

## Radiological Survey Sheet

Job Location PERD 118W/W223 Page 1 of 12  
 Survey Purpose Lab Close-out Date 2/28/03  
 Performed By Pam Jones (Print) Pam Jones (Sign)

Inst.(1) (Model/SN) Beckman LS 6000 #7060743	Inst.(2) Ludlum 2241-2 (Model/SN) #163603	Inst.(3) (Model/SN)
Det. Internal (Model/SN)	Det. Ludlum 43-68 (Model/SN) #PR149613	Det. (Model/SN)
Eff. See LSC Printout	Eff. $\approx$ 8% C14	Eff.
Type rad. $\beta$	Type rad. $\beta$	Type rad.
Bkgd. See LSC Printout	Bkgd. 300 cpm	Bkgd.
Cal. Due: 4/26/03	Cal. Due: 4/5/03	Cal. due

No.	Time	Location	Inst. Used	Total Activity (cpm/100 cm <sup>2</sup> )
1.	1000	door	1	See attached LSC Printout
2.		wall	1	
3.		↓	1	
4.		top hood	1	
5.		glass	1	
6.		left inside	1	
7.		rear ↓	1	
8.		right ↓	1	
9.		corner ↓	1	
10.		Floor	1	
11.		↓	1	
12.		↓	1	
13.		↓	1	
14.		top hood	1	
15.		glass	1	
16.		left inside	1	
17.		rear ↓	1	
18.		right ↓	1	

Radiological Survey Continuation Sheet

Page 2 of 12  
 Date 2/28/03

No.	Time	Location	Inst. Used	Total Activity (cpm/100 cm <sup>2</sup> )
19		counter inside	1	See attached LSC Printout
20		out shelves	1	
21		top shelf	1	
22		shelf	1	
23		↓	1	
24		bot. shelf	1	
25		out. shelves	1	
26		top shelf	1	
27		shelf	1	
28		↓	1	
29		bot. shelf	1	
30		top shelf	1	
31		shelf	1	
32		bot. shelf	1	
33		top shelf	1	
34		shelf	1	
35		bot. shelf	1	
36		top shelf	1	
37		shelf	1	
38		bot. shelf	1	
39		top shelf	1	
40		shelf	1	
41		bot. shelf	1	
42		desktop	1	
43		out. drawers	1	
44		↓	1	
45		↓	1	
46	↓	desk drawer	1	↓

Radiological Survey Continuation Sheet

Page 3 of 12  
 Date 2/28/03

No.	Time	Location	Inst. Used	Total Activity (cpm/100 cm <sup>2</sup> )
47		out hood left	1	See attached LSC Printout
48		↓ top	1	
49		↓ right	1	
50		↓ edge	1	
51		in hood left side	1	
52		↓ top left rear	1	
53		↓ mid. left rear	1	
54		↓ bot. left rear	1	
55		↓ top rt. rear	1	
56		↓ mid. rt. rear	1	
57		↓ bot. rt. rear	1	
58		↓ rt. side	1	
59		↓ left counter	1	
60		↓ rt. counter	1	
61		↓ wooden shelf	1	
62		↓	1	
63		↓	1	
64		↓ ↓	1	
65		out. cab.	1	
66		left	1	
67		bottom	1	
68		rt.	1	
69		out. cab.	1	
70		left	1	
71		bottom	1	
72		rt.	1	
73		floor	1	
74	↓	↓	1	↓

Radiological Survey Continuation Sheet

Page 4 of 12  
 Date 2/28/03

No.	Time	Location	Inst. Used	Total Activity (cpm/100 cm <sup>2</sup> )
75		floor	1	See attached LSC Printout
76		out. shelves	1	
77		top shelf	1	
78		shelf	1	
79		bot. shelf	1	
80		left counter	1	
81		rt. counter	1	
82		sides of sink	1	
83		bottom	1	
84		drain	1	
85		out. cabinet	1	
86		left	1	
87		bottom	1	
88		right	1	
89		floor	1	
90			1	
91			1	
92		↓	1	
93		out. shelves	1	
94		top shelf	1	
95		shelf	1	
96		↓	1	
97		bot. shelf	1	
98		out. shelves	1	
99		top shelf	1	
100		shelf	1	
101		↓	1	
102		bot. shelf	1	



Radiological Survey Continuation Sheet

Page 5 of 18  
 Date 2/28/03

No.	Time	Location	Inst. Used	Total Activity (cpm/100 cm <sup>2</sup> )
103		out shelves	1	See attached LSC Printout
104		top shelf	1	
105		shelf	1	
106		↓	1	
107		bot. shelf	1	
108		counter	1	
109		↓	1	
110		↓	1	
111		↓	1	
112		out. drawer	1	
113		↓	1	
114		↓	1	
115		↓	1	
116		top shelf	1	
117		shelf	1	
118		bot. shelf	1	
119		top shelf	1	
120		shelf	1	
121		bot. shelf	1	
122		top shelf	1	
123		shelf	1	
124		bot. shelf	1	
125		top shelf	1	
126		shelf	1	
127		bot. shelf	1	
128		counter	1	
129		↓	1	
130		↓	1	

Radiological Survey Continuation Sheet

Page 6 of 12  
 Date 2/28/03

No.	Time	Location	Inst. Used	Total Activity (cpm/100 cm <sup>2</sup> )
131		counter	1	See attached LSC Printout
132		desktop	1	
133		out. drawers	1	
134			1	
135			1	
136			1	
137			1	
138			1	
139		↓ floor	1	
140			1	
141			1	
142			1	
143			1	
144			1	
145		↓ door	1	
146		wall	1	
147		top shelf	1	
148		shelf	1	
149		bot. shelf	1	
150		desktop	1	
151		top shelf	1	
152		shelf	1	
153		bot. shelf	1	
154		counter	1	
155			1	
156		↓	1	
157		drawers	1	
158		↓	1	

Radiological Survey Continuation Sheet

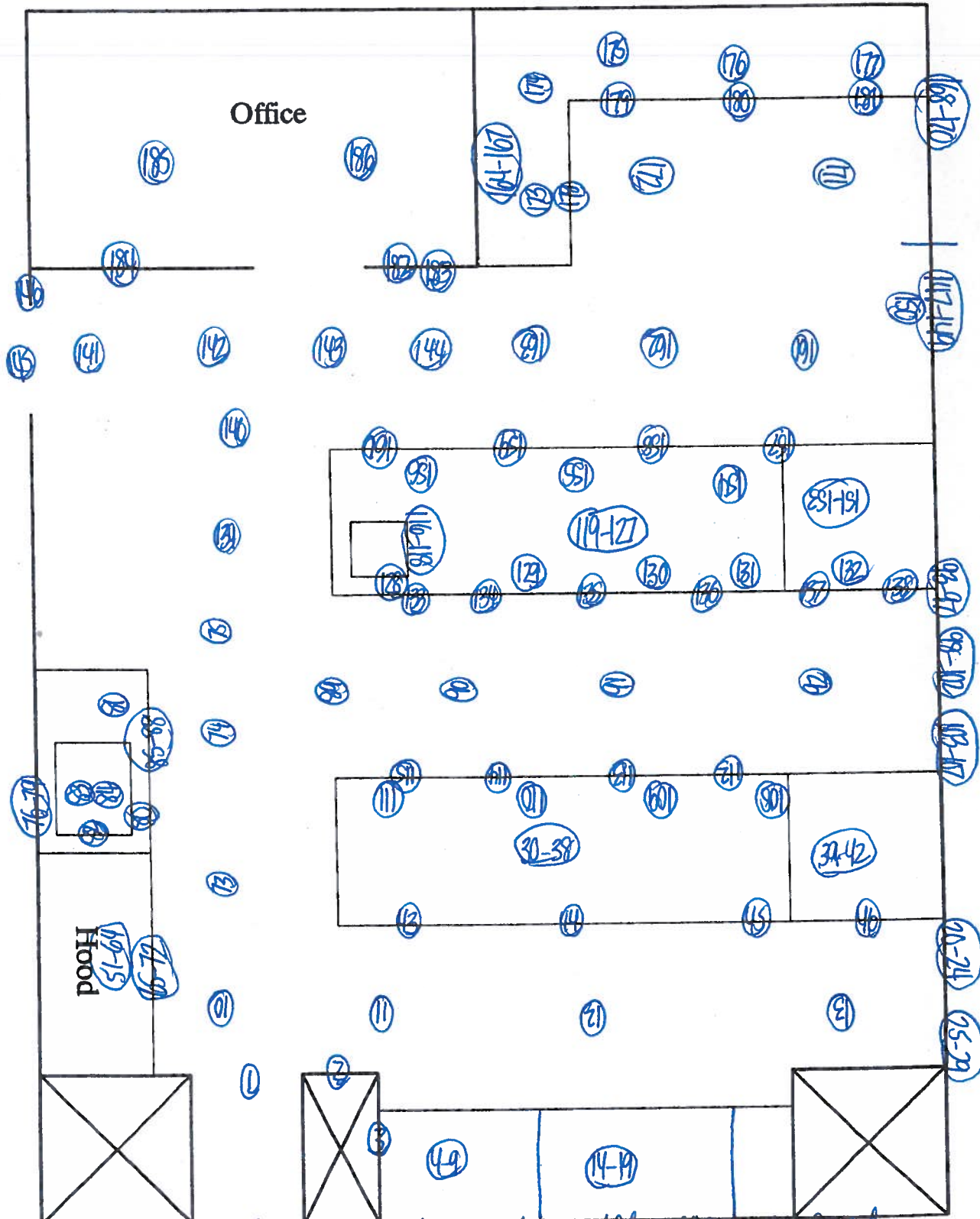
Page 7 of 12  
 Date 2/28/03

No.	Time	Location	Inst. Used	Total Activity (cpm/100 cm <sup>2</sup> )
159		drawers	1	See attached LSC Printout
160		↓	1	
161		floor	1	
162		↓	1	
163		↓	1	
164		shelf	1	
165		↓	1	
166		↓	1	
167		↓	1	
168		shelf	1	
169		↓	1	
170		↓	1	
171		floor	1	
172		↓	1	
173		counter	1	
174		↓	1	
175		↓	1	
176		↓	1	
177		↓	1	
178		drawer	1	
179		↓	1	
180		↓	1	
181		↓	1	
182		tabletop	1	
183		drawer	1	
184		glass	1	
185		floor	1	
186	↓	↓	1	↓

Bld. 118W Room W223

Page 8 of 12

Date: 2/28/03



Circle  
Levelling

Surveyed using instrument #2 All areas were found



**ID: WIPES**

USER: 1 COMMENT: WIPES  
 PRESET TIME : 1.00  
 DATA CALC : DL DPM H# : YES SAMPLE REPEATS: 1 PRINTER : ED1  
 COUNT BLANK : YES IC# : NO REPLICATES : 1 RS232 : ED1  
 TWO PHASE : NO AQC : YES CYCLE REPEATS : 1  
 SCINTILLATOR: LIQUID LUMEX: YES LOW SAMPLE REJ: 0  
 LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

ISOTOPE 1: 3H %ERROR: 2.00 FACTOR: 1.0000 BKG. SUB: 0  
 ISOTOPE 2: 14C %ERROR: 2.00 FACTOR: 1.0000 BKG. SUB: 0  
 WIDE OPEN WINDOW %ERROR: 0.00 FACTOR: 1.0000 BKG. SUB: 0

BACKGROUND QUENCH CURVE: Off COLOR QUENCH CORRECTION: Off

Quench Limits Low: 13.688 High: 306.34

SAM NO	3H CPM	14C CPM	WIDE CPM	3H DPM	14C DPM		
B1	17.00	11.00	39.00	30.58	14.45		
	Blank Average		DPM for	3H :	30.58	COEF. OF VAR:	0.000
	Blank Average		DPM for	14C :	14.45	COEF. OF VAR:	0.000
1	13.00	11.00	37.00	-8.47	0.07		
2	14.00	5.00	31.00	-3.13	-7.98		
3	14.00	8.00	36.00	-4.84	-3.97		
4	15.00	9.00	39.00	-3.31	-2.65		
5	19.00	14.00	46.00	2.78	3.99		
6	13.00	13.00	40.00	-9.58	2.74		
7	18.00	6.00	34.00	4.45	-6.72		
8	19.00	9.00	46.00	5.61	-2.70		
9	9.00	13.00	38.00	-17.92	2.84		
10	19.00	10.00	38.00	7.16	-1.30		
11	20.00	10.00	43.00	7.89	-1.36		
12	17.00	12.00	35.00	0.20	1.37		
13	20.00	13.00	39.00	5.78	2.65		
14	16.00	7.00	31.00	0.17	-5.33		
15	19.00	10.00	39.00	5.22	-1.36		
16	12.00	7.00	29.00	-8.18	-5.26		
17	22.00	7.00	45.00	12.90	-5.44		
18	20.00	14.00	47.00	5.05	3.98		
19	15.00	9.00	35.00	-3.50	-2.66		
20	17.00	15.00	48.00	-1.88	5.37		
21	12.00	15.00	38.00	-12.60	5.45		
22	18.00	7.00	40.00	4.33	-5.37		
23	18.00	6.00	37.00	5.17	-6.70		
24	15.00	12.00	36.00	-4.58	1.38		
25	10.00	11.00	38.00	-14.87	0.12		
26	9.00	11.00	30.00	-16.94	0.15		
27	18.00	12.00	51.00	1.87	1.33		
28	12.00	7.00	29.00	-8.52	-5.27		
29	10.00	13.00	31.00	-15.89	2.80		
30	10.00	7.00	31.00	-12.31	-5.21		
31	14.00	8.00	38.00	-4.63	-3.96		
32	12.00	12.00	30.00	-10.89	1.45		
33	15.00	10.00	36.00	-3.55	-1.30		
34	22.00	9.00	41.00	12.02	-2.75		
35	14.00	5.00	29.00	-2.95	-7.98		
36	12.00	13.00	32.00	-11.64	2.77		

SAM NO	3H CPM	14C CPM	WIDE CPM	3H DPM	14C DPM
37	14.00	5.00	34.00	-3.13	-7.98
38	12.00	11.00	27.00	-10.50	0.09
39	14.00	13.00	37.00	-7.57	2.72
40	8.00	11.00	33.00	-18.97	0.18
41	16.00	8.00	36.00	-0.37	-3.99
42	12.00	9.00	34.00	-9.48	-2.59
43	14.00	9.00	29.00	-5.12	-2.62
44	11.00	9.00	28.00	-11.77	-2.58
45	11.00	8.00	32.00	-11.25	-3.92
46	11.00	17.00	33.00	-15.69	8.17
47	13.00	4.00	30.00	-4.36	-9.30
48	18.00	12.00	45.00	2.43	1.36
49	11.00	6.00	30.00	-10.11	-6.59
50	12.00	6.00	32.00	-7.71	-6.60
51	10.00	13.00	32.00	-15.76	2.82
52	15.00	10.00	33.00	-3.64	-1.30
53	12.00	13.00	41.00	-10.78	2.84
54	12.00	8.00	31.00	-7.65	-3.87
55	20.00	12.00	39.00	6.97	1.33
56	16.00	11.00	42.00	-1.56	0.04
57	21.00	8.00	42.00	10.45	-4.08
58	11.00	9.00	31.00	-11.48	-2.56
59	16.00	9.00	38.00	-0.62	-2.64
60	9.00	15.00	29.00	-19.04	5.50
61	12.00	13.00	34.00	-10.17	2.89
62	17.00	11.00	50.00	1.72	0.07
63	19.00	13.00	42.00	4.30	2.69
64	17.00	8.00	39.00	1.98	-4.01
65	21.00	9.00	39.00	10.23	-2.73
66	13.00	9.00	35.00	-6.86	-2.58
67	17.00	9.00	40.00	3.63	-2.60
68	14.00	10.00	33.00	-5.13	-1.25
69	17.00	12.00	36.00	-0.43	1.34
70	17.00	10.00	40.00	1.71	-1.30
71	14.00	8.00	34.00	-4.60	-3.96
72	12.00	5.00	25.00	-7.19	-7.94
73	19.00	8.00	37.00	6.20	-4.04
74	13.00	15.00	51.00	-8.77	5.60
75	10.00	8.00	34.00	-13.40	-3.90
76	18.00	6.00	34.00	5.42	-6.70
77	20.00	7.00	36.00	9.07	-5.40
78	13.00	8.00	26.00	-6.31	-3.92
79	16.00	10.00	40.00	-1.48	-1.32
80	14.00	14.00	37.00	-7.77	4.08
81	18.00	16.00	45.00	0.20	6.72
82	18.00	8.00	33.00	4.20	-4.02
83	21.00	13.00	42.00	8.08	2.63
84	9.00	10.00	30.00	-16.24	-1.18
85	17.00	11.00	46.00	-0.06	-0.00
86	17.00	10.00	38.00	1.12	-1.32
87	17.00	10.00	36.00	1.64	-1.30
88	14.00	5.00	29.00	-3.09	-7.98
89	17.00	11.00	36.00	0.53	0.02
90	13.00	11.00	32.00	-7.92	0.10
91	13.00	11.00	33.00	-8.42	0.07
92	11.00	19.00	38.00	-16.71	10.85
93	14.00	14.00	37.00	-7.86	4.07
94	18.00	8.00	32.00	3.82	-4.03

SAM NO	3H CPM	14C CPM	WIDE CPM	3H DPM	14C DPM
95	18.00	9.00	36.00	3.75	-2.68
96	14.00	16.00	43.00	-8.89	6.75
97	8.00	9.00	31.00	-18.18	-2.53
98	16.00	10.00	32.00	-1.58	-1.32
99	10.00	7.00	24.00	-12.79	-5.24
100	10.00	5.00	25.00	-11.77	-7.92
101	14.00	10.00	39.00	-5.57	-1.27
102	19.00	6.00	33.00	7.41	-6.72
103	14.00	6.00	27.00	-3.84	-6.65
104	13.00	10.00	37.00	-7.77	-1.26
105	16.00	17.00	45.00	-4.89	8.08
106	13.00	6.00	34.00	-4.99	-6.60
107	13.00	11.00	35.00	-8.35	0.08
108	18.00	18.00	43.00	-0.96	9.40
109	26.00	8.00	45.00	21.27	-4.16
110	18.00	14.00	45.00	0.78	4.01
111	8.00	12.00	32.00	-19.73	1.48
112	16.00	15.00	49.00	-3.92	5.39
113	16.00	4.00	36.00	1.90	-9.35
114	11.00	11.00	32.00	-12.78	0.10
115	13.00	8.00	30.00	-6.80	-3.94
116	11.00	5.00	30.00	-9.41	-7.93
117	14.00	10.00	32.00	-6.01	-1.30
118	13.00	11.00	38.00	-7.77	0.11
119	11.00	13.00	32.00	-13.42	2.82
120	9.00	14.00	36.00	-18.35	4.19
121	11.00	13.00	28.00	-13.63	2.80
122	11.00	11.00	35.00	-12.54	0.12
123	20.00	11.00	42.00	7.06	-0.03
124	18.00	9.00	36.00	3.26	-2.69
125	12.00	10.00	34.00	-9.98	-1.25
126	13.00	13.00	39.00	-9.31	2.76
127	19.00	10.00	41.00	5.16	-1.36
128	14.00	8.00	30.00	-4.43	-3.95
129	11.00	8.00	25.00	-11.04	-3.91
130	17.00	12.00	34.00	-0.39	1.35
131	21.00	10.00	37.00	9.93	-1.38
132	13.00	9.00	30.00	-7.21	-2.60
133	18.00	9.00	34.00	3.47	-2.69
134	15.00	14.00	38.00	-6.06	4.03
135	13.00	14.00	38.00	-10.12	4.08
136	16.00	5.00	29.00	0.51	-8.02
137	7.00	10.00	26.00	-20.81	-1.17
138	13.00	9.00	32.00	-7.63	-2.62
139	17.00	12.00	36.00	0.21	1.37
140	17.00	4.00	31.00	4.38	-9.37
141	10.00	14.00	34.00	-16.05	4.19
142	16.00	10.00	33.00	-0.74	-1.29
143	17.00	7.00	33.00	3.25	-5.33
144	17.00	12.00	40.00	1.20	1.42
145	16.00	8.00	38.00	-0.34	-3.99
146	17.00	6.00	27.00	2.98	-6.69
147	11.00	9.00	33.00	-11.56	-2.57
148	14.00	10.00	36.00	-5.54	-1.27
149	17.00	10.00	39.00	0.82	-1.33
150	14.00	14.00	40.00	-7.67	4.09
151	14.00	12.00	39.00	-6.66	1.41
152	12.00	13.00	43.00	-11.71	2.76

SAM NO	3H CPM	14C CPM	WIDE CPM	3H DPM	14C DPM
153	9.00	7.00	23.00	-14.83	-5.21
154	19.00	10.00	39.00	4.88	-1.37
155	12.00	13.00	36.00	-11.59	2.77
156	20.00	5.00	30.00	10.01	-8.08
157	6.00	12.00	27.00	-23.97	1.52
158	7.00	7.00	27.00	-19.12	-5.18
159	19.00	16.00	48.00	1.71	6.66
160	16.00	19.00	48.00	-6.14	10.74
161	19.00	7.00	38.00	6.97	-5.38
162	12.00	12.00	33.00	-10.74	1.46
163	11.00	16.00	38.00	-15.14	6.83
164	12.00	6.00	26.00	-7.30	-6.59
165	14.00	8.00	32.00	-4.83	-3.97
166	7.00	9.00	21.00	-20.03	-2.48
167	11.00	8.00	29.00	-10.24	-3.87
168	10.00	10.00	35.00	-14.10	-1.20
169	11.00	6.00	30.00	-9.59	-6.57
170	18.00	10.00	36.00	3.31	-1.33
171	9.00	8.00	22.00	-14.71	-3.83
172	6.00	14.00	25.00	-24.68	4.33
173	8.00	11.00	28.00	-19.00	0.18
174	18.00	11.00	40.00	3.30	0.03
175	14.00	8.00	32.00	-4.33	-3.95
176	16.00	10.00	40.00	-1.68	-1.32
177	11.00	7.00	29.00	-10.52	-5.25
178	19.00	6.00	41.00	7.49	-6.72
179	11.00	9.00	28.00	-11.78	-2.58
180	19.00	9.00	34.00	5.84	-2.70
181	22.00	11.00	45.00	11.35	-0.06
182	16.00	13.00	47.00	-2.75	2.72
183	14.00	6.00	33.00	-3.36	-6.63
184	12.00	7.00	32.00	-8.67	-5.28
185	12.00	6.00	32.00	-8.01	-6.61
186	15.00	8.00	34.00	-2.70	-3.98