 (CONTD.)

| RUN NAME | DCP NAME | DISP DIRN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------------|-------------|--------------|----------|----------|----------|-----------|-----------|----------|----------|----------|----------|----------|
| RUN2 (CONTD.) | | | | | | | | | | | | |
| 69 | X | | -.000619 | .000145 | .001142 | -.008376 | -.008333 | .002968 | -.000278 | .001923 | -.000340 | -.000528 |
| 69 | Y | | -.029542 | -.017295 | .005839 | .348905 | -.573556 | -.357843 | .596857 | -.026390 | .006191 | -.014831 |
| 69 | Z | | -.016197 | -.002473 | -.004026 | .043603 | -.090709 | .006453 | -.212624 | -.001474 | .015281 | -.096583 |
| 63 | X | | .001540 | .007266 | .007211 | -.159315 | .037093 | .067980 | -.104844 | -.005691 | .014198 | -.017634 |
| 63 | Y | | -.049999 | -.027166 | .000052 | .551306 | -.776539 | -.455501 | .592491 | -.023553 | .006450 | -.061765 |
| 63 | Z | | -.004098 | -.001586 | -.003664 | .029114 | -.014493 | .001141 | -.074036 | -.001669 | .004555 | -.023720 |
| 67 | X | | -.007234 | .012600 | .017442 | -.282910 | -.031638 | .092453 | -.151572 | -.012138 | .027515 | -.018655 |
| 67 | Y | | -.062041 | -.029450 | -.005510 | .608988 | -.819397 | -.447648 | .419054 | -.026029 | .015189 | -.069929 |
| 67 | Z | | .000740 | -.000549 | -.000762 | .001989 | .003426 | -.000884 | -.000749 | -.000235 | .000515 | -.016231 |
| 25 | X | | -.074818 | .030004 | .072914 | -.725627 | -.521663 | .141358 | -.151304 | .000062 | .043693 | .005269 |
| 25 | Y | | -.121986 | -.034536 | -.029539 | .702120 | -.973732 | -.346348 | -.285171 | -.016710 | .033360 | .030553 |
| 25 | Z | | .000608 | -.000537 | -.000679 | .001387 | .002633 | -.000650 | -.000664 | -.000111 | .000396 | -.013738 |
| 25 | X | | -.134735 | .039515 | .100153 | -.983296 | -.809885 | .134526 | -.186540 | -.034603 | .068152 | .062307 |
| 25 | Y | | -.170851 | -.032504 | -.041176 | .794796 | -1.000000 | -.206008 | -.702593 | .006984 | .026858 | .133068 |
| 25 | Z | | .000501 | -.000443 | -.000561 | .001145 | .002174 | -.000535 | -.000548 | -.000091 | .000327 | -.011363 |
| 27 | X | | -.180724 | .036953 | .097137 | -1.000000 | -.845210 | .066600 | -.203387 | -.092833 | .081555 | .117673 |
| 27 | Y | | -.193288 | -.023598 | -.038285 | .657334 | -.793693 | -.024767 | -.768625 | .031993 | .001934 | .181007 |
| 27 | Z | | .000373 | -.000330 | -.000417 | .000852 | .001619 | -.000400 | -.000409 | -.000068 | .000244 | -.008478 |
| 28 | X | | -.172734 | .024060 | .064271 | -.702388 | -.571658 | -.015029 | -.150619 | -.108500 | .058809 | .107429 |
| 28 | Y | | -.145140 | -.011153 | -.021685 | .351515 | -.390452 | .078584 | -.427806 | .032650 | -.016259 | .115962 |
| 28 | Z | | .000245 | -.000217 | -.000274 | .000559 | .001063 | -.000263 | -.000269 | -.000044 | .000160 | -.005573 |
| 29 | X | | -.089789 | .007821 | .020564 | -.242679 | -.174340 | -.039873 | -.051100 | -.056064 | .016547 | .040183 |
| 29 | Y | | .000000 | -.000000 | -.000000 | .000000 | -.000001 | -.000001 | -.000002 | -.000000 | .000000 | .000000 |
| 29 | Z | | .000117 | -.000103 | -.000130 | .000266 | .000506 | -.000125 | -.000128 | -.000020 | .000076 | -.002654 |
| 30 | X | | .000000 | .000000 | .000000 | -.000001 | -.000001 | .000000 | -.000000 | .000000 | .000000 | .000000 |
| 30 | Y | | .137266 | .003929 | .010976 | -.160136 | .115953 | -.160045 | .116013 | -.032275 | .032607 | -.043933 |
| 30 | Z | | .000041 | -.000036 | -.000046 | .000094 | .000179 | -.000045 | -.000045 | -.000006 | .000027 | -.000939 |
| 31 | X | | .063202 | -.002937 | -.007064 | .096480 | .046056 | .044885 | .017050 | .035169 | -.001528 | -.013938 |
| 31 | Y | | .225132 | .005231 | .016055 | -.227287 | .140551 | -.269791 | .130132 | -.050409 | .053633 | -.055991 |
| 31 | Z | | .000000 | -.000000 | -.000000 | .000000 | .000000 | -.000001 | -.000000 | .000001 | -.000000 | -.000002 |
| 32 | X | | .232812 | -.006448 | -.013212 | .223664 | .036784 | .188549 | .028929 | .102472 | .013452 | -.024579 |
| 32 | Y | | .444644 | .006363 | .025017 | -.325737 | .112151 | -.531625 | .057757 | -.083613 | .097128 | -.052809 |
| 32 | Z | | .000022 | .000002 | .000005 | -.000086 | .000034 | -.000490 | -.000113 | .001262 | -.000347 | .000075 |

MODE SHAPES (GLOBAL DISPLS AT MASS POINTS, NORMALIZED TO MAX. DISPL = 1.0), MODES 1 THRU 10 (CONTD.)

| RUN NAME | DCP NAME | DISP DIRN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------------|-------------|--------------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|----------|
| RUN2 (CONTD.) | | | | | | | | | | | | |
| 33 | X | | .423259 | -.006771 | -.009279 | .250958 | -.084642 | .360516 | .013086 | .117312 | .049353 | -.012927 |
| 33 | Y | | .677755 | .005630 | .030700 | -.357641 | -.002506 | -.763692 | -.116064 | -.097268 | .122284 | -.014353 |
| 33 | Z | | .000045 | .000004 | .000010 | -.000171 | .000067 | -.000979 | -.000225 | .002522 | -.000693 | .000154 |
| 34 | X | | .616133 | -.005358 | .000181 | .217734 | -.262671 | .536799 | -.017124 | .046667 | .102705 | .009907 |
| 34 | Y | | .908656 | .003883 | .033933 | -.343498 | -.162445 | -.940506 | -.336105 | -.089416 | .124809 | .044614 |
| 34 | Z | | .000067 | .000006 | .000015 | -.000257 | .000101 | -.001468 | -.000338 | .003779 | -.001039 | .000232 |
| 35 | X | | .652089 | -.005015 | .002227 | .208451 | -.298820 | .570650 | -.023328 | .021576 | .114994 | .014461 |
| 35 | Y | | .951745 | .003508 | .034398 | -.338251 | -.194765 | -.969447 | -.379440 | -.086069 | .123402 | .056769 |
| 35 | Z | | .000071 | .000006 | .000016 | -.000273 | .000107 | -.001562 | -.000359 | .004020 | -.001105 | .000247 |
| 35 | X | | .641058 | -.005968 | .005685 | .220020 | -.382245 | .734023 | .047065 | .000205 | .073169 | .013066 |
| 35 | Y | | 1.000000 | .003111 | .034874 | -.331879 | -.232784 | -1.000000 | -.430613 | -.079553 | .119160 | .071719 |
| 35 | Z | | .043867 | -.000311 | .000483 | .004574 | -.035004 | -.029807 | -.048407 | .009184 | -.005613 | .014453 |
| 37 | X | | .547954 | -.007638 | .005327 | .291302 | -.424906 | .953960 | .149227 | .061365 | -.024693 | .005824 |
| 37 | Y | | .899580 | .001511 | .032637 | -.257430 | -.264190 | -.759311 | -.334079 | -.019152 | .022794 | .064136 |
| 37 | Z | | .052967 | -.000833 | .000020 | .006162 | -.025739 | -.147875 | -.087617 | .174131 | -.052650 | .027377 |
| 38 | X | | .547968 | -.007627 | .006357 | .290326 | -.424936 | .953209 | .149057 | .061423 | -.024810 | .005891 |
| 38 | Y | | .637944 | -.001815 | .020704 | -.053369 | -.280644 | -.159417 | -.131859 | .107542 | -.180255 | .042102 |
| 38 | Z | | -.025899 | -.001095 | -.001386 | -.003390 | .075338 | -.339143 | -.042151 | .662031 | -.171020 | .022451 |
| 39 | X | | .547952 | -.007620 | .006375 | .290501 | -.424971 | .952558 | .148912 | .061437 | -.024873 | .005929 |
| 39 | Y | | .476083 | -.003495 | .013145 | .059418 | -.274644 | .167764 | -.020336 | .174562 | -.289259 | .028142 |
| 39 | Z | | -.068876 | -.001184 | -.002008 | -.010483 | .129939 | -.439350 | -.013584 | .940106 | -.236176 | .019422 |
| 40 | X | | .514847 | -.007634 | .005206 | .298198 | -.413559 | .974369 | .160259 | .067111 | -.036158 | .003604 |
| 40 | Y | | .395810 | -.003741 | .010038 | .038091 | -.253142 | .249671 | .014401 | .193164 | -.323157 | .022089 |
| 40 | Z | | -.075477 | -.001128 | -.001931 | -.013594 | .138544 | -.456894 | -.007346 | 1.000000 | -.246651 | .019185 |
| 41 | X | | .362550 | -.006739 | .001052 | .237161 | -.331011 | .936139 | .177634 | .068735 | -.054689 | -.005287 |
| 41 | Y | | .243460 | -.002862 | .005836 | .077906 | -.170632 | .213572 | .032259 | .194788 | -.341518 | .013092 |
| 41 | Z | | -.055923 | -.000738 | -.000982 | -.018268 | .109714 | -.390203 | -.009937 | .866151 | -.198224 | .018767 |
| 42 | X | | .206455 | -.005329 | -.002487 | .250087 | -.229922 | .816075 | .175069 | .055927 | -.053786 | -.013092 |
| 42 | Y | | .087293 | -.001469 | .002245 | .041782 | -.069745 | .096015 | .030272 | .181911 | -.340276 | .005161 |
| 42 | Z | | -.037675 | -.000394 | -.000328 | -.015353 | .074922 | -.272791 | -.002580 | .647321 | -.124940 | .013995 |
| 43 | X | | .171830 | -.004795 | -.002901 | .229530 | -.201634 | .748224 | .161331 | .049557 | -.050076 | -.013000 |
| 43 | Y | | .058807 | -.001021 | .001815 | .026958 | -.049294 | .057319 | .021526 | .148371 | -.328237 | .004181 |
| 43 | Z | | -.033672 | -.000371 | -.000400 | -.011007 | .064711 | -.226385 | .002105 | .570422 | -.100602 | .011534 |

MODE SHAPES (GLOBAL DISPLS. AT MASS POINTS, NORMALIZED TO MAX. DISPL = 1.0), MODES 1 THRU 10 (CONTD.)

| RUN NAME | DCP NAME | DISP DIRN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------------|-------------|--------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| RUN2 (CONTD.) | | | | | | | | | | | | |
| 44 | X | | .136380 | -.003945 | -.002775 | .191686 | -.165050 | .620808 | .131246 | .043465 | -.044878 | -.010055 |
| 44 | Y | | .036757 | -.000444 | .001681 | .006760 | -.032718 | .016024 | .005251 | .067266 | -.303996 | .003475 |
| 44 | Z | | -.029431 | -.000396 | -.000693 | -.001314 | .051647 | -.158510 | .009544 | .461325 | -.067358 | .007640 |
| 45 | X | | .108724 | -.003242 | -.002593 | .159780 | -.135400 | .513832 | .105351 | .038944 | -.040450 | -.007474 |
| 45 | Y | | .019342 | .000029 | .001613 | -.009891 | -.019086 | -.019604 | -.008308 | .001290 | -.278836 | .002931 |
| 45 | Z | | -.026420 | -.000422 | -.000951 | .005368 | .041342 | -.102869 | .015997 | .372123 | -.040523 | .004331 |
| 46 | X | | .070752 | -.002213 | -.002048 | .111173 | -.091827 | .355530 | .070936 | .028769 | -.030077 | -.004744 |
| 46 | Y | | .009165 | .000355 | .001698 | -.022628 | -.010035 | -.048507 | -.018177 | -.041150 | -.265901 | .002771 |
| 46 | Z | | -.019406 | -.000352 | -.000944 | .009304 | .027285 | -.050126 | .016129 | .245811 | -.013166 | .001588 |
| 47 | X | | .000000 | -.000000 | -.000000 | .000001 | -.000001 | .000003 | .000001 | .000000 | -.000000 | -.000000 |
| 47 | Y | | .009052 | .000350 | .001673 | -.022290 | -.009942 | -.047673 | -.017980 | -.041354 | -.265214 | .002697 |
| 47 | Z | | -.000000 | -.000000 | -.000000 | .000000 | .000000 | -.000000 | .000000 | .000002 | -.000001 | .000000 |
| 48 | X | | -.049847 | .001473 | .001315 | -.075979 | .066173 | -.249978 | -.048009 | -.023416 | .031637 | .002324 |
| 48 | Y | | .008906 | .000343 | .001639 | -.021850 | -.009819 | -.046581 | -.017717 | -.041584 | -.264112 | .002600 |
| 48 | Z | | .012001 | .000261 | .000862 | -.009829 | -.016684 | .016794 | -.012520 | -.144655 | -.038269 | -.000159 |
| 49 | X | | -.065262 | .001747 | .001388 | -.091141 | .085400 | -.305623 | -.054861 | -.032509 | .053754 | .001080 |
| 49 | Y | | .008759 | .000336 | .001605 | -.021404 | -.009692 | -.045465 | -.017441 | -.041779 | -.262766 | .002499 |
| 49 | Z | | .012540 | .000312 | .001166 | -.014122 | -.016851 | .002315 | -.015315 | -.135482 | -.086881 | .000734 |
| 50 | X | | -.060825 | .001351 | .000774 | -.071140 | .076319 | -.244564 | -.037189 | -.031477 | .067796 | -.002020 |
| 50 | Y | | .008612 | .000330 | .001571 | -.020752 | -.009552 | -.044327 | -.017153 | -.041938 | -.261176 | .002396 |
| 50 | Z | | .005501 | .000177 | .000783 | -.010119 | -.006654 | -.014905 | -.008320 | -.040376 | -.087603 | .001214 |
| 51 | X | | -.035723 | .000785 | .000433 | -.041794 | .045878 | -.147238 | -.022382 | -.019246 | .051114 | -.001339 |
| 51 | Y | | .002796 | .000117 | .000575 | -.007808 | -.002971 | -.018555 | -.006406 | -.010662 | -.124248 | .000712 |
| 51 | Z | | .000037 | .000000 | -.000001 | .000019 | -.000065 | .000259 | -.000020 | -.000775 | .000389 | -.000012 |
| 52 | X | | -.025231 | .000565 | .000327 | -.030370 | .032758 | -.106635 | -.016532 | -.013700 | .037551 | -.000825 |
| 52 | Y | | .000000 | .000000 | .000000 | -.000000 | -.000000 | -.000001 | -.000000 | .000000 | .000001 | .000000 |
| 52 | Z | | .000028 | .000000 | -.000001 | .000014 | -.000049 | .000194 | -.000015 | -.000581 | .000291 | -.000000 |
| 53 | X | | -.000000 | .000000 | .000000 | -.000000 | .000000 | -.000001 | -.000000 | -.000000 | .000000 | .000000 |
| 53 | Y | | -.004552 | -.000197 | -.000961 | .013407 | .005050 | .033286 | .012412 | .025251 | .347803 | .000175 |
| 53 | Z | | .000000 | .000000 | -.000000 | -.000000 | -.000000 | .000000 | -.000000 | -.000001 | -.000002 | -.000000 |
| 54 | X | | .011209 | -.000255 | -.000152 | .013830 | -.014853 | .048957 | .007700 | .005914 | -.027022 | .000258 |
| 54 | Y | | -.000176 | -.000237 | -.001126 | .016071 | .005910 | .041438 | .016145 | .035922 | .545478 | .001573 |
| 54 | Z | | -.000014 | .000000 | .000000 | -.000021 | .000012 | -.000075 | -.000029 | -.000083 | -.001779 | -.000015 |

MODE SHAPES (GLOBAL DISPLS AT MASS POINTS, NORMALIZED TO MAX. DISPL = 1.0), MODES 1 THRU 10 (CONTD.)

| RUN NAME | DCP NAME | DISP DIRN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------------|----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|----------|
| RUN2 (CONTD.) | | | | | | | | | | | | |
| 55 | X | | .011722 | -.000267 | -.000159 | .014501 | -.015660 | .051509 | .008029 | .005848 | -.038963 | .000187 |
| 55 | Y | | -.003209 | -.000151 | -.000727 | .010552 | .003793 | .028665 | .011679 | .028335 | .465464 | .002166 |
| 55 | Z | | -.000028 | .000001 | .000001 | -.000042 | .000024 | -.000150 | -.000058 | -.000164 | -.003554 | -.000031 |
| 55 | X | | .005945 | -.000135 | -.000079 | .007357 | -.008024 | .026204 | .003978 | .002487 | -.032577 | -.000010 |
| 55 | Y | | -.000000 | -.000000 | -.000000 | .000000 | .000000 | -.000000 | -.000000 | -.000000 | -.000010 | -.000000 |
| 56 | Z | | -.000042 | .000001 | .000001 | -.000062 | .000036 | -.000225 | -.000087 | -.000246 | -.005328 | -.000046 |
| 57 | X | | .002847 | -.000065 | -.000037 | .003518 | -.003888 | .012555 | .001830 | .000850 | -.024372 | -.000078 |
| 57 | Y | | .001307 | .000069 | .000326 | -.005070 | -.001679 | -.014817 | -.006563 | -.018104 | -.328398 | -.002208 |
| 57 | Z | | -.000048 | .000001 | .000001 | -.000071 | .000040 | -.000255 | -.000079 | -.000279 | -.006041 | -.000053 |
| 58 | X | | -.000153 | .000003 | .000001 | -.000180 | .000227 | -.000639 | -.000048 | .000141 | .005835 | .000041 |
| 58 | Y | | .002905 | .000105 | .000619 | -.008949 | -.004779 | -.027617 | -.014629 | -.050709 | -.979145 | -.008000 |
| 58 | Z | | .001685 | -.000038 | -.000019 | .002050 | -.002396 | .007326 | .000861 | -.000394 | -.036694 | -.000231 |
| 59 | X | | -.000188 | .000004 | .000002 | -.000222 | .000284 | -.000793 | -.000053 | .000210 | .008198 | .000059 |
| 59 | Y | | .002792 | .000086 | .000561 | -.007835 | -.004884 | -.024513 | -.013797 | -.051038 | -.998143 | -.008480 |
| 59 | Z | | .001881 | -.000042 | -.000020 | .002282 | -.002734 | .008192 | .000864 | -.000887 | -.052615 | -.000356 |
| 60 | X | | -.000212 | .000005 | .000002 | -.000251 | .000326 | -.000904 | -.000056 | .000263 | .009983 | .000073 |
| 60 | Y | | .002648 | .000070 | .000504 | -.006797 | -.004886 | -.021593 | -.012908 | -.050582 | -1.000000 | -.008768 |
| 60 | Z | | .002005 | -.000045 | -.000021 | .002432 | -.002961 | .008770 | .000857 | -.001266 | -.064664 | -.000452 |
| 61 | X | | -.000219 | .000005 | .000002 | -.000264 | .000346 | -.000966 | -.000059 | .000299 | .011271 | .000084 |
| 61 | Y | | .001986 | .000032 | .000333 | -.004080 | -.004105 | -.013610 | -.009512 | -.042196 | -.852954 | -.007943 |
| 61 | Z | | .001850 | -.000042 | -.000018 | .002269 | -.002838 | .008280 | .000713 | -.001671 | -.074003 | -.000538 |
| 62 | X | | -.000133 | .000003 | .000001 | -.000162 | .000213 | -.000598 | -.000036 | .000189 | .007121 | .000053 |
| 62 | Y | | .001050 | .000012 | .000166 | -.001915 | -.002320 | -.006625 | -.005083 | -.023961 | -.489500 | -.004682 |
| 62 | Z | | .001088 | -.000024 | -.000010 | .001335 | -.001687 | .004909 | .000403 | -.001098 | -.046938 | -.000345 |
| 63 | X | | .000000 | -.000000 | -.000000 | .000000 | -.000000 | .000000 | .000000 | .000000 | .000000 | .000000 |
| 63 | Y | | .000000 | -.000000 | -.000000 | .000000 | -.000000 | .000000 | -.000000 | -.000000 | -.000000 | -.000000 |
| 63 | Z | | .000000 | -.000000 | -.000000 | .000000 | -.000000 | .000000 | .000000 | -.000000 | -.000000 | -.000000 |
| MISC. MODES | | | | | | | | | | | | |
| 81 | X | | -.000551 | -.000056 | -.000199 | .003730 | .000256 | .011407 | .004392 | .007467 | .128315 | .000399 |
| 81 | Y | | .002792 | .000086 | .000561 | -.007336 | -.004884 | -.024516 | -.013799 | -.051047 | -.998354 | -.008482 |
| 81 | Z | | .002934 | .000171 | .000700 | -.012420 | -.003126 | -.040478 | -.019399 | -.048312 | -.960724 | -.006730 |

MODE SHAPES (GLOBAL DISPLS AT MASS POINTS, NORMALIZED TO MAX. DISPL = 1.0), MODES 1 THRU 10 (CONTD.)

| RUN NAME | DCP NAME | DISP DIRN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------------------|-------------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| NORMALIZING FACTORS | | | .7639E-01 | .7320E-01 | .3626E-01 | .1160E+00 | .1192E+00 | .1042E+00 | .9126E-01 | .5530E-01 | .1341E+00 | .5970E-01 |

MODE SHAPES (GLOBAL DISPLS AT MASS POINTS, NORMALIZED TO MAX. DISPL = 1.0), MODES 11 THRU 19

| RUN NAME | DCP NAME | DISP DIRN | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|----------|----------|-----------|----------|----------|----------|-----------|-----------|----------|----------|----------|----------|
| RUN1 | | | | | | | | | | | |
| 1 | X | | .000000 | .000000 | .000000 | -.000000 | .000000 | -.000000 | .000000 | .000000 | .000000 |
| 1 | Y | | -.000000 | .000000 | -.000000 | .000001 | -.000000 | .000000 | -.000000 | -.000000 | -.000001 |
| 1 | Z | | -.000000 | .000000 | .000000 | -.000000 | .000000 | .000000 | -.000000 | -.000000 | -.000000 |
| 5 | X | | -.120609 | .019278 | .007430 | -.239075 | .067128 | .010230 | -.085007 | -.052414 | -.141736 |
| 5 | Y | | -.000237 | .000040 | -.000026 | .0000759 | -.0000167 | .000040 | -.000445 | -.000232 | -.000843 |
| 5 | Z | | .157291 | -.012651 | .023786 | -.801981 | .217249 | .008924 | -.016192 | -.061084 | -.049995 |
| 5 | X | | .128726 | .020663 | .007943 | -.256448 | .072185 | .011134 | -.092440 | -.057310 | -.154432 |
| 5 | Y | | -.000271 | .000045 | -.000030 | .0000868 | -.0000191 | .000045 | -.000509 | -.000266 | -.000964 |
| 5 | Z | | .169365 | -.013619 | .025550 | -.860889 | .233121 | .009486 | -.016599 | -.064975 | -.052150 |
| 7 | X | | .174697 | .017880 | .008545 | -.226051 | .054909 | .001732 | -.015118 | .000275 | -.015112 |
| 7 | Y | | -.042306 | .003689 | -.004162 | .118888 | -.027800 | .003368 | -.038692 | -.020003 | -.069465 |
| 7 | Z | | .208780 | -.016948 | .030083 | -1.000000 | .268125 | .008167 | .005613 | -.057724 | -.013717 |
| 8 | X | | .314085 | -.000062 | .009949 | -.019018 | -.044257 | -.044388 | .359339 | .282795 | .653122 |
| 8 | Y | | -.192688 | .015067 | -.014431 | .349260 | -.066449 | .025050 | -.242482 | -.152872 | -.438608 |
| 8 | Z | | .208378 | -.016892 | .029995 | -.996912 | .267281 | .008154 | .005408 | -.057582 | -.013950 |
| 9 | X | | .452828 | -.005632 | .014047 | -.039606 | -.069817 | -.070956 | .569137 | .445877 | 1.000000 |
| 9 | Y | | -.267059 | .011637 | -.013664 | .216403 | -.012251 | .042289 | -.365947 | -.267009 | -.665532 |
| 9 | Z | | .207713 | -.016801 | .029842 | -.991183 | .265778 | .008118 | .005173 | -.057250 | -.014146 |
| 10 | X | | .407431 | .002346 | .016528 | -.217711 | -.005969 | -.051004 | .408139 | .322047 | .696881 |
| 10 | Y | | -.132955 | .001361 | -.004204 | -.002847 | .026831 | .024302 | -.196125 | -.157101 | -.361450 |
| 10 | Z | | .116645 | -.016178 | .017825 | -.592842 | .162352 | .005844 | -.000295 | -.042979 | -.013047 |
| 11 | X | | .359344 | .003057 | .014959 | -.217906 | .003700 | -.041927 | .334434 | .263131 | .559751 |
| 11 | Y | | -.084940 | .001148 | -.002639 | -.002641 | .017145 | .015237 | -.122514 | -.098262 | -.224506 |
| 11 | Z | | .064180 | -.016630 | .011272 | -.373740 | .106931 | .004627 | -.002232 | -.036399 | -.012662 |
| 12 | X | | .324982 | .003548 | .013845 | -.217979 | .010594 | -.035501 | .282335 | .221451 | .463036 |
| 12 | Y | | -.050630 | .000655 | -.001529 | -.002387 | .010239 | .008819 | -.070487 | -.056640 | -.127931 |
| 12 | Z | | .026497 | -.017028 | .005611 | -.226353 | .067645 | .003770 | -.003525 | -.031874 | -.012386 |
| 13 | X | | .200675 | .005110 | .010249 | -.226747 | .035799 | -.014794 | .118378 | .089414 | .170348 |
| 13 | Y | | -.000012 | .000000 | -.000001 | -.000000 | .000011 | .000013 | -.000019 | -.000098 | -.000281 |
| 13 | Z | | -.075972 | -.012333 | -.004293 | .117762 | -.021052 | .002995 | -.018269 | -.022759 | -.019169 |
| 14 | X | | .124439 | .006049 | .008337 | -.238161 | .051723 | -.003612 | .032550 | .019819 | .025692 |
| 14 | Y | | .000000 | .000000 | .000000 | -.000000 | .000001 | .000000 | -.000003 | -.000003 | -.000006 |
| 14 | Z | | -.124440 | -.006049 | -.008337 | .233157 | -.051722 | .003612 | -.032550 | -.019820 | -.025693 |

MODE SHAPES (GLOBAL DISPLS AT MASS POINTS, NORMALIZED TO MAX. DISPL = 1.0), MODES 11 THRU 19 (CONTD.)

| RUNL (CONTD.) | RUN NAME | DCP NAME | DISP DIRN | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|------------------|-------------|-------------|--------------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | 15 | X | | -.022846 | .008019 | .004889 | -.267208 | .083777 | .017259 | -.125733 | -.108766 | -.234883 |
| | 15 | Y | | .000032 | .000816 | .000068 | -.000112 | .000328 | .000160 | -.001086 | -.001006 | -.001743 |
| | 15 | Z | | -.218230 | .006392 | -.015536 | .445641 | -.104058 | .005193 | -.060896 | -.016070 | -.037719 |
| | 15 | X | | -.145017 | .009624 | .002128 | -.291289 | .109656 | .033617 | -.248351 | -.208471 | -.431415 |
| | 15 | Y | | .000046 | .001173 | .000098 | -.000161 | .000471 | .000229 | -.001561 | -.001446 | -.002505 |
| | 15 | Z | | -.295437 | .016710 | -.020972 | .597493 | -.142058 | .006627 | -.083457 | -.013772 | -.046128 |
| | 17 | X | | -.264916 | .011156 | -.000528 | -.313340 | .134211 | .048919 | -.362013 | -.300931 | -.609552 |
| | 17 | Y | | .000060 | .001531 | .000127 | -.000209 | .000615 | .000299 | -.002037 | -.001886 | -.003268 |
| | 17 | Z | | -.370641 | .026752 | -.025918 | .732095 | -.175524 | .008083 | -.104569 | -.011974 | -.053073 |
| | | X | | -.897457 | .017036 | -.012142 | -.357156 | .215514 | .093260 | -.547814 | -.539322 | -.910470 |
| | | Y | | .000250 | .006408 | .000533 | -.000876 | .002572 | .001252 | -.008516 | -.007888 | -.013659 |
| | | Z | | -.771275 | .066696 | -.035681 | .849683 | -.190922 | .017056 | -.159768 | -.023743 | -.019686 |
| | 18 | X | | -.962664 | .015107 | -.007304 | -.204501 | .121351 | .023642 | -.052133 | -.091391 | .173276 |
| | 18 | Y | | .000440 | .011266 | .000936 | -.001540 | .004520 | .002199 | -.014954 | -.013851 | -.023971 |
| | 18 | Z | | -.962667 | .015107 | -.007304 | -.204500 | .121351 | .023642 | -.052135 | -.091391 | .173277 |
| | 19 | X | | -.924231 | .014673 | -.005124 | -.131875 | .099759 | .007642 | .077533 | .000990 | .366432 |
| | 19 | Y | | .000471 | .012072 | .001003 | -.001650 | .004843 | .002356 | -.016020 | -.014838 | -.025676 |
| | 19 | Z | | -1.000000 | -.002374 | -.001483 | -.409801 | .186532 | .025795 | -.032461 | -.110897 | .220575 |
| | 20 | X | | -.883522 | .018672 | -.002895 | -.170386 | .086276 | -.002934 | .162386 | .057974 | .476987 |
| | 20 | Y | | .014108 | .011266 | .001535 | .001431 | .000114 | -.001137 | .011277 | .003849 | .008604 |
| | 20 | Z | | -.952170 | .015139 | .009277 | -.652573 | .263175 | .032506 | -.090368 | -.096990 | .272700 |
| | 21 | X | | -.883125 | .018631 | -.002886 | -.170404 | .086205 | -.002982 | .162714 | .058174 | .477134 |
| | 21 | Y | | -.000001 | -.000003 | -.000000 | .000000 | -.000001 | -.000000 | .000002 | .000002 | .000005 |
| | 21 | Z | | -.711824 | .035443 | .010376 | -.641516 | .256852 | .033378 | -.121466 | -.076537 | .266175 |
| | | X | | -.878962 | .018225 | -.002797 | -.170411 | .085459 | -.003433 | .165620 | .059994 | .477814 |
| | | Y | | -.188640 | -.212483 | -.027171 | -.010306 | -.032308 | .002690 | -.071654 | .029096 | .003936 |
| | | Z | | -.513503 | .224070 | .017586 | -.438730 | .163954 | .037783 | -.388775 | .117566 | .179166 |
| | 22 | X | | -.874070 | .017795 | -.002704 | -.170141 | .084572 | -.003877 | .168150 | .061676 | .477195 |
| | 22 | Y | | -.292674 | -.446588 | -.064772 | -.016941 | -.127580 | -.010745 | -.072499 | .157587 | .011549 |
| | 22 | Z | | -.132865 | .380592 | .017601 | -.115663 | .029651 | .034784 | -.557466 | .270519 | .055595 |
| | 23 | X | | -.389629 | .007868 | -.001644 | -.192912 | .094247 | -.003838 | .175151 | .057221 | .483589 |
| | 23 | Y | | -.258948 | -.590887 | -.073149 | -.023336 | -.158077 | -.020011 | -.012334 | .187229 | -.001254 |
| | 23 | Z | | -.085755 | .405675 | .015923 | -.055758 | .004271 | .034278 | -.575736 | .285735 | .036605 |

MODE SHAPES (GLOBAL DISPLS AT MASS POINTS, NORMALIZED TO MAX. DISPL = 1.0), MODES 11 THRU 19 (CONTD.)

| RUN NAME | DCP NAME | DISP DIRN | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---------------|----------|-----------|----------|----------|----------|----------|-----------|----------|----------|----------|----------|
| RUN1 (CONTD.) | | | | | | | | | | | |
| 24 | X | | -.611654 | .054561 | -.015453 | -.191150 | -.027478 | -.032943 | .290193 | .222341 | .355800 |
| 24 | Y | | -.102115 | -.560282 | -.084081 | -.018964 | -.223421 | -.042227 | .160942 | .222049 | -.065306 |
| 24 | Z | | -.059537 | .302530 | .011027 | -.030121 | -.0000630 | .024995 | -.411833 | .198804 | .030999 |
| 25 | X | | .183027 | .380885 | -.068881 | -.081805 | -.448957 | -.113926 | .580957 | .719736 | -.037957 |
| 25 | Y | | -.102776 | -.560011 | -.083983 | -.018924 | -.222964 | -.042132 | .160719 | .221416 | -.064778 |
| 25 | Z | | .001665 | .002269 | .001259 | -.003672 | .006415 | .001759 | -.013949 | -.004824 | .001687 |
| RUN2 | | | | | | | | | | | |
| 77 | X | | -.000001 | .000002 | -.000000 | -.000001 | -.000002 | -.000000 | .000002 | .000004 | .000000 |
| 77 | Y | | -.000001 | -.000002 | -.000000 | -.000000 | -.000000 | -.000000 | .000002 | -.000001 | -.000000 |
| 77 | Z | | -.000000 | -.000000 | -.000000 | -.000000 | -.000000 | -.000000 | .000000 | .000000 | -.000000 |
| 75 | X | | -.001533 | .002125 | -.000358 | -.000900 | -.002065 | -.000593 | .003047 | .004955 | .000415 |
| 75 | Y | | -.239415 | -.605257 | -.044853 | -.012566 | -.051148 | -.030598 | .391251 | -.130630 | -.006653 |
| 75 | Z | | -.098460 | -.008054 | -.018126 | -.008662 | -.066865 | -.009013 | .003164 | .092459 | -.013621 |
| 75 | X | | -.003062 | .004242 | -.000714 | -.001596 | -.004120 | -.001183 | .006078 | .009881 | .000827 |
| 75 | Y | | -.360774 | -.827561 | -.060841 | -.016570 | -.067263 | -.037581 | .466325 | -.155078 | -.007391 |
| 75 | Z | | -.148369 | -.011012 | -.024587 | -.011421 | -.087933 | -.011069 | .003771 | .109763 | -.015131 |
| 74 | X | | -.004585 | .006346 | -.001068 | -.002386 | -.006151 | -.001768 | .009078 | .014759 | .001235 |
| 74 | Y | | -.313375 | -.568207 | -.040855 | -.010234 | -.041136 | -.018063 | .196819 | -.064244 | -.002092 |
| 74 | Z | | -.128876 | -.007561 | -.016510 | -.007054 | -.053855 | -.005320 | .001591 | .045471 | -.004282 |
| 73 | X | | -.005570 | .007701 | -.001296 | -.002395 | -.007475 | -.002143 | .011003 | .017886 | .001495 |
| 73 | Y | | -.211464 | -.264272 | -.018113 | -.003665 | -.014388 | -.001170 | -.022451 | .009089 | .001711 |
| 73 | Z | | -.086955 | -.003516 | -.007320 | -.002526 | -.018809 | -.000345 | -.000181 | -.006433 | .003504 |
| 72 | X | | -.006550 | .009047 | -.001523 | -.003400 | -.008777 | -.002514 | .012905 | .020977 | .001752 |
| 72 | Y | | -.091484 | -.017230 | -.000150 | .001025 | .004559 | .008157 | -.130466 | .044657 | .003104 |
| 72 | Z | | -.037623 | -.000229 | -.000060 | .000707 | .005974 | .002403 | -.001055 | -.031607 | .006355 |
| 71 | X | | -.007526 | .010381 | -.001747 | -.003999 | -.010066 | -.002831 | .014780 | .024024 | .002005 |
| 71 | Y | | -.000001 | -.000007 | -.000001 | -.000000 | -.000001 | -.000001 | .000000 | -.000001 | -.000000 |
| 71 | Z | | -.000001 | .000000 | -.000000 | -.000000 | -.000001 | -.000000 | .000000 | .000002 | -.000000 |
| 70 | X | | -.008861 | .012199 | -.002052 | -.004578 | -.011818 | -.003377 | .017316 | .028143 | .002345 |
| 70 | Y | | .002090 | -.545191 | -.040275 | -.015059 | -.046602 | -.044824 | .645476 | -.239388 | -.004703 |
| 70 | Z | | .013918 | -.011924 | -.016298 | -.006976 | -.073357 | -.012508 | -.002285 | .144463 | -.029251 |

MODE SHAPES (GLOBAL DISPLS AT MASS POINTS, NORMALIZED TO MAX. DISPL = 1.0), MODES 11 THRU 19 (CONTD.)

| RUN NAME | DCP NAME | DISP DIRN | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|------------------|-------------|--------------|----------|-----------|----------|----------|----------|----------|-----------|----------|----------|
| RUNZ (CONTD.) | | | | | | | | | | | |
| 69 | X | | -.009018 | .012411 | -.002088 | -.004657 | -.012022 | -.003435 | .017610 | .028621 | .002384 |
| 69 | Y | | -.007485 | -.632912 | -.045731 | -.017485 | -.049128 | -.050203 | .730511 | -.278448 | -.002623 |
| 69 | Z | | .016226 | -.015323 | -.018514 | -.007021 | -.082600 | -.013761 | -.005181 | .160186 | -.034356 |
| 68 | X | | .076840 | .277290 | -.010212 | -.013606 | -.121652 | -.023184 | .036530 | .273243 | -.033290 |
| 68 | Y | | -.077774 | -1.000000 | -.065584 | -.017432 | -.045219 | -.057115 | .863475 | -.392275 | -.003039 |
| 68 | Z | | .008173 | .001707 | -.003071 | -.001706 | -.013439 | .000530 | -.043976 | .037337 | -.011304 |
| 67 | X | | .139548 | .392525 | -.027902 | -.027775 | -.237869 | -.050600 | .167734 | .461399 | -.061100 |
| 67 | Y | | -.068652 | -.985218 | -.075411 | -.014458 | -.093413 | -.059637 | .781963 | -.282522 | -.030301 |
| 67 | Z | | .002595 | .001992 | .001449 | -.003406 | .007248 | .001938 | -.014656 | -.006293 | .001486 |
| 25 | X | | .188027 | .380885 | -.068881 | -.081305 | -.448957 | -.113926 | .580957 | .719736 | -.037957 |
| 25 | Y | | -.102776 | -.560011 | -.083983 | -.013924 | -.222964 | -.042132 | .160719 | .221416 | -.064778 |
| 25 | Z | | .001655 | .002269 | .001259 | -.003672 | .006415 | .001759 | -.013949 | -.004824 | .001687 |
| 25 | X | | .479654 | .163371 | -.057623 | -.045455 | -.401401 | -.103250 | .538487 | .482256 | -.093524 |
| 25 | Y | | -.160143 | .045296 | -.040326 | -.011958 | -.158899 | .001654 | -.360652 | .365730 | .001497 |
| 25 | Z | | .001378 | .001881 | .001044 | -.003047 | .005323 | .001462 | -.011602 | -.004013 | .001406 |
| 27 | X | | .785397 | -.209361 | .007514 | .046663 | -.029489 | -.000103 | -.038800 | -.239566 | -.120989 |
| 27 | Y | | -.161407 | .604433 | .039821 | .018994 | .063054 | .045767 | -.470663 | .072478 | .091634 |
| 27 | Z | | .001028 | .001407 | .000781 | -.002280 | .003994 | .001096 | -.008702 | -.003010 | .001056 |
| 28 | X | | .685034 | -.377874 | .062477 | .075431 | .326503 | .093914 | -.542199 | -.663647 | -.032427 |
| 28 | Y | | -.080997 | .555665 | .069209 | .031323 | .184285 | .039553 | -.100425 | -.249332 | .078853 |
| 28 | Z | | .000676 | .000925 | .000514 | -.001502 | .002625 | .000723 | -.005740 | -.001987 | .000697 |
| 29 | X | | .242359 | -.197376 | .046379 | .051457 | .268852 | .069838 | -.375284 | -.349376 | .043979 |
| 29 | Y | | -.000001 | .000000 | -.000000 | -.000000 | -.000002 | .000000 | -.000008 | .000006 | .000001 |
| 29 | Z | | .000322 | .000442 | .000245 | -.000716 | .001252 | .000345 | -.002738 | -.000949 | .000333 |
| 30 | X | | .000002 | -.000000 | -.000000 | .000000 | -.000002 | -.000000 | .000001 | -.000002 | -.000002 |
| 30 | Y | | -.000097 | -.322079 | -.078165 | -.034697 | -.247432 | -.011927 | -.398775 | .493234 | -.011789 |
| 30 | Z | | .000115 | .000157 | .000086 | -.000253 | .000444 | .000123 | -.000968 | -.000337 | .000118 |
| 31 | X | | -.071149 | .103270 | -.034316 | -.027096 | -.208332 | -.048218 | .238108 | .152614 | -.068504 |
| 31 | Y | | -.013332 | -.443197 | -.119029 | -.051854 | -.375083 | -.012270 | -.554337 | .749927 | -.006351 |
| 31 | Z | | .000001 | .000001 | -.000000 | -.000000 | .000002 | .000001 | -.000000 | -.000002 | -.000000 |
| 32 | X | | -.089320 | .273583 | -.110380 | -.070514 | -.667238 | -.142037 | .563574 | .316170 | -.243636 |
| 32 | Y | | -.060662 | -.505554 | -.176424 | -.070449 | -.521552 | .002452 | -1.000000 | 1.000000 | .020748 |
| 32 | Z | | .000753 | .000363 | -.000486 | .000152 | .001324 | .000717 | .002059 | -.001593 | -.000340 |

MODE SHAPES (GLOBAL DISPLS AT MASS POINTS, NORMALIZED TO MAX. DISPL = 1.0), MODES 11 THRU 19 (CONTD.)

| RUN NAME | DCP NAME | DISP DIRN | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---------------|-------------|--------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| RUN2 (CONTD.) | | | | | | | | | | | |
| 33 | X | | .019502 | .313283 | -.152436 | -.076059 | -.884223 | -.165774 | .716135 | .196303 | -.307484 |
| 33 | Y | | -.109584 | -.259272 | -.165019 | -.050140 | -.378042 | .035172 | -.749368 | .594599 | .043929 |
| 33 | Z | | .001504 | .000725 | -.000971 | .000304 | .002643 | .001431 | .004110 | -.003178 | -.000679 |
| 34 | X | | .158825 | .237460 | -.150830 | -.047719 | -.783250 | -.111785 | .394523 | -.128170 | -.209166 |
| 34 | Y | | -.142193 | .201075 | -.108247 | .003446 | .026978 | .084376 | .055456 | -.335901 | .044734 |
| 34 | Z | | .002253 | .001086 | -.001454 | .000455 | .003954 | .002140 | .006146 | -.004751 | -.001015 |
| 35 | X | | .180890 | .216953 | -.147616 | -.040453 | -.740408 | -.096581 | .312420 | -.199835 | -.178742 |
| 35 | Y | | -.146207 | .299613 | -.096859 | .015793 | .122572 | .096324 | .243731 | -.541059 | .042233 |
| 35 | Z | | .002396 | .001154 | -.001546 | .000484 | .004204 | .002275 | .006534 | -.005051 | -.001079 |
| 35 | X | | .160390 | .030118 | -.024652 | -.013631 | -.338704 | -.056855 | -.028912 | -.287135 | -.005958 |
| 35 | Y | | -.145655 | .426040 | -.101625 | .033771 | .273579 | .127245 | .515566 | -.812715 | .032750 |
| 35 | Z | | .004849 | .124895 | -.022100 | .019251 | .170022 | .044607 | .288267 | -.275103 | -.013631 |
| 37 | X | | .173526 | -.169136 | .154597 | .012728 | .059186 | -.061602 | -.291013 | -.190043 | .115587 |
| 37 | Y | | -.112804 | .261263 | .065932 | .055369 | .574645 | .099060 | .332925 | -.664382 | .102805 |
| 37 | Z | | .053940 | .250452 | -.110936 | .035093 | .341440 | .124572 | .655205 | -.496095 | -.063946 |
| 38 | X | | .173761 | -.170020 | .154897 | .013007 | .062427 | -.060719 | -.293535 | -.189953 | .116729 |
| 38 | Y | | .017821 | .014686 | .366128 | .075919 | .803651 | -.044302 | .195153 | -.097618 | .053089 |
| 38 | Z | | .251061 | .090710 | -.090377 | .014638 | .113412 | .086879 | .347636 | -.140014 | -.084210 |
| 39 | X | | .173823 | -.170422 | .154950 | .013164 | .064340 | -.060111 | -.294691 | -.189652 | .117243 |
| 39 | Y | | .094027 | -.110999 | .501550 | .081251 | .855221 | -.119757 | .129247 | .257195 | .000715 |
| 39 | Z | | .370000 | -.020461 | -.055933 | .001828 | -.042059 | .049086 | .099828 | .079631 | -.079725 |
| 40 | X | | .131430 | -.183191 | .152250 | .012054 | .053999 | -.056563 | -.309399 | -.133165 | .106947 |
| 40 | Y | | .117585 | -.149245 | .512775 | .079514 | .837945 | -.123605 | .095477 | .404461 | -.025710 |
| 40 | Z | | .401962 | -.056168 | -.041702 | -.000308 | -.084085 | .034082 | -.011568 | .119462 | -.059277 |
| 41 | X | | .188535 | -.200347 | .054951 | .000717 | -.049987 | .011812 | -.369944 | .060333 | .064034 |
| 41 | Y | | .124914 | -.165902 | .415005 | .067766 | .728777 | -.056416 | .035953 | .597323 | -.069511 |
| 41 | Z | | .367203 | -.075566 | -.037584 | .000436 | -.088033 | .016442 | -.195145 | .041285 | .023329 |
| 42 | X | | .174812 | -.189134 | -.075137 | -.014201 | -.187675 | .093567 | -.405685 | .192365 | .025370 |
| 42 | Y | | .111478 | -.154199 | .263946 | .052310 | .584407 | .024198 | .000485 | .727580 | -.108802 |
| 42 | Z | | .291909 | -.098748 | -.010956 | -.005325 | -.162630 | -.028904 | -.393360 | -.033726 | .106273 |
| 43 | X | | .163349 | -.165623 | -.122533 | -.014566 | -.178836 | .125039 | -.365804 | .185629 | .015537 |
| 43 | Y | | .090825 | -.133948 | .245136 | .050907 | .569241 | .044504 | .026543 | .713335 | -.114678 |
| 43 | Z | | .261849 | -.098285 | -.003421 | -.009544 | -.210322 | -.045171 | -.417908 | -.058606 | .115654 |

MODE SHAPES (GLOBAL DISPLS AT MASS POINTS, NORMALIZED TO MAX. DISPL = 1.0), MODES 11 THRU 19 (CONTD.)

| RUN NAME | DCP NAME | DISP DIRN | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---------------|-------------|--------------|----------|----------|----------|----------|-----------|----------|----------|----------|----------|
| RUN2 (CONTD.) | | | | | | | | | | | |
| 44 | X | | .143337 | -.114553 | -.199998 | -.009097 | -.093175 | .179999 | -.260866 | .138002 | .004824 |
| 44 | Y | | .045070 | -.091956 | .195535 | .048619 | .572233 | .068468 | .101371 | .653720 | -.121834 |
| 44 | Z | | .216730 | -.090070 | .003059 | -.016691 | -.288128 | -.065774 | -.416522 | -.094067 | .117350 |
| 45 | X | | .126445 | -.072822 | -.260317 | -.004279 | -.019323 | .222266 | -.174780 | .097130 | -.002699 |
| 45 | Y | | .006944 | -.057895 | .157945 | .047579 | .575755 | .085553 | .164475 | .605723 | -.128071 |
| 45 | Z | | .179337 | -.083707 | .010757 | -.022736 | -.353878 | -.083508 | -.412798 | -.119911 | .116067 |
| 46 | X | | .093777 | -.033888 | -.265162 | -.000475 | .035485 | .218887 | -.094119 | .056898 | -.005463 |
| 46 | Y | | -.019804 | -.037386 | .147149 | .047352 | .588352 | .089703 | .211146 | .582821 | -.133933 |
| 46 | Z | | .121849 | -.060613 | .009494 | -.022270 | -.338195 | -.078953 | -.331776 | -.130604 | .095956 |
| 47 | X | | .000001 | -.000000 | .000001 | -.000000 | -.000006 | -.000003 | -.000001 | -.000001 | -.000000 |
| 47 | Y | | -.019804 | -.036710 | .145378 | .047372 | .582660 | .089311 | .210745 | .578798 | -.133619 |
| 47 | Z | | .000001 | -.000000 | .000000 | .000000 | -.000000 | -.000000 | -.000001 | .000002 | -.000000 |
| 48 | X | | -.081036 | .005310 | .428069 | -.014938 | -.286223 | -.374565 | .038457 | -.087008 | -.006905 |
| 48 | Y | | -.019783 | -.035775 | .142836 | .046658 | .574137 | .088574 | .209630 | .571962 | -.132758 |
| 48 | Z | | -.073876 | .025576 | .033237 | .026838 | .365087 | .074591 | .275134 | .258297 | -.106996 |
| 49 | X | | -.115271 | -.019198 | .791331 | -.037610 | -.670563 | -.643505 | .001366 | -.151015 | -.019400 |
| 49 | Y | | -.019740 | -.034770 | .140000 | .045837 | .564277 | .087578 | .207843 | .563273 | -.131388 |
| 49 | Z | | -.070162 | .012417 | .070144 | .037548 | .493733 | .092951 | .313465 | .404197 | -.138907 |
| 50 | X | | -.114069 | -.055279 | 1.000000 | -.058458 | -1.000000 | -.677683 | -.071123 | -.176481 | -.026854 |
| 50 | Y | | -.019673 | -.031695 | .136875 | .044910 | .553101 | .086324 | .205390 | .552758 | -.129512 |
| 50 | Z | | -.021292 | -.010069 | .063806 | .024048 | .302650 | .049261 | .137869 | .282636 | -.075068 |
| 51 | X | | -.073555 | -.039947 | .708029 | -.043380 | -.742925 | -.365580 | -.045344 | -.139284 | -.018112 |
| 51 | Y | | -.003619 | -.013869 | .050764 | .015661 | .190952 | .030267 | .065076 | .199313 | -.044621 |
| 51 | Z | | -.000405 | .000284 | -.000185 | .000059 | .000933 | .000324 | .001608 | .000636 | -.000590 |
| 52 | X | | -.052942 | -.027905 | .510959 | -.031145 | -.535177 | -.251950 | -.028933 | -.102290 | -.013300 |
| 52 | Y | | -.000000 | -.000001 | .000004 | .000001 | .000014 | .000002 | .000003 | .000013 | -.000002 |
| 52 | Z | | -.000304 | .000213 | -.000139 | .000044 | .000739 | .000238 | .001206 | .000477 | -.000443 |
| 53 | X | | -.000001 | -.000000 | .000004 | -.000000 | -.000004 | -.000006 | -.000000 | -.000001 | -.000000 |
| 53 | Y | | .003500 | .019633 | -.079096 | -.023440 | -.284952 | -.054227 | -.109183 | -.322022 | .076086 |
| 53 | Z | | -.000000 | .000001 | -.000003 | .000000 | .000004 | -.000002 | -.000000 | -.000000 | -.000001 |
| 54 | X | | .025271 | .014751 | -.261751 | .015116 | .280734 | .016945 | .002494 | .047699 | .007352 |
| 54 | Y | | .000976 | .019132 | -.084514 | -.023788 | -.287826 | -.064218 | -.120917 | -.348455 | .085213 |
| 54 | Z | | .000055 | .000253 | -.001998 | .000130 | .002709 | -.016315 | -.001604 | -.000808 | .000023 |

MODE SHAPES (GLOBAL DISPLS AT MASS POINTS, NORMALIZED TO MAX. DISPL = 1.0), MODES 11 THRU 19 (CONTD.)

| RUN NAME | DCP NAME | DISP DIRN | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|------------------|-------------|--------------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|
| RUNZ (CONTD.) | | | | | | | | | | | |
| 55 | X | | .027440 | .017608 | -.297746 | .018465 | .324550 | -.087583 | -.008026 | .047685 | .008543 |
| 55 | Y | | -.002017 | .008692 | -.045971 | -.011705 | -.140226 | -.040257 | -.068407 | -.189631 | .048537 |
| 55 | Z | | .000110 | .000505 | -.003991 | .000261 | .005409 | -.032581 | -.003204 | -.001613 | .003046 |
| 55 | X | | .014751 | .011176 | -.172718 | .010794 | .192953 | -.171915 | -.016995 | .019266 | .004995 |
| 55 | Y | | .000000 | .000000 | -.000001 | -.000001 | -.000008 | .000005 | -.000002 | -.000006 | .000001 |
| 55 | Z | | .000166 | .000757 | -.005979 | .000390 | .008103 | -.048790 | -.004797 | -.002416 | .003070 |
| 57 | X | | .007584 | .006826 | -.096361 | .006057 | .110242 | -.169703 | -.017036 | .005411 | .002807 |
| 57 | Y | | .003794 | .000228 | .010618 | .000814 | .007295 | .021034 | .017399 | .038002 | -.011973 |
| 57 | Z | | .000188 | .000958 | -.006777 | .000442 | .009183 | -.055290 | -.005436 | -.002737 | .003079 |
| 58 | X | | -.000628 | -.001080 | .011406 | -.000772 | -.014735 | .054704 | .005230 | .001218 | -.003060 |
| 58 | Y | | .016742 | .007354 | -.002074 | -.010531 | -.140649 | .096044 | -.005128 | -.040659 | .003612 |
| 58 | Z | | .005653 | .007621 | -.088885 | .005708 | .107920 | -.321337 | -.032067 | -.006162 | .002171 |
| 59 | X | | -.000845 | -.001549 | .015190 | -.001093 | -.021010 | .082224 | .008074 | .002202 | -.003196 |
| 59 | Y | | .018228 | .007920 | -.003732 | -.014577 | -.193544 | .167845 | -.016628 | -.079326 | .015776 |
| 59 | Z | | .007024 | .010732 | -.120170 | .007907 | .149162 | -.507140 | -.051257 | -.013013 | .003047 |
| 60 | X | | -.001011 | -.001925 | .020064 | -.001354 | -.026136 | .105255 | .010498 | .003054 | -.003327 |
| 60 | Y | | .019228 | .008336 | -.005100 | -.017823 | -.237122 | .228998 | -.026511 | -.112630 | .026458 |
| 60 | Z | | .008059 | .013228 | -.145380 | .009525 | .182926 | -.663460 | -.067615 | -.018800 | .003829 |
| 61 | X | | -.001146 | -.002298 | .024024 | -.001627 | -.031553 | .131860 | .013490 | .004158 | -.003561 |
| 61 | Y | | .018031 | .007944 | -.006672 | -.021012 | -.280381 | .307314 | -.040558 | -.157803 | .042649 |
| 61 | Z | | .008535 | .015607 | -.168194 | .011200 | .216521 | -.855122 | -.088518 | -.026733 | .004850 |
| 62 | X | | -.000729 | -.001499 | .015718 | -.001069 | -.020767 | .088278 | .009129 | .002851 | -.000412 |
| 62 | Y | | .010775 | .004838 | -.004458 | -.013729 | -.183402 | .209341 | -.028518 | -.109047 | .030587 |
| 62 | Z | | .005312 | .010149 | -.108909 | .007312 | .141657 | -.577096 | -.060212 | -.018532 | .003336 |
| 63 | X | | .000000 | .000000 | -.000001 | .000000 | .000001 | .000007 | .000000 | .000000 | .000000 |
| 63 | Y | | .000000 | .000000 | -.000000 | -.000000 | -.000002 | .000003 | -.000000 | -.000001 | .000000 |
| 63 | Z | | .000000 | .000000 | -.000001 | .000000 | .000002 | -.000006 | -.000001 | -.000000 | .000000 |
| MISC. NODES | | | | | | | | | | | |
| 81 | X | | -.000552 | -.004604 | .022580 | -.006603 | -.099017 | .264776 | -.007149 | -.046521 | .019833 |
| 31 | Y | | .018233 | .007924 | -.003734 | -.014584 | -.193647 | .167958 | -.016640 | -.079385 | .015790 |
| 81 | Z | | .018446 | .036351 | -.179480 | .005547 | .146160 | -1.000000 | -.066559 | -.080977 | -.005222 |

MODE SHAPES (GLOBAL DISPLS AT MASS POINTS, NORMALIZED TO MAX. DISPL = 1.0), MODES 11 THRU 19 (CONTD.)

| RUN NAME | DCP NAME | DISP DIRN | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---------------------|-------------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| NORMALIZING FACTORS | | | .9003E-01 | .8895E-01 | .6211E-01 | .6401E-01 | .1132E+00 | .9989E-01 | .1071E+00 | .1060E+00 | .5588E-01 |

ACCELERATION SPECTRUM NO. 1

SPECTRUM NAME = HDRZ
 SPECTRUM TITLE = HORIZONTAL RESPONSE SPECTRA 3% DAMPING
 PERIOD/FREQUENCY CODE = F (FREQUENCIES SPECIFIED)
 UNITS CODE = G (MULTIPLES OF GRAVITY)
 INTERPOLATION TYPE = NATURAL

| FREQUENCY | ACCELERATION |
|-----------|--------------|
| 35.0000 | .4225 |
| 30.0000 | .4225 |
| 25.0000 | .4234 |
| 20.0000 | .4306 |
| 15.0000 | .4441 |
| 12.0000 | .4690 |
| 10.0000 | .5000 |
| 9.0000 | .5123 |
| 8.0000 | .5518 |
| 7.5000 | .6318 |
| 7.0000 | .6958 |
| 6.5000 | .8646 |
| 6.0000 | 1.2176 |
| 5.5000 | 1.8291 |
| 5.0000 | 1.6738 |
| 4.5000 | 1.7312 |
| 4.0000 | 2.5551 |
| 3.7100 | 2.2541 |
| 3.5000 | 2.0282 |
| 3.0000 | 1.0956 |
| 2.5000 | 1.7319 |
| 2.0000 | 1.1116 |
| 1.5000 | .6133 |
| 1.0000 | .3032 |
| .7000 | .2118 |
| .4000 | .1048 |
| .3000 | .0776 |

NRC/RHR PIPING MODEL PROBLEM II***ELBOW FLEX. AND MISS. MASS. INCLUDED***

ACCELERATION SPECTRUM NO. 2

SPECTRUM NAME = VERT
 SPECTRUM TITLE = VERTICAL RESPONSE SPECTRA 3% DAMPING
 PERIOD/FREQUENCY CODE = F (FREQUENCIES SPECIFIED)
 UNITS CODE = G (MULTIPLES OF GRAVITY)
 INTERPOLATION TYPE = NATURAL

| FREQUENCY | ACCELERATION |
|-----------|--------------|
| 35.0000 | .1598 |
| 30.0000 | .1698 |
| 25.0000 | .1696 |
| 20.0000 | .1876 |
| 15.0000 | .2268 |
| 12.0000 | .3456 |
| 11.3500 | .3433 |
| 10.0000 | .2868 |
| 9.0000 | .2678 |
| 8.0000 | .2553 |
| 7.5000 | .2719 |
| 7.0000 | .3509 |
| 6.5000 | .4091 |
| 6.0000 | .5847 |
| 5.5000 | .9305 |
| 5.0000 | 1.2145 |
| 4.5000 | .9126 |
| 4.0000 | .7080 |
| 3.5000 | .5854 |
| 3.0000 | .4397 |
| 2.5000 | .4048 |
| 2.0000 | .3561 |
| 1.5000 | .2658 |
| 1.0000 | .1763 |
| .7000 | .1321 |
| .4000 | .0696 |
| .3000 | .0506 |

SPECTRAL ACCELERATIONS (MULTIPLES OF GRAVITY) AT MODE FREQUENCIES

| MODE NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| FREQUENCY | 3.795 | 4.531 | 6.479 | 8.033 | 8.950 | 10.471 | 12.097 | 13.539 | 14.157 | 15.503 |
| SPECTRUM 1 | 2.344 | 1.728 | .879 | .551 | .514 | .493 | .468 | .456 | .451 | .443 |
| SPECTRUM 2 | .659 | .931 | .416 | .256 | .267 | .307 | .342 | .295 | .260 | .223 |
| MODE NUMBER | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | |
| FREQUENCY | 15.902 | 20.759 | 21.114 | 22.340 | 22.453 | 25.196 | 26.325 | 26.472 | 28.826 | |
| SPECTRUM 1 | .442 | .430 | .429 | .427 | .427 | .423 | .423 | .423 | .423 | |
| SPECTRUM 2 | .220 | .185 | .184 | .179 | .179 | .170 | .170 | .170 | .170 | |

RESPONSE SPECTRUM ANALYSIS NO. 1

X RESPONSE

RESULTS SET NAME (INERTIA ONLY) = CQGX

EXCITATION OPTION = SMPL (SIMPLE EXCITATION)

RESULTS SET NAME (INERT + ANCH) = (NO ANCHOR MOVEMENTS)

MISSING MASS OPTION = MISM (CORRECTION APPLIED)

MODE COMBINATION OPTION = MCQC (CQC METHOD)

DAMPING RATIO (ALL MODES) = 0.000

ACCELERATIONS CODE = ALLA (CALCULATE FOR ALL POINTS)

ACCELERATION CUT-OFF (G) = 0.00

NO. OF NEW SUPPORT LEVELS = 0

RESPONSE SPECTRA

| X SPECTRUM | Y SPECTRUM | Z SPECTRUM | SCALE FACTOR |
|------------|------------|------------|--------------|
| HJRZ | | | 1.000 |

CQC COMBINATION CASE = WHITE NOISE

RESPONSE SPECTRUM ANALYSIS NO. 1 (COGX), FORCES AND MOMENTS IN LOCAL COORDINATES

(MISC. MEMB. ONLY)

| RUN GROUP | SOP MMB | DCP NAME | AXIAL FORCE (LB) | Y FORCE (LB) | Z FORCE (LB) | XX MOMENT (LB.IN) | YY MOMENT (LB.IN) | ZZ MOMENT (LB.IN) |
|-----------|---------|----------|------------------|--------------|--------------|-------------------|-------------------|-------------------|
| MISC | OP1 | 59 | 45.67 | 23.52 | 68.75 | 0.00 | 1650.01 | 554.50 |
| | | 81 | 45.67 | 23.52 | 68.75 | 0.00 | .00 | .00 |

RESPONSE SPECTRUM ANALYSIS NO. 1 (CQCX), GLOBAL DISPLACEMENTS AT DISPLACEMENT OUTPUT POINTS

| RUN NAME | DDP NO. | DCP NAME | X DISPL (IN) | Y DISPL (IN) | Z DISPL (IN) | XX ROTN (RAD) | YY ROTN (RAD) | ZZ ROTN (RAD) |
|----------|---------|----------|--------------|--------------|--------------|---------------|---------------|---------------|
| RUN1 | | | | | | | | |
| | 1 | 1 | .000 | .000 | .000 | .00572 | .00525 | .00567 |
| | 2 | 5 | .294 | .000 | .295 | .00553 | .00525 | .00559 |
| | 3 | 6 | .316 | .030 | .317 | .00541 | .00525 | .00554 |
| | 4 | 7 | .332 | .030 | .362 | .00083 | .00547 | .00445 |
| | 5 | 8 | .252 | .039 | .362 | .00062 | .00539 | .00370 |
| | 6 | 9 | .374 | .039 | .362 | .00114 | .00510 | .00296 |
| | 7 | 10 | .403 | .024 | .374 | .00155 | .00430 | .00258 |
| | 8 | 11 | .396 | .015 | .377 | .00157 | .00423 | .00255 |
| | 9 | 12 | .392 | .009 | .380 | .00159 | .00419 | .00254 |
| | 10 | 13 | .374 | .000 | .373 | .00225 | .00390 | .00256 |
| | 11 | 14 | .362 | .000 | .362 | .00230 | .00382 | .00258 |
| | 12 | 15 | .338 | .000 | .339 | .00239 | .00367 | .00252 |
| | 13 | 16 | .318 | .000 | .320 | .00244 | .00359 | .00254 |
| | 14 | 17 | .298 | .000 | .300 | .00248 | .00352 | .00255 |
| | 15 | 18 | .074 | .002 | .074 | .00255 | .00170 | .00184 |
| | 16 | 19 | .075 | .003 | .085 | .00246 | .00156 | .00155 |
| | 17 | 20 | .076 | .002 | .092 | .00157 | .00104 | .00045 |
| | 18 | 21 | .076 | .000 | .088 | .00153 | .00103 | .00052 |
| | 19 | 22 | .076 | .080 | .023 | .00081 | .00083 | .00115 |
| | 20 | 23 | .076 | .089 | .021 | .00067 | .00050 | .00089 |
| | 21 | 24 | .073 | .092 | .018 | .00057 | .00067 | .00045 |
| | 22 | 25 | .063 | .092 | .001 | .00064 | .00083 | .00050 |
| RUN2 | | | | | | | | |
| | 23 | 77 | .000 | .000 | .000 | .00058 | .00010 | .00033 |
| | 24 | 76 | .000 | .018 | .006 | .00058 | .00009 | .00028 |
| | 25 | 75 | .000 | .030 | .010 | .00058 | .00005 | .00013 |
| | 26 | 74 | .000 | .032 | .011 | .00058 | .00002 | .00008 |
| | 27 | 73 | .000 | .027 | .009 | .00058 | .00007 | .00022 |
| | 28 | 72 | .000 | .016 | .006 | .00058 | .00012 | .00036 |
| | 29 | 71 | .001 | .000 | .000 | .00058 | .00018 | .00049 |
| | 30 | 70 | .001 | .029 | .010 | .00058 | .00018 | .00059 |
| | 31 | 69 | .001 | .032 | .011 | .00058 | .00017 | .00050 |
| | 32 | 68 | .007 | .049 | .003 | .00056 | .00062 | .00047 |
| | 33 | 67 | .013 | .056 | .001 | .00069 | .00086 | .00041 |
| | 34 | 25 | .063 | .092 | .001 | .00054 | .00083 | .00050 |
| | 35 | 26 | .104 | .122 | .000 | .00045 | .00063 | .00057 |
| | 36 | 27 | .131 | .132 | .000 | .00024 | .00026 | .00091 |
| | 37 | 28 | .120 | .097 | .000 | .00094 | .00054 | .00117 |
| | 38 | 29 | .060 | .000 | .000 | .00134 | .00126 | .00144 |
| | 39 | 30 | .000 | .091 | .000 | .00250 | .00175 | .00150 |
| | 40 | 31 | .042 | .148 | .000 | .00273 | .00201 | .00159 |
| | 41 | 32 | .153 | .293 | .000 | .00303 | .00242 | .00198 |
| | 42 | 33 | .278 | .446 | .000 | .00310 | .00257 | .00208 |
| | 43 | 34 | .405 | .597 | .000 | .00300 | .00250 | .00228 |
| | 44 | 35 | .429 | .625 | .000 | .00216 | .00247 | .00232 |
| | 45 | 36 | .422 | .557 | .029 | .00207 | .00168 | .00308 |

RESPONSE SPECTRUM ANALYSIS NO. 1 (CQCX), GLOBAL DISPLACEMENTS AT DISPLACEMENT OUTPUT POINTS (CONTD.)

| RUN NAME | DUP NO. | DCP NAME | X DISPL (IN) | Y DISPL (IN) | Z DISPL (IN) | XX ROTN (RAD) | YY ROTN (RAD) | ZZ ROTN (RAD) |
|------------------|------------|-------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| RUN2 (CONTD.) | | | | | | | | |
| | 46 | 37 | .361 | .591 | .035 | .00180 | .00133 | .00404 |
| | 47 | 38 | .361 | .419 | .020 | .00158 | .00116 | .00416 |
| | 48 | 39 | .361 | .313 | .047 | .00145 | .00107 | .00418 |
| | 49 | 40 | .340 | .260 | .052 | .00140 | .00086 | .00408 |
| | 50 | 41 | .240 | .160 | .039 | .00121 | .00072 | .00378 |
| | 51 | 42 | .138 | .058 | .026 | .00099 | .00059 | .00374 |
| | 52 | 43 | .115 | .039 | .023 | .00087 | .00078 | .00314 |
| | 53 | 44 | .092 | .024 | .020 | .00080 | .00073 | .00299 |
| | 54 | 45 | .073 | .013 | .018 | .00074 | .00070 | .00286 |
| | 55 | 46 | .048 | .007 | .013 | .00043 | .00102 | .00156 |
| | 56 | 47 | .000 | .007 | .000 | .00028 | .00098 | .00136 |
| | 57 | 48 | .034 | .006 | .008 | .00009 | .00093 | .00045 |
| | 58 | 49 | .044 | .006 | .009 | .00005 | .00088 | .00007 |
| | 59 | 50 | .041 | .006 | .004 | .00014 | .00083 | .00014 |
| | 60 | 51 | .024 | .002 | .000 | .00017 | .00060 | .00015 |
| | 61 | 52 | .017 | .000 | .000 | .00015 | .00056 | .00014 |
| | 62 | 53 | .000 | .003 | .000 | .00005 | .00035 | .00012 |
| | 63 | 54 | .008 | .004 | .000 | .00002 | .00011 | .00010 |
| | 64 | 55 | .008 | .002 | .000 | .00006 | .00006 | .00009 |
| | 65 | 56 | .004 | .000 | .000 | .00007 | .00014 | .00007 |
| | 66 | 57 | .002 | .001 | .000 | .00007 | .00014 | .00006 |
| | 67 | 58 | .000 | .002 | .001 | .00008 | .00002 | .00002 |
| | 68 | 59 | .000 | .002 | .002 | .00008 | .00002 | .00002 |
| | 69 | 60 | .000 | .002 | .002 | .00008 | .00001 | .00002 |
| | 70 | 61 | .000 | .002 | .002 | .00008 | .00001 | .00002 |
| | 71 | 62 | .000 | .001 | .001 | .00008 | .00002 | .00003 |
| | 72 | 63 | .000 | .000 | .000 | .00008 | .00003 | .00003 |
| MISC. NODES | 73 | 81 | .001 | .002 | .003 | .00008 | .00002 | .00002 |

RESPONSE SPECTRUM ANALYSIS NO. 1 (CQCX), ABSOLUTE GLOBAL ACCELERATIONS (MULTIPLES OF GRAVITY)

| POINT NAME | X ACCEL | Y ACCEL | Z ACCEL | X-Z ACCEL | X-Y-Z ACCEL |
|------------|---------|---------|---------|-----------|-------------|
| 1 | .423 | .000 | .000 | .423 | .423 |
| 5 | 1.336 | .000 | .647 | 1.484 | 1.484 |
| 6 | 1.427 | .000 | .696 | 1.538 | 1.538 |
| 7 | 1.488 | .070 | .797 | 1.688 | 1.670 |
| 8 | .894 | .149 | .797 | 1.197 | 1.207 |
| 9 | .910 | .181 | .797 | 1.209 | 1.223 |
| 10 | .974 | .091 | .796 | 1.258 | 1.261 |
| 11 | .956 | .056 | .798 | 1.245 | 1.246 |
| 12 | .943 | .032 | .803 | 1.239 | 1.239 |
| 13 | .901 | .000 | .791 | 1.199 | 1.199 |
| 14 | .877 | .000 | .768 | 1.156 | 1.166 |
| 15 | .832 | .001 | .727 | 1.104 | 1.104 |
| 16 | .796 | .001 | .692 | 1.055 | 1.055 |
| 17 | .763 | .001 | .660 | 1.009 | 1.009 |
| 18 | .537 | .008 | .332 | .631 | .631 |
| 19 | .541 | .008 | .362 | .651 | .651 |
| 20 | .542 | .007 | .362 | .652 | .652 |
| 21 | .542 | .000 | .346 | .643 | .643 |
| 22 | .542 | .311 | .070 | .546 | .628 |
| 23 | .544 | .345 | .063 | .548 | .647 |
| 24 | .524 | .364 | .045 | .526 | .639 |
| 25 | .501 | .364 | .002 | .501 | .619 |
| 77 | .423 | .000 | .000 | .423 | .423 |
| 76 | .423 | .144 | .035 | .424 | .448 |
| 75 | .423 | .236 | .054 | .426 | .487 |
| 74 | .423 | .243 | .050 | .425 | .490 |
| 73 | .423 | .197 | .038 | .424 | .458 |
| 72 | .423 | .114 | .020 | .423 | .438 |
| 71 | .423 | .000 | .000 | .423 | .423 |
| 70 | .423 | .191 | .033 | .424 | .465 |
| 69 | .423 | .214 | .037 | .424 | .475 |
| 68 | .425 | .293 | .010 | .426 | .517 |
| 67 | .432 | .309 | .003 | .432 | .531 |
| 25 | .501 | .354 | .002 | .501 | .619 |
| 26 | .569 | .382 | .002 | .569 | .685 |
| 27 | .584 | .331 | .001 | .584 | .671 |
| 28 | .526 | .202 | .001 | .526 | .553 |
| 29 | .443 | .000 | .000 | .443 | .443 |
| 30 | .423 | .159 | .000 | .423 | .452 |
| 31 | .430 | .256 | .000 | .430 | .501 |
| 32 | .505 | .481 | .000 | .505 | .697 |
| 33 | .629 | .707 | .001 | .629 | .945 |
| 34 | .771 | .930 | .001 | .771 | 1.208 |
| 35 | .800 | .973 | .001 | .800 | 1.259 |
| 36 | .795 | 1.022 | .057 | .797 | 1.245 |
| 37 | .751 | .914 | .104 | .758 | 1.137 |
| 38 | .751 | .651 | .130 | .752 | 1.002 |
| 39 | .751 | .514 | .180 | .772 | .927 |

RESPONSE SPECTRUM ANALYSIS NO. 1 (CQCX), ABSOLUTE GLOBAL ACCELERATIONS (MULTIPLES OF GRAVITY) (CONT.)

| POINT NAME | X ACCEL | Y ACCEL | Z ACCEL | X-Z ACCEL | X-Y-Z ACCEL |
|---------------|------------|------------|------------|--------------|----------------|
| 40 | .731 | .448 | .190 | .755 | .878 |
| 41 | .629 | .305 | .161 | .649 | .717 |
| 42 | .537 | .153 | .120 | .551 | .574 |
| 43 | .516 | .142 | .108 | .527 | .545 |
| 44 | .488 | .128 | .096 | .497 | .513 |
| 45 | .470 | .122 | .092 | .478 | .494 |
| 46 | .447 | .123 | .077 | .454 | .470 |
| 47 | .423 | .122 | .000 | .423 | .440 |
| 48 | .448 | .120 | .077 | .454 | .470 |
| 49 | .494 | .118 | .102 | .505 | .518 |
| 50 | .531 | .116 | .063 | .535 | .547 |
| 51 | .480 | .040 | .000 | .480 | .482 |
| 52 | .454 | .000 | .000 | .454 | .454 |
| 53 | .423 | .061 | .000 | .423 | .427 |
| 54 | .431 | .053 | .001 | .431 | .436 |
| 55 | .433 | .033 | .002 | .433 | .435 |
| 56 | .426 | .000 | .003 | .426 | .426 |
| 57 | .424 | .009 | .003 | .424 | .424 |
| 58 | .423 | .036 | .032 | .424 | .425 |
| 59 | .423 | .045 | .045 | .425 | .427 |
| 60 | .423 | .053 | .055 | .426 | .429 |
| 61 | .423 | .060 | .066 | .428 | .432 |
| 62 | .423 | .039 | .043 | .425 | .427 |
| 63 | .423 | .000 | .000 | .423 | .423 |
| 81 | .423 | .045 | .068 | .428 | .431 |

RESPONSE SPECTRUM ANALYSIS NO. 1 (CQCX). FORCES, MOMENTS AND STRESSES ALONG PIPE RUNS

| RUN NAME | SUP NO. | DCP NAME | COMP TYPE | AXIAL FORCE (LB) | Y FORCE (LB) | Z FORCE (LB) | TORS MOMENT (LB.IN) | YY MOMENT (LB.IN) | ZZ MOMENT (LB.IN) | M/Z (PSI) | 14/Z (PSI) |
|----------|---------|----------|-----------|------------------|--------------|--------------|---------------------|-------------------|-------------------|-----------|------------|
| RUN1 | 1 | 1 | STRP | 612.22 | 529.03 | 1160.30 | .00 | .00 | .00 | .00 | .00 |
| | 2L | 5 | STRP | 612.22 | 529.03 | 1160.30 | .00 | 60330.87 | 27507.66 | 1409.28 | 1409.28 |
| | 2R | 5 | STRP | 612.18 | 238.20 | 1004.74 | .00 | 60330.87 | 27507.66 | 3948.42 | 3948.42 |
| | 3L | 6 | STRP | 612.18 | 238.20 | 1004.74 | .00 | 64353.60 | 28395.51 | 4188.63 | 4188.63 |
| | 3R | 6 | BELB | 612.17 | 969.96 | 186.51 | .00 | 28395.51 | 64353.60 | 4188.63 | 10224.95 |
| | 4L | 7 | BELB | 969.96 | 612.17 | 186.51 | 30254.23 | 2238.11 | 68781.18 | 4476.51 | 10927.72 |
| | 4R | 7 | STRP | 860.38 | 620.28 | 164.79 | 30254.23 | 2238.11 | 68781.18 | 4476.51 | 4476.51 |
| | 5L | 8 | STRP | 860.38 | 620.28 | 164.79 | 30254.23 | 8314.90 | 41828.61 | 3113.70 | 3113.70 |
| | 5R | 8 | STRP | 705.81 | 630.15 | 241.74 | 30254.23 | 8314.90 | 41828.61 | 3113.70 | 3113.70 |
| | 6L | 9 | STRP | 705.81 | 630.15 | 241.74 | 30254.23 | 17345.48 | 15657.41 | 2276.39 | 2276.39 |
| | 6R | 9 | BELB | 600.68 | 507.66 | 430.36 | 30254.23 | 17087.19 | 15938.89 | 2276.39 | 5556.94 |
| | 7L | 10 | BELB | 507.66 | 600.68 | 430.36 | 19677.33 | 29911.83 | 17341.94 | 2368.99 | 5783.01 |
| | 7R | 10 | STRP | 537.28 | 395.09 | 561.19 | 19677.33 | 29911.83 | 29911.83 | 2368.99 | 2368.99 |
| | 8L | 11 | STRP | 537.28 | 395.09 | 561.19 | 19677.33 | 19887.15 | 29990.17 | 2442.29 | 2442.29 |
| | 8R | 11 | STRP | 547.90 | 383.22 | 546.73 | 19677.33 | 19887.15 | 29990.17 | 2442.29 | 2442.29 |
| | 9L | 12 | STRP | 547.90 | 383.22 | 546.73 | 19677.33 | 21670.24 | 30109.31 | 2500.59 | 2500.59 |
| | 9R | 12 | BELB | 564.16 | 365.86 | 524.23 | 19677.33 | 21670.24 | 30109.31 | 2500.59 | 6104.24 |
| | 10L | 13 | BELB | 620.28 | 259.59 | 524.23 | 26176.94 | 18703.28 | 29080.77 | 2582.46 | 6304.11 |
| | 10R | 13 | STRP | 620.28 | 274.38 | 498.72 | 26176.94 | 18703.28 | 29080.77 | 2582.46 | 2582.46 |
| | 11L | 14 | STRP | 620.28 | 274.38 | 498.72 | 26176.94 | 20649.74 | 27742.83 | 2582.86 | 2582.86 |
| | 11R | 14 | STRP | 4120.60 | 187.35 | 254.45 | 26176.94 | 20649.74 | 27742.83 | 2582.86 | 2582.86 |
| | 12L | 15 | STRP | 4120.60 | 187.35 | 254.45 | 26176.94 | 21735.57 | 26968.64 | 2585.37 | 2585.37 |
| | 12R | 15 | VALV | 4120.53 | 182.18 | 174.01 | 26176.94 | 21735.57 | 26968.64 | N/A | N/A |
| | 13 | 16 | VALV | 4120.53 | 182.18 | 174.01 | 26176.94 | 21959.37 | 25861.10 | N/A | N/A |
| | 14L | 17 | VALV | 4120.38 | 291.50 | 171.70 | 26176.94 | 20841.11 | 23920.58 | N/A | N/A |
| | 14R | 17 | STRP | 4120.17 | 441.79 | 304.99 | 26176.94 | 20841.11 | 23920.58 | 2449.30 | 2449.30 |
| | 15L | 18 | STRP | 4119.30 | 525.91 | 382.87 | 26176.94 | 19843.61 | 41020.35 | 3129.37 | 3129.37 |
| | 15R | 18 | STRP | 4118.41 | 347.96 | 264.68 | 26176.94 | 19843.61 | 41020.35 | 3129.37 | 3129.37 |
| | 16L | 19 | STRP | 4118.41 | 347.96 | 264.68 | 26176.94 | 17607.25 | 40208.47 | 3043.37 | 3043.37 |
| | 16R | 19 | BELB | 4118.01 | 359.92 | 266.65 | 26176.94 | 17607.25 | 40208.47 | 3043.37 | 7429.23 |
| | 17L | 20 | BELB | 359.92 | 4118.01 | 256.65 | 14895.93 | 23289.20 | 27886.49 | 2338.31 | 5708.11 |
| | 17R | 20 | STRP | 370.43 | 4117.90 | 272.61 | 14895.93 | 23289.20 | 27886.49 | 2338.31 | 2338.31 |
| | 18L | 21 | STRP | 370.43 | 4117.90 | 272.61 | 14895.93 | 22280.96 | 40399.62 | 2911.86 | 2911.86 |
| | 18R | 21 | STRP | 392.35 | 601.88 | 247.16 | 14895.93 | 22280.96 | 40399.62 | 2911.86 | 2911.86 |
| | 19L | 22 | STRP | 436.41 | 583.97 | 308.28 | 14895.93 | 14316.37 | 7985.78 | 1318.99 | 1318.99 |
| | 19R | 22 | BELB | 465.81 | 312.59 | 558.77 | 14895.93 | 7985.78 | 14316.37 | 1318.99 | 3219.83 |
| | 20L | 23 | BELB | 334.07 | 450.66 | 558.77 | 13257.83 | 14208.70 | 15097.73 | 1465.42 | 3577.28 |
| | 20R | 23 | BELB | 347.59 | 543.60 | 459.79 | 13257.83 | 15097.73 | 14208.70 | 1465.42 | 3577.28 |
| | 21L | 24 | BELB | 543.60 | 347.59 | 459.79 | 16427.80 | 11596.65 | 17929.86 | 1604.31 | 3916.33 |
| | 21R | 24 | STRP | 518.02 | 509.84 | 316.22 | 16427.80 | 13148.84 | 16824.69 | 1604.31 | 1604.31 |
| | 22 | 25 | STRP | 518.02 | 509.84 | 316.22 | 16427.80 | 8936.84 | 24352.57 | 1828.43 | 1828.43 |

RESPONSE SPECTRUM ANALYSIS NO. 1 (CQCX). FORCES, MOMENTS AND STRESSES ALONG PIPE RUNS (CONTD.)

| RUN NAME | SOP NO. | DCP NAME | COMP TYPE | AXIAL FORCE (LB) | Y FORCE (LB) | Z FORCE (LB) | TORS MOMENT (LB.IN) | YY MOMENT (LB.IN) | ZZ MOMENT (LB.IN) | M/Z (PSI) | I/MZ (PSI) |
|----------|---------|----------|-----------|------------------|--------------|--------------|---------------------|-------------------|-------------------|-----------|------------|
| RUN2 | | | | | | | | | | | |
| | 23 | 77 | STRP | 904.38 | 280.18 | 77.25 | 0.00 | .00 | .00 | .00 | .00 |
| | 24 | 75 | STRP | 904.38 | 280.18 | 77.25 | 0.00 | 4403.05 | 15970.01 | 352.09 | 352.09 |
| | 24R | 76 | STRP | 904.07 | 209.65 | 55.45 | 0.00 | 4403.05 | 15970.01 | 352.09 | 352.09 |
| | 25L | 75 | STRP | 904.07 | 209.65 | 65.45 | 0.00 | 8091.27 | 27953.76 | 616.68 | 616.68 |
| | 25R | 75 | STRP | 903.46 | 111.94 | 54.10 | 0.00 | 8091.27 | 27863.76 | 616.68 | 616.68 |
| | 26L | 74 | STRP | 903.46 | 111.94 | 54.10 | 0.00 | 10826.92 | 33317.11 | 744.58 | 744.58 |
| | 26R | 74 | STRP | 902.72 | 101.31 | 53.09 | .00 | 10826.92 | 33317.11 | 744.58 | 744.58 |
| | 27L | 73 | STRP | 902.72 | 101.31 | 53.09 | .00 | 12247.51 | 33640.85 | 760.92 | 760.92 |
| | 27R | 73 | STRP | 902.02 | 142.95 | 55.63 | .00 | 12247.51 | 33640.85 | 760.92 | 760.92 |
| | 28L | 72 | STRP | 902.02 | 142.95 | 55.63 | .00 | 13566.07 | 32426.35 | 747.08 | 747.08 |
| | 28R | 72 | STRP | 901.19 | 174.04 | 57.33 | .00 | 13566.07 | 32426.35 | 747.08 | 747.08 |
| | 29L | 71 | STRP | 901.19 | 174.04 | 57.33 | .00 | 14929.03 | 31108.51 | 733.38 | 733.38 |
| | 29R | 71 | STRP | 900.06 | 514.70 | 724.18 | .00 | 14929.03 | 31108.51 | 733.38 | 733.38 |
| | 30L | 70 | STRP | 900.06 | 514.70 | 724.18 | .00 | 24410.62 | 9374.71 | 555.77 | 555.77 |
| | 30R | 70 | STRP | 899.20 | 473.16 | 719.48 | 0.00 | 24410.62 | 9374.71 | 555.77 | 555.77 |
| | 31L | 69 | STRP | 899.20 | 473.16 | 719.48 | 0.00 | 28595.80 | 8544.00 | 634.33 | 634.33 |
| | 31R | 69 | BELB | 898.67 | 753.86 | 379.72 | .00 | 24220.94 | 17437.49 | 634.33 | 1717.51 |
| | 32L | 68 | BELB | 753.86 | 898.67 | 379.72 | 30359.47 | 6834.98 | 16590.62 | 749.54 | 2029.46 |
| | 32R | 68 | BELB | 733.24 | 369.10 | 895.42 | 30359.47 | 16590.62 | 6834.98 | 749.54 | 2029.46 |
| | 33L | 67 | BELB | 716.07 | 401.39 | 895.42 | 19773.63 | 20990.15 | 9654.28 | 646.35 | 1750.05 |
| | 33R | 67 | STRP | 716.56 | 325.82 | 878.64 | 19773.63 | 20990.15 | 9654.28 | 646.35 | 646.35 |
| | 34L | 25 | STRP | 716.56 | 325.82 | 878.64 | 19773.63 | 39056.64 | 22383.99 | 1045.02 | 1045.02 |
| | 34R | 25 | STRP | 705.94 | 684.32 | 584.43 | 26647.24 | 34571.84 | 20954.55 | 1028.18 | 1028.18 |
| | 35L | 26 | STRP | 705.94 | 684.32 | 584.43 | 26647.24 | 51429.92 | 51821.26 | 1651.89 | 1651.89 |
| | 35R | 26 | STRP | 706.58 | 583.05 | 491.17 | 26647.24 | 51429.92 | 51821.26 | 1651.89 | 1651.89 |
| | 36L | 27 | STRP | 706.58 | 583.05 | 491.17 | 26647.24 | 73833.89 | 87046.14 | 2491.23 | 2491.23 |
| | 36R | 27 | STRP | 707.11 | 520.93 | 466.65 | 26647.24 | 73833.89 | 87046.14 | 2491.23 | 2491.23 |
| | 37L | 28 | STRP | 707.11 | 520.93 | 466.65 | 26647.24 | 91287.65 | 116182.65 | 3191.09 | 3191.09 |
| | 37R | 28 | STRP | 707.45 | 496.17 | 509.87 | 26647.24 | 91287.65 | 116182.65 | 3191.09 | 3191.09 |
| | 38L | 29 | STRP | 707.45 | 496.17 | 509.87 | 26647.24 | 108484.49 | 142709.50 | 3851.93 | 3851.93 |
| | 38R | 29 | STRP | 707.58 | 1067.97 | 525.95 | 26647.24 | 108484.49 | 142709.50 | 3851.93 | 3851.93 |
| | 39L | 30 | STRP | 707.58 | 1067.97 | 525.95 | 26647.24 | 120831.04 | 100308.35 | 3385.49 | 3385.49 |
| | 39R | 30 | STRP | 707.61 | 1027.05 | 1002.25 | 26647.24 | 120831.04 | 100308.35 | 3385.49 | 3385.49 |
| | 40L | 31 | STRP | 707.61 | 1027.05 | 1002.25 | 26647.24 | 99050.38 | 78157.61 | 2740.98 | 2740.98 |
| | 40R | 31 | STRP | 196.47 | 950.75 | 981.88 | 26647.24 | 99050.38 | 78157.61 | 2740.98 | 2740.98 |
| | 41L | 32 | STRP | 196.47 | 950.75 | 981.88 | 26647.24 | 51490.48 | 33056.49 | 1418.48 | 1418.48 |
| | 41R | 32 | STRP | 196.37 | 747.64 | 877.90 | 26647.24 | 51490.48 | 33056.49 | 1418.48 | 1418.48 |
| | 42L | 33 | STRP | 196.37 | 747.64 | 877.90 | 26647.24 | 13427.45 | 12841.71 | 690.44 | 690.44 |
| | 42R | 33 | STRP | 196.15 | 459.31 | 697.19 | 26647.24 | 13427.45 | 12841.71 | 690.44 | 690.44 |
| | 43L | 34 | STRP | 196.15 | 459.31 | 697.19 | 26647.24 | 28733.99 | 28606.99 | 1031.23 | 1031.23 |
| | 43R | 34 | STRP | 195.97 | 278.23 | 549.41 | 26647.24 | 28733.99 | 28606.99 | 1031.23 | 1031.23 |
| | 44L | 35 | STRP | 195.97 | 278.23 | 549.41 | 26647.24 | 33381.81 | 30225.42 | 1112.14 | 1112.14 |
| | 44R | 35 | BELB | 195.87 | 244.17 | 481.36 | 26647.24 | 33381.81 | 30225.42 | 1112.14 | 3945.84 |
| | 45L | 36 | BELB | 244.17 | 195.87 | 481.36 | 38462.06 | 31796.88 | 32553.20 | 1266.49 | 4493.47 |
| | 45R | 36 | BELB | 327.35 | 385.33 | 136.70 | 38462.06 | 32563.20 | 31796.88 | 1266.49 | 3429.16 |
| | 46L | 37 | BELB | 385.33 | 327.36 | 136.70 | 34901.11 | 36187.21 | 34386.67 | 1294.59 | 3505.24 |

NRC/RHR PIPING MODEL PROBLEM II**ELBOW FLEX. AND MISS. MASS. INCLUDED**

RESPONSE SPECTRUM ANALYSIS NO. 1 (COCK). FORCES, MOMENTS AND STRESSES ALONG PIPE RUNS (CONTD.)

| RUN NAME | SOP NO. | DCP NAME | COMP TYPE | AXIAL FORCE (LB) | Y FORCE (LB) | Z FORCE (LB) | TORS MOMENT (LB.IN) | YY MOMENT (LB.IN) | ZZ MOMENT (LB.IN) | M/Z (PSI) | I/Z (PSI) |
|------------------|------------|-------------|--------------|------------------------|--------------------|--------------------|---------------------------|-------------------------|-------------------------|--------------|--------------|
| RUNZ (CONTD.) | | | | | | | | | | | |
| 46R | 37 | STPP | | 336.94 | 565.50 | 160.61 | 34901.11 | 36187.21 | 34386.67 | 1294.59 | 1294.59 |
| 47L | 38 | STRP | | 336.94 | 565.50 | 160.61 | 34901.11 | 32180.48 | 21056.82 | 1103.88 | 1103.88 |
| 47R | 38 | STRP | | 398.32 | 735.78 | 140.54 | 34901.11 | 32180.48 | 21056.82 | 1103.88 | 1103.88 |
| 48L | 39 | STRP | | 398.32 | 735.78 | 140.54 | 34901.11 | 29764.94 | 22974.95 | 1090.38 | 1090.38 |
| 48R | 39 | BELB | | 470.25 | 809.39 | 137.70 | 34901.11 | 29764.94 | 22374.95 | 1090.38 | 2952.31 |
| 49L | 40 | BELB | | 696.24 | 625.68 | 137.70 | 44399.30 | 10057.51 | 27359.69 | 1128.98 | 3056.84 |
| 49R | 40 | STRP | | 720.34 | 775.65 | 146.66 | 44399.30 | 10057.51 | 27359.69 | 1128.98 | 1128.98 |
| 50L | 41 | STRP | | 720.34 | 775.65 | 146.66 | 44399.30 | 13848.58 | 43193.42 | 1348.91 | 1348.91 |
| 50R | 41 | STRP | | 760.37 | 932.42 | 171.00 | 44399.30 | 13848.68 | 43183.42 | 1348.91 | 1348.91 |
| 51L | 42 | STRP | | 760.37 | 932.42 | 171.00 | 44399.30 | 18509.97 | 72839.17 | 1855.26 | 1855.26 |
| 51R | 42 | BELB | | 789.03 | 450.89 | 898.03 | 44399.30 | 64828.65 | 38018.55 | 1855.26 | 5023.32 |
| 52L | 43 | BELB | | 766.12 | 488.80 | 898.03 | 73374.62 | 40630.29 | 40404.77 | 1978.71 | 5357.57 |
| 52R | 43 | STRP | | 773.58 | 802.18 | 677.55 | 73374.62 | 50124.61 | 27754.90 | 1978.71 | 1978.71 |
| 53L | 44 | STRP | | 773.58 | 802.18 | 677.55 | 73374.62 | 54917.08 | 37582.15 | 2105.36 | 2105.36 |
| 53R | 44 | STRP | | 781.53 | 812.42 | 699.63 | 73374.62 | 54917.08 | 37582.15 | 2105.36 | 2105.36 |
| 54L | 45 | STRP | | 781.53 | 812.42 | 699.63 | 73374.62 | 59643.28 | 45855.31 | 2233.69 | 2233.69 |
| 54R | 45 | BELB | | 790.15 | 820.08 | 717.99 | 73374.62 | 59643.28 | 45855.31 | 2233.69 | 6047.93 |
| 55L | 46 | BELB | | 1005.73 | 534.22 | 717.99 | 9402.79 | 100160.11 | 53295.77 | 2419.70 | 6551.58 |
| 55R | 46 | STRP | | 1016.51 | 900.51 | 219.51 | 9402.79 | 33437.69 | 108417.75 | 2419.70 | 2419.70 |
| 56L | 47 | STRP | | 1016.51 | 900.51 | 219.51 | 9402.79 | 40503.64 | 130231.60 | 2905.62 | 2905.62 |
| 56R | 47 | STRP | | 1035.52 | 820.90 | 233.08 | 9402.79 | 40503.64 | 130231.60 | 2905.62 | 2905.62 |
| 57L | 48 | STRP | | 1035.52 | 820.90 | 233.08 | 9402.79 | 30483.17 | 92531.39 | 2080.27 | 2080.27 |
| 57R | 48 | STRP | | 1058.61 | 843.23 | 232.85 | 9402.79 | 30483.17 | 92531.39 | 2080.27 | 2080.27 |
| 58L | 49 | STRP | | 1058.61 | 843.23 | 232.85 | 9402.79 | 20558.74 | 53716.88 | 1238.70 | 1238.70 |
| 58R | 49 | STRP | | 1083.27 | 878.43 | 237.09 | 9402.79 | 20558.74 | 53716.88 | 1238.70 | 1238.70 |
| 59L | 50 | STRP | | 1083.27 | 878.43 | 237.09 | 9402.79 | 11006.56 | 13115.04 | 415.17 | 415.17 |
| 59R | 50 | BELB | | 1104.03 | 240.63 | 915.86 | 9402.79 | 13115.04 | 11006.56 | 415.17 | 1124.11 |
| 60L | 51 | BELB | | 240.63 | 1104.03 | 915.86 | 3576.66 | 22939.19 | 12450.63 | 559.92 | 1516.05 |
| 60R | 51 | STRP | | 240.65 | 1108.07 | 931.76 | 3576.66 | 22939.19 | 12450.63 | 559.92 | 559.92 |
| 61L | 52 | STRP | | 240.65 | 1108.07 | 931.76 | 3576.66 | 33602.82 | 25612.88 | 901.23 | 901.23 |
| 61R | 52 | STRP | | 240.66 | 179.42 | 946.68 | 3576.66 | 33602.82 | 25612.88 | 901.23 | 901.23 |
| 62L | 53 | STRP | | 240.66 | 179.42 | 946.68 | 3576.66 | 67070.33 | 19305.48 | 1485.35 | 1485.35 |
| 62R | 53 | STRP | | 244.89 | 190.11 | 534.20 | 3576.66 | 67070.33 | 19305.48 | 1485.35 | 1485.35 |
| 63L | 54 | STRP | | 244.89 | 190.11 | 534.20 | 3576.66 | 47939.22 | 12793.32 | 1057.30 | 1057.30 |
| 63R | 54 | STRP | | 244.61 | 202.69 | 541.81 | 3576.66 | 47939.22 | 12793.32 | 1057.30 | 1057.30 |
| 64L | 55 | STRP | | 244.61 | 202.69 | 541.81 | 3576.66 | 28516.11 | 6737.15 | 627.39 | 627.39 |
| 64R | 55 | STRP | | 244.06 | 209.61 | 551.73 | 3576.66 | 28516.11 | 6737.15 | 627.39 | 627.39 |
| 65L | 56 | STRP | | 244.06 | 209.61 | 551.73 | 3576.66 | 8791.07 | 5955.71 | 238.26 | 238.26 |
| 65R | 56 | STRP | | 243.48 | 202.87 | 556.03 | 3576.66 | 8791.07 | 5955.71 | 238.26 | 238.26 |
| 66L | 57 | STRP | | 243.48 | 202.87 | 556.03 | 3576.66 | 1764.99 | 3264.66 | 109.55 | 109.55 |
| 66R | 57 | BELB | | 242.96 | 557.92 | 202.32 | 3576.66 | 3264.66 | 1764.99 | 109.55 | 296.61 |
| 67L | 58 | BELB | | 564.27 | 227.84 | 202.32 | 1698.91 | 4310.08 | 8366.09 | 203.26 | 550.34 |
| 67R | 58 | VALV | | 564.43 | 171.25 | 200.44 | 1698.60 | 8366.09 | 4310.20 | N/A | N/A |
| 68L | 59 | VALV | | 564.48 | 171.25 | 200.44 | 1698.60 | 9484.20 | 5124.34 | N/A | N/A |
| 69L | 60 | VALV | | 564.12 | 59.69 | 74.43 | 1.75 | 9684.38 | 7079.57 | N/A | N/A |

RESPONSE SPECTRUM ANALYSIS NO. 1 (COCK). FORCES, MOMENTS AND STRESSES ALONG PIPE RUNS (CONTD.)

| RUN NAME | SDP NO. | DCP NAME | COMP TYPE | AXIAL FORCE (LB) | Y FORCE (LB) | Z FORCE (LB) | TORS MOMENT (LB.IN) | YY MOMENT (LB.IN) | ZZ MOMENT (LB.IN) | M/Z (PSI) | IM/Z (PSI) |
|------------------|------------|-------------|--------------|------------------------|--------------------|--------------------|---------------------------|-------------------------|-------------------------|--------------|---------------|
| RUN2 (CONTD.) | | | | | | | | | | | |
| | 69R | 60 | STRP | 564.39 | 20.28 | 45.26 | .18 | 9684.38 | 7079.57 | 97.92 | 97.92 |
| | 70L | 61 | STRP | 564.39 | 20.28 | 45.26 | .18 | 8274.33 | 6577.15 | 86.28 | 86.28 |
| | 70R | 61 | STRP | 564.55 | 56.03 | 74.27 | .02 | 8274.33 | 6577.15 | 86.28 | 86.28 |
| | 71L | 62 | STRP | 564.55 | 56.03 | 74.27 | .02 | 4864.21 | 3985.63 | 51.33 | 51.33 |
| | 71R | 62 | STRP | 564.67 | 85.71 | 104.60 | .00 | 4864.21 | 3985.63 | 51.33 | 51.33 |
| | 72 | 63 | STRP | 564.67 | 85.71 | 104.60 | .00 | .00 | .00 | .00 | .00 |

RESPONSE SPECTRUM ANALYSIS NO. 1 (COCK), SUPPORT FORCES AND DEFORMATIONS

| SUPP NAME | SUPP LOCN | SUPP TYPE | DIRN CODE | RESULT TYPE | RESULT UNIT | AXIS TYPE | X-AXIS | Y-AXIS | Z-AXIS |
|-----------|-----------|-----------|-----------|----------------------|----------------------|----------------------|--------------------------|-----------------|-----------------|
| 1X | 1 | SNGL | X | FORC DISP | (LB) (IN) | GLBL GLBL | 529.03 .000 | 0.00 .000 | 0.00 .000 |
| 1Y | 1 | SNGL | Y | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .000 | 612.22 .000 | 0.00 .000 |
| 1Z | 1 | SNGL | Z | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .000 | 0.00 .000 | 1160.30 .000 |
| 77X | 77 | SNGL | X | FORC DISP | (LB) (IN) | GLBL GLBL | 904.38 .000 | 0.00 .000 | 0.00 .000 |
| 77Y | 77 | SNGL | Y | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .000 | 280.18 .000 | 0.00 .000 |
| 77Z | 77 | SNGL | Z | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .000 | 0.00 .000 | 77.25 .000 |
| 63X | 63 | SNGL | X | FORC DISP | (LB) (IN) | GLBL GLBL | 550.18 .000 | 0.00 .000 | 0.00 .000 |
| 63Y | 63 | SNGL | Y | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .000 | 85.71 .000 | 0.00 .000 |
| 63Z | 63 | SNGL | Z | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .000 | 0.00 .000 | 164.70 .000 |
| 14XZ | 14 | SNGL | INCL | FORC FORC DISP | (LB) (LB) (IN) | LOCL GLBL LOCL | 407.17 297.91 .000 | 0.00 .000 | 287.91 .511 |
| 14Y | 14 | SNGL | Y | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .352 | 4556.25 .000 | 0.00 .362 |

RESPONSE SPECTRUM ANALYSIS NO. 1 (CQCX), SUPPORT FORCES AND DEFORMATIONS (CONTD.)

| SUPP NAME | SUPP LOCN | SUPP TYPE | DIRN CODE | RESULT TYPE | RESULT UNIT | AXIS TYPE | X-AXIS | Y-AXIS | Z-AXIS |
|--------------|-----------|-----------|-----------|-------------|-------------|-----------|---------|---------|--------|
| 14Y (CONTD.) | | | | | | | | | |
| 18XZ | 18 | SNGL | INCL | FORC | (LB) | LOCL | 870.71 | | |
| | | | | FORC | (LB) | GLBL | 615.68 | 0.00 | 615.68 |
| | | | | DISP | (IN) | LOCL | .000 | .002 | .105 |
| 21Y | 21 | SNGL | Y | FORC | (LB) | GLBL | 0.00 | 4633.52 | 0.00 |
| | | | | DISP | (IN) | GLBL | .076 | .000 | .088 |
| 29Y | 29 | SNGL | Y | FORC | (LB) | GLBL | 0.00 | 1482.00 | 0.00 |
| | | | | DISP | (IN) | GLBL | .060 | .000 | .000 |
| 30X | 30 | SNGL | X | FORC | (LB) | GLBL | 1362.05 | 0.00 | 0.00 |
| | | | | DISP | (IN) | GLBL | .000 | .091 | .000 |
| 31Z | 31 | SNGL | Z | FORC | (LB) | GLBL | 0.00 | 0.00 | 823.47 |
| | | | | DISP | (IN) | GLBL | .042 | .148 | .000 |
| 47X | 47 | SNGL | X | FORC | (LB) | GLBL | 1595.31 | 0.00 | 0.00 |
| | | | | DISP | (IN) | GLBL | .000 | .007 | .000 |
| 47Z | 47 | SNGL | Z | FORC | (LB) | GLBL | 0.00 | 0.00 | 429.78 |
| | | | | DISP | (IN) | GLBL | .000 | .007 | .000 |
| 52Y | 52 | SNGL | Y | FORC | (LB) | GLBL | 0.00 | 1282.59 | 0.00 |
| | | | | DISP | (IN) | GLBL | .017 | .000 | .000 |
| 53X | 53 | SNGL | X | FORC | (LB) | GLBL | 1474.46 | 0.00 | 0.00 |
| | | | | DISP | (IN) | GLBL | .000 | .003 | .000 |
| 53Z | 53 | SNGL | Z | FORC | (LB) | GLBL | 0.00 | 0.00 | 270.78 |
| | | | | DISP | (IN) | GLBL | .000 | .003 | .000 |

RESPONSE SPECTRUM ANALYSIS NO. 1 (CQCX), SUPPORT FORCES AND DEFORMATIONS (CONTD.)

| SUPP NAME | SUPP LOCV | SUPP TYPE | DIRN CODE | RESULT TYPE | RESULT UNIT | AXIS TYPE | X-AXIS | Y-AXIS | Z-AXIS |
|--------------|-----------|-----------|-----------|-------------|-------------|-----------|--------|--------|--------|
| 53Z (CONTD.) | | | | | | | | | |
| 56Y | 55 | SNGL | Y | FORC | (LB) | GLBL | 0.00 | 358.37 | 0.00 |
| | | | | DISP | (IN) | GLBL | .004 | .000 | .000 |
| 71Y | 71 | SNGL | Y | FORC | (LB) | GLBL | 0.00 | 483.16 | 0.00 |
| | | | | DISP | (IN) | GLBL | .001 | .000 | .000 |
| 71Z | 71 | SNGL | Z | FORC | (LB) | GLBL | 0.00 | 0.00 | 756.73 |
| | | | | DISP | (IN) | GLBL | .001 | .000 | .000 |

RESPONSE SPECTRUM ANALYSIS NO. 2

Y RESPONSE

RESULTS SET NAME (INERTIA ONLY) = CQCY

EXCITATION OPTION = SMPL (SIMPLE EXCITATION)

RESULTS SET NAME (INERT + ANCH) = (NO ANCHOR MOVEMENTS)

MISSING MASS OPTION = MISM (CORRECTION APPLIED)

MODE COMBINATION OPTION = MCQC (CQC METHOD)

DAMPING RATIO (ALL MODES) = 0.000

ACCELERATIONS CODE = (NO ACCELERATION POINTS)

ACCELERATION CUT-OFF (G) = 0.00

NO. OF NEW SUPPORT LEVELS = 0

RESPONSE SPECTRA

| | | | |
|------------|------------|------------|--------------|
| X SPECTRUM | Y SPECTRUM | Z SPECTRUM | SCALE FACTOR |
| | VERT | | 1.000 |

CQC COMBINATION CASE = WHITE NOISE

RESPONSE SPECTRUM ANALYSIS NO. 2 (COCY), FORCES AND MOMENTS IN LOCAL COORDINATES

(MISC. MEMB. ONLY)

| RUN GROUP | SUP MMB | DCP NAME | AXIAL FORCE (LB) | Y FORCE (LB) | Z FORCE (LB) | XX MOMENT (LB.IN) | YY MOMENT (LB.IN) | ZZ MOMENT (LB.IN) |
|-----------|---------|----------|------------------|--------------|--------------|-------------------|-------------------|-------------------|
| MISC | 0P1 | 59 | 230.61 | 33.59 | 229.60 | 0.00 | 5510.40 | 806.26 |
| | | 81 | 230.61 | 33.59 | 229.60 | 0.00 | .00 | .00 |

RESPONSE SPECTRUM ANALYSIS NO. 2 (CQCX), GLOBAL DISPLACEMENTS AT DISPLACEMENT OUTPUT POINTS

| RUN NAME | DOP NO. | DCP NAME | X DISPL (IN) | Y DISPL (IN) | Z DISPL (IN) | XX ROTN (RAD) | YY ROTN (RAD) | ZZ ROTN (RAD) |
|----------|---------|----------|--------------|--------------|--------------|---------------|---------------|---------------|
| RUN1 | 1 | 1 | .000 | .000 | .000 | .00027 | .00030 | .00032 |
| | 2 | 5 | .017 | .000 | .014 | .00026 | .00030 | .00032 |
| | 3 | 6 | .018 | .000 | .015 | .00026 | .00030 | .00032 |
| | 4 | 7 | .019 | .002 | .017 | .00027 | .00031 | .00028 |
| | 5 | 8 | .012 | .004 | .017 | .00025 | .00030 | .00026 |
| | 6 | 9 | .018 | .005 | .017 | .00025 | .00029 | .00024 |
| | 7 | 10 | .020 | .003 | .017 | .00013 | .00028 | .00027 |
| | 8 | 11 | .019 | .002 | .017 | .00014 | .00028 | .00027 |
| | 9 | 12 | .019 | .001 | .017 | .00014 | .00028 | .00027 |
| | 10 | 13 | .017 | .000 | .017 | .00020 | .00028 | .00028 |
| | 11 | 14 | .017 | .000 | .017 | .00021 | .00028 | .00029 |
| | 12 | 15 | .015 | .000 | .015 | .00021 | .00028 | .00029 |
| | 13 | 16 | .015 | .000 | .016 | .00022 | .00028 | .00029 |
| | 14 | 17 | .014 | .000 | .015 | .00022 | .00028 | .00029 |
| | 15 | 18 | .028 | .001 | .028 | .00019 | .00027 | .00014 |
| | 16 | 19 | .029 | .001 | .030 | .00018 | .00027 | .00012 |
| | 17 | 20 | .029 | .001 | .028 | .00014 | .00029 | .00019 |
| | 18 | 21 | .029 | .000 | .027 | .00014 | .00029 | .00022 |
| | 19 | 22 | .029 | .037 | .012 | .00018 | .00020 | .00053 |
| | 20 | 23 | .030 | .041 | .012 | .00018 | .00010 | .00043 |
| | 21 | 24 | .029 | .042 | .010 | .00032 | .00026 | .00029 |
| | 22 | 25 | .026 | .042 | .000 | .00037 | .00036 | .00032 |
| RUN2 | 23 | 77 | .000 | .000 | .000 | .00037 | .00011 | .00029 |
| | 24 | 76 | .000 | .015 | .006 | .00037 | .00009 | .00023 |
| | 25 | 75 | .000 | .025 | .009 | .00037 | .00003 | .00029 |
| | 26 | 74 | .000 | .025 | .009 | .00037 | .00004 | .00029 |
| | 27 | 73 | .000 | .019 | .007 | .00037 | .00007 | .00019 |
| | 28 | 72 | .000 | .011 | .004 | .00037 | .00010 | .00027 |
| | 29 | 71 | .000 | .000 | .000 | .00037 | .00012 | .00031 |
| | 30 | 70 | .000 | .016 | .006 | .00037 | .00011 | .00033 |
| | 31 | 69 | .000 | .018 | .007 | .00037 | .00010 | .00033 |
| | 32 | 68 | .003 | .024 | .002 | .00042 | .00024 | .00030 |
| | 33 | 67 | .005 | .025 | .000 | .00042 | .00036 | .00029 |
| | 34 | 25 | .026 | .042 | .000 | .00037 | .00036 | .00032 |
| | 35 | 26 | .045 | .058 | .000 | .00024 | .00030 | .00038 |
| | 36 | 27 | .059 | .054 | .000 | .00010 | .00011 | .00048 |
| | 37 | 28 | .055 | .047 | .000 | .00046 | .00022 | .00059 |
| | 38 | 29 | .029 | .000 | .000 | .00034 | .00059 | .00071 |
| | 39 | 30 | .000 | .043 | .000 | .00120 | .00084 | .00079 |
| | 40 | 31 | .020 | .071 | .000 | .00131 | .00097 | .00033 |
| | 41 | 32 | .074 | .141 | .000 | .00146 | .00116 | .00092 |
| | 42 | 33 | .134 | .214 | .000 | .00149 | .00124 | .00101 |
| | 43 | 34 | .195 | .287 | .000 | .00144 | .00120 | .00110 |
| | 44 | 35 | .206 | .301 | .000 | .00143 | .00119 | .00112 |
| | 45 | 36 | .203 | .316 | .014 | .00100 | .00081 | .00148 |

RESPONSE SPECTRUM ANALYSIS NO. 2 (COCY), GLOBAL DISPLACEMENTS AT DISPLACEMENT OUTPUT POINTS (CONT.)

| RUN NAME | DOP NO. | DCP NAME | X DISPL (IN) | Y DISPL (IN) | Z DISPL (IN) | XX ROTN (RAD) | YY ROTN (RAD) | ZZ ROTN (RAD) |
|------------------|------------|-------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| RUN2 (CONTD.) | | | | | | | | |
| | 46 | 37 | .173 | .284 | .017 | .00087 | .00064 | .00194 |
| | 47 | 38 | .173 | .201 | .009 | .00076 | .00056 | .00230 |
| | 48 | 39 | .173 | .150 | .023 | .00070 | .00051 | .00231 |
| | 49 | 40 | .163 | .125 | .025 | .00057 | .00041 | .00196 |
| | 50 | 41 | .115 | .077 | .018 | .00058 | .00035 | .00191 |
| | 51 | 42 | .066 | .028 | .012 | .00048 | .00028 | .00130 |
| | 52 | 43 | .055 | .019 | .011 | .00042 | .00037 | .00150 |
| | 53 | 44 | .044 | .012 | .010 | .00038 | .00035 | .00143 |
| | 54 | 45 | .035 | .007 | .008 | .00036 | .00034 | .00137 |
| | 55 | 46 | .023 | .004 | .006 | .00021 | .00049 | .00074 |
| | 56 | 47 | .000 | .004 | .000 | .00013 | .00047 | .00050 |
| | 57 | 48 | .016 | .004 | .004 | .00034 | .00045 | .00021 |
| | 58 | 49 | .021 | .004 | .004 | .00033 | .00042 | .00033 |
| | 59 | 50 | .019 | .004 | .002 | .00037 | .00040 | .00036 |
| | 60 | 51 | .011 | .002 | .000 | .00014 | .00028 | .00037 |
| | 61 | 52 | .008 | .000 | .000 | .00013 | .00026 | .00037 |
| | 62 | 53 | .000 | .004 | .000 | .00009 | .00016 | .00036 |
| | 63 | 54 | .004 | .006 | .000 | .00032 | .00005 | .00035 |
| | 64 | 55 | .004 | .005 | .000 | .00038 | .00003 | .00034 |
| | 65 | 56 | .002 | .000 | .000 | .00022 | .00006 | .00033 |
| | 66 | 57 | .001 | .004 | .000 | .00026 | .00007 | .00033 |
| | 67 | 58 | .000 | .011 | .001 | .00042 | .00002 | .00035 |
| | 68 | 59 | .000 | .011 | .001 | .00042 | .00001 | .00036 |
| | 69 | 60 | .000 | .011 | .001 | .00042 | .00001 | .00037 |
| | 70 | 61 | .000 | .009 | .001 | .00041 | .00000 | .00012 |
| | 71 | 62 | .000 | .005 | .001 | .00040 | .00001 | .00017 |
| | 72 | 63 | .000 | .000 | .000 | .00040 | .00002 | .00018 |
| MISC. NODES | 73 | 81 | .001 | .011 | .011 | .00042 | .00001 | .00036 |

RESPONSE SPECTRUM ANALYSIS NO. 2 (COCY), ABSOLUTE GLOBAL ACCELERATIONS (MULTIPLES OF GRAVITY)

| POINT NAME | X ACCEL | Y ACCEL | Z ACCEL | X-Z ACCEL | X-Y-Z ACCEL |
|---------------|------------|------------|------------|--------------|----------------|
| 1 | .000 | .170 | .000 | .000 | .170 |
| 5 | .078 | .170 | .036 | .086 | .190 |
| 6 | .084 | .170 | .039 | .093 | .193 |
| 7 | .090 | .170 | .045 | .101 | .197 |
| 8 | .070 | .172 | .045 | .083 | .191 |
| 9 | .074 | .174 | .045 | .086 | .194 |
| 10 | .066 | .171 | .040 | .077 | .188 |
| 11 | .060 | .170 | .038 | .071 | .184 |
| 12 | .055 | .170 | .038 | .067 | .183 |
| 13 | .043 | .170 | .037 | .057 | .179 |
| 14 | .038 | .170 | .038 | .053 | .178 |
| 15 | .035 | .170 | .041 | .054 | .178 |
| 16 | .040 | .170 | .047 | .062 | .181 |
| 17 | .051 | .170 | .054 | .074 | .185 |
| 18 | .152 | .170 | .152 | .215 | .274 |
| 19 | .153 | .170 | .161 | .222 | .280 |
| 20 | .153 | .170 | .149 | .214 | .273 |
| 21 | .153 | .170 | .139 | .207 | .268 |
| 22 | .153 | .229 | .116 | .192 | .299 |
| 23 | .157 | .241 | .129 | .204 | .316 |
| 24 | .126 | .248 | .102 | .152 | .296 |
| 25 | .112 | .248 | .001 | .112 | .272 |
| 77 | .000 | .170 | .000 | .000 | .170 |
| 76 | .000 | .282 | .088 | .088 | .296 |
| 75 | .001 | .393 | .139 | .139 | .417 |
| 74 | .001 | .380 | .133 | .133 | .403 |
| 73 | .002 | .309 | .100 | .100 | .325 |
| 72 | .002 | .219 | .052 | .052 | .225 |
| 71 | .002 | .170 | .000 | .002 | .170 |
| 70 | .002 | .264 | .064 | .064 | .271 |
| 69 | .003 | .283 | .071 | .071 | .291 |
| 68 | .053 | .309 | .024 | .059 | .314 |
| 67 | .078 | .278 | .001 | .078 | .289 |
| 25 | .112 | .248 | .001 | .112 | .272 |
| 26 | .145 | .320 | .001 | .145 | .352 |
| 27 | .167 | .339 | .001 | .167 | .373 |
| 28 | .144 | .246 | .000 | .144 | .295 |
| 29 | .063 | .170 | .000 | .063 | .181 |
| 30 | .000 | .193 | .000 | .000 | .193 |
| 31 | .035 | .219 | .000 | .035 | .222 |
| 32 | .119 | .299 | .000 | .119 | .313 |
| 33 | .209 | .376 | .000 | .208 | .429 |
| 34 | .299 | .485 | .000 | .299 | .509 |
| 35 | .316 | .508 | .001 | .316 | .528 |
| 36 | .316 | .535 | .034 | .317 | .522 |
| 37 | .290 | .477 | .060 | .296 | .561 |
| 38 | .290 | .349 | .067 | .297 | .459 |
| 39 | .290 | .291 | .092 | .304 | .420 |

RESPONSE SPECTRUM ANALYSIS NO. 2 (COCY), ABSOLUTE GLOBAL ACCELERATIONS (MULTIPLES OF GRAVITY) (CONTD.)

| POINT NAME | X ACCEL | Y ACCEL | Z ACCEL | X-Z ACCEL | X-Y-Z ACCEL |
|---------------|------------|------------|------------|--------------|----------------|
| 40 | .278 | .267 | .097 | .294 | .397 |
| 41 | .217 | .225 | .081 | .232 | .323 |
| 42 | .155 | .197 | .057 | .155 | .257 |
| 43 | .137 | .192 | .049 | .146 | .241 |
| 44 | .112 | .187 | .038 | .118 | .221 |
| 45 | .092 | .184 | .031 | .097 | .208 |
| 46 | .063 | .183 | .021 | .056 | .195 |
| 47 | .000 | .183 | .000 | .000 | .133 |
| 48 | .051 | .183 | .020 | .055 | .191 |
| 49 | .074 | .183 | .031 | .080 | .199 |
| 50 | .074 | .182 | .025 | .079 | .199 |
| 51 | .047 | .172 | .000 | .047 | .179 |
| 52 | .034 | .170 | .000 | .034 | .173 |
| 53 | .000 | .188 | .000 | .000 | .188 |
| 54 | .015 | .211 | .001 | .015 | .212 |
| 55 | .019 | .200 | .002 | .019 | .201 |
| 56 | .015 | .170 | .003 | .015 | .170 |
| 57 | .012 | .185 | .003 | .013 | .186 |
| 58 | .003 | .280 | .021 | .021 | .280 |
| 59 | .005 | .283 | .032 | .032 | .285 |
| 60 | .007 | .284 | .041 | .042 | .287 |
| 61 | .008 | .258 | .053 | .053 | .263 |
| 62 | .005 | .203 | .035 | .036 | .206 |
| 63 | .000 | .170 | .000 | .000 | .170 |
| 81 | .033 | .283 | .226 | .228 | .363 |

RESPONSE SPECTRUM ANALYSIS NO. 2 (CUCY). FORCES, MOMENTS AND STRESSES ALONG PIPE RUNS

| RUN NAME | SOP NO. | DCP NAME | COMP TYPE | AXIAL FORCE (LB) | Y FORCE (LB) | Z FORCE (LB) | TORS MOMENT (LB.IN) | YY MOMENT (LB.IN) | ZZ MOMENT (LB.IN) | M/Z (PSI) | I4/Z (PSI) |
|-------------|------------|-------------|--------------|------------------------|--------------------|--------------------|---------------------------|-------------------------|-------------------------|--------------|---------------|
| RUN1 | | | | | | | | | | | |
| | 1 | 1 | STRP | 33.85 | 31.10 | 52.86 | .00 | .00 | .00 | .00 | .00 |
| | 2L | 5 | STRP | 33.85 | 31.10 | 52.86 | .00 | 2748.39 | 1617.16 | 67.78 | 67.78 |
| | 2R | 5 | STRP | 33.82 | 13.16 | 45.89 | .00 | 2748.39 | 1617.16 | 189.89 | 189.89 |
| | 3L | 5 | STRP | 33.82 | 13.16 | 45.89 | .00 | 2931.06 | 1665.56 | 200.75 | 200.75 |
| | 3R | 6 | BELB | 33.82 | 44.42 | 10.11 | .00 | 1665.55 | 2931.06 | 200.75 | 490.06 |
| | 4L | 7 | BELB | 44.42 | 33.82 | 10.11 | 1761.03 | 121.27 | 3144.44 | 214.73 | 524.19 |
| | 4R | 7 | STRP | 40.15 | 33.85 | 10.57 | 1761.03 | 121.27 | 3144.44 | 214.73 | 214.73 |
| | 5L | 8 | STRP | 40.15 | 33.85 | 10.57 | 1761.03 | 509.68 | 2214.21 | 171.18 | 171.18 |
| | 5R | 8 | STRP | 35.32 | 33.00 | 20.40 | 1761.03 | 509.68 | 2214.21 | 171.18 | 171.18 |
| | 6L | 9 | STRP | 35.32 | 33.00 | 20.40 | 1761.03 | 1317.87 | 2035.81 | 178.47 | 178.47 |
| | 6R | 9 | BELB | 33.19 | 30.74 | 29.59 | 1761.03 | 1622.74 | 1902.22 | 178.47 | 435.67 |
| | 7L | 10 | BELB | 30.74 | 33.19 | 29.59 | 1825.75 | 1617.25 | 1830.06 | 183.75 | 448.54 |
| | 7R | 10 | STRP | 32.49 | 30.33 | 32.31 | 1825.75 | 1890.06 | 1617.25 | 183.75 | 183.75 |
| | 8L | 11 | STRP | 32.49 | 30.33 | 32.31 | 1825.75 | 1881.01 | 1569.24 | 181.93 | 181.93 |
| | 8R | 11 | STRP | 33.12 | 30.55 | 31.93 | 1825.75 | 1881.01 | 1569.24 | 181.93 | 181.93 |
| | 9L | 12 | STRP | 33.12 | 30.55 | 31.93 | 1825.75 | 1881.13 | 1541.49 | 181.09 | 181.09 |
| | 9R | 12 | BELB | 34.09 | 30.82 | 31.28 | 1825.75 | 1881.13 | 1541.49 | 181.09 | 442.07 |
| | 10L | 13 | BELB | 32.47 | 32.52 | 31.28 | 1582.53 | 2105.67 | 1401.59 | 177.68 | 433.73 |
| | 10R | 13 | STRP | 32.48 | 33.46 | 30.27 | 1582.53 | 2105.67 | 1401.59 | 177.68 | 177.68 |
| | 11L | 14 | STRP | 32.48 | 33.46 | 30.27 | 1582.53 | 2123.91 | 1298.03 | 175.65 | 175.65 |
| | 11R | 14 | STRP | 1453.42 | 53.79 | 47.12 | 1582.53 | 2123.91 | 1298.03 | 175.65 | 175.65 |
| | 12L | 15 | STRP | 1453.42 | 53.79 | 47.12 | 1582.53 | 1855.59 | 1204.88 | 161.98 | 161.98 |
| | 12R | 15 | VALV | 1453.40 | 52.75 | 43.58 | 1582.53 | 1855.59 | 1204.88 | N/A | |
| | 13 | 16 | VALV | 1453.40 | 52.75 | 43.58 | 1582.53 | 1666.58 | 1269.00 | N/A | |
| | 14L | 17 | VALV | 1453.34 | 48.62 | 37.56 | 1582.53 | 1478.65 | 1401.17 | N/A | |
| | 14R | 17 | STRP | 1453.27 | 43.75 | 34.18 | 1582.53 | 1478.65 | 1401.17 | 153.61 | 153.61 |
| | 15L | 18 | STRP | 1452.96 | 34.76 | 37.99 | 1582.53 | 2552.10 | 4482.30 | 321.28 | 321.28 |
| | 15R | 18 | STRP | 1452.65 | 99.25 | 35.29 | 1582.53 | 2552.10 | 4482.30 | 321.28 | 321.28 |
| | 16L | 19 | STRP | 1452.65 | 99.25 | 35.29 | 1582.53 | 2314.27 | 4793.62 | 330.18 | 330.18 |
| | 16R | 19 | BELB | 1452.50 | 105.01 | 39.36 | 1582.53 | 2314.27 | 4793.62 | 330.18 | 806.00 |
| | 17L | 20 | BELB | 105.01 | 1452.50 | 39.36 | 2085.37 | 1477.87 | 12463.30 | 757.62 | 1849.43 |
| | 17R | 20 | STRP | 110.05 | 1452.40 | 43.85 | 2085.37 | 1477.87 | 12463.30 | 757.62 | 757.62 |
| | 18L | 21 | STRP | 110.05 | 1452.40 | 43.85 | 2085.37 | 1461.88 | 18613.64 | 1118.74 | 1118.74 |
| | 18R | 21 | STRP | 120.79 | 270.85 | 54.01 | 2085.37 | 1461.88 | 18613.64 | 1118.74 | 1118.74 |
| | 19L | 22 | STRP | 142.65 | 263.62 | 61.04 | 2085.37 | 4681.99 | 3998.16 | 387.09 | 387.09 |
| | 19R | 22 | BELB | 157.20 | 59.96 | 253.90 | 2085.37 | 3998.16 | 4631.99 | 387.09 | 944.93 |
| | 20L | 23 | BELB | 131.16 | 105.37 | 253.90 | 3684.29 | 5283.03 | 5073.16 | 488.23 | 1191.83 |
| | 20R | 23 | BELB | 135.68 | 248.28 | 113.15 | 3684.29 | 5073.16 | 5283.03 | 488.23 | 1191.83 |
| | 21L | 24 | BELB | 248.28 | 135.68 | 113.15 | 5506.23 | 3328.66 | 7950.69 | 604.90 | 1476.65 |
| | 21R | 24 | STRP | 239.37 | 177.50 | 62.97 | 5506.23 | 3919.89 | 7533.19 | 604.90 | 604.90 |
| | 22 | 25 | STRP | 239.37 | 177.50 | 62.97 | 5506.23 | 2760.62 | 9103.42 | 654.52 | 654.52 |

RESPONSE SPECTRUM ANALYSIS NO. 2 (CQCY). FORCES, MOMENTS AND STRESSES ALONG PIPE RUNS (CONTD.)

| RUN NAME | SOP NO. | DCP NAME | COMP TYPE | AXIAL FORCE (LB) | Y FORCE (LB) | Z FORCE (LB) | TORS MOMENT (LB.IN) | YY MOMENT (LB.IN) | ZZ MOMENT (LB.IN) | M/Z (PSI) | I4/Z (PSI) |
|----------|---------|----------|-----------|------------------|--------------|--------------|---------------------|-------------------|-------------------|-----------|------------|
| RUN2 | 23 | 77 | STRP | 318.02 | 290.74 | 111.30 | 0.00 | .00 | .00 | .00 | .00 |
| | 24L | 76 | STRP | 318.02 | 290.74 | 111.30 | 0.00 | 6343.93 | 16572.16 | 377.15 | 377.15 |
| | 24R | 76 | STRP | 317.91 | 175.92 | 56.94 | 0.00 | 6343.93 | 16572.16 | 377.15 | 377.15 |
| | 25L | 75 | STRP | 317.91 | 175.92 | 56.94 | 0.00 | 10117.90 | 26520.78 | 603.30 | 603.30 |
| | 25R | 75 | STRP | 317.68 | 66.17 | 31.64 | 0.00 | 10117.90 | 26520.78 | 603.30 | 603.30 |
| | 26L | 74 | STRP | 317.68 | 66.17 | 31.64 | 0.00 | 10045.27 | 26318.02 | 598.73 | 598.73 |
| | 26R | 74 | STRP | 317.39 | 181.75 | 77.11 | .00 | 10045.27 | 26318.02 | 598.73 | 598.73 |
| | 27L | 73 | STRP | 317.39 | 181.75 | 77.11 | .00 | 8457.31 | 21573.65 | 492.50 | 492.50 |
| | 27R | 73 | STRP | 317.12 | 266.19 | 109.70 | .00 | 8457.31 | 21573.65 | 492.50 | 492.50 |
| | 28L | 72 | STRP | 317.12 | 266.19 | 109.70 | .00 | 7091.54 | 15953.10 | 371.06 | 371.06 |
| | 28R | 72 | STRP | 316.80 | 311.27 | 126.90 | .00 | 7091.54 | 15953.10 | 371.06 | 371.06 |
| | 29L | 71 | STRP | 316.80 | 311.27 | 126.90 | .00 | 7991.16 | 15381.04 | 368.40 | 368.40 |
| | 29R | 71 | STRP | 316.37 | 236.17 | 328.59 | .00 | 7991.16 | 15381.04 | 368.40 | 368.40 |
| | 30L | 70 | STRP | 316.37 | 236.17 | 328.59 | .00 | 9938.70 | 4818.47 | 234.76 | 234.76 |
| | 30R | 70 | STRP | 316.04 | 225.19 | 325.98 | 0.00 | 9938.70 | 4818.47 | 234.76 | 234.76 |
| | 31L | 69 | STRP | 316.04 | 225.19 | 325.98 | 0.00 | 11791.36 | 4063.84 | 235.08 | 235.08 |
| | 31R | 69 | BELB | 315.84 | 357.33 | 158.02 | .00 | 10314.80 | 7011.13 | 265.08 | 717.74 |
| | 32L | 68 | BELB | 357.33 | 315.84 | 168.02 | 12293.44 | 3024.28 | 7368.54 | 316.81 | 857.81 |
| | 32R | 68 | BELB | 352.98 | 178.49 | 314.67 | 12293.44 | 7868.54 | 3024.28 | 316.81 | 857.81 |
| | 33L | 67 | BELB | 324.55 | 226.10 | 314.67 | 6365.93 | 10028.59 | 4737.07 | 271.80 | 735.93 |
| | 33R | 67 | STRP | 324.78 | 237.44 | 310.32 | 6365.93 | 10028.59 | 4737.07 | 271.80 | 271.80 |
| | 34L | 25 | STRP | 324.78 | 237.44 | 310.32 | 6365.93 | 11296.42 | 16913.34 | 452.97 | 452.97 |
| | 34R | 25 | STRP | 274.28 | 344.34 | 284.15 | 12816.58 | 8348.89 | 15309.18 | 459.96 | 459.96 |
| | 35L | 26 | STRP | 274.28 | 344.34 | 284.15 | 12816.58 | 18614.27 | 30430.61 | 805.64 | 805.64 |
| | 35R | 26 | STRP | 274.55 | 282.57 | 235.47 | 12816.58 | 18614.27 | 30430.61 | 805.64 | 805.64 |
| | 36L | 27 | STRP | 274.55 | 282.57 | 235.47 | 12816.58 | 32920.36 | 44934.29 | 1214.86 | 1214.86 |
| | 36R | 27 | STRP | 274.78 | 304.06 | 192.10 | 12816.58 | 32920.36 | 44934.29 | 1214.86 | 1214.86 |
| | 37L | 28 | STRP | 274.78 | 304.06 | 192.10 | 12816.58 | 43567.84 | 56012.35 | 1532.63 | 1532.63 |
| | 37R | 28 | STRP | 274.92 | 355.66 | 186.23 | 12816.58 | 43567.84 | 56012.35 | 1532.63 | 1532.63 |
| | 38L | 29 | STRP | 274.92 | 355.66 | 186.23 | 12816.58 | 51798.96 | 69833.21 | 1867.96 | 1867.96 |
| | 38R | 29 | STRP | 274.98 | 515.20 | 188.53 | 12816.58 | 51798.96 | 69833.21 | 1867.96 | 1867.96 |
| | 39L | 30 | STRP | 274.98 | 515.20 | 188.53 | 12816.58 | 56672.89 | 49556.18 | 1623.11 | 1623.11 |
| | 39R | 30 | STRP | 274.99 | 496.35 | 475.30 | 12816.58 | 56672.89 | 49556.18 | 1623.11 | 1623.11 |
| | 40L | 31 | STRP | 274.99 | 496.35 | 475.30 | 12816.58 | 46268.59 | 38955.29 | 1314.08 | 1314.08 |
| | 40R | 31 | STRP | 93.94 | 461.74 | 465.58 | 12816.58 | 46268.59 | 38955.29 | 1314.08 | 1314.08 |
| | 41L | 32 | STRP | 93.94 | 461.74 | 465.58 | 12816.58 | 23393.05 | 17244.05 | 675.09 | 675.09 |
| | 41R | 32 | STRP | 93.89 | 368.33 | 415.70 | 12816.58 | 23393.05 | 17244.05 | 675.09 | 675.09 |
| | 42L | 33 | STRP | 93.89 | 368.33 | 415.70 | 12816.58 | 4202.91 | 6454.95 | 317.82 | 317.82 |
| | 42R | 33 | STRP | 93.79 | 228.50 | 325.73 | 12816.58 | 4202.91 | 6454.95 | 317.82 | 317.82 |
| | 43L | 34 | STRP | 93.79 | 228.50 | 325.73 | 12816.58 | 13782.75 | 13706.10 | 494.86 | 494.86 |
| | 43R | 34 | STRP | 93.70 | 125.53 | 248.79 | 12816.58 | 13782.75 | 13706.10 | 494.86 | 494.86 |
| | 44L | 35 | STRP | 93.70 | 125.53 | 248.79 | 12816.58 | 16059.22 | 14518.84 | 534.73 | 534.73 |
| | 44R | 35 | BELB | 93.65 | 95.54 | 211.19 | 12816.58 | 16059.22 | 14518.84 | 534.73 | 1897.17 |
| | 45L | 36 | BELB | 95.54 | 93.65 | 211.19 | 18485.97 | 15195.37 | 15576.07 | 608.02 | 2157.24 |
| | 45R | 36 | BELB | 129.15 | 154.77 | 38.78 | 18485.97 | 15676.07 | 15195.37 | 608.02 | 1646.28 |
| | 46L | 37 | BELB | 154.77 | 129.15 | 38.78 | 16826.77 | 17382.53 | 16307.61 | 620.11 | 1679.01 |

RESPONSE SPECTRUM ANALYSIS NO. 2 (COCY). FORCES, MOMENTS AND STRESSES ALONG PIPE RUNS (CONTD.)

| RUN NAME | SOP NO. | DCP NAME | COMP TYPE | AXIAL FORCE (LB) | Y FORCE (LB) | Z FORCE (LB) | TORS MOMENT (LB.IN) | YY MOMENT (LB.IN) | ZZ MOMENT (LB.IN) | M/Z (PSI) | Y/Z (PSI) |
|------------------|------------|-------------|--------------|------------------------|--------------------|--------------------|---------------------------|-------------------------|-------------------------|--------------|--------------|
| RUN2 (CONTD.) | | | | | | | | | | | |
| 46R | 37 | STRP | | 117.21 | 252.33 | 76.24 | 16826.77 | 17382.53 | 16307.61 | 620.11 | 620.11 |
| 47L | 38 | STRP | | 117.21 | 252.33 | 76.24 | 16826.77 | 15411.39 | 9652.90 | 526.58 | 526.58 |
| 47R | 38 | STRP | | 145.12 | 337.60 | 66.28 | 16826.77 | 15411.39 | 9652.90 | 526.58 | 526.58 |
| 48L | 39 | STRP | | 145.12 | 337.60 | 66.28 | 16826.77 | 14214.86 | 9812.64 | 512.53 | 512.53 |
| 48R | 39 | BELB | | 182.19 | 373.45 | 64.64 | 16826.77 | 14214.86 | 9312.64 | 512.53 | 1387.71 |
| 49L | 40 | BELB | | 287.07 | 300.42 | 64.64 | 21323.92 | 4763.89 | 11924.56 | 529.05 | 1432.46 |
| 49R | 40 | STRP | | 294.26 | 371.19 | 69.32 | 21323.92 | 4763.89 | 11924.56 | 529.05 | 529.05 |
| 50L | 41 | STRP | | 294.26 | 371.19 | 59.32 | 21323.92 | 6498.14 | 20319.74 | 641.10 | 641.10 |
| 50R | 41 | STRP | | 307.39 | 444.80 | 82.22 | 21323.92 | 6498.14 | 20319.74 | 641.10 | 641.10 |
| 51L | 42 | STRP | | 307.39 | 444.80 | 82.22 | 21323.92 | 8688.85 | 34911.04 | 888.87 | 888.87 |
| 51R | 42 | BELB | | 317.42 | 213.71 | 429.41 | 21323.92 | 31105.79 | 18075.01 | 888.87 | 2406.70 |
| 52L | 43 | BELB | | 322.76 | 205.56 | 429.41 | 35300.38 | 19392.85 | 19312.91 | 949.37 | 2570.52 |
| 52R | 43 | STRP | | 324.64 | 387.18 | 299.24 | 35300.38 | 23953.71 | 13239.74 | 949.37 | 949.37 |
| 53L | 44 | STRP | | 324.64 | 387.18 | 299.24 | 35300.38 | 26382.13 | 17983.14 | 1011.65 | 1011.65 |
| 53R | 44 | STRP | | 326.69 | 393.08 | 309.24 | 35300.38 | 26382.13 | 17983.14 | 1011.65 | 1011.65 |
| 54L | 45 | STRP | | 326.69 | 393.08 | 309.24 | 35300.38 | 28666.33 | 21937.30 | 1073.56 | 1073.56 |
| 54R | 45 | BELB | | 328.95 | 397.76 | 317.59 | 35300.38 | 28666.33 | 21987.30 | 1073.56 | 2906.77 |
| 55L | 46 | BELB | | 466.00 | 221.95 | 317.59 | 4421.83 | 48121.71 | 25629.05 | 1162.60 | 3147.87 |
| 55R | 46 | STRP | | 470.63 | 388.53 | 102.77 | 4421.83 | 16155.55 | 52072.51 | 1162.60 | 1162.60 |
| 56L | 47 | STRP | | 470.63 | 388.53 | 102.77 | 4421.83 | 19622.74 | 62056.23 | 1386.51 | 1386.51 |
| 56R | 47 | STRP | | 479.24 | 388.91 | 122.47 | 4421.83 | 19622.74 | 62056.23 | 1386.51 | 1386.51 |
| 57L | 48 | STRP | | 479.24 | 388.91 | 122.47 | 4421.83 | 14512.48 | 44091.17 | 991.04 | 991.04 |
| 57R | 48 | STRP | | 490.32 | 401.02 | 122.70 | 4421.83 | 14512.48 | 44091.17 | 991.04 | 991.04 |
| 58L | 49 | STRP | | 490.32 | 401.02 | 122.70 | 4421.83 | 9831.50 | 25547.30 | 589.35 | 589.35 |
| 58R | 49 | STRP | | 502.74 | 417.87 | 121.40 | 4421.83 | 9831.50 | 25547.30 | 589.35 | 589.35 |
| 59L | 50 | STRP | | 502.74 | 417.87 | 121.40 | 4421.83 | 6450.93 | 6218.04 | 212.36 | 212.36 |
| 59R | 50 | BELB | | 513.61 | 119.75 | 431.35 | 4421.83 | 6218.04 | 6450.93 | 212.36 | 574.99 |
| 60L | 51 | BELB | | 119.75 | 513.61 | 431.35 | 1691.07 | 11026.68 | 5840.54 | 267.63 | 724.64 |
| 60R | 51 | STRP | | 119.76 | 516.30 | 435.94 | 1691.07 | 11026.68 | 5840.54 | 267.63 | 267.63 |
| 61L | 52 | STRP | | 119.76 | 516.30 | 435.94 | 1691.07 | 16062.39 | 11325.71 | 419.27 | 419.27 |
| 61R | 52 | STRP | | 119.77 | 294.79 | 439.94 | 1691.07 | 16062.39 | 11325.71 | 419.27 | 419.27 |
| 62L | 53 | STRP | | 119.77 | 294.79 | 439.94 | 1691.07 | 31682.24 | 13904.18 | 736.25 | 736.25 |
| 62R | 53 | STRP | | 307.84 | 269.72 | 255.68 | 1691.07 | 31682.24 | 13904.18 | 736.25 | 736.25 |
| 63L | 54 | STRP | | 307.84 | 269.72 | 255.68 | 1691.07 | 22515.29 | 21047.20 | 656.06 | 656.06 |
| 63R | 54 | STRP | | 307.55 | 231.00 | 257.86 | 1691.07 | 22515.29 | 21047.20 | 656.06 | 656.06 |
| 64L | 55 | STRP | | 307.55 | 231.00 | 257.86 | 1691.07 | 13305.53 | 28192.08 | 663.36 | 663.36 |
| 64R | 55 | STRP | | 306.96 | 198.77 | 260.07 | 1691.07 | 13305.53 | 28192.08 | 663.36 | 663.36 |
| 65L | 56 | STRP | | 306.96 | 198.77 | 260.07 | 1691.07 | 4272.35 | 34549.84 | 740.79 | 740.79 |
| 65R | 56 | STRP | | 306.34 | 979.25 | 260.77 | 1691.07 | 4272.35 | 34549.84 | 740.79 | 740.79 |
| 66L | 57 | STRP | | 306.34 | 979.25 | 260.77 | 1691.07 | 1912.15 | 20388.82 | 436.73 | 436.73 |
| 66R | 57 | BELB | | 305.78 | 260.99 | 965.27 | 1691.07 | 20388.82 | 1912.15 | 436.73 | 1182.49 |
| 67L | 58 | BELB | | 271.61 | 296.39 | 965.27 | 5571.07 | 14362.16 | 4452.55 | 340.82 | 922.80 |
| 67R | 58 | VALV | | 271.75 | 769.19 | 280.65 | 5575.45 | 7547.80 | 14360.47 | N/A | |
| 68 | 59 | VALV | | 271.75 | 769.19 | 280.65 | 5575.45 | 7547.80 | 25849.25 | N/A | |
| 69L | 60 | VALV | | 272.69 | 193.02 | 55.19 | 7.14 | 7706.22 | 28324.12 | N/A | |

RESPONSE SPECTRUM ANALYSIS NO. 2 (COCY). FORCES, MOMENTS AND STRESSES ALONG PIPE RUNS (CONTO.)

| RUN NAME | SOP NO. | DCP NAME | COMP TYPE | AXIAL FORCE (LB) | Y FORCE (LB) | Z FORCE (LB) | TORS MOMENT (LB.IN) | YY MOMENT (LB.IN) | ZZ MOMENT (LB.IN) | M/Z (PSI) | I4/Z (PSI) |
|------------------|------------|-------------|--------------|------------------------|--------------------|--------------------|---------------------------|-------------------------|-------------------------|--------------|---------------|
| RUN2 (CONTO.) | | | | | | | | | | | |
| | 69R | 60 | STRP | 272.83 | 72.97 | 35.22 | .69 | 7706.22 | 28924.12 | 243.56 | 243.56 |
| | 70L | 61 | STRP | 272.83 | 72.97 | 35.22 | .69 | 6608.19 | 25455.00 | 214.68 | 214.68 |
| | 70R | 61 | STRP | 272.89 | 228.78 | 59.07 | .06 | 6608.19 | 25455.00 | 214.68 | 214.68 |
| | 71L | 62 | STRP | 272.89 | 228.78 | 59.07 | .06 | 3896.36 | 14817.68 | 125.07 | 125.07 |
| | 71R | 62 | STRP | 272.93 | 318.64 | 83.79 | .00 | 3896.36 | 14817.68 | 125.07 | 125.07 |
| | 72 | 63 | STRP | 272.93 | 318.64 | 83.79 | .00 | .00 | .00 | .00 | .00 |

RESPONSE SPECTRUM ANALYSIS NO. 2 (COCY), SUPPORT FORCES AND DEFORMATIONS

| SUPP NAME | SUPP LOCN | SUPP TYPE | DIRN CODE | RESULT TYPE | RESULT UNIT | AXIS TYPE | X-AXIS | Y-AXIS | Z-AXIS |
|--------------|--------------|--------------|--------------|----------------------|----------------------|----------------------|------------------------|----------------------|-----------------------|
| 1X | 1 | SNGL | X | FORC DISP | (LB) (IN) | GLBL GLBL | 31.10 .000 | 0.00 .000 | 0.00 .000 |
| 1Y | 1 | SNGL | Y | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .000 | 33.88 .000 | 0.00 .000 |
| 1Z | 1 | SNGL | Z | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .000 | 0.00 .000 | 52.86 .000 |
| 77X | 77 | SNGL | X | FORC DISP | (LB) (IN) | GLBL GLBL | 318.02 .000 | 0.00 .000 | 0.00 .000 |
| 77Y | 77 | SNGL | Y | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .000 | 290.74 .000 | 0.00 .000 |
| 77Z | 77 | SNGL | Z | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .000 | 0.00 .000 | 111.30 .000 |
| 63X | 63 | SNGL | X | FORC DISP | (LB) (IN) | GLBL GLBL | 269.52 .000 | 0.00 .000 | 0.00 .000 |
| 63Y | 63 | SNGL | Y | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .000 | 318.65 .000 | 0.00 .000 |
| 63Z | 63 | SNGL | Z | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .000 | 0.00 .000 | 94.18 .000 |
| 14XZ | 14 | SNGL | INCL | FORC FORC DISP | (LB) (LB) (IN) | LOCL GLBL LUCL | 52.17 36.89 .000 | 0.00 0.00 .000 | 36.89 0.00 .023 |
| 14Y | 14 | SNGL | Y | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .017 | 1470.76 .000 | 0.00 .017 |

RESPONSE SPECTRUM ANALYSIS NO. 2 (COCY), SUPPORT FORCES AND DEFORMATIONS (CONTD.)

| SUPP NAME | SUPP LOCN | SUPP TYPE | DIRN CODE | RESULT TYPE | RESULT UNIT | AXIS TYPE | X-AXIS | Y-AXIS | Z-AXIS |
|--------------|-----------|-----------|-----------|-------------|-------------|-----------|--------|---------|--------|
| 14Y (CONTD.) | | | | | | | | | |
| 18XZ | 18 | SNGL | INCL | FORC | (LB) | LOCL | 102.96 | | |
| | | | | FORC | (LB) | GLBL | 72.80 | 0.00 | 72.80 |
| | | | | DISP | (IN) | LOCL | .000 | .001 | .040 |
| 21Y | 21 | SNGL | Y | FORC | (LB) | GLBL | 0.00 | 1719.94 | 0.00 |
| | | | | DISP | (IN) | GLBL | .029 | .000 | .027 |
| 29Y | 29 | SNGL | Y | FORC | (LB) | GLBL | 0.00 | 775.44 | 0.00 |
| | | | | DISP | (IN) | GLBL | .029 | .000 | .000 |
| 30X | 30 | SNGL | X | FORC | (LB) | GLBL | 610.54 | 0.00 | 0.00 |
| | | | | DISP | (IN) | GLBL | .000 | .043 | .000 |
| 31Z | 31 | SNGL | Z | FORC | (LB) | GLBL | 0.00 | 0.00 | 345.73 |
| | | | | DISP | (IN) | GLBL | .020 | .071 | .000 |
| 47X | 47 | SNGL | X | FORC | (LB) | GLBL | 726.20 | 0.00 | 0.00 |
| | | | | DISP | (IN) | GLBL | .000 | .004 | .000 |
| 47Z | 47 | SNGL | Z | FORC | (LB) | GLBL | 0.00 | 0.00 | 221.84 |
| | | | | DISP | (IN) | GLBL | .000 | .004 | .000 |
| 52Y | 52 | SNGL | Y | FORC | (LB) | GLBL | 0.00 | 550.95 | 0.00 |
| | | | | DISP | (IN) | GLBL | .008 | .000 | .000 |
| 53X | 53 | SNGL | X | FORC | (LB) | GLBL | 693.77 | 0.00 | 0.00 |
| | | | | DISP | (IN) | GLBL | .000 | .004 | .000 |
| 53Z | 53 | SNGL | Z | FORC | (LB) | GLBL | 0.00 | 0.00 | 276.44 |
| | | | | DISP | (IN) | GLBL | .000 | .004 | .000 |

RESPONSE SPECTRUM ANALYSIS NO. 2 (COCY), SUPPORT FORCES AND DEFORMATIONS (CONTO.)

| SUPP NAME | SUPP LOCN | SUPP TYPE | DIRN CODE | RESULT TYPE | RESULT UNIT | AXIS TYPE | X-AXIS | Y-AXIS | Z-AXIS |
|-----------------|--------------|--------------|--------------|----------------|----------------|--------------|--------------|-----------------|----------------|
| 53Z (CONTO.) | | | | | | | | | |
| 56Y | 56 | SNGL | Y | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .002 | 1162.70 .000 | 0.00 .000 |
| 71Y | 71 | SNGL | Y | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .000 | 425.31 .000 | 0.00 .000 |
| 71Z | 71 | SNGL | Z | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .000 | 0.00 .000 | 370.76 .000 |

RESPONSE SPECTRUM ANALYSIS NO. 3

Z RESPONSE

RESULTS SET NAME (INERTIA ONLY) = CQCZ

EXCITATION OPTION = SMPL (SIMPLE EXCITATION)

RESULTS SET NAME (INERT + ANCH) = (NO ANCHOR MOVEMENTS)

MISSING MASS OPTION = MISM (CORRECTION APPLIED)

MODE COMBINATION OPTION = MCQC (CQC METHOD)

DAMPING RATIO (ALL MODES) = 0.000

ACCELERATIONS CODE = (NO ACCELERATION POINTS)

ACCELERATION CUT-OFF (G) = 0.00

NO. OF NEW SUPPORT LEVELS = 0

RESPONSE SPECTRA

| | | | |
|------------|------------|------------|--------------|
| X SPECTRUM | Y SPECTRUM | Z SPECTRUM | SCALE FACTOR |
| | | HORZ | 1.000 |

CQC COMBINATION CASE = WHITE NOISE

RESPONSE SPECTRUM ANALYSIS NO. 3 (CQCZ), FORCES AND MOMENTS IN LOCAL COORDINATES

(MISC. MEMB. ONLY)

| RUN GROUP | SDP MMB | DCP NAME | AXIAL FORCE (LB) | Y FORCE (LB) | Z FORCE (LB) | XX MOMENT (LB.IN) | YY MOMENT (LB.IN) | ZZ MOMENT (LB.IN) |
|--------------|------------|-------------|------------------------|--------------------|--------------------|-------------------------|-------------------------|-------------------------|
| MISC | OP1 | 59 | 143.27 | 116.42 | 450.89 | 0.00 | 10821.43 | 2794.09 |
| | | 81 | 143.27 | 116.42 | 450.89 | 0.00 | .00 | .00 |

RESPONSE SPECTRUM ANALYSIS NO. 3 (CQCZ), GLOBAL DISPLACEMENTS AT DISPLACEMENT OUTPUT POINTS

| RUN NAME | DUP NO. | DCP NAME | X DISPL (IN) | Y DISPL (IN) | Z DISPL (IN) | XX ROTN (RAD) | YY ROTN (RAD) | ZZ ROTN (RAD) |
|----------|---------|----------|--------------|--------------|--------------|---------------|---------------|---------------|
| RUN1 | | | | | | | | |
| | 1 | 1 | .000 | .000 | .000 | .00831 | .00579 | .00048 |
| | 2 | 5 | .025 | .000 | .429 | .00834 | .00579 | .00049 |
| | 3 | 6 | .027 | .000 | .461 | .00787 | .00579 | .00050 |
| | 4 | 7 | .054 | .042 | .526 | .00103 | .00550 | .00036 |
| | 5 | 8 | .293 | .045 | .526 | .00074 | .00535 | .00122 |
| | 6 | 9 | .543 | .017 | .526 | .00154 | .00505 | .00152 |
| | 7 | 10 | .582 | .024 | .545 | .00235 | .00385 | .00235 |
| | 8 | 11 | .574 | .016 | .550 | .00238 | .00379 | .00241 |
| | 9 | 12 | .568 | .010 | .554 | .00241 | .00375 | .00245 |
| | 10 | 13 | .543 | .000 | .542 | .00323 | .00329 | .00332 |
| | 11 | 14 | .526 | .000 | .526 | .00330 | .00321 | .00339 |
| | 12 | 15 | .493 | .000 | .493 | .00343 | .00304 | .00350 |
| | 13 | 16 | .463 | .000 | .465 | .00350 | .00296 | .00356 |
| | 14 | 17 | .434 | .000 | .436 | .00356 | .00288 | .00351 |
| | 15 | 18 | .023 | .002 | .023 | .00369 | .00087 | .00256 |
| | 16 | 19 | .010 | .002 | .057 | .00356 | .00070 | .00239 |
| | 17 | 20 | .019 | .001 | .091 | .00219 | .00071 | .00025 |
| | 18 | 21 | .019 | .000 | .088 | .00213 | .00076 | .00025 |
| | 19 | 22 | .019 | .014 | .007 | .00105 | .00104 | .00016 |
| | 20 | 23 | .017 | .018 | .003 | .00085 | .00071 | .00012 |
| | 21 | 24 | .014 | .022 | .002 | .00014 | .00046 | .00028 |
| | 22 | 25 | .019 | .022 | .000 | .00008 | .00018 | .00025 |
| RUN2 | | | | | | | | |
| | 23 | 77 | .000 | .000 | .000 | .00022 | .00024 | .00011 |
| | 24 | 76 | .000 | .006 | .013 | .00022 | .00018 | .00009 |
| | 25 | 75 | .000 | .010 | .020 | .00022 | .00004 | .00004 |
| | 26 | 74 | .000 | .011 | .017 | .00022 | .00011 | .00003 |
| | 27 | 73 | .000 | .009 | .012 | .00022 | .00017 | .00008 |
| | 28 | 72 | .000 | .005 | .005 | .00022 | .00017 | .00012 |
| | 29 | 71 | .000 | .000 | .000 | .00022 | .00010 | .00017 |
| | 30 | 70 | .000 | .010 | .003 | .00022 | .00004 | .00021 |
| | 31 | 69 | .000 | .011 | .003 | .00022 | .00004 | .00021 |
| | 32 | 68 | .004 | .017 | .001 | .00016 | .00015 | .00024 |
| | 33 | 67 | .008 | .018 | .000 | .00011 | .00018 | .00025 |
| | 34 | 25 | .019 | .022 | .000 | .00008 | .00018 | .00025 |
| | 35 | 26 | .025 | .022 | .000 | .00007 | .00007 | .00024 |
| | 36 | 27 | .025 | .018 | .000 | .00010 | .00008 | .00024 |
| | 37 | 28 | .018 | .011 | .000 | .00014 | .00014 | .00024 |
| | 38 | 29 | .007 | .000 | .000 | .00017 | .00017 | .00024 |
| | 39 | 30 | .000 | .008 | .000 | .00020 | .00017 | .00024 |
| | 40 | 31 | .004 | .012 | .000 | .00021 | .00018 | .00024 |
| | 41 | 32 | .013 | .023 | .000 | .00023 | .00019 | .00025 |
| | 42 | 33 | .022 | .035 | .000 | .00024 | .00020 | .00026 |
| | 43 | 34 | .031 | .046 | .000 | .00024 | .00021 | .00027 |
| | 44 | 35 | .033 | .048 | .000 | .00023 | .00021 | .00027 |
| | 45 | 36 | .033 | .051 | .002 | .00017 | .00027 | .00028 |

RESPONSE SPECTRUM ANALYSIS NO. 3 (CQCZ), GLOBAL DISPLACEMENTS AT DISPLACEMENT OUTPUT POINTS (CONT.)

| RUN NAME | DOP NO. | DCP NAME | X DISPL (IN) | Y DISPL (IN) | Z DISPL (IN) | XX ROTN (RAD) | YY ROTN (RAD) | ZZ ROTN (RAD) |
|-----------------|------------|-------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| RUN2 (CONT.) | | | | | | | | |
| | 46 | 37 | .029 | .046 | .006 | .00016 | .00032 | .00034 |
| | 47 | 38 | .029 | .032 | .018 | .00016 | .00031 | .00034 |
| | 48 | 39 | .029 | .025 | .025 | .00018 | .00029 | .00034 |
| | 49 | 40 | .027 | .021 | .027 | .00024 | .00013 | .00031 |
| | 50 | 41 | .019 | .014 | .023 | .00026 | .00010 | .00031 |
| | 51 | 42 | .012 | .007 | .017 | .00028 | .00008 | .00029 |
| | 52 | 43 | .010 | .006 | .015 | .00031 | .00010 | .00025 |
| | 53 | 44 | .008 | .004 | .012 | .00031 | .00011 | .00024 |
| | 54 | 45 | .007 | .003 | .010 | .00030 | .00011 | .00023 |
| | 55 | 46 | .005 | .003 | .007 | .00021 | .00012 | .00015 |
| | 56 | 47 | .000 | .003 | .000 | .00014 | .00012 | .00012 |
| | 57 | 48 | .005 | .003 | .004 | .00034 | .00012 | .00038 |
| | 58 | 49 | .008 | .003 | .004 | .00034 | .00012 | .00035 |
| | 59 | 50 | .008 | .003 | .001 | .00037 | .00013 | .00033 |
| | 60 | 51 | .005 | .001 | .000 | .00008 | .00013 | .00037 |
| | 61 | 52 | .004 | .000 | .000 | .00007 | .00012 | .00037 |
| | 62 | 53 | .003 | .002 | .000 | .00005 | .00008 | .00039 |
| | 63 | 54 | .002 | .003 | .000 | .00001 | .00003 | .00010 |
| | 64 | 55 | .002 | .003 | .000 | .00005 | .00002 | .00011 |
| | 65 | 56 | .002 | .000 | .000 | .00011 | .00003 | .00012 |
| | 66 | 57 | .001 | .002 | .000 | .00014 | .00004 | .00013 |
| | 67 | 58 | .000 | .006 | .002 | .00025 | .00008 | .00036 |
| | 68 | 59 | .001 | .006 | .003 | .00026 | .00008 | .00036 |
| | 69 | 60 | .001 | .006 | .004 | .00026 | .00006 | .00036 |
| | 70 | 61 | .001 | .005 | .006 | .00025 | .00001 | .00037 |
| | 71 | 62 | .001 | .003 | .004 | .00025 | .00007 | .00039 |
| | 72 | 63 | .000 | .000 | .000 | .00025 | .00009 | .00010 |
| MISC. NODES | 73 | 81 | .002 | .006 | .009 | .00026 | .00008 | .00036 |

RESPONSE SPECTRUM ANALYSIS NO. 3 (COZ), ABSOLUTE GLOBAL ACCELERATIONS (MULTIPLES OF GRAVITY)

| POINT NAME | X ACCEL | Y ACCEL | Z ACCEL | X-Z ACCEL | X-Y-Z ACCEL |
|---------------|------------|------------|------------|--------------|----------------|
| 1 | .000 | .000 | .423 | .423 | .423 |
| 5 | .105 | .000 | .997 | 1.003 | 1.003 |
| 6 | .113 | .000 | 1.059 | 1.055 | 1.065 |
| 7 | .153 | .090 | 1.187 | 1.197 | 1.200 |
| 8 | .619 | .103 | 1.187 | 1.339 | 1.343 |
| 9 | 1.142 | .058 | 1.188 | 1.647 | 1.648 |
| 10 | 1.224 | .055 | 1.222 | 1.729 | 1.730 |
| 11 | 1.206 | .035 | 1.231 | 1.723 | 1.724 |
| 12 | 1.193 | .022 | 1.238 | 1.719 | 1.719 |
| 13 | 1.141 | .000 | 1.215 | 1.657 | 1.667 |
| 14 | 1.105 | .000 | 1.183 | 1.619 | 1.619 |
| 15 | 1.035 | .000 | 1.120 | 1.525 | 1.525 |
| 16 | .974 | .001 | 1.066 | 1.444 | 1.444 |
| 17 | .913 | .001 | 1.011 | 1.362 | 1.362 |
| 18 | .137 | .005 | .444 | .465 | .465 |
| 19 | .127 | .005 | .461 | .478 | .478 |
| 20 | .130 | .003 | .485 | .502 | .502 |
| 21 | .130 | .000 | .481 | .498 | .498 |
| 22 | .129 | .050 | .426 | .445 | .449 |
| 23 | .130 | .069 | .426 | .445 | .450 |
| 24 | .100 | .081 | .424 | .436 | .443 |
| 25 | .097 | .080 | .423 | .433 | .441 |
| 77 | .000 | .000 | .423 | .423 | .423 |
| 76 | .000 | .079 | .528 | .528 | .534 |
| 75 | .001 | .121 | .639 | .639 | .651 |
| 74 | .001 | .109 | .598 | .598 | .608 |
| 73 | .002 | .080 | .513 | .513 | .519 |
| 72 | .002 | .041 | .442 | .442 | .444 |
| 71 | .002 | .000 | .423 | .423 | .423 |
| 70 | .003 | .066 | .425 | .425 | .431 |
| 59 | .003 | .074 | .426 | .426 | .432 |
| 68 | .028 | .096 | .423 | .424 | .434 |
| 67 | .049 | .094 | .423 | .425 | .436 |
| 25 | .097 | .030 | .423 | .433 | .441 |
| 26 | .109 | .104 | .423 | .436 | .449 |
| 27 | .111 | .120 | .423 | .437 | .453 |
| 28 | .118 | .081 | .423 | .439 | .446 |
| 29 | .064 | .000 | .423 | .427 | .427 |
| 30 | .000 | .054 | .423 | .423 | .426 |
| 31 | .041 | .080 | .423 | .425 | .432 |
| 32 | .124 | .115 | .423 | .440 | .455 |
| 33 | .156 | .112 | .423 | .450 | .464 |
| 34 | .132 | .114 | .423 | .443 | .457 |
| 35 | .125 | .120 | .423 | .441 | .457 |
| 36 | .082 | .135 | .424 | .432 | .452 |
| 37 | .092 | .124 | .439 | .448 | .455 |
| 38 | .092 | .150 | .537 | .545 | .558 |
| 39 | .092 | .203 | .630 | .636 | .669 |

RESPONSE SPECTRUM ANALYSIS NO. 3 (COCZ), ABSOLUTE GLOBAL ACCELERATIONS (MULTIPLES OF GRAVITY) (CONT.)

| POINT NAME | X ACCEL | Y ACCEL | Z ACCEL | X-Z ACCEL | X-Y-Z ACCEL |
|---------------|------------|------------|------------|--------------|----------------|
| 40 | .092 | .208 | .652 | .658 | .690 |
| 41 | .075 | .179 | .603 | .607 | .633 |
| 42 | .080 | .144 | .531 | .537 | .556 |
| 43 | .087 | .128 | .510 | .517 | .533 |
| 44 | .104 | .104 | .483 | .494 | .505 |
| 45 | .123 | .096 | .465 | .481 | .490 |
| 46 | .119 | .098 | .443 | .459 | .469 |
| 47 | .000 | .097 | .423 | .423 | .434 |
| 48 | .199 | .096 | .432 | .476 | .485 |
| 49 | .354 | .095 | .435 | .560 | .563 |
| 50 | .409 | .093 | .426 | .590 | .597 |
| 51 | .259 | .034 | .423 | .496 | .497 |
| 52 | .184 | .000 | .423 | .461 | .461 |
| 53 | .000 | .063 | .423 | .423 | .427 |
| 54 | .077 | .083 | .423 | .430 | .437 |
| 55 | .095 | .052 | .423 | .433 | .438 |
| 56 | .089 | .000 | .423 | .432 | .432 |
| 57 | .078 | .040 | .423 | .430 | .432 |
| 58 | .024 | .125 | .445 | .445 | .463 |
| 59 | .035 | .141 | .476 | .477 | .497 |
| 60 | .045 | .157 | .510 | .512 | .535 |
| 61 | .057 | .169 | .560 | .553 | .587 |
| 62 | .033 | .109 | .490 | .491 | .503 |
| 63 | .000 | .000 | .423 | .423 | .423 |
| 81 | .114 | .141 | .612 | .623 | .638 |

RESPONSE SPECTRUM ANALYSIS NO. 3 (CQCZ). FORCES, MOMENTS AND STRESSES ALONG PIPE RUNS

| RUN NAME | SOP NO. | DCP NAME | COMP TYPE | AXIAL FORCE (LB) | Y FORCE (LB) | Z FORCE (LB) | TORS MOMENT (LB.IN) | YY MOMENT (LB.IN) | ZZ MOMENT (LB.IN) | M/Z (PSI) |
|----------|---------|----------|-----------|------------------|--------------|--------------|---------------------|-------------------|-------------------|-----------|
| RUN1 | 1 | 1 | STRP | 876.15 | 206.36 | 1692.49 | .00 | .00 | .00 | .00 |
| | 2L | 5 | STRP | 876.15 | 206.36 | 1692.49 | .00 | 88002.86 | 10729.73 | 1884.28 |
| | 2R | 5 | STRP | 876.10 | 209.28 | 1464.79 | .00 | 88002.86 | 10729.73 | 5279.24 |
| | 3L | 6 | STRP | 876.10 | 209.28 | 1464.79 | .00 | 93873.28 | 11562.23 | 5632.25 |
| | 3R | 6 | BELB | 876.08 | 1413.37 | 210.42 | .00 | 11562.23 | 93873.28 | 5632.25 |
| | 4L | 7 | BELB | 1413.37 | 876.08 | 210.42 | 14065.12 | 2525.08 | 100321.24 | 6034.28 |
| | 4R | 7 | STRP | 1249.49 | 889.27 | 195.40 | 14065.12 | 2525.08 | 100321.24 | 6034.28 |
| | 5L | 8 | STRP | 1249.49 | 889.27 | 195.40 | 14065.12 | 11311.24 | 60317.12 | 3749.15 |
| | 5R | 8 | STRP | 1011.24 | 909.53 | 65.53 | 14065.12 | 11311.24 | 60317.12 | 3749.15 |
| | 6L | 9 | STRP | 1011.24 | 909.53 | 65.53 | 14065.12 | 14334.94 | 16705.00 | 1555.54 |
| | 6R | 9 | BELB | 840.62 | 721.09 | 557.80 | 14065.12 | 2124.67 | 21909.66 | 1555.54 |
| | 7L | 10 | BELB | 721.09 | 840.62 | 557.80 | 5202.35 | 20670.97 | 23284.69 | 1879.82 |
| | 7R | 10 | STRP | 767.06 | 508.03 | 777.64 | 5202.35 | 23284.69 | 20670.97 | 1879.82 |
| | 8L | 11 | STRP | 767.06 | 508.03 | 777.64 | 5202.35 | 27125.30 | 23174.88 | 2146.99 |
| | 8R | 11 | STRP | 783.44 | 490.79 | 754.98 | 5202.35 | 27125.30 | 23174.88 | 2146.99 |
| | 9L | 12 | STRP | 783.44 | 490.79 | 754.98 | 5202.35 | 29764.63 | 24887.48 | 2331.06 |
| | 9R | 12 | BELB | 808.41 | 465.05 | 720.18 | 5202.35 | 29764.63 | 24887.48 | 2331.06 |
| | 10L | 13 | BELB | 899.89 | 244.96 | 720.18 | 27130.96 | 23606.05 | 25973.09 | 2641.65 |
| | 10R | 13 | STRP | 899.89 | 283.18 | 681.99 | 27130.96 | 23606.05 | 25973.09 | 2641.65 |
| | 11L | 14 | STRP | 899.89 | 283.18 | 681.99 | 27130.96 | 27029.58 | 24553.56 | 2709.01 |
| | 11R | 14 | STRP | 3946.73 | 78.65 | 260.85 | 27130.96 | 27029.58 | 24553.56 | 2709.01 |
| | 12L | 15 | STRP | 3946.73 | 78.65 | 260.85 | 27130.96 | 29538.64 | 25170.12 | 2819.70 |
| | 12R | 15 | VALV | 3946.68 | 109.37 | 99.85 | 27130.96 | 29538.64 | 25170.12 | N/A |
| | 13 | 15 | VALV | 3946.68 | 109.37 | 99.85 | 27130.96 | 30303.62 | 24342.26 | N/A |
| | 14L | 17 | VALV | 3946.54 | 368.48 | 177.22 | 27130.96 | 28864.31 | 21324.90 | N/A |
| | 14R | 17 | STRP | 3946.36 | 616.14 | 425.62 | 27130.96 | 28864.31 | 21324.90 | 2679.01 |
| | 15L | 18 | STRP | 3945.63 | 738.61 | 546.48 | 27130.96 | 28007.89 | 57974.63 | 4160.55 |
| | 15R | 18 | STRP | 3944.87 | 143.57 | 318.41 | 27130.96 | 28007.89 | 57974.63 | 4160.55 |
| | 16L | 19 | STRP | 3944.87 | 143.57 | 318.41 | 27130.96 | 24912.43 | 56897.33 | 4035.65 |
| | 16R | 19 | BELB | 3944.53 | 148.95 | 325.89 | 27130.96 | 24912.43 | 56897.33 | 4035.65 |
| | 17L | 20 | BELB | 148.95 | 3944.53 | 325.89 | 21008.47 | 23228.43 | 8719.94 | 1935.97 |
| | 17R | 20 | STRP | 154.44 | 3944.69 | 335.96 | 21008.47 | 23228.43 | 8719.94 | 1935.97 |
| | 18L | 21 | STRP | 154.44 | 3944.69 | 335.96 | 21008.47 | 21799.58 | 9210.79 | 1884.42 |
| | 18R | 21 | STRP | 165.37 | 147.03 | 355.20 | 21008.47 | 21799.58 | 9210.79 | 1884.42 |
| | 19L | 22 | STRP | 185.93 | 148.21 | 375.56 | 21008.47 | 7845.54 | 3198.67 | 1348.93 |
| | 19R | 22 | BELB | 198.98 | 377.31 | 147.52 | 21008.47 | 7845.54 | 3198.67 | 1348.93 |
| | 20L | 23 | BELB | 216.12 | 367.76 | 149.52 | 17130.61 | 12111.27 | 11410.62 | 1422.13 |
| | 20R | 23 | BELB | 218.43 | 150.95 | 370.40 | 17130.61 | 11410.62 | 12111.27 | 1422.13 |
| | 21L | 24 | BELB | 150.95 | 218.43 | 370.40 | 15661.90 | 12790.99 | 8350.41 | 1302.78 |
| | 21R | 24 | STRP | 155.03 | 215.98 | 377.20 | 15661.90 | 14826.93 | 3674.36 | 1302.78 |
| | 22 | 25 | STRP | 155.03 | 215.98 | 377.20 | 15661.90 | 3752.62 | 5110.83 | 1006.17 |

X
 4070 ft
 as well as 20070

RESPONSE SPECTRUM ANALYSIS NO. 3 (CQCZ). FORCES, MOMENTS AND STRESSES ALONG PIPE RUNS (CONTD.)

| RUN NAME | SIP NO. | DCP NAME | COMP TYPE | AXIAL FORCE (LB) | Y FORCE (LB) | Z FORCE (LB) | TORS MOMENT (LB.IN) | YY MOMENT (LB.IN) | ZZ MOMENT (LB.IN) | M/Z (PSI) | 14/Z (PSI) |
|----------|---------|----------|-----------|------------------|--------------|--------------|---------------------|-------------------|-------------------|-----------|------------|
| RUN2 | | | | | | | | | | | |
| | 23 | 77 | STRP | 172.38 | 104.14 | 307.77 | 0.00 | .00 | .00 | .00 | .00 |
| | 24L | 76 | STRP | 172.38 | 104.14 | 307.77 | 0.00 | 17542.76 | 5935.90 | 393.62 | 393.62 |
| | 24R | 76 | STRP | 172.24 | 70.40 | 139.00 | 0.00 | 17542.76 | 5935.90 | 393.62 | 393.62 |
| | 25L | 75 | STRP | 172.24 | 70.40 | 139.00 | 0.00 | 25462.18 | 9940.95 | 580.19 | 580.19 |
| | 25R | 75 | STRP | 171.95 | 51.11 | 118.01 | 0.00 | 25462.18 | 9840.95 | 580.19 | 580.19 |
| | 26L | 74 | STRP | 171.95 | 51.11 | 118.01 | 0.00 | 18796.88 | 11097.33 | 463.94 | 463.94 |
| | 26R | 74 | STRP | 171.60 | 76.77 | 304.14 | .00 | 18796.88 | 11097.33 | 463.94 | 463.94 |
| | 27L | 73 | STRP | 171.60 | 76.77 | 304.14 | .00 | 7700.65 | 11210.43 | 289.07 | 289.07 |
| | 27R | 73 | STRP | 171.26 | 97.90 | 404.89 | .00 | 7700.65 | 11210.43 | 289.07 | 289.07 |
| | 28L | 72 | STRP | 171.26 | 97.90 | 404.89 | .00 | 7766.07 | 11680.31 | 298.12 | 298.12 |
| | 28R | 72 | STRP | 170.87 | 108.63 | 449.99 | .00 | 7766.07 | 11680.31 | 298.12 | 298.12 |
| | 29L | 71 | STRP | 170.87 | 108.63 | 449.99 | .00 | 24244.58 | 13108.21 | 585.79 | 585.79 |
| | 29R | 71 | STRP | 170.33 | 195.56 | 343.37 | .00 | 24244.58 | 13108.21 | 585.79 | 585.79 |
| | 30L | 70 | STRP | 170.33 | 195.56 | 343.37 | .00 | 8676.93 | 4514.07 | 207.88 | 207.88 |
| | 30R | 70 | STRP | 169.93 | 187.49 | 355.35 | 0.00 | 8676.93 | 4514.07 | 207.88 | 207.88 |
| | 31L | 69 | STRP | 169.93 | 187.49 | 355.35 | 0.00 | 7385.13 | 3944.13 | 177.95 | 177.95 |
| | 31R | 69 | BELB | 169.68 | 310.02 | 252.11 | .00 | 5445.62 | 6359.36 | 177.95 | 481.81 |
| | 32L | 68 | BELB | 310.02 | 169.68 | 262.11 | 6208.99 | 4718.05 | 3524.91 | 181.89 | 492.48 |
| | 32R | 68 | BELB | 313.48 | 256.77 | 167.00 | 6208.99 | 3524.91 | 4718.05 | 181.89 | 492.48 |
| | 33L | 67 | BELB | 364.79 | 176.42 | 157.00 | 5799.56 | 3356.42 | 7054.14 | 206.94 | 560.32 |
| | 33R | 67 | STRP | 367.51 | 168.21 | 159.28 | 5799.56 | 3356.42 | 7054.14 | 206.94 | 206.94 |
| | 34L | 25 | STRP | 367.51 | 168.21 | 159.28 | 5799.56 | 7951.93 | 14093.77 | 365.19 | 365.19 |
| | 34R | 25 | STRP | 562.90 | 94.47 | 114.29 | 3008.41 | 20593.82 | 10553.43 | 495.97 | 495.97 |
| | 35L | 26 | STRP | 562.90 | 94.47 | 114.29 | 3008.41 | 17553.00 | 10506.28 | 439.47 | 439.47 |
| | 35R | 26 | STRP | 565.26 | 83.62 | 115.59 | 3008.41 | 17553.00 | 10506.28 | 439.47 | 439.47 |
| | 36L | 27 | STRP | 565.26 | 83.62 | 115.59 | 3008.41 | 13581.47 | 10173.69 | 366.29 | 366.29 |
| | 36R | 27 | STRP | 567.19 | 106.20 | 124.70 | 3008.41 | 13581.47 | 10173.69 | 366.29 | 366.29 |
| | 37L | 28 | STRP | 567.19 | 106.20 | 124.70 | 3008.41 | 9825.03 | 9841.37 | 302.40 | 302.40 |
| | 37R | 28 | STRP | 568.48 | 137.72 | 149.00 | 3008.41 | 9825.03 | 9841.37 | 302.40 | 302.40 |
| | 38L | 29 | STRP | 568.48 | 137.72 | 149.00 | 3008.41 | 10541.13 | 14185.34 | 381.03 | 381.03 |
| | 38R | 29 | STPP | 568.99 | 118.99 | 163.57 | 3008.41 | 10541.13 | 14185.34 | 381.03 | 381.03 |
| | 39L | 30 | STRP | 568.98 | 118.99 | 163.57 | 3008.41 | 14714.87 | 10738.01 | 392.42 | 392.42 |
| | 39R | 30 | STRP | 569.09 | 108.81 | 152.84 | 3008.41 | 14714.87 | 10738.01 | 392.42 | 392.42 |
| | 40L | 31 | STRP | 569.09 | 108.81 | 152.84 | 3008.41 | 12535.65 | 9256.05 | 337.31 | 337.31 |
| | 40R | 31 | STRP | 306.13 | 93.51 | 143.69 | 3008.41 | 12535.65 | 9256.05 | 337.31 | 337.31 |
| | 41L | 32 | STRP | 306.13 | 93.51 | 143.69 | 3008.41 | 9908.61 | 6854.08 | 263.94 | 263.94 |
| | 41R | 32 | STRP | 305.79 | 74.89 | 112.90 | 3008.41 | 9908.61 | 6854.08 | 263.94 | 263.94 |
| | 42L | 33 | STRP | 305.79 | 74.89 | 112.90 | 3008.41 | 9634.03 | 4745.44 | 237.04 | 237.04 |
| | 42R | 33 | STRP | 305.14 | 78.27 | 107.10 | 3008.41 | 9634.03 | 4745.44 | 237.04 | 237.04 |
| | 43L | 34 | STRP | 305.14 | 78.27 | 107.10 | 3008.41 | 9997.17 | 2362.14 | 230.08 | 230.08 |
| | 43R | 34 | STPP | 304.57 | 82.39 | 120.03 | 3008.41 | 9997.17 | 2852.14 | 230.08 | 230.08 |
| | 44L | 35 | STRP | 304.57 | 82.39 | 120.03 | 3008.41 | 10271.74 | 2812.13 | 235.21 | 235.21 |
| | 44R | 35 | BELB | 304.28 | 87.41 | 123.80 | 3008.41 | 10271.74 | 2812.13 | 235.21 | 834.51 |
| | 45L | 36 | BELB | 37.41 | 304.28 | 123.80 | 10754.53 | 2898.02 | 4159.96 | 252.78 | 896.85 |
| | 45R | 36 | BELB | 100.58 | 136.55 | 302.04 | 10754.53 | 4169.95 | 2978.02 | 252.78 | 684.42 |
| | 46L | 37 | BELB | 136.55 | 100.58 | 302.04 | 8920.92 | 5784.96 | 3979.86 | 241.30 | 653.33 |

RESPONSE SPECTRUM ANALYSIS NO. 3 (CQCZ). FORCES, MOMENTS AND STRESSES ALONG PIPE RUNS (CONTD.)

| RUN NAME | SOP NO. | DCP NAME | COMP TYPE | AXIAL FORCE (LB) | Y FORCE (LB) | Z FORCE (LB) | TDRS MOMENT (LB.IN) | YY MOMENT (LB.IN) | ZZ MOMENT (LB.IN) | M/Z (PSI) | 14/Z (PSI) |
|---------------|---------|----------|-----------|------------------|--------------|--------------|---------------------|-------------------|-------------------|-----------|------------|
| RUN2 (CONTD.) | | | | | | | | | | | |
| 46R | 37 | STRP | | 138.45 | 115.59 | 270.40 | 8920.92 | 5784.96 | 3979.86 | 241.30 | 241.30 |
| 47L | 38 | STRP | | 138.45 | 115.59 | 270.40 | 8920.92 | 7096.23 | 5350.84 | 272.33 | 272.33 |
| 47R | 38 | STRP | | 146.12 | 113.46 | 155.95 | 8920.92 | 7096.23 | 5350.84 | 272.33 | 272.33 |
| 48L | 39 | STRP | | 146.12 | 113.46 | 165.95 | 8920.92 | 11031.91 | 7535.50 | 341.44 | 341.44 |
| 43R | 39 | BELB | | 152.99 | 117.46 | 80.37 | 8920.92 | 11031.91 | 7535.50 | 341.44 | 924.48 |
| 49L | 40 | BELB | | 180.89 | 66.93 | 80.37 | 4262.26 | 14573.72 | 7855.76 | 363.46 | 984.10 |
| 49R | 40 | STRP | | 192.80 | 90.23 | 41.48 | 4262.26 | 14573.72 | 7855.76 | 363.46 | 363.46 |
| 50L | 41 | STRP | | 192.80 | 90.23 | 41.48 | 4262.26 | 13371.24 | 6782.63 | 331.29 | 331.29 |
| 50R | 41 | STRP | | 214.91 | 128.20 | 183.18 | 4262.26 | 13371.24 | 6782.63 | 331.29 | 331.29 |
| 51L | 42 | STRP | | 214.91 | 128.20 | 183.18 | 4262.26 | 6947.58 | 6785.57 | 225.41 | 225.41 |
| 51R | 42 | HELB | | 231.59 | 231.53 | 178.05 | 4262.26 | 6926.64 | 6806.95 | 225.41 | 610.33 |
| 52L | 43 | HELB | | 227.27 | 235.78 | 178.05 | 7037.76 | 4033.61 | 5054.77 | 203.14 | 550.03 |
| 52R | 43 | STRP | | 239.50 | 234.01 | 221.12 | 7037.76 | 5417.22 | 3531.92 | 203.14 | 203.14 |
| 53L | 44 | STRP | | 239.50 | 234.01 | 221.12 | 7037.76 | 4425.46 | 4083.38 | 196.86 | 196.86 |
| 53R | 44 | STRP | | 252.44 | 249.61 | 234.24 | 7037.76 | 4425.46 | 4083.38 | 196.86 | 196.86 |
| 54L | 45 | STRP | | 252.44 | 249.61 | 234.24 | 7037.76 | 4921.64 | 5894.62 | 221.39 | 221.39 |
| 54R | 45 | BELB | | 266.31 | 260.87 | 245.08 | 7037.76 | 4921.64 | 5894.62 | 221.39 | 599.43 |
| 55L | 46 | HELB | | 230.85 | 292.71 | 245.08 | 1973.28 | 10174.85 | 8936.34 | 290.45 | 786.42 |
| 55R | 46 | STRP | | 248.00 | 190.64 | 361.31 | 1973.28 | 9538.31 | 9534.94 | 290.45 | 290.45 |
| 56L | 47 | STRP | | 248.00 | 190.64 | 361.31 | 1973.28 | 22230.35 | 13214.70 | 551.26 | 551.26 |
| 56R | 47 | STRP | | 277.72 | 197.16 | 136.60 | 1973.28 | 22230.35 | 13214.70 | 551.26 | 551.26 |
| 57L | 48 | STRP | | 277.72 | 197.16 | 136.60 | 1973.28 | 16638.05 | 9377.52 | 408.30 | 408.30 |
| 57R | 48 | STRP | | 312.66 | 124.96 | 159.81 | 1973.28 | 16638.05 | 9377.52 | 408.30 | 408.30 |
| 58L | 49 | STRP | | 312.66 | 124.96 | 159.81 | 1973.28 | 10057.69 | 9371.64 | 295.18 | 295.18 |
| 58R | 49 | STRP | | 348.49 | 102.28 | 186.37 | 1973.28 | 10057.69 | 9371.64 | 295.18 | 295.18 |
| 59L | 50 | STRP | | 348.49 | 102.28 | 186.37 | 1973.28 | 4275.92 | 5458.74 | 153.23 | 153.23 |
| 59R | 50 | HELB | | 377.57 | 194.15 | 213.32 | 1973.28 | 5458.74 | 4275.92 | 153.23 | 414.88 |
| 60L | 51 | HELB | | 194.15 | 377.57 | 213.32 | 2383.89 | 3110.91 | 4035.38 | 119.56 | 323.73 |
| 60R | 51 | STRP | | 194.23 | 383.37 | 253.65 | 2383.89 | 3110.91 | 4035.38 | 119.56 | 119.56 |
| 61L | 52 | STRP | | 194.23 | 383.37 | 253.65 | 2383.89 | 6047.79 | 7935.13 | 218.02 | 218.02 |
| 61R | 52 | STRP | | 194.31 | 157.19 | 302.78 | 2383.89 | 6047.79 | 7935.13 | 218.02 | 218.02 |
| 62L | 53 | STRP | | 194.31 | 157.19 | 302.78 | 2383.89 | 16787.62 | 8511.05 | 403.24 | 403.24 |
| 62R | 53 | STRP | | 1334.77 | 149.93 | 180.12 | 2383.89 | 16787.62 | 8511.05 | 403.24 | 403.24 |
| 63L | 54 | STRP | | 1334.77 | 149.93 | 180.12 | 2383.89 | 11486.28 | 11418.85 | 347.95 | 347.95 |
| 63R | 54 | STRP | | 1332.43 | 139.45 | 190.79 | 2383.89 | 11486.28 | 11418.85 | 347.95 | 347.95 |
| 64L | 55 | STRP | | 1332.43 | 139.45 | 190.79 | 2383.89 | 7256.23 | 14974.31 | 355.38 | 355.38 |
| 64R | 55 | STRP | | 1327.74 | 130.76 | 193.65 | 2383.89 | 7256.23 | 14974.31 | 355.38 | 355.38 |
| 65L | 56 | STRP | | 1327.74 | 130.76 | 193.65 | 2383.89 | 7332.61 | 18409.80 | 424.22 | 424.22 |
| 65R | 56 | STRP | | 1322.83 | 625.91 | 137.04 | 2383.89 | 7332.61 | 18409.80 | 424.22 | 424.22 |
| 66L | 57 | STRP | | 1322.83 | 625.91 | 137.04 | 2383.89 | 8759.42 | 12019.28 | 320.14 | 320.14 |
| 66R | 57 | BELB | | 1318.40 | 180.63 | 513.98 | 2383.89 | 12019.28 | 8759.42 | 320.14 | 866.80 |
| 67L | 58 | BELB | | 335.86 | 1287.64 | 513.98 | 11109.38 | 8892.44 | 9734.43 | 366.44 | 992.18 |
| 67R | 58 | VALV | | 339.63 | 512.92 | 1163.33 | 11108.58 | 9734.43 | 8993.44 | N/A | |
| 68 | 59 | VALV | | 338.68 | 512.92 | 1163.33 | 11108.58 | 27038.03 | 16557.98 | N/A | |
| 69L | 60 | VALV | | 388.97 | 150.91 | 371.53 | 4.84 | 32556.24 | 19563.77 | N/A | |

RESPONSE SPECTRUM ANALYSIS NO. 3 (COGZ). FORCES, MOMENTS AND STRESSES ALONG PIPE RUNS (CONTD.)

| RUN NAME | SUP NO. | DCP NAME | COMP TYPE | AXIAL FORCE (LB) | Y FORCE (LB) | Z FORCE (LB) | TORS MOMENT (LB.IN) | YY MOMENT (LB.IN) | ZZ MOMENT (LB.IN) | M/Z (PSI) | M/Z (PSI) |
|------------------|------------|-------------|--------------|------------------------|--------------------|--------------------|---------------------------|-------------------------|-------------------------|--------------|--------------|
| RUN2 (CONTD.) | | | | | | | | | | | |
| | 60R | 60 | STRP | 391.92 | 38.93 | 39.47 | .50 | 32556.24 | 19653.77 | 310.47 | 310.47 |
| | 70L | 61 | STRP | 391.92 | 38.93 | 39.47 | .50 | 34080.66 | 18558.44 | 316.77 | 316.77 |
| | 70R | 61 | STRP | 393.31 | 157.33 | 255.79 | .04 | 34080.66 | 18558.44 | 316.77 | 316.77 |
| | 71L | 62 | STRP | 393.31 | 157.33 | 255.79 | .04 | 21725.70 | 11268.29 | 199.78 | 199.78 |
| | 71R | 62 | STRP | 394.01 | 242.31 | 467.19 | .00 | 21725.70 | 11268.29 | 199.78 | 199.78 |
| | 72 | 63 | STRP | 394.01 | 242.31 | 467.19 | .00 | .00 | .00 | .00 | .00 |

RESPONSE SPECTRUM ANALYSIS NO. 3 (CQCZ), SUPPORT FORCES AND DEFORMATIONS

| SUPP NAME | SUPP LOCN | SUPP TYPE | DIRN CODE | RESULT TYPE | RESULT UNIT | AXIS TYPE | X-AXIS | Y-AXIS | Z-AXIS |
|-----------|-----------|-----------|-----------|----------------------|----------------------|----------------------|--------------------------|----------------------|-----------------|
| 1X | L | SNGL | X | FORC DISP | (LB) (IN) | GLBL GLBL | 206.36 .000 | 0.00 .000 | 0.00 .000 |
| 1Y | L | SNGL | Y | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .000 | 876.15 .000 | 0.00 .000 |
| 1Z | L | SNGL | Z | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .000 | 0.00 .000 | 1692.49 .000 |
| 77X | 77 | SNGL | X | FORC DISP | (LB) (IN) | GLBL GLBL | 172.38 .000 | 0.00 .000 | 0.00 .000 |
| 77Y | 77 | SNGL | Y | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .000 | 104.14 .000 | 0.00 .000 |
| 77Z | 77 | SNGL | Z | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .000 | 0.00 .000 | 307.77 .000 |
| 63X | 63 | SNGL | X | FORC DISP | (LB) (IN) | GLBL GLBL | 453.45 .000 | 0.00 .000 | 0.00 .000 |
| 63Y | 63 | SNGL | Y | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .000 | 242.31 .000 | 0.00 .000 |
| 63Z | 63 | SNGL | Z | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .000 | 0.00 .000 | 409.75 .000 |
| 14XZ | 14 | SNGL | INCL | FORC FORC DISP | (LB) (LB) (IN) | LOCL GLBL LOCL | 545.00 385.37 .000 | 0.00 0.00 .000 | 385.37 .744 |
| 14Y | 14 | SNGL | Y | FORC DISP | (LB) (IN) | GLBL GLBL | 0.00 .526 | 4845.08 .000 | 0.00 .526 |

RESPONSE SPECTRUM ANALYSIS NO. 3 (COCZ), SUPPORT FORCES AND DEFORMATIONS (CONTD.)

| SUPP NAME | SUPP LOCN | SUPP TYPE | DIRN CODE | RESULT TYPE | RESULT UNIT | AXIS TYPE | X-AXIS | Y-AXIS | Z-AXIS |
|----------------|--------------|--------------|--------------|----------------|----------------|--------------|---------|---------|---------|
| 14Y (CONT.) | | | | | | | | | |
| 18XZ | 18 | SNGL | INCL | FORC | (LB) | LOCL | 1213.29 | | |
| | | | | FORC | (LB) | GLBL | 857.92 | 0.00 | 857.92 |
| | | | | DISP | (IN) | LOCL | .000 | .002 | .033 |
| 21Y | 21 | SNGL | Y | FORC | (LB) | GLBL | 0.00 | 4081.02 | 0.00 |
| | | | | DISP | (IN) | GLBL | .019 | .000 | .088 |
| 29Y | 29 | SNGL | Y | FORC | (LB) | GLBL | 0.00 | 208.73 | 0.00 |
| | | | | DISP | (IN) | GLBL | .007 | .000 | .000 |
| 30X | 30 | SNGL | X | FORC | (LB) | GLBL | 247.50 | 0.00 | 0.00 |
| | | | | DISP | (IN) | GLBL | .000 | .008 | .000 |
| 31Z | 31 | SNGL | Z | FORC | (LB) | GLBL | 0.00 | 0.00 | 631.88 |
| | | | | DISP | (IN) | GLBL | .004 | .012 | .000 |
| 47X | 47 | SNGL | X | FORC | (LB) | GLBL | 321.21 | 0.00 | 0.00 |
| | | | | DISP | (IN) | GLBL | .000 | .003 | .000 |
| 47Z | 47 | SNGL | Z | FORC | (LB) | GLBL | 0.00 | 0.00 | 484.31 |
| | | | | DISP | (IN) | GLBL | .000 | .003 | .000 |
| 52Y | 52 | SNGL | Y | FORC | (LB) | GLBL | 0.00 | 427.02 | 0.00 |
| | | | | DISP | (IN) | GLBL | .004 | .000 | .000 |
| 53X | 53 | SNGL | X | FORC | (LB) | GLBL | 466.33 | 0.00 | 0.00 |
| | | | | DISP | (IN) | GLBL | .000 | .002 | .000 |
| 53Z | 53 | SNGL | Z | FORC | (LB) | GLBL | 0.00 | 0.00 | 1332.26 |
| | | | | DISP | (IN) | GLBL | .000 | .002 | .000 |

RESPONSE SPECTRUM ANALYSIS NO. 3 (COCZ), SUPPORT FORCES AND DEFORMATIONS (CONTD.)

| SUPP NAME | SUPP LOCN | SUPP TYPE | DIRN CODE | RESULT TYPE | RESULT UNIT | AXIS TYPE | X-AXIS | Y-AXIS | Z-AXIS |
|-----------------|--------------|--------------|--------------|----------------|----------------|--------------|--------|--------|--------|
| 532 (CONTD.) | | | | | | | | | |
| 56Y | 56 | SNGL | Y | FORC | (LB) | GLBL | 0.00 | 708.26 | 0.00 |
| | | | | DISP | (IN) | GLBL | .002 | .000 | .000 |
| 71Y | 71 | SNGL | Y | FORC | (LB) | GLBL | 0.00 | 259.30 | 0.00 |
| | | | | DISP | (IN) | GLBL | .000 | .000 | .000 |
| 71Z | 71 | SNGL | Z | FORC | (LB) | GLBL | 0.00 | 0.00 | 786.92 |
| | | | | DISP | (IN) | GLBL | .000 | .000 | .000 |

17.21.49. JOB, T2000, P1.
17.21.49. USER, HUANGKI,.
17.21.49. CHARGE, OVHWC, 06250401355.
17.21.50. %PROLOG, PROCL,.,.
17.21.50. %SETFS, PROCL/FS=AD.
17.21.50. PRUCL.
17.21.50. //LOADER 587 .004 CP .072 RT//LOADER 014472/040000-040000 CM L TM
17.21.51. IFE, JT, EQ, TXD, FLASHIT.
17.21.51. ENDIF, FLASHIT.
17.21.51. IFE, JT, EQ, BCU, BULLIT.
17.21.51. CHGFTN.
17.21.51. END CHGFTN
17.21.51. 15600 MAXIMUM EXECUTION FL.
17.21.51. 0.002 CP SECONDS EXECUTION TIME.
17.21.51. GET, SYSBULL/UN=EDSOPER, NA.
17.21.52. IFE, FILE(SYSBULL, AS), OUTIT.
17.21.52. COPY, SYSBULL.
17.21.52. EOI ENCOUNTERED.
17.21.52. ENDIF, OUTIT.
17.21.52. ENDIF, BULLIT.
17.21.52. RETURN, PROCL.
17.21.53. REVERT.
17.21.53. ROUTE, OUTPUT, DC=PR, UJN=YAX, FC=CP, UN=CSOVAXI, DEF.
17.21.53. ROUTE COMPLETE.
17.21.53. ATTACH, RYCOM.
17.21.53. RYCOM.
17.21.53. //LOADER 587 .006 CP .056 RT//LOADER 014472/040000-040000 CM L TM
17.24.32. END SPIPE
17.24.32. 332700 FINAL EXECUTION FL.
17.24.32. 97.185 CP SECONDS EXECUTION TIME.
17.24.32. REWIND, OUTPUT.
17.24.32. PURGE, TESTOUL/NA.
17.24.32. TESTOUL NOT FOUND.
17.24.32. DEFINE, TESTOUL.
17.24.33. COPY3F, OUTPUT, TESTOUL, 99.
17.24.33. EOI ENCOUNTERED.
17.24.33. EXIT.
17.24.33. UEAD, 0.002KUNS.
17.24.33. UEPP, 0.054KUNS.
17.24.33. UEMS, 93.972KUNS.
17.24.33. UECP, 97.663SECS.
17.24.33. AESR, 180.059UNTS.
17.24.33. %OUT(*//DP=E)
17.24.33. NO FILES PROCESSED.
17.24.33. %DAYFILE(OUTPUT, JT=D)
17.27.45. UCLP, LB, HSOILP2, 6.764KLNS.