

C

108

2

Repl. 52

Nov. 9, 1911

T 37320

Time 2:12

No. class Int. Remark

1 A 63 near edge

2 A 63

3 A 42 near edge

4 A 42

5 A 42 some proc.

6 B5 42

7 K 42

8 A 42

9 A 21

10 B9 63

11 K 63

12 net 63 no bright lines

13 A 21

14 F5 42

15 G 63

16 A 63

17 F 42

18 F5 42

19 A 42

20 F 63

21 B5 42

22 A5 84 maybe Comp. Confirms

23 F 21

24 B5 63 Probably a cluster

25 A3 63

26 F2 84

27 B5 42

Approx. Pos.	D.M.	P.A.	Dec.	magn.
2 14.8 +60 53	+60° 472	2 14 52.1	+60 52.4	6.6 ✓
2 9.1 +59 22.4	+59° 46.4	2 9 13.7	+59 22.5	6.7 ✓
2 8.0 +58 42.2	+58° 437	2 7 58.8	+58 42.0	8.7 ✓
2 9.0 +58 36	+58° 440	2 9 9.4	+58 37.8	8.5 ✓
2 9.1 +58 50	+58° 442	2 9 26.3	+58 51.4	8.0 ✓
2 11.0 +58 32	+58° 450	2 10 49.9	+58 34.8	7.5 ✓
2 11.9 +58 28	+58° 456	2 11 51.7	+58 27.6	7.3 ✓
2 12.7 +58 10	+58° 457	2 12 54.2	+58 9.7	8.6 ✓
2 14.4 +59 13	+59° 482	2 14 25.2	+59 12.2	8.2 ✓
2 14.9 +59 20	+59° 484	2 14 50.8	+59 20.3	7.2 ✓
2 15.9 +59 0	+59° 486	2 15 57.3	+59 1.1	6.9 ✓
2 18.7 +60 0.4	+60° 488	2 18 57.7	+60 0.3	8.1 ✓
2 19.1 +60 15.4	+60° 490	2 19 58.0	+60 16.4	7.7 ✓
2 20.3 +60 5	+60° 495	2 20 14.2	+60 8.6	8.0 ✓
2 32.4 +59 19	+59° 505	2 32 27.3	+59 21.0	7.5 ✓
2 26.1 +59 15	+59° 517	2 26 7.0	+59 13.4	6.8 ✓
2 26.6 +59 27	+59° 521	2 26 35.1	+59 26.8	6.7 ✓
2 27.3 +60 30.2	+60° 527	2 27 23.1	+60 27.8	8.0 ✓
2 30.3 +59 56	+59° 529	2 30 23.5	+59 55.6	7.9 ✓
2 31.5 +60 58	+60° 548	2 31 25.9	+60 58.4	7.1 ✓
2 34.0 +60 48	+60° 561	2 34 0.8	+60 46.1	8.0 ✓
2 36.2 +59 57	+59° 541	2 36 4.5	+59 57.0	6.2 ✓
2 38.6 +59 59	+59° 548	2 38 38.3	+59 57.5	8.5 ✓
2 40.0 +59 47	+59° 552	2 39 59.9	+59 48.7	6.9 ✓
2 41.5 +59 50	+59° 559	2 41 45.7	+59 52.3	7.6 ✓
2 44.5 +60 56	+60° 591	2 44 30.0	+60 55.5	5.9 ✓
2 44.7 +59 48	+59° 569	2 44 40.7	+59 48.1	7.9 ✓

Edge

made

edge

Nov. 8, 1911 (cont)

Tag 320

No. Obs. Int. Remark

28	B ₉	63	
29	B ₅	84	
30	B ₅ ?	42	Probably second exposure
31	F ₅	63	
32	B ₅	63	
33	B ₈ ?	42	Focus poor
34	A	21	"
35	A ₂	21	
36	A ₀	63	
37	A	42	near edge
38	A	42	Focus poor
39	A	42	"
40	B ₈ ?	42	"
41	F	42	
42	K	42	
43	cont.	42	No lines seen
44	F ₂	42	
45	F ₂	63	
46	A	42	
47	A ₃	21	
48	B ₅	21	
49	A ₀	63	
50	K ₀	63	
51	F ₂	42	
52	A	21	
53	comp.	63	$K = 0.5 H$ Brightness = F
54	A	42	
55	A	63	

DM R.L. Dec. mag.

2 46.2 +60 32	+60° 57' 2 46 57' +60 82.1 7.8 ✓
2 48.4 +60 41	+60° 608 2 48 21.0 -60 42.2 7.2 ✓
2 48.1 +60 57	+57° 578 2 48 54 +57 58.6 8.0 ✓
2 52.5 +59 45	+57° 588 2 52 28.1 +57 44.2 6.8 ✓
2 527 +61 7	+61° 513 2 52 20 +61 9.5 6.7 ✓
2 539 +59 29	+59° 589 2 53 34.8 +59 27.4 8.2 ✓
2 54.5 +59 46	+59° 590 2 54 20.2 +59 44.6 8.9 ✓
2 55.0 +59 1	+59° 592 2 54 56.1 +59 0.4 9.0 ✓
3 0.0 +60 4	+60° 636 3 0 0.0 +60 4.4 7.0 ✓
2 4.0 +60 36	+60° 657 3 3 56.2 +60 34.8 8.0 ✓
3 4.8 +59 30.8	+57° 618 3 4 46.2 +59 29.5 7.9 ✓
3 5.2 +59 28	+57° 621 3 5 10.6 +59 27.0 8.3 ✓
3 5.5 +59 30.8	+57° 625 3 5 27.5 +59 31.3 7.1 ✓
3 11.9 +58 12	+58° 594 3 11 51.5 +58 12.2 8.2 ✓
3 12.1 +58 12	+58° 596 3 12 7.0 +58 11.7 6.9 ✓
2 16.2 +58 13	+58° 467 2 16 18.1 +58 12.6 8.0 ✓
2 16.5 +58 28	+58° 468 2 16 19.5 +58 27.5 8.8 ✓
2 16.9 +58 28	+58° 471 2 16 50.3 +58 27.5 7.5 ✓
2 19.5 +58 0	+57° 577 2 19 37.0 +57 59.9 8.6 ✓
2 20.7 +58 13	+58° 479 2 20 44.2 +58 11.5 8.4 ✓
2 22.4 +58 58	+58° 583 2 22 17.1 +58 58.5 8.3 ✓
2 22.8 +57 49	+57° 585 2 22 35.1 +57 48.5 7.5 ✓
2 23.4 +58 35.8	+58° 485 2 23 18.8 +58 34.2 7.0 ✓
2 25.8 +58 56	+57° 591 2 25 4.2 +57 51.8 7.9 ✓
2 25.5 +58 26	+58° 491 2 25 43.0 +58 26.1 9.0 ✓
2 27.8 +57 27	+57° 594 2 25 39.4 +57 25.8 7.5 ✓

Don't find
these onesSands
made
copy

Nov. 8, 1911 (cont)

T 37320

No. Date Set Remarks

56	A	42	
57	B5	42	
58	B	42	
59	A	42	
60	B5	63	
61	A	42	
62	B8?	42	Focus very poor.
63	B0	42	
64	A0	63	
65	A	42	
66	A	42	
67	B0	42	
68	A	42	
69	B5	42	
70	Omit	42	Ins. supersaturated. Too poor
71	Omit		
72	A	42	
73	B5	42	
74	B5	21	
75	A0	84	Line over H β strong as in X-ray spec.
76	A	42	
77	B5	42	
78	A3	42	
79	A	42	
80	B8?	42	
81	B8?	42	
82	A0	63	

Dm

2	24.1	+57°	60.0	2	26	12.2	+57°	29.0	8.7	✓
2	28.4	+58°	497	2	28	20.4	+58°	12.0	7.8	✓
2	29.0	+57°	60.5	2	29	7.0	+57°	52.2	8.0	✓
2	29.3	+58°	502	2	29	25.3	+58°	1.5	9.0	✓
2	31.0	+58°	502	2	30	51.5	+58°	20.7	7.0	✓
2	30.2	+57°	530	2	30	28.1	+57°	5.7	8.2	✓
2	33.0	+59°	535	2	32	58.1	+59°	12.0	7.3	✓
2	32.7	+58°	510	2	32	47.0	+58°	36.9	8.5	✓
2	32.3	+58°	508	2	32	22.0	+58°	13.8	7.5	✓
2	31.8	+57°	615	2	31	46.8	+57°	57.5	8.5	✓
2	32.6	+57°	619	2	32	41.6	+57°	49.6	8.0	✓
2	32.2	+57°	616	2	32	16.2	+57°	34.7	8.0	✓
2	31.0	+57°	613	2	30	48.3	+57°	34.7	9.0	✓
2	33.7	+57°	623	2	33	41.2	+57°	10.8	8.0	✓
2	38.0	+57°	638	2	37	56.7	+57°	11.5	8.2	✓
2	38.2	+57°	640	2	38	18.3	+57°	25.4	7.8	✓
2	38.8	+57°	643	2	38	44.0	+57°	17.0	8.0	✓
2	40.8	+57°	651	2	40	55.1	+57°	41.5	6.2	✓
2	42.2	+58°	525	2	42	15.3	+58°	9.2	8.0	✓
2	37.7	+58°	521	2	37	33.2	+58°	12.8	7.2	✓
2	45.3	+59°	567	2	44	4.5	+59°	13.2	7.9	✓
2	45.3	+58°	532	2	45	26.3	+58°	33.5	8.2	✓
2	46.0	+58°	504	2	45	45.5	+58°	29.3	8.9	✓
2	47.9	+59°	576	2	47	51.0	+59°	14.3	9.0	✓
2	48.3	+58°	540	2	46	15.4	+58°	59.9	7.2	✓

Sands

made

b7

Nov. 8, 1911 (cont.)

T 373 20

no	Ches	Int	Remark
83	A	42	Partial, supposed on 84
84	A	63	
85	B	42	
86	A	42	
87	A	63	
88	A	42	
89	A?	42	Fucus form
90	A	42	
91	F	42	
92	F	63	
93	N	42	3, 6, 10
94	B	42	
95	B5	42	
96	A3	63	
97	K	42	
98	A	42	
99	B4	84	Don't cont. to H. K. well marked lines maybe minor
100	B4	63	like that of 99
101	B4	84	"
102	A	42	
103	A21	84	
104	K	21	
105	B5	63	
106	A0	42	
107	F21	63	

Dm

2	49.9 + 59.6	+ 57° 58' 2	49.34.5 + 59 48 8.7 ✓
2	49.9 + 59.6	+ 57° 58' 2	49.40.5 + 59 58 7.0 ✓
2	52.5 + 58.0	+ 58° 56' 2	52.26.0 + 58 56.5 7.8 ✓
2	50.1 + 58.27	+ 58° 54' 2	50.23.5 + 58 27.1 8.21 ✓
2	58.2 + 58.48	+ 58° 53' 2	58.4.0 + 58 48.6 8.1 ✓
2	59.0 + 58.59	+ 58° 56' 2	58.58.1 + 58 57.9 8.0 ✓
3	1.0 + 59.22	+ 57° 60' 3	1.9.0 + 59 22.0 8.3 ✓
3	0.7 + 58.10	+ 58° 57' 2	0.41.6 + 58 10.8 8.2 ✓
2	58.2 + 58.12	+ 58° 56' 2	58.8.5 + 58 11.3 8.0 ✓
2	57.8 + 57.48	+ 57° 69' 2	57.40.4 + 57 47.0 7.3 ✓
3	0.4 + 57.20	+ 57° 70' 2	0.20.6 + 57 20.4 7.9 ✓
3	6.5 + 58.13	+ 58° 58' 3	6.19.0 + 58 14.7 8.4 ✓
3	9.8 + 57.20	+ 57° 71' 3	9.26.2 + 57 20.6 8.0 ✓
2	15.1 + 57.33	+ 57° 56' 2	15.3.1 + 57 34.1 8.1 ✓
2	13.0 + 57.31	+ 57° 55' 2	12.57.0 + 57 26.3 8.0 ✓
2	13.9 + 57.14	+ 57° 55' 2	13.35.1 + 57 11.1 8.7 ✓
2	11.8 + 56.33	+ 56° 56' 2	11.42.2 + 56 34.4 6.7 ✓
2	12.7 + 56.45	+ 56° 59' 2	12.45.5 + 56 43.3 7.0 ✓
2	15.1 + 55.57	+ 55° 6' 2	15.4.4 + 55 56.4 6.3 ✓
2	15.7 + 55.28	+ 55° 6' 2	15.47.6 + 55 26.3 8.0 ✓
2	19.2 + 54.54	+ 54° 55' 2	19.14.8 + 54 53.0 6.5 ✓
2	20.0 + 54.45	+ 54° 55' 2	20.2.7 + 54 41.4 7.3 ✓
2	20.6 + 54.55	+ 54° 56' 2	20.38.2 + 54 57.0 6.5 ✓
2	21.5 + 54.42	+ 54° 56' 2	21.23.3 + 54 38.2 8.4 ✓
2	22.1 + 54.48	+ 54° 56' 2	21.59.1 + 54 48.8 6.5 ✓

long
medium
short

Nov. 10, 1911

I 37320 (Cont.)

Time 11:30

no	class	Int.	Remark
108	B	42	Maybe O ₂ 5
109	A	42	
110	O ₂	63	
111	A	42	
112	B8	63	
113	G5	84	
114	O ₂	105	
115	B3	42	
116	O ₂	63	
117	O ₂	63	
118	K5	63	
119	B3	63	
120	O ₂	63	
121	A	42	
122	B8?	42	
123	G5	63	
124	O ₂	84	Lines narrow
125	Ma	42	
126	G0	63	
127	K0	105	
128	K0	63	
129	A	21	
130	O ₂	42	
131	F	21	
132	A	21	
133	K5	42	
134	A	21	

Dm

2	23.0 +54 41	+54° 56.9	2	22.7	+54 41.5	5.0	✓
2	23.1 +54 30	+54° 57.0	2	23.2	+54 32.5	9.0	✓
2	23.0 +53 54	+54° 54.1	2	22.48.5	+53 54.8	7.5	✓
2	25.2 +53 45	+53° 54.7	2	25.26.8	+53 41.7	8.5	✓
2	15.2 +54 35	+54° 53.9	2	15.9.5	+54 35.8	7.0	✓
2	13.9 +54 42	+54° 53.5	2	13.50.4	+54 41.8	6.4	✓
2	12.2 +55 11	+55° 57.8	2	12.18.5	+55 10.8	5.7	✓
2	15.5 +56 50	+56° 6.16	2	15.33.0	+56 50.8	8.5	✓
2	16.0 +56 32	+56° 6.21	2	16.2.3	+56 34.6	7.0	✓
2	19.5 +57 11	+57° 57.6	2	19.33.1	+57 10.2	7.0	✓
2	21.0 +57 22	+57° 58.0	2	20.58.1	+57 21.8	6.5	✓
2	21.2 +57 4	+57° 58.2	2	21.26.8	+57 2.8	6.8	✓
2	19.7 +56 1	+56° 6.27	2	19.47.0	+56 1.1	8.1	✓
2	19.1 +56 29	+56° 6.22	2	19.2.1	+56 26.2	8.4	✓
2	16.0 +56 36	+56° 6.30	2	17.57.2	+56 37.1	8.2	✓
2	16.5 +56 1?	+56° 6.38	2	16.27.2	+56 0.2	2	✓
3	47 +56 36	+56° 7.98	3	4	+56 35.4	6.0	✓
3	1.9 +55 35	+55° 7.49	3	1	+55 31.4	8.0	✓
2	57.5 +56 24	+56° 7.78	2	57.26.3	+56 27.2	7.0	✓
2	55.0 +56 8	+56° 7.67	2	54.42.9	+56 8.1	5.0	✓
2	55.0 +55 30	+55° 7.38	2	54.52.6	+55 30.0	6.3	✓
2	57.5 +55 4	+55° 7.41	2	57.26.7	+55 3.8	8.0	✓
2	55.3 +56 56	+56° 7.71	2	55.19.9	+56 56.1	7.9	✓
2	53.8 +57 1	+57° 6.83	2	53.31.5	+57 0.5	8.7	✓
2	49.5 +54 49	+57° 6.75	2	49.35.1	+57 50.8	9.0	✓
2	49.0 +57 5	+57° 6.72	2	48.54.6	+57 4.7	7.1	✓
2	46.2 +57 11	+57° 6.69	2	48.10.2	+57 10.6	8.9	✓

Nov. 10, 1911 (Cont.)

T 37320

No	Class	Int.	Remark
135	B	21	
136	Q2	42	
137	O	21	Bright band seen probably 4633
138	Qmp?	84	Like penumbra for ft. Confine
139	K5	63	
140	Q	42	
141	Q0	63	
142	Q	42	
143	Q	21	
144	Q3	42	
145	Conti.	21	H ₂ light?
146	Q0	42	
147	Q	21	
148	O	42	Bright Band seen
149	Q0	42	
150	K0	63	
151	Q	42	
152	B	21	
153	B	21	
154	Q	42	
155	Q	21	
156	B	42	Don't see uncertain
157	B	42	
158	Q2	42	
159	K0	63	
160	K0	42	
161	Q2	42	

2	45.3	+57.20	+57° 66.5	2	45	24.3	+57	20.4	8.0	✓
2	42.0	+56.42	+56° 73.2	2	41	48.2	+56	39.2	8.0	✓
2	41.0	+56.27	+56° 72.8	2	41	47.8	+56	26.7	8.5	✓
2	38.9	+56.28	+56° 71.8	2	38	52.0	+56	28.2	6.5	✓
2	38.6	+56.26	+56° 71.7	2	38	55.2	+56	25.5	7.6	✓
2	38.8	+55.58	+55° 70.9	2	38	41.0	+55	57.5	8.3	✓
2	35.0	+55.57	+55° 70.2	2	34	53.6	+55	58.5	7.7	✓
2	34.5	+56.30	+56° 70.8	2	34	28.9	+56	30.8	8.2	✓
2	33.8	+56.28	+56° 70.2	2	33	26.9	+56	29.1	8.2	✓
2	33.0	+55.51	+55° 69.4	2	32	57.9	+55	52.5	7.8	✓
2	32.4	+56.18	+56° 69.3	2	32	19.8	+56	16.5	8.3	✓
2	31.7	+55.57	+55° 69.2	2	31	45.9	+55	51.5	8.0	✓
2	31.7	+56.47	+56° 69.0	2	31	31.8	+56	47.6	8.2	✓
2	30.9	+56.9	+56° 68.6	2	30	42.7	+56	6.5	9.1	✓
2	30.1	+56.14	+56° 68.2	2	30	5.6	+56	10.2	8.5	✓
2	30.1	+56.74	+56° 68.3	2	30	7.0	+56	40.6	7.0	✓
2	30.3	+57.11	+57° 61.0	2	30	25.2	+57	11.2	8.4	✓
2	29.1	+57.4	+57° 60.6	2	29	14.8	+57	2.9	8.1	✓
2	28.1	+57.12	+57° 60.2	2	28	4.8	+57	10.6	8.4	✓
2	26.8	+57.6	+57° 59.8	2	26	5.8	+57	5.0	8.2	✓
2	25.8	+57.7	+57° 59.5	2	25	43.6	+57	5.2	8.7	✓
2	23.1	+56.514	+56° 65.6	2	23	6.8	+56	53.2	7.7	✓
2	22.3	+56.51	+56° 65.2	2	22	25.8	+56	53.1	8.5	✓
2	22.9	+56.37	+56° 65.4	2	22	52.2	+56	35.4	8.4	✓
2	21.2	+56.51	+56° 64.4	2	21	25.8	+56	52.9	7.0	✓
2	21.3	+55.33	+55° 66.5	2	21	20.9	+55	33.5	8.3	✓
2	21.4	+55.22	+55° 67.4	2	27	23.8	+55	19.7	8.7	✓

S

3

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Nov. 10, 1911 (cont.)

I 37320

No Class Sub Remark

162	A5	42	
163	B8?	42	
164	B8?	42	
165	B8	63	
166	F0	42	
167	A5	63	
168	A	84	near edge
169	B8	84	"
170	B8?	21	
171	B8?	105	Burned out
172	A0	21	
173	B8?	42	
174	A5	63	
175	A0	63	
176	A	21	
177	A	21	
178	A	21	
179	A	42	
180	B8	42	
181	B5	21	
182	A3	42	
183	B8?	42	
184	F5	42	
185	A	42	Line 4077 strong. Pl. 37330 shows this line
186	A	21	line of probably resembles Phenon.
187	A	21	
188	K0	105	
189	A	42	

Dm

2	27.0	+55° 20	+55° 67.1	2	26	57.0	+55° 18.9	8.4	✓
2	26.2	+55° 18	+55° 66.3	2	26	17.6	+55° 17.4	8.6	✓
2	25.9	+55° 18	+55° 66.0	2	25	55.9	+55° 17.5	8.2	✓
2	32.8	+55° 40	+55° 68.8	2	30	72.0	+55° 38.9	7.5	✓
2	32.1	+55° 40	+55° 68.8	2	30	10.4	+55° 38.9	7.5	✓
3	0.5	+52° 35	+52° 66.3	3	0	29.4	+52° 25.5	7.0	✓
3	1.3	+51° 38	+51° 68.9	3	1	18.5	+51° 37.6	7.3	✓
2	57.7	+51° 40	+51° 68.1	2	57	41.2	+51° 38.7	6.8	✓
2	57.4	+52° 9	+52° 66.6	2	55	25.8	+52° 9.1	8.0	✓
2	50.7	+51° 47	+51° 66.5	2	50	33.7	+51° 47.4	5.7	✓
2	59.2	+53° 37	+53° 62.4	2	57	19.1	+53° 37.5	8.4	✓
2	57.0	+53° 32	+53° 61.5	2	56	53.3	+53° 32.5	8.0	✓
2	51.9	+53° 48	+53° 60.6	2	51	52.4	+53° 47.0	7.3	✓
2	49.5	+54° 35	+54° 62.9	2	49	28.5	+54° 37.0	8.0	✓
2	49.2	+53° 46	+53° 60.1	2	49	14.8	+53° 45.1	8.5	✓
2	48.8	+53° 48	+53° 59.9	2	48	41.4	+53° 47.3	8.5	✓
2	47.5	+53° 50	+53° 57.5	2	47	21.5	+53° 49.1	8.5	✓
2	47.0	+53° 48	+53° 57.4	2	47	1.6	+53° 45.7	8.3	✓
2	47.9	+53° 12	+53° 57.6	2	47	48.6	+53° 12.7	7.7	✓
2	50.9	+55° 48	+55° 73.6	2	50	39.7	+55° 48.6	8.5	✓
2	50.0	+55° 45	+55° 73.3	2	49	39.3	+55° 43.9	8.5	✓
2	47.5	+55° 18	+55° 73.0	2	47	26.0	+55° 17.2	8.2	✓
2	46.3	+54° 50	+54° 62.1	2	46	25.5	+54° 57.9	7.7	✓
2	46.0	+55° 35	+55° 72.6	2	45	52.5	+55° 34.9	8.0	✓
2	45.2	+55° 50	+55° 72.3	2	45	13.3	+55° 53.5	8.4	✓
2	44.8	+55° 28	+55° 72.2	2	44	50.3	+55° 27.1	8.5	✓
2	40.0	+55° 16	+55° 71.4	2	40	11.0	+55° 17.7	8.5	✓
2	39.5	+54° 52	+54° 61.0	2	39	30.4	+54° 53.0	7.5	✓

Nov. 10, 1911 (Cont.)
I 37 3.20

No	Class	Int	Remark
190	Ko	42	
191	Qo	63	
192	Qs	42	
193	Js	42	
194	A	42	
195	B8	84	
196	Qo	42	
197	F8	105	
198	A	63	
199	A21	42	
200	K2	42	
201	A	42	
202	A	63	
203	F2	63	
204	Ko	84	
205	Qo	63	
206	A	63	

Time 17.56

Mich 7.186 207 3' 95
208 1' 10

2	37.8 + 55.10	+55° 70.6	2	37 + 8.1	+55° 9.0	7.5	✓
2	37.3 + 57.0	+54° 60.6	2	37.30.0	+54° 57.3	7.3	✓
2	38.2 + 55.15	+55° 70.4	2	36 15.4	+56° 15.9	7.5	✓
2	37.2 + 54.20	+54° 60.5	2	37 25.1	+54° 19.4	8.3	✓
2	34.8 + 54.22	+54° 60.2	2	34 40.1	+54° 20.5	8.0	✓
2	32.7 + 54.30	+54° 59.8	2	32 45.0	+54° 29.7	6.0	✓
2	31.5 + 54.51	+54° 59.6	2	31 20.2	+54° 57.7	7.3	✓
2	44.0 + 52.10	+52° 64.1	2	43 59.9	+52° 9.4	4.2	✓
2	42.5 + 52.22	+52° 64.0	2	42 37.3	+52° 24.5	7.0	✓
2	43.3 + 53.12	+53° 58.7	2	43 19.1	+53° 11.8	7.8	✓
2	41.8 + 52.27	+52° 63.7	2	41 32.3	+52° 24.9	7.0	✓
2	37.5 + 53.30	+53° 58.9	2	37 25.8	+53° 29.6	8.3	✓
2	37.2 + 53.21	+53° 56.8	2	37 19.7	+53° 19.8	6.8	✓
2	36.2 + 53.29	+53° 56.7	2	36 19.6	+53° 27.1	6.8	✓
2	32.7 + 52.54	+52° 61.6	2	32 49.1	+52° 57.2	6.0	✓
2	30.4 + 52.10	+52° 60.9	2	30 19.3	+52° 10.2	7.5	✓
2	40.3 + 51.42	+51° 63.6	2	40 23.8	+51° 40.0	7.5	

Ident by A.D.W.

Checked by J.B.M.

✓	207 + 54°	613	2	40.5	+ 54	4	7.9
✓	208 + 53°	574	2	38.4	+ 53	32	7.8

no. 493 on I 38164

Nov. 16, 1911

~~0 37000~~
I 361956

June 5:02

No	class	Int.	Remark
1	A2	63	
2	A	42	
3	F8	84	
4	A	21	
5	F0	21	
6	A	21	
7	F	42	
8	F0	63	
9	F	21	
10	A5	42	
11	F0	63	
12	A	63	On edge
13	F5	63	
14	F3-	42	
15	A5	21	
16	F	42	
17	K0	42	
18	F8	105	
19	A	42	
20	A	84	On edge Burned out
21	F	21	
22	A5	21	
23	F	84	
24	F0	84	
25	A	42	
26	F	21	
27	A	42	New edge

Dm + 43° 209	0	54	47.4	+ 40°	33.1	6.0	✓
Dm + 40° 224	0	59	35.4	+ 40°	45.2	6.5	✓
Dm + 41° 219	1	2	8.3	+ 41°	18.2	6.2	✓
Dm + 40° 231	1	2	2.5	+ 40°	9.2	7.5	✓
Dm + 43° 244	1	4	3.1	+ 40°	9.0	7.3	✓
Dm + 40° 245	1	4	10.4	+ 40°	32.7	7.8	✓
Dm + 40° 248	1	4	46.9	+ 40°	53.8	7.0	✓
Dm + 41° 252	1	11	46.2	+ 41°	12.6	7.0	✓
Dm + 40° 282	1	17	6.3	+ 40°	35.6	7.5	✓
Dm + 41° 273	1	17	48.4	+ 41°	32.9	7.3	✓
Dm + 40° 289	1	19	3.3	+ 40°	20.9	6.0	✓
Dm + 39° 334	1	19	24.2	+ 39°	34.3	6.5	✓
Dm + 41° 283	1	20	7.2	+ 41°	30.4	7.0	✓
Dm + 41° 288	1	20	54.9	+ 41°	31.5	7.5	✓
Dm + 42° 308	1	19	51.5	+ 42°	2.4	7.7	✓
Dm + 40° 315	1	25	4.6	+ 40°	8.4	7.0	✓
Dm + 40° 328	1	27	21.7	+ 40°	25.5	6.8	✓
Dm + 40° 332	1	28	23.1	+ 40°	40.9	4.0	✓
Dm + 40° 341	1	30	35.0	+ 40°	26.8	7.3	✓
Dm + 39° 378	1	32	3.1	+ 39°	51.2	5.4	✓
Dm + 39° 376	1	31	35.0	+ 39°	56.3	6.7	✓
Dm + 40° 344	1	31	23.5	+ 40°	55.9	7.0	✓
Dm + 41° 328	1	32	59.4	+ 41°	53.1	5.3	✓
Dm + 42° 345	1	31	59.7	+ 42°	33.8	6.0	✓
Dm + 42° 352	1	33	25.1	+ 42°	54.2	7.5	✓
Dm + 42° 362	1	36	22.3	+ 42°	58.7	7.7	✓
Dm + 42° 370	1	37	37.3	+ 42°	58.8	7.5	✓

Nov. 16, 1911 (Cont)
I 36956

June 2145

M	Obs	Int.	Remarks
28	Fr	42	
29	Fr	42	
30	Fr	42	
31	Fr	21	
32	Fr	105	
33	K	21	
34	Fr	21	
35	Q	21	
36	Fr	63	
37	K	42	
38	Fr	21	
39	K	42	
40	K	21	
41	Q	63	4077 and 4128-31 Strong. Probably lib. 2 Phœnix
42	Fr	63	
43	Fr	42	
44	Q	21	
45	Q	63	
46	Fr	21	
47	Q	21	
48	Q	21	
49	Fr	21	
50	Q	84	
51	Q	21	
52	K	63	
53	Q	21	
54	K	42	

DM + 42° 252	0	56	49.4 + 42	24.8	8.0	✓
DM + 42° 239	0	59	6.2 + 42	45.3	7.5	✓
DM + 42° 240	0	59	51.7 + 42	4.1	7.0	✓
DM + 42° 249	1	2	29.7 + 42	10.1	7.7	✓
DM + 43° 234	0	59	42.7 + 43	10.5	5.2	✓
DM + 43° 251	1	5	12.9 + 43	24.5	7.8	✓
DM + 42° 262	1	6	22.0 + 42	8.8	8.7	✓
DM + 43° 268	1	7	28.0 + 42	22.7	8.6	✓
DM + 42° 271	1	8	11.6 + 42	10.7	7.0	✓
DM + 42° 275	1	10	12.3 + 42	32.8	7.5	✓
DM + 41° 246	1	11	22.1 + 41	49.0	8.4	✓
DM + 42° 281	1	11	54.3 + 42	45.0	6.5	✓
DM + 42° 284	1	12	42.7 + 42	28.4	7.5	✓
DM + 42° 293	1	15	53.7 + 42	23.2	6.5	✓
DM + 42° 302	1	17	49.4 + 42	41.2	6.0	✓
DM + 42° 305	1	18	12.1 + 42	56.9	6.9	✓
DM + 43° 301	1	19	36.1 + 43	7.6	8.0	✓
DM + 43° 302	1	19	41.1 + 43	17.9	6.5	✓
DM + 42° 313	1	22	33.8 + 42	52.5	8.0	✓
DM + 43° 318	1	24	40.8 + 43	9.0	8.4	✓
DM + 43° 323	1	25	29.8 + 43	40.4	8.1	✓
DM + 43° 337	1	29	59.7 + 43	24.2	7.5	✓
DM + 43° 343	1	30	42.0 + 43	37.2	5.0	✓
DM + 44° 350	1	32	59.8 + 44	18.8	8.6	✓
DM + 44° 354	1	34	29.6 + 44	34.1	6.8	✓
DM + 44° 357	1	34	57.4 + 44	40.6	8.5	✓
DM + 45° 432	1	35	37.4 + 45	24.7	6.8	✓

Good
made
247

Nov. 16, 1911 (Cont)

I 369.56

No	class	Int.	Remark
55	F	63	Near edge
56	A	84	"
57	F5	42	"
58	A	63	lim 426 suspected
59	A	42	
60	A	42	
61	A	42	
62	K5	42	
63	A	63 X	
64	A2	21	
65	B5	42	
66	K	21	
67	K5	63	
68	A	21	
69	K5	42	
70	B5	63	
71	K	84	
72	A	42	
73	K	42	
74	F	21	
75	B8	42	
76	F	105	
77	A	21	
78	K	21	
79	B5	84	
80	A	21	
81	A	21	
82	A	63	

Dm + 45° 447	1	38	54.7 + 45	30.4	6.9	✓
Dm + 43° 193	0	51	52.9 + 43	55.4	6.2	✓
Dm + 44° 216	0	53	37 + 44	39.7	7.2	✓
Dm + 44° 240	0	59	51.5 + 44	16	7.6	✓
Dm + 44° 347	1	0	34.1 + 44	25.8	7.5	✓
Dm + 45° 263	1	0	36.6 + 45	10.1	7.8	✓
Dm + 45° 287	1	1	50.5 + 45	12.2	8.0	✓
Dm + 45° 291	1	2	48.6 + 45	24.9	6.9	✓
Dm + 45° 292	1	2	51.7 + 45	51.6	7.0	✓
Dm + 46° 277	1	2	19.1 + 46	35.1	8.7	✓
Dm + 46° 289	1	4	31.3 + 46	25.3	7.7	✓
Dm + 45° 303	1	6	34.5 + 45	51.7	8.0	✓
Dm + 44° 271	1	8	40.2 + 44	8.6	6.4	✓
Dm + 43° 268	1	8	8.4 + 43	40.8	7.5	✓
Dm + 43° 262	1	9	17.4 + 43	51.4	6.9	✓
Dm + 42° 288	1	13	46.8 + 42	50.0	6.5	✓✓
Dm + 44° 287	1	13	48.3 + 44	45.4	5.2	✓
Dm + 44° 290	1	14	47.1 + 44	34.5	7.5	✓
Dm + 44° 302	1	17	9.9 + 44	1.1	7.7	✓
Dm + 44° 296	1	16	33.7 + 44	51.1	8.5	✓
Dm + 44° 314	1	18	17.6 + 44	55.9	8.3	✓✓
Dm + 44° 307	1	18	58.8 + 44	39.0	5.0	✓
Dm + 44° 310	1	19	50.5 + 44	9.7	8.5	✓
Dm + 44° 319	1	21	59.2 + 44	10.8	8.0	✓
Dm + 46° 370	1	21	26.6 + 46	15.6	5.8	✓
Dm + 45° 365	1	23	12.9 + 45	39.4	8.3	✓
Dm + 45° 376	1	25	20.0 + 45	13.9	8.5	✓
Dm + 46° 393	1	27	18.2 + 46	21.9	7.0	✓

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Nov. 16, 1911

(Cont.)

T 36956

no	class	Int	Remark
83	h	21	
84	h	42	
85	h-	21	
86	K	21	
87	h-	63	
88	h	84	
89	a	63	Edge
90	a	42	"
91	a	42	
92	fo	63	
93	h	21	
94		63	Revers. look up
95	K	21	
96	a	105	Revers. int
97	B	63	
98	h	63	
99	K	21	
100	f	21	
101	a	42	
102	a	42	
103	a	42	
104	h	63	
105	h	63	
106	fo	42	
107	h-	42	
108	h	105	
109	a	42	
110	a	42	

DM +46° 397	1	27	38.2 +46	34.5	7.1	✓
DM +46° 414	1	28	30.2 +46	12.7	7.7	✓
DM +45° 392	1	28	31.8 +45	43.1	7.6	✓
DM +45° 401	1	29	56.9 +45	36.3	7.4	✓
DM +45° 404	1	30	46.7 +45	5.9	7.0	✓
DM +44° 341	1	29	49.7 +44	39.7	7.0	✓
DM +46° 215	0	50	30.4 +46	15.7	6.5	✓
DM +47° 272	0	51	43.2 +47	14.2	6.6	✓
DM +46° 229	0	52	21.2 +46	31.7	7.0	✓
DM +46° 243	0	54	43.0 +46	35.4	6.3	✓
DM +46° 241	0	54	25.8 +46	54.4	7.4	✓
DM +46° 245	0	55	35.5 +46	50.7	7.0	✓
DM +46° 266	0	59	25.8 +46	4.0	7.5	✓
DM +46° 275	1	1	7.8 +46	28.2	4.4	✓
DM +47° 357	1	7	53.4 +47	19.0	6.5	✓
DM +46° 319	1	9	38.6 +46	39.2	6.7	✓
DM +46° 317	1	7	26.5 +46	54.9	7.2	✓
DM +46° 327	1	12	14.9 +46	7.2	8.2	✓
DM +46° 334	1	13	20.9 +46	31.2	7.7	+46° 335' unperposed? ✓
DM +47° 387	1	12	56.9 +47	19.1	7.1	✓
DM +47° 400	1	15	34.0 +47	32.3	7.5	✓
DM +46° 363	1	19	25.9 +46	59.7	7.3	✓
DM +47° 460	1	27	37.4 +47	58.1	6.4	✓
DM +47° 463	1	27	53.2 +47	34.6	7.0	✓
DM +47° 466	1	28	53.6 +47	40.9	8.0	✓
DM +47° 467	1	29	8.4 +47	53.5	3.6	✓
DM +47° 483	1	33	40.8 +47	40.1	9.0	✓
DM +47° 491	1	35	15.6 +47	28.4	7.8	✓

Carbon 1000

Nov. 16, 1911

I 36956

No	class	set	Remark
111	a ₀	63	
112	a ₂	42	
113	a ₂	21	
114	a ₂	42	
115	a ₂	63	

Time 3.30

Feb. 17, 1912	116	K	4	E
Additional stars, 117	78		5	
	118	K	5	E
	119	75	5	

120 75 4

DM +48°	337	0	58	45.0	+48	46.7	6.7	✓
DM +48°	348	1	1	24.1	+48	16.7	6.9	✓
DM +48°	365	1	4	49.2	+48	30.2	7.5	✓
DM +48°	374	1	6	2.2	+48	39.9	7.0	✓
DM +48°	392	1	9	13.2	+48	14.9	6.9	✓

Select by A.D.B. 11-23-11

Checked by J.C.M.

116	+49°	358	1	13.2	+49	21.5	6.5	✓
117	+48°	327	0	55.6	+48	5.0	7.0	✓
118	+48°	320	X	53.1	+48	45.7	6.2	✓
119	+48°	309	X	51.2	+48	11.0	6.5	✓
120	+44°	261	1	4.2	+44	32.5	6.5	

Nov. 26, 1911

Time 1230

I 37371

No.	Class	Int.	Remarks
1	F5	84	
2	F5	84	
3	F5	42	
4	G5	42	
5	F5	21	
6	G2	21	
7	G5	21	
8	K2	63	
9	F0	105	
10	B9	84	New edge
11	G3	42	
12	K0	21	
13	G	21	
14	G2	63	
15	G0	42	
16	G5	21	
17	K0	42	
18	K0	42	
19	F5	84	
20	G	21	
21	K0	42	
22	K0	63	
23	F	21	
24	G	21	
25	mb	63	
26	G0	63	
27	G	42	

1	+24° 389	2	7	31.5	+24	22.6	6.0V
2	+25° 373	2	7	28.2	+25	6.4	6.1V
3	+24° 325	2	5	27.2	+24	55.4	7.5V
4	+25° 368	2	5	46.0	+25	57.0	7.3V
5	+25° 372	2	7	22.2	+25	58.1	8.4V
6	+26° 375	2	7	55.1	+26	21.4	8.6V
7	+26° 373	2	7	5.7	+26	41.0	8.1V
8	+25° 362	2	2	57.7	+25	14.4	6.8V
9	+25° 355	2	1	11.2	+25	15.9	5.0V
10	+25° 349	1	58	38.0	+25	0.3	6.5V
11	+25° 348	1	58	31.3	+25	8.6	7.4V
12	+25° 350	1	58	41.2	+25	37.7	7.6V
13	+26° 354	1	58	17.5	+26	9.7	8.5V
14	+26° 357	1	59	4.9	+26	33.4	7.0V
15	+24° 302	1	58	3.3	+24	25.1	8.0V
16	+24° 300	1	57	36.0	+24	20.9	7.9V
17	+24° 298	1	56	23.8	+24	44.1	8.0V
18	+25° 343	1	56	9.0	+25	13.8	7.2V
19	+25° 341	1	55	26.6	+25	14.0	6.0V
20	+25° 340	1	55	14.2	+25	48.9	8.0V
21	+26° 346	1	55	17.3	+26	47.9	7.5V
22	+27° 320	1	53	51.3	+27	42.7	6.5V
23	+27° 318	1	52	18.9	+27	10.7	8.6V
24	+27° 317	1	52	17.2	+27	3.1	8.3V
25	+27° 310	1	49	36.6	+27	4.9	6.5V
26	+27° 311	1	49	46.8	+27	49.1	7.7V
27	+26° 322	1	46	53.0	+26	51.1	7.8V

Carbide made out

Nov. 26, 1911 (Cont)

I 37371

No.	Class	Int.	Remarks
28	K	21	
29	F	42	nearedge
30	B5	63	"
31	F	42	"
32	Qo	105	
33	Ma	42	
34	F5	63	
35	B5	63	
36	K	21	
37	Qo	42	
38	Q2	63	
39	Q3	42	
40	AK	21	Perhaps an error in recording on I may have used Q while
41	B5	42	that K. Certainly K was splendous. Q/L June 16, 84
42	F5	42	
43	F5	63	
44	K	21	
45	Ko	42	
46	Q2	42	
47	F2	63	
48	F	21	
49	K2	42	
50	F	105+	Burned pit
51	B5	42	
52	F5	42	
53	Ko	63	
54	Q3	42	
55	Q3	63	

28	+27° 300	1	46	43.2	+27	7.2	7.5 V
29	+25° 319	1	45	47.2	+25	4.0	7.5 V
30	+25° 305	1	41	20.6	+25	45.8	6.5 V
31	+28° 393	2	12	25.4	+28	4.0	7.3 V
32	+27° 360	2	10	34.5	+27	53.2	5.8 V
33	+28° 384	2	9	33.6	+28	20.8	7.0 V
34	+28° 382	2	9	2.1	+28	4.8	6.8 V
35	+28° 374	2	6	15.8	+28	1.2	6.5 V
36	+28° 369	2	4	2.1	+28	30.7	8.0 V
37	+27° 337	2	1	0.5	+27	42.7	8.0 V
38	+28° 359	1	58	29.9	+28	34.7	6.7 V
39	+29° 361	1	59	15.3	+29	4.0	7.8 V
40	+28° 364	1	59	40.0	+28	52.5	8.1 V
41	+28° 348	1	56	27.4	+28	28.7	7.0 V
42	+28° 342	1	54	29.9	+28	5.1	8.2 V
43	+28° 338	1	52	41.4	+28	31.8	7.7 V
44	+28° 337	1	52	38.9	+28	50.9	8.2 V
45	+28° 333	1	50	25.9	+28	41.0	8.2 V
46	+29° 326	1	47	39.1	+29	0.1	8.3 V
47	+28° 319	1	46	53.4	+28	4.9	7.5 V
48	+28° 316	1	46	31.0	+28	26.2	9.0 V
49	+28° 313	1	44	57.0	+28	6.3	7.0 V
50	+28° 312	1	44	49.8	+28	52.5	8.9 V
51	+28° 304	1	41	54.5	+28	45.9	8.3 V
52	+29° 393	2	11	45.4	+29	8.4	8.3 V
53	+29° 392	2	11	34.5	+29	31.7	6.5 V
54	+29° 388	2	10	46.0	+29	22.8	8.5 V
55	+29° 387	2	9	41.6	+29	10.9	7.8 V

Cards made out

Nov. 26, 1911 (Cont.)

I 37371

No.	Class	Int.	Remark
56	B8	84	
57	Fo	63	
58	B5	42	
59	B0	105	
60	A	42	
61	Fo	42	
62	F	42	
63	F5	42	
64	Fo	42	
65	B5	21	
66	B	42	
67	Fo	42	
68	Fo	63	
69	Fo	42	
70	F5	42	
71	F	42	
72	F5	63	
73	K	21	
74	Fo	42	
75	F5	42	
76	A0	84	
77	K	42	
78	B5	21	
79	A0	105	
80	A0	42	
81	F5	42	
82	F20	42	

56	+29° 376	2	6	17.2	+29	43.6	7.3 V
57	+30° 354	2	5	54.2	+30	8.3	7.3 V
58	+29° 374	2	4	43.2	+29	52.6	7.8 V
59	+29° 371	2	3	58.6	+29	38.1	5.0 V
60	+29° 369	2	2	44.5	+29	13.6	8.1 V
61	+29° 370	2	2	44.7	+29	26.7	8.1 V
62	+29° 368	2	2	23.6	+29	23.6	8.3 V
63	+30° 326	1	56	22.8	+30	0.6	7.8 V
64	+29° 355	1	55	37.0	+29	12.3	7.7 V
65	+29° 349	1	54	5.1	+29	4.2	8.1 V
66	+29° 346	1	52	24.1	+29	13.6	8.3 V
67	+29° 330	1	48	10.6	+29	44.6	8.2 V
68	+29° 324	1	47	30.6	+29	39.0	7.5 V
69	+29° 309	1	42	19.9	+29	45.8	8.5 V
70	+30° 287	1	42	7.2	+30	5.4	8.0 V
71	+30° 296	1	42	56.9	+30	40.2	8.5 V
72	+30° 372	2	11	21.5	+30	38.2	9.4 +30° 245 superposed? V
73	+31° 403	2	11	30.7	+31	38.9	8.0 V
74	+30° 360	2	7	53.8	+30	22.2	7.4 V
75	+31° 386	2	5	7.9	+31	13.7	8.0 V
76	+30° 347	2	2	59.1	+30	50.3	6.5 V
77	+31° 370	2	1	12.4	+31	38.6	7.7 V
78	+31° 371	2	1	26.1	+31	51.5	8.3 V
79	+32° 369	1	54	31.4	+32	36.1	5.5 V
80	+32° 365	1	53	46.8	+32	42.4	8.0 V
81	+33° 347	1	54	11.0	+33	4.3	8.1 V
82	+32° 371	1	55	20.4	+32	59.9	7.7 V

Cards made on A

Nov. 26, 1911 (Cont.)

- I 37371

No.	Class	Int.	Remark
83	Ko	63	
84	Qo	21	
85	B9	42	
86	A	21	
87	F5-	84	
88	Q5-	63	
89	Fo	42	
90	F5	21	
91	F5-	42	
92	mb	42	
93	K	21	
94	B	21	
95	F2	21	
96	B5-	21	
97	A	63	
98	K	21	
99	A	105	Lines burned out
100	A	105+	"
101	B	105	"

13.48

✓	102	2	Bo
✓	103	2	B5
✓	104	1	K5 Parity super on 70

83	+32°	360	1	50	38.8	+32	30.6	7.0 ✓
84	+32°	357	1	50	7.4	+32	51.8	8.1 ✓
85	+33°	328	1	49	25.4	+33	6.6	7.6 ✓
86	+32°	344	1	47	39.0	+32	52.6	8.6 ✓
87	+31°	316	1	40	24.8	+31	57.5	6.2 ✓
88	+31°	303	1	36	5.1	+31	47.2	7.2 ✓
89	+31°	329	1	45	10.8	+31	13.7	8.0 ✓
90	+31°	334	1	46	16.6	+31	8.1	8.7 ✓
91	+30°	303	1	48	42.1	+30	18.8	7.8 ✓
92	+30°	310	1	47	44.1	+30	26.0	7.0 ✓
93	+31°	354	1	53	22.5	+31	25.3	8.0 ✓
94	+31°	357	1	54	52.9	+31	42.6	8.6 ✓
95	+30°	324	1	55	28.9	+30	41.2	8.6 ✓
96	+30°	333	1	57	51.8	+30	17.8	8.4 ✓
97	+32°	390	2	1	45.4	+32	59.6	7.0 ✓
	+31°	382	2	4	0.4	+31	28.6	7.0 ✓
98	+33°	377	2	8	43.4	+33	11.1	4.1 ✓
	+32°	407	2	7	22.5	+32	42.4	5.2 ✓
99	+33°	395	2	8	14.4	+33	34.6	8.0 ✓
100	+33°	397	2	8	43.4	+33	11.1	4.1 ✓
101	+33	395	2	8	14.4	+33	34.6	8.0 ✓

Cards made out

Ident. by J. C. M.
checked by A. D. M. 12-12-11

102	+30°	273	1	38.4	+30	5	8.3 ✓
103	+30°	280	1	40.2	+30	3	8.3 ✓
104	+30°	288	1	41.2	+30	11	8.1 ✓

Nov 30, 1911

I 37380

Time 10.02

No. class Dist. Remark

1	Ko	4	
2	Go	8	
3	Ks	3	
4	Qs	4	
5	Qo	3	
6	Jo	4	
7	Qo	2	
8	Ks	3	
9	Qo	4	
10	Ks	1	
11	Jo	2	
12	Jo	2	
13	Jo	3	
14	Ks	1	
15	Jo	2	
16	Ks	2	
17	Ks	4	
18	Qo	3	
19	Go	5	
20	J	3	Nebulosity - purple and No bright lines
21	Qs	2	
22	Jo	7	
23	Qo	3	
24	Qo	3	
25	Ks	2	
26	Qo	2	
27	Ko	4	

1	+42° 249	1	2	29.7	+42	10.1	7.7 ✓
2	+41° 219	1	2	8.3	+41	18.2	6.2 ✓
3	+41° 224	1	3	40.7	+41	27.8	8.1 ✓
4	+40° 248	1	4	46.9	+40	53.8	7.0 ✓
5	+40° 245	1	4	10.4	+40	32.7	7.8 ✓
6	+40° 244	1	4	3.1	+40	9.0	7.3 ✓
7	+40° 239	1	3	47.5	+40	20.9	8.3 ✓
8	+40° 235	1	3	0.2	+40	20.2	7.0 ✓
9	+40° 231	1	2	2.5	+40	9.2	7.5 ✓
10	+39° 273	1	1	50.3	+39	52.0	8.3 ✓
11	+39° 272	1	1	44.2	+39	41.7	8.4 ✓
12	+39° 271	1	1	38.6	+39	23.7	8.8 ✓
13	+39° 269	1	1	25.6	+39	1.2	8.0 ✓
14	+38° 202	1	1	40.5	+38	51.9	8.9 ✓
15	+39° 276	1	2	42.1	+39	2.3	9.1 ✓
16	+40° 249	1	5	5.4	+40	28.9	7.3 ✓
17	+40° 250	1	5	19.3	+40	23.7	7.3 ✓
18	+42° 262	1	6	22.0	+42	8.8	8.7 ✓
19	+42° 271	1	8	11.6	+42	10.7	7.0 ✓
20	+41° 238	1	8	53.7	+41	17.1	8.5 ✓
21	+41° 246	1	11	22.1	+41	49.0	8.4 ✓
22	+41° 252	1	11	46.2	+41	12.6	7.0 ✓
23	+40° 262	1	9	29.7	+40	15.0	8.5 ✓
24	+40° 259	1	8	11.1	+40	6.4	8.0 ✓
25	+39° 292	1	7	58.5	+39	53.2	8.3 ✓
26	+39° 299	1	10	17.7	+39	27.6	8.4 ✓
27	+39° 301	1	10	36.8	+39	10.8	7.2 ✓

Cards made out

Nov. 30, 1911 (cont)

T. 37380

No.	Class	Int.	Remark
28	Js	3	
29	Q ₂	4	
30	Q ₂	3	
31	Jo	4	
32	B8	8	
33	R	2	
34	Y ₅	2	
35	Q	1	
36	Y ₅	3	
37	Q ₀	6	
38	Jo	2	
39	Y ₅	3	
40	Y ₅	4	
41	K ₀	4	
42	B	3	
43	Q ₂	3	
44	K	2	neb. superposed?
45	Y ₅	3	
46	Js	2	
47	Jo	2	
48	K	2	
49	Q	2	
50	R	2	
51	B	3	
52	Jo	2	
53	Q ₅	7	
54	K	1	
55	Y ₀	4	

28	+40° 26.8	1	11	59.3	+40	37.6	8.7	✓
29	+40° 28.2	1	17	6.3	+40	35.6	7.5	✓
30	+38° 42.2	1	2	56.0	+38	5.2	8.8	✓
31	+37° 22.3	1	1	37.6	+37	20.6	7.5	✓
32	+36° 20.1	1	3	2.4	+36	57.0	6.0	✓
33	+38° 21.0	1	4	3.1	+38	47.5	9.1	✓
34	+38° 21.4	1	4	59.6	+38	17.4	8.6	✓
35	+38° 21.2	1	4	33.5	+38	6.1	9.5	✓
36	+38° 22.0	1	6	31.6	+38	40.4	7.5	✓
37	+38° 22.9	1	9	2.1	+38	42.5	6.8	✓
38	+38° 22.2	1	7	0.8	+38	3.2	8.5	✓
39	+37° 24.2	1	7	13.9	+37	43.2	7.7	✓
40	+37° 24.8	1	8	44.0	+37	41.3	7.8	✓
41	+38° 23.3	1	10	6.7	+38	1.5	8.1	✓
42	+38° 24.1	1	11	52.9	+38	19.1	8.0	✓
43	+39° 31.8	1	15	39.3	+39	10.2	7.8	✓
44	+38° 25.4	1	16	6.6	+38	18.3	8.2	✓
45	+38° 25.5	1	16	13.5	+38	16.0	8.0	✓
46	+37° 23.1	1	3	45.7	+37	7.8	8.8	✓
47	+36° 20.5	1	4	49.8	+36	54.8	9.0	✓
48	+36° 20.9	1	5	41.5	+36	53.7	8.7	✓
49	+37° 23.5	1	5	51.8	+37	1.7	9.0	✓
50	+37° 23.7	1	6	8.7	+37	5.6	9.0	✓
51	+36° 21.2	1	7	19.9	+36	58.3	8.2	✓
52	+37° 24.3	1	7	58.0	+37	9.2	9.0	✓
53	+36° 22.0	1	10	35.8	+36	37.6	6.5	✓
54	+36° 22.4	1	12	3.9	+36	55.4	8.7	✓
55	+37° 25.9	1	12	46.8	+37	16.3	7.9	✓

Cords made out

Nov. 30, 1911 (Cont)

I 37380

No.	Class	Int.	Remark
56	Q ₅	2	
57	Q ₂	8	Identify line near K
58	Q ₁	2	
59	Q ₂	3	
60	Q ₃	4	
61	Q ₂	5	
62	Q ₀	6	
63	Q ₁	2	
64	Q ₃	3	
65	Q ₁	3	
66	F ₂	4	
67	F ₅	2	
68	K ₀	3	
69	Q ₂	4	
70	K	1	
71	F ₂	2	
72	Q ₁	2	
73	Q ₅	2	
74	F ₅	3	
75	K ₂	2	Fl. star near bright
76	Q ₃	4	
77	F ₅	2	
78	Q ₂	2	
79	Q ₅	1	
80	K ₅	1	
81	Q ₂	5	
82	F ₅	4	
83	K	3	

56	+37° 270	i	14	53.3	+37	5.8	8.4
57	+36° 237	i	15	22.8	+36	58.0	6.0
58	+36° 240	i	15	56.5	+36	46.2	8.0
59	+36° 245	i	16	44.7	+36	57.6	8.1
60	+36° 244	i	16	42.5	+36	42.5	7.8
61	+36° 241	i	16	8.6	+36	7.5	7.3
62	+35° 260	i	15	4.1	+35	45.4	6.7
63	+34° 233	i	14	47.7	+34	6.7	9.0
64	+35° 251	i	12	21.4	+35	39.7	8.6
65	+35° 249	i	11	54.1	+35	53.2	8.1
66	+35° 238	i	8	33.9	+35	33.1	8.0
67	+35° 237	i	8	25.2	+35	40.1	8.5
68	+35° 221	i	4	36.5	+35	29.9	8.2
69	+35° 219	i	3	38.1	+35	38.2	7.8
70	+35° 214	i	2	22.2	+35	40.3	8.9
71	+35° 213	i	1	27.6	+35	47.0	8.5
72	+35° 216	i	2	34.9	+35	18.4	9.0
73	+35° 215	i	2	29.2	+35	9.7	8.5
74	+34° 199	i	1	54.2	+34	55.7	8.5
75	Trail of +34° 198	i	1	37.6	+34	50.5	8.2
76	+34° 194	i	1	14.0	+34	1.7	7.4
77	+33° 180	i	1	40.0	+33	50.6	8.0
78	+33° 176	i	0	32.4	+33	46.3	8.3
79	+33° 172	o	59	40.8	+33	26.9	8.5
80	+33° 169	o	59	24.9	+33	12.7	8.2
81	+33° 178	i	1	12.5	+33	9.6	7.0
82	+33° 181	i	1	55.4	+33	6.4	7.0
83	+33° 185	i	4	27.1	+33	21.0	8.0

Cards made out

Nov. 30, 1911 (Cont)

I 37380

No.	Class	Int	Remark
84	A	6	
85	fs	4	
86	fs	2	
87	fs	2	
88	fs	2	
89	fs	3	
90	F	2	Box focus
91	K	1	
92	K	2	
93	fs	4	
94	fs	2	
95	Q	4	
96	K	3	
97	K	3	
98	K	3	
99	A	3	
100	fs	5	
101	Q3	3	
102	fs	3	
103	fs	4	
104	K	6	
105	fs	4	

Time 10.25

Cook. in 127. ± 0.2

84	+33° 18.7	i	5	12.1	+33	20.6	7.0 ✓
85	+33° 18.8	i	5	55.4	+33	45.6	7.0 ✓
86	+34° 21.1	i	5	30.3	+34	9.6	8.6 ✓
87	+34° 20.6	i	4	31.5	+34	24.6	8.1 ✓
88	+34° 20.2	i	3	33.7	+34	20.1	8.1 ✓
89	+35° 21.8	i	3	10.3	+35	9.2	8.2 ✓
90	+35° 22.3	i	4	59.2	+35	12.6	9.0 ✓
91	+34° 21.3	i	6	2.3	+34	15.2	8.7 ✓
92	+34° 21.5	i	6	55.3	+34	6.9	7.8 ✓
93	+33° 19.5	i	7	35.7	+33	57.4	8.2 ✓
94	+34° 22.0	i	8	3.3	+34	27.3	8.3 ✓
95	+34° 22.4	i	9	21.3	+34	40.5	7.7 ✓
96	+33° 20.5	i	11	26.7	+33	59.3	7.3 ✓
97	+34° 23.1	i	12	4.3	+34	21.6	7.8 ✓
98	+34° 23.0	i	12	1.8	+34	12.4	8.0 ✓
99	+33° 20.7	i	11	55.2	+33	44.0	8.8 ✓
100	+33° 22.0	i	15	25.2	+33	28.7	6.8 ✓
101	+33° 20.9	i	12	19.6	+33	13.0	8.5 ✓
102	+32° 23.0	i	10	48.8	+32	45.4	7.8 ✓
103	+32° 22.9	i	10	33.3	+32	59.5	8.0 ✓
104	+32° 22.3	i	8	13.9	+32	22.1	6.5 ✓
105	+32° 20.4	i	5	2.5	+32	22.5	7.9 ✓

Cards made out

Sent by J. C. M. Dec. 18, '11

checked by A. D. H. Dec. 19, '11.

December 3, 1911

Time 10:45

I 37381

No.	Class	Int.	Remark
1	B5	7	
2	B8	3	
3	A	2	
4	B5	6	
5	B5	3	
6	B5	8	
7	B5	3	
8	K5	3	
9	K0	4	
10	Q3	4	
11	B8?	3	Near edge.
12	B5	4	
13	K0	6	
14	K0	5	
15	Q2	3	
16	K0	3	
17	K2	3	
18	B	2	
19	B	6	
20	Q2	6	
21	B	2	
22	K0	5	
23	mt	3	
24	A	2	
25	Q2	2	
26	B5	3	
27	B5	3	

	RM No	B.A.	Dec. Magn.
x			
1	+33° 220	1 15 25.2	+33 26.7 6.3 ✓
2	+33° 224	1 16 57.4	+33 55.0 8.5 ✓
3	+33° 226	1 17 28.0	+33 52.5 8.9 ✓
4	+33° 228	1 17 54.0	+33 49.7 6.5 ✓
5	+33° 232	1 18 49.5	+33 53.2 7.8 ✓
6	+33° 234	1 18 52.4	+33 56.4 6.6 ✓
7	+32° 239	1 13 58.4	+32 29.0 8.7 ✓
8	+32° 245	1 15 6.3	+32 31.8 7.7 ✓
9	+32° 249	1 17 8.6	+32 10.4 8.0 ✓
10	+33° 246	1 22 39.4	+33 26.6 8.1 ✓
11	+34° 265	1 23 53.5	+34 3.6 6.6 ✓
12	+33° 262	1 24 43.7	+33 7.2 7.8 ✓
13	+32° 272	1 26 44.8	+32 22.9 7.2 ✓
14	+33° 259	1 27 36.4	+33 6.1 6.5 ✓
15	+32° 281	1 28 37.0	+32 55.0 8.2 ✓
16	+32° 280	1 28 34.3	+32 6.7 7.9 ✓
17	+32° 299	1 34 7.0	+32 18.7 7.6 ✓
18	+31° 297	1 34 14.4	+31 53.3 8.1 ✓
19	+31° 301	1 35 35.7	+31 29.2 6.5 ✓
20	+31° 303	1 36 5.1	+31 47.2 7.2 ✓
21	+31° 232	1 13 35.4	+31 53.0 8.4 ✓
22	+30° 210	1 14 6.8	+30 56.6 7.6 ✓
23	+31° 236	1 14 51.3	+31 5.0 7.6 ✓
24	+31° 238	1 15 21.6	+31 1.6 9.0 ✓
25	+31° 241	1 16 12.3	+31 9.0 9.0
26	+31° 243	1 16 32.0	+31 14.2 8.0
27	+31° 244	1 16 52.9	+31 7.5 8.7

Dec 3, 1911 (cont)

I 87/381

No.	Class	Int.	Remarks
28	F8	4	
29	G0	4	
30	F5	4	
31	G2	4	
32	G5	4	
33	K0	5	
34	F0	4	
35	F5	6	
36	F5	4	
37	G5	4	
38	K5	2	
39	F5	4	
40	K0	3	
41	F	3	
42	G3	5	
43	G5	4	
44	F5	3	
45	K5	2	
46	F8	4	
47	K0	5	
48	G3	2	
49	K0	3	
50	G2	3	
51	K2	3	
52	F5	2	
53	G5	2	
54	G	3	
55	F5	2	

Star No.	Chm. No.	R.A.	Dec. Magn.
28	28	+30° 218	1 17 26.2 +30 47.7 8.1 ✓
29	30	+30° 219	1 17 30.5 +30 47.4 8.0 ✓
30	31	+30° 217	1 17 24.8 +30 24.2 8.3 ✓
31	32	+30° 220	1 17 30.9 +30 34.2 8.7 ✓
32	32	+30° 224	1 17 32.7 +30 20.8 8.5 ✓
33	34	+31° 254	1 19 36.5 +31 13.5 6.9 ✓
34	35	+29° 240	1 19 23.6 +29 46.7 8.3 ✓
35	36	+29° 243	1 20 12.4 +29 47.8 7.5 ✓
36	37	+30° 230	1 21 20.5 +30 8.2 8.3 ✓
37	38	+30° 233	1 21 41.6 +30 14.9 8.1 ✓
38	38	+31° 262	1 22 18.0 +31 26.9 8.2 ✓
39	40	+31° 268	1 24 3.0 +31 48.8 8.1 ✓
40	41	+29° 256	1 23 37.6 +29 32.5 8.3 ✓
41		+30° 240	1 25 14.5 +30 11.7 8.9 ✓
42		+29° 260	1 25 30.1 +29 39.6 8.0 ✓
43		+30° 246	1 27 18.2 +30 33.6 8.4 ✓
44		+31° 278	1 27 29.9 +31 1.4 8.5 ✓
45		+30° 245	1 27 18.8 +30 1.7 8.6 ✓
46		+30° 252	1 29 49.7 +30 2.8 8.0 ✓
47		+30° 257	1 30 39.4 +30 54.2 7.8 ✓
48		+30° 260	1 32 5.7 +30 57.6 9.1 ✓
49		+31° 294	1 33 43.8 +31 17.8 8.0 ✓
50		+30° 262	1 33 59.4 +30 24.0 8.6 ✓
51		+30° 264	1 34 41.5 +30 18.1 7.8 ✓
52		+30° 268	1 35 50.6 +30 13.0 9.1 ✓
53		+30° 212	1 14 14.6 +30 13.9 8.6 ✓
54		+30° 213	1 15 29.6 +30 10.9 8.6 ✓
55		+29° 224	1 15 17.2 +29 24.4 9.2 ✓

Dec. 3, 1911 (cont.)

I 37381

no.	class	dist.	Remark
56	F8	4	
57	F2	7	
58	F8	2	
59	F8	5	
60	Q2	4	
61	G0	6	
62	F5	2	
63	Q2	5	
64	G5	1	
65	G5	4	
66	F0	4	
67	K0	3	
68	K0	5	
69	K0	3	
70	G5	3	
71	F5	4	
72	G	3	
73	K0	8	
74	F0	3	
75	Q2	6	
76	Q2	4	
77	F0	3	
78	F0	6	
79	Ma	2	
80	Q2	3	
81	R	2	
82	K	2	
83	Q2	2	

no.	Dir. W.	R.A.	(Dec. Magn.)
56	+29° 229	16 23.9	+29 4.9 8.6 ✓
57	+29° 239	1 19 13.3	+29 1.6 7.5 ✓
58	+29° 251	1 21 48.8	+29 30.7 9.1 ✓
59	+28° 242	1 21 24.6	+28 48.5 8.5 ✓
60	+28° 244	1 22 1.7	+28 46.9 8.7 ✓
61	+28° 249	1 23 11.9	+28 40.0 7.3 ✓
62	+28° 246	1 22 11.2	+28 12.3 9.3 ✓
63	+27° 236	1 22 3.8	+27 44.4 8.0 ✓
64	+28° 251	1 24 48.2	+28 28.5 8.3 ✓
65	+28° 253	1 25 10.7	+28 30.9 8.7 ✓
66	+29° 258	1 25 9.0	+29 8.2 8.5 ✓
67	+28° 257	1 26 41.5	+28 30.4 8.5 ✓
68	+28° 257	1 26 34.3	+28 21.6 8.2 ✓
69	+28° 267	1 28 30.6	+28 41.7 8.1 ✓
70	+28° 271	1 30 10.0	+28 30.4 8.5 ✓
71	+29° 279	1 31 29.4	+29 21.3 8.3 ✓
72	+29° 281	1 31 44.3	+29 38.9 9.0 ✓
73	+29° 286	1 33 27.0	+29 19.3 6.0 ✓
74	+29° 288	1 33 56.3	+29 21.0 8.3 ✓
75	+28° 282	1 33 33.0	+28 47.2 7.5 ✓
76	+28° 281	1 33 43.9	+28 20.6 8.4 ✓
77	+28° 280	1 33 5.8	+28 24.9 8.9 ✓
78	+27° 277	1 36 42.6	+27 44.1 7.5 ✓
79	+28° 292	1 36 55.5	+28 0.9 7.8 ✓
80	+27° 271	1 33 40.8	+27 22.8 8.6 ✓
81	+27° 270	1 33 3.7	+27 44.5 8.7 ✓
82	+27° 266	1 32 9.5	+27 32.0 8.3 ✓
83	+27° 264	1 31 58.7	+27 34.9 8.6 ✓

Cape

Mague

Box

Kelp (reflected)
see chart I 29727

Dec. 3, 1911 (Cont.)

I 37381

No.	Class	Int.	Remark
84	85	5	
85	Ko	6	
86	Ko	8	
87	K	2	
88	85	2	
89	K	3	
90	F8	6	
91	F5	3	
92	K	2	
93	Ko	3	
94	Ko	5	
95	Ko	4	
96	K	2	
97	F2	3	
98	F5	3	
99	K2	4	
100	F	4	
101	Ko	6	
102	Fo	5	
103	Fo	2	
104	F2	3	
105	K	2	
106	K	1	
107	85	2	
108	85	6	
109	83	4	
110	F8	4	
111	K	5	

Dr. No.	R.A.	(Dec. Mag.)
84	+27° 26.2	1 31 24.1 +27 22.5 7.5 ✓
85	+27° 26.1	1 31 7.2 +27 1.4 7.2 ✓
86	+27° 21.5	1 13 6.4 +27 58.6 5.0 ✓
87	+28° 22.5	1 14 24.1 +28 5.5 8.2 ✓
88	+28° 22.7	1 14 46.1 +28 26.1 8.5 ✓
89	+28° 23.4	1 16 46.7 +28 5.9 8.2 ✓
90	+27° 22.5	1 17 8.4 +27 48.2 7.7 ✓
91	+26° 22.7	1 15 21.2 +26 53.8 8.5 ✓
92	+26° 23.1	1 16 23.2 +26 47.5 8.5 ✓
93	+26° 23.8	1 18 39.0 +26 48.8 8.0 ✓
94	+26° 23.9	1 18 43.7 +26 29.1 6.8 ✓
95	+25° 22.8	1 14 39.9 +25 48.6 8.1 ✓
96	+25° 23.8	1 17 5.7 +25 46.0 8.5 ✓
97	+25° 23.2	1 15 53.6 +25 9.3 8.2 ✓
98	+25° 24.6	1 18 54.9 +25 45.2 8.1 ✓
99	+24° 21.2	1 19 8.2 +24 41.6 7.0 ✓
100	+24° 21.7	1 19 56.2 +24 53.9 7.9 ✓
101	+24° 22.2	1 21 26.9 +24 31.6 6.5 ✓
102	+25° 25.8	1 22 39.8 +25 8.7 7.0 ✓
103	+25° 25.7	1 22 39.6 +25 36.0 8.0 ✓
104	+25° 25.9	1 22 49.9 +25 44.5 8.3 ✓
105	+26° 24.7	1 21 7.2 +26 34.6 8.5 ✓
106	+26° 24.8	1 22 2.5 +26 37.0 8.2 ✓
107	+27° 24.4	1 25 2.2 +27 10.5 8.8 ✓
108	+27° 24.8	1 27 31.4 +27 32.0 7.3 ✓
109	+26° 26.5	1 28 16.1 +26 29.9 8.0 ✓
110	+25° 26.5	1 27 23.1 +25 56.0 7.4 ✓
111	+24° 23.9	1 29 28.2 +24 26.5 7.3 ✓

Dec. 3, 1911 (cont)

I 37381

No	Class	Sort	Remark
112	F ₆	7	

Time 11:10

conv. in 97.54

Dec. No.	R. h.	Dec. Magn.
112	+25° 27' 13.33 14.7	+25 0.5 6.0 ✓

Ident. by L. D. M.
 checked by J. C. M. Dec. 7, 1911

Card made by

June 11:16

Dec 13, 1911

T 37327

No.	Class	Int.	Remark
1	F5	6	
2	B5-	3	
3	B9	7	
4	Q2	2	
5	K0	3	
6	F8	2	
7	F5	3	
8	F5-	4	
9	F2	9	
10	K2	3	
11	M	2	Partly superseded p. 12
12	K	1	
13	B3	5	
14	Q5-	4	
15	F8	2	
16	K0	4	
17	B0	4	
18	K	1	
19	Q	4	On edge
20	Q	3	
21	G0	2	
22	B5-	5	
23	K0	3	
24	B	1	
25	F8	2	
26	Q0	10	
27	Q2	3	

1 +26° 77.6	4	52	48.2	+26	27.5	7.2	1
2 +26° 77.4	4	52	21.0	+26	20.3	7.8	1
3 +27° 71.6	4	50	53.1	+27	5.4	7.2	1
4 +28° 73.2	4	52	53.0	+28	5.0	8.0	1
5 +26° 76.4	4	46	34.9	+26	57.4	7.4	1
6 +27° 70.8	4	46	52.6	+27	35.1	8.6	1
7 +28° 71.3	4	45	19.8	+28	33.9	8.7	1
8 +27° 70.4	4	43	57.5	+27	50.7	8.2	1
9 +27° 70.1	4	43	44.9	+27	38.9	6.0	1
10 +26° 75.9	4	44	0.0	+26	31.6	7.3	1
11 +28° 70.7	4	42	26.9	+28	16.4	8.1	1
12 +28° 70.6	4	42	26.1	+28	24.0	8.5	1
13 +28° 70.4	4	41	48.3	+28	5.0	7.4	1
14 +28° 70.1	4	40	57.1	+28	35.9	8.0	1
15 +28° 70.0	4	40	53.2	+28	41.8	8.7	1
16 +28° 69.8	4	40	12.5	+28	5.8	7.2	1
17 +26° 75.2	4	40	8.5	+26	45.4	7.6	1
18 +26° 75.0	4	39	22.0	+26	42.7	7.8	1
19 +25° 73.1	4	37	19.3	+25	46.0	7.5	1
20 +27° 69.4	4	37	32.1	+27	38.9	8.3	1
21 +28° 68.9	4	37	5.1	+28	36.4	8.6	1
22 +28° 68.7	4	36	45.8	+28	24.6	7.0	1
23 +27° 68.8	4	34	35.0	+27	24.4	8.0	1
24 +28° 68.3	4	33	9.9	+28	18.5	8.8	1
25 +28° 68.2	4	32	42.0	+28	23.3	8.7	1
26 +28° 68.0	4	32	16.2	+28	20.5	5.0	1
27 +28° 67.7	4	30	34.4	+28	29.8	8.1	1

made
made
made

Dec. 13, 1911 (Cont)
I 373.78

No.	Class	Set.	Remark
28	F8	3	
29	Qo	5	
30	Fo	6	
31	B8?	10	Burned out
32	Fo	3	
33	B5	6	
34	L	7	Burned out
35	Qo	3	
36	Mar	2	
37	A	3	E
38	A	3	E
39	Qo	5	
40	Qo	3	
41	Qo	2	
42	Qo	5	
43	Q3	3	
44	F8	5	Partly superseded on 45
45	B	2	Nearly all superseded on 44
46	F8	3	
47	F8	4	
48	B9	5	
49	Qo	5	
50	Qo	7	
51	B5	7	
52	A	1	
53	Ko	2	
54	Fo	2	
55	Ko	7	

28	+28° 67.4	4	29	25.3	+28	26.0	8.3 V
29	+27° 67.3	4	28	9.7	+27	36.8	7.3 V
30	+26° 73.1	4	29	34.2	+26	38.6	7.0 V
31	+28° 66.6	4	25	35.2	+28	39.7	5.7 V
32	+28° 65.8	4	21	0.7	+28	43.9	8.5 V
33	+27° 66.2	4	21	18.5	+27	48.7	6.5 V
34	+27° 66.1	4	20	23.8	+27	4.0	6.5 V
35	+27° 66.0	4	19	19.7	+27	27.5	7.0 V
36	+28° 65.3	4	15	22.8	+28	41.1	8.0 V
37	+29° 78.7	4	52	33.0	+29	27.0	8.4 V
38	+29° 78.4	4	52	0.1	+29	6.8	8.2 V
39	+29° 77.4	4	49	35.3	+29	36.7	7.0 V
40	+29° 77.3	4	49	7.0	+29	36.0	8.3 V
41	+29° 77.0	4	48	47.7	+29	20.1	8.8 V
42	+29° 77.1	4	48	49.5	+29	54.0	7.7 V
43	+20° 74.6	4	48	53.4	+30	24.5	8.1 V
44	+30° 75.2	4	50	6.5	+30	49.9	8.0 V
45	+30° 75.1	4	50	4.7	+30	46.5	8.5 V
46	+31° 84.0	4	50	20.3	+31	3.6	8.3 V
47	+31° 83.9	4	50	15.8	+31	22.2	8.0 V
48	+31° 84.5	4	52	25.6	+31	34.1	7.0 V
49	+30° 74.2	4	46	35.4	+30	6.7	7.0 V
50	+30° 74.1	4	46	31.3	+30	19.3	6.8 V
51	+30° 73.2	4	42	54.6	+30	54.7	6.8 V
52	+30° 72.7	4	41	57.2	+30	46.5	8.7 V
53	+31° 81.7	4	41	30.1	+31	18.4	7.8 V
54	+30° 72.1	4	39	45.3	+30	42.0	8.5 V
55	+31° 81.6	4	39	56.5	+31	10.6	5.3 V

cond
mass
37

Dec 13, 1911 (Cont)

I 37387

No.	Class	Int.	Remark
56	Aop	6	Line #128-31, stronger except hgd. Like 3ridani
57	Js	6	" "
58	Bq	6	
59	A	1	
60	Js	5	
61	Jo	7	
62	A	1	
63	Bq	4	
64	Js	5	
65	Jo	2	
66	Js	4	
67	Js	8	
68	Ko	8	
69	Qo	3	
70	Jo	5	
71	Bq	9	
72	Qo	2	
73	Qo	3	
74	Bq	4	
75	Qo	4	
76		3	No stars supposed
77			
78	Js	4	
79	Ko	4	
80	Qo	5	
81	Jo	2	
82	Qo	6	
83	A	2	

56	+29°	742	4	40	7.3	+29	18.6	7.0	✓
57	+28°	695	4	39	11.2	+28	58.1	6.3	✓
58	+29°	741	4	39	13.3	+29	31.5	6.5	✓
59	+29°	738	4	38	13.7	+29	3.8	8.8	✓
60	+30°	704	4	31	36.0	+30	0.8	7.2	✓
61	+29°	728	4	31	14.4	+29	41.2	6.5	✓
62	+29°	725	4	29	20.9	+29	5.5	8.4	✓
63	+30°	698	4	28	36.3	+30	6.0	8.4	✓
64	+30°	695	4	28	4.8	+30	6.3	7.7	✓
65	+30°	686	4	25	38.2	+30	20.0	8.9	✓
66	+29°	716	4	22	29.1	+29	35.4	8.3	✓
67	+30°	665	4	19	44.4	+30	8.0	6.0	✓
68	+31°	776	4	16	53.7	+31	6.6	5.0	✓
69	+31°	777	4	17	2.5	+31	37.7	8.3	✓
70	+32°	805	4	20	46.3	+32	11.8	7.3	✓
71	+32°	806	4	21	20.3	+32	8.0	6.5	✓
72	+31°	784	4	21	15.1	+31	15.6	8.6	✓
73	+31°	780	4	23	26.5	+31	5.3	8.2	✓
74	+31°	791	4	23	37.5	+31	28.3	8.5	✓
75	+31°	794	4	24	25.0	+31	21.8	8.3	✓
76	+31°	796	4	24	40.5	+31	49.6	8.5	✓
77					41.4		54.8		
78	+32°	815	4	26	15.3	+32	16.7	7.6	✓
79	+32°	853	4	46	6.1	+32	33.0	7.5	✓
80	+31°	828	4	46	6.4	+31	54.0	7.2	✓
81	+31°	824	4	44	47.9	+31	56.9	8.5	✓
82	+31°	821	4	43	7.8	+31	48.6	7.0	✓
83	+32°	842	4	41	38.1	+32	11.8	8.8	✓

Circles

made

B

Dec 13, 1911 (Cont)

T 37387

No.	Class	Set.	Remark
84	Jo	8	
85	Mu	1	
86	Q5	7	
87	Fr	3	
88	Q	2	
89	B3	5	
90	Jo	4	
91	Q21	4	
92	Fr	3	
93	Q3	3	
94	Q5	3	
95	K	2	
96	Fr	7	
97	Q	9	Burned out
98	Q	6	
99	Jo	5	
100	B	3	Prod focus
101	Q5	4	"
102	Q21	6	
103	Q3	4	
104	Jo	3	
105	Fr	6	
106	Ko	5	
107	Q	3	
108	Fr	2	
109	Ko	3	
110	Jo	4	
111	Qo	4	

84	+32° 840	4	39	56.7	+32	21.1	6.0	✓
85	+32° 830	4	35	53.0	+32	38.9	8.7	✓
86	+32° 827	4	34	26.7	+32	35.5	6.5	✓
87	+32° 820	4	30	44.9	+32	50.8	8.2	✓
88	+32° 818	4	29	24.0	+32	22.9	8.4	✓
89	+31° 803	4	28	57.1	+31	41.9	7.0	✓
90	+31° 805	4	29	57.4	+31	28.1	7.8	✓
91	+32° 814	4	26	9.2	+32	57.6	7.6	✓
92	+32° 810	4	23	23.0	+32	55.1	8.3	✓
93	+33° 810	4	24	36.9	+33	27.9	8.0	✓
94	+33° 867	4	19	8.1	+33	52.6	7.7	✓
95	+33° 856	4	15	29.9	+33	14.0	8.4	✓
96	+33° 854	4	15	14.8	+33	38.6	6.0	✓
97	+33° 853	4	15	6.4	+33	47.6	6.0	✓
98	+33° 851	4	15	1.3	+33	58.0	6.9	✓
99	+34° 932	4	49	8.0	+34	9.7	8.0	✓
100	+34° 927	4	48	21.3	+34	2.5	8.0	✓
101	+33° 926	4	47	21.3	+33	45.2	8.0	✓
102	+34° 916	4	42	43.9	+34	10.9	7.7	✓
103	+33° 907	4	41	48.0	+33	51.2	7.7	✓
104	+33° 901	4	39	23.9	+33	43.7	7.5	✓
105	+34° 904	4	35	38.0	+34	53.3	7.2	✓
106	+33° 892	4	33	37.6	+33	39.6	7.3	✓
107	+33° 891	4	32	59.5	+33	41.3	8.2	✓
108	+32° 824	4	34	4.9	+32	56.8	8.4	✓
109	+34° 900	4	31	51.7	+34	23.6	7.0	✓
110	+34° 895	4	27	25.7	+34	38.9	7.5	✓
111	+34° 891	4	24	38.1	+34	29.5	7.5	✓

Candor made by

Dec. 13, 1911 (cont.)

I 37387

No. Class Set Remark

112 Q2 : 6

Time 11:41

Cont. 133,96

112 +34° 883 4 19 41.6 +34 56.4 6.8

made out

Identified by J. C. M. Dec. 22 '11
checked by A. D. S. Feb. 9, 1912.

Dec. 13, 1911

Time 12.0

T 10405
T 36777

No. Chas. Int. Remark

1 Q3 6

2 K 3 Potv focus

3 K5 2

4 K5 2

5 Q5 2

6 Q2 3

7 Q 3

8 F 2

9 B9 7

10 F2 2 E

11 F5 6

12 Q0 8

13 B9 4 N 12, 13. Partly superseded.

14 F0 2

15 K 2

16 K5 6

17 F8 2

18 Q3 5

19 Q0 4

20 Q0 4

21 K0 6

22 Q0 2

23 F2 6

24 B5 6

25 Q2 3

26 B8 5 E

27 B8 5 E

1	+32° 827	4	34.4	+32	35.5	6.5V
2	+33° 892	4	33.6	+33	39.6	7.3V
3	+34° 900	4	31.9	+34	23.6	7.0V
4	+34° 895	4	27.4	+34	38.9	7.5V
5	+35° 885	4	26.2	+35	21.8	7.5V
6	+34° 891	4	24.6	+34	29.5	7.5V
7	+32° 814	4	25.2	+32	57.6	7.6V
8	+33° 880	4	24.6	+33	27.9	8.0V
9	+32° 806	4	21.8	+32	8.0	6.5V
10	+32° 805	4	20.8	+32	11.8	7.3V
11	+33° 854	4	15.2	+33	38.6	6.0V
12	+33° 853	4	15.1	+33	47.6	6.0V
13	+33° 851	4	15.0	+33	58.0	6.9V
14	+33° 850	4	14.8	+33	30.9	8.0V
15	+34° 863	4	12.0	+34	18.1	7.5V
16	+34° 860	4	11.0	+34	18.1	5.0V
17	+33° 829	4	9.0	+33	29.8	7.8V
18	+34° 848	4	6.8	+34	31.3	7.3V
19	+35° 823	4	3.9	+35	6.5	8.0V
20	+34° 829	4	2.6	+34	58.2	7.0V
21	+33° 807	4	1.7	+33	12.3	6.2V
22	+33° 795	3	58.8	+33	48.2	8.0V
23	+33° 776	3	56.3	+33	50.6	7.3V
24	+33° 785	3	57.7	+33	3.3	7.0V
25	+32° 726	3	59.1	+32	4.1	7.5V
26	+31° 703	3	57.5	+31	58.2	6.5V
27	+32° 674	3	55.5	+32	9.9	6.5V

Circled

et

Dec. 13, 1911 (cont.)

T₃₇ 1040.5-

No.	Class	Set.	Remark
28	F5-	5	
29	B5	5	
30	A0	5	
31	B5-	5	
32	A	3	
33	F5-	2	
34	K	2	
35	F0	4	
36	B5-	4	
37	A	4	
38	B9	5	
39	A2	5	
40	A2	5	
40a	K	1	
41	F5-	2	
42	A2	6	
43	B5-	7	
44	B5-	7	
45	B	2	
46	F5-	3	
47	B	2	
48	F8	4	
49	A0	3	E
50	A0	4	
51	A5	4	Box four
52	K	6	
53	F8	8	
54	B5-	2	
55	A2	4	

28	+36° 90.8	4	22.6	+36	43.6	6.5 V
29	+36° 90.3	4	22.3	+36	26.7	6.5 V
30	+34° 88.3	4	19.7	+34	56.4	6.8 V
31	+36° 89.5	4	17.7	+36	12.1	6.5 V
32	+36° 88.9	4	16.0	+36	20.0	7.3 V
33	+34° 87.8	4	16.8	+34	28.6	8.0 V
34	+34° 87.4	4	14.9	+34	54.2	7.2 V
35	+34° 87.2	4	14.5	+34	53.5	7.5 V
36	+35° 86.0	4	14.1	+35	33.0	6.5 V
	+35° 85.8	4	13.7	+35	41.6	7.3
37	+36° 85.8	4	15.9	+36	55.8	7.2 V
38	+36° 88.0	4	12.8	+36	33.9	7.0 V
39	+36° 87.6	4	11.4	+36	14.2	7.3 V
40	+36° 86.6	4	8.9	+36	30.5	7.5 V
40a	+35° 84.9	4	11.2	+35	27.2	6.5 V
41	+35° 84.0	4	9.0	+35	38.1	7.3 V
42	+36° 85.7	4	5.4	+36	8.2	6.8 V
43	+37° 89.9	4	5.3	+37	10.1	6.2 V
44	+37° 89.7	4	4.4	+37	35.5	6.0 V
45	+37° 89.4	4	2.7	+37	20.9	5.0 V
46	+36° 84.2	4	2.5	+36	22.8	5.3 V
47	+35° 80.9	4	0.2	+36	34.6	7.6 V
48	+35° 80.7	3	59.9	+35	39.3	7.0 V
49	+35° 79.6	3	55.1	+35	31.1	7.3 V
50	+36° 81.3	3	55.4	+36	41.4	7.2 V
51	+37° 87.6	3	56.1	+37	21.5	7.3 V
52	+37° 88.1	3	58.7	+37	21.2	6.0 V
53	+37° 88.2	3	59.0	+37	40.1	5.5 V
54	+37° 87.8	3	58.0	+37	41.2	6.9 V
55	+38° 85.0	4	1.0	+38	6.1	7.5 V

Long

et

Dec. 13, 1911 (Cont)

T 10405

No.	Class	Int	Remark
56	fo	6	
57	fo	4	
58	h	3	
59	fo	2.	
60	K	2	
61	fo	4	
62	fz	4	
63	Q	1	
64	fo	6	
65	fo	3	
66	Qo	3	
67	Q8	7	
68	fh	3	
69	h	2	Poor focus
70	fh	5	
71	fo	8	Burned out

Time 12:14

Spectra rather wide and focus not very good.
Faint stars not well seen.

56	+38° 54.8	4	0.6	+38 51.8 6.8 V
57	+38° 56.1	4	4.4	+38 5.8 6.7 V
58	+37° 93.0	4	21.9	+37 20.2 8.0 V
59	+36° 88.8	4	15.9	+36 55.8 7.8 V
60	+37° 91.4	4	13.2	+37 36.9 7.8 V
61	+37° 91.2	4	11.6	+37 53.8 7.5 V
62	+38° 87.6	4	11.2	+38 13.0 7.4 V
63	+38° 87.5	4	10.4	+38 0.4 8.5 V
64	+37° 90.9	4	9.8	+37 38.7 7.0 V
65	+37° 90.6	4	8.7	+37 12.9 8.3 V
66	+39° 101.6	4	21.9	+39 35.2 8.3 V
67	+39° 101.3	4	21.5	+39 41.6 6.6 V
68	+39° 99.4	4	17.7	+39 21.3 8.0 V
69	+38° 88.6	4	15.5	+38 42.5 7.8 V
70	+39° 98.0	4	12.2	+39 35.3 7.4 V
71	+40° 91.2	4	5.0	+40 6.3 4.8 V

Cape

Made

Ept

Ident. by J. E. M. Jan. 11 '12
checked by R. D. K. Feb. 9, 1912

June 12.16

Dec 18, 1911

I.36997

No. class Int. Remark

1	B5	9	
2	Ko	4	
3	Q2	2	
4	B8	8	
5	F8	5	
6	Q	3	E
7	Qo	5	
8	F8	4	
9	Q3	3	
10	Fo	3	
11	K	2	
12	F8	3	Appears Nebulous
13	B5	5	
14	F8	4	
15	Fo	2	
16	B8	10	E
17	Qo	3	
18	F	3	E
19	Qo	3	
20	Qo	2	
21	Ko	5	
22	Q2	4	
23	K	4	E
24	B5	4	E
25	B8	9	E
26	K	3	
27	B5	6	

June 38.19 rem

1	+25° 90.2	5	30.8	+25	48.8	5.7V
2	+26° 88.4	5	29.9	+26	31.8	6.8V
3	+26° 87.6	5	28.7	+26	7.7	8.8V
4	+26° 87.0	5	28.1	+26	49.6	6.7V
5	+25° 87.9	5	27.5	+25	50.7	6.6V
6	+25° 86.6	5	26.3	+25	43.7	7.7V
7	+24° 85.4	5	24.6	+24	31.1	7.0V
8	+26° 85.6	5	25.9	+26	52.5	8.0V
9	+26° 85.0	5	25.2	+26	46.7	7.7V
10	+27° 77.4	5	25.3	+27	13.8	7.8V
11	+27° 79.1	5	24.8	+27	3.7	8.0V
12	+26° 84.1	5	23.8	+26	38.1	8.2V
13	+26° 83.5	5	23.4	+26	52.5	7.8V
14	+27° 78.3	5	22.3	+27	39.4	7.3V
15	+25° 84.3	5	21.5	+25	13.1	8.1V
16	+25° 83.9	5	20.3	+25	1.7	8.5V
17	+24° 82.6	5	15.1	+24	49.2	8.2V
18	+25° 81.8	5	11.4	+25	0.6	7.9V
19	+25° 80.7	5	7.0	+25	47.5	7.3V
20	+25° 80.4	5	5.6	+25	44.9	7.8V
21	+26° 79.6	5	3.4	+26	17.2	7.0V
22	+28° 84.9	5	32.5	+28	22.7	8.0V
23	+29° 97.0	5	34.2	+29	7.8	7.0V
24	+29° 96.4	5	33.2	+29	46.3	7.7V
25	+29° 95.4	5	32.1	+29	24.5	7.8V
26	+28° 84.6	5	31.4	+28	53.8	7.5V
27	+29° 94.7	5	30.1	+29	7.6	6.2V

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Dec, 14, 1911 (Cont)

I 36997

No.	Class	Int.	Remarks
28	Qo	3	
29	Q2	7	
30	Ke	4	
31	Js	3	
32	Js	4	
33	Js	6	
34	Js	3	
35	B8?	10	Clarified from trail
36	Bq	7	
37	Q3	4	
38	Bq	7	
39	Q	1	
40	Q3	5	
41	Jo	6	
42	Qo	4	
43	Qo	3	
44	Js	4	Poor focus
45	Q3	7	
46	Q2	4	
47	ma	3	
48	Qo	6	
49	Js	6	Poor focus
50	K	7	E
51	Q2	6	
52	B8?	6	Poor focus
53	A	5	E
54	Bq	7	E
55	Js	3	

28	+30° 96.6	5	30.0	+30	3.5	8.1 V
29	+30° 96.3	5	29.3	+30	23.9	6.0 V
30	+27° 80.6	5	26.8	+27	33.7	7.1 V
31	+29° 92.3	5	23.0	+29	5.2	7.8 V
32	+29° 91.1	5	20.9	+29	25.6	7.5 V
33	+29° 90.9	5	20.5	+29	3.9	7.0 V
34	+27° 77.1	5	17.9	+27	28.8	7.8 V
35	+28° 79.5	5	17.1	+28	28.9	2.0 V
36	+28° 78.8	5	14.2	+28	48.1	7.0 V
37	+28° 78.7	5	13.9	+28	19.4	7.3 V
38	+27° 75.8	5	11.9	+27	48.2	6.5 V
39	+27° 75.0	5	9.6	+27	55.4	8.3 V
40	+28° 77.3	5	9.1	+28	38.0	7.3 V
41	+28° 77.2	5	8.1	+28	46.3	6.5 V
42	+28° 75.7	5	2.2	+28	48.4	8.1 V
43	+28° 75.5	5	1.6	+28	32.8	8.3 V
44	+27° 73.4	5	1.0	+27	22.3	7.3 V
45	+27° 73.2	5	0.7	+27	57.0	5.5 V
46	+28° 75.1	4	59.5	+28	5.0	7.0 V
47	+29° 83.3	5	2.4	+29	43.9	6.5 V
48	+29° 83.0	5	2.1	+29	32.6	7.0 V
49	+29° 82.2	5	0.5	+29	36.3	6.5 V
50	+30° 77.2	4	55.0	+30	17.7	6.5 V
51	+27° 72.3	4	55.6	+27	29.3	6.5 V
52	+26° 78.3	4	56.9	+26	13.4	6.5 V
53	+31° 10.56	5	32.0	+31	6.3	8.1 V
54	+31° 10.48	5	31.2	+31	16.4	6.4 V
55	+31° 10.49	5	31.3	+31	50.0	6.6 V

Contd

moder

B

Dec. 13, 1911 (Cont)

I 36997

No.	Class	Set	Remark
56	A	3	
57	B	2	
58	A	4	Poor focus
59	F	2	
60	Q3	3	
61	F5	3	
62	Q2	5	
63	B9	6	
64	Bc?	10	Lens burned out H β light towards red?
65	K5	3	
66	Q0	6	
67	A	3	
68	Q0	3	
69	F5	3	
70	K0	5	
71	F	6	Poor focus
72	K	3	
73	F	4	Poor focus
74	Q0	4	
75	A	3	
76	F8	6	
77	Bx ⁹	8	Lens narrow
78	A	2	
79	A	9	
80	A	3	
81	B	3	
82	A	2	
83	Q2	5	

56	+31° 1043	5	30.6	+31	48.6	8.01
57	+31° 1040	5	30.5	+31	8.5	8.11
58	+30° 968	5	30.1	+30	47.9	7.51
59	+31° 1025	5	28.0	+31	12.7	7.81
60	+30° 944	5	26.1	+30	29.9	8.21
61	+30° 942	5	25.8	+30	49.1	8.01
62	+31° 1003	5	23.6	+31	45.6	7.01
63	+32° 1027	5	23.8	+32	11.3	6.71
64	+32° 1024	5	23.3	+32	4.8	4.81
65	+32° 1030	5	24.2	+32	38.3	7.01
66	+32° 1028	5	24.0	+32	41.7	6.71
67	+33° 1083	5	24.4	+33	18.1	8.31
68	+32° 1037	5	25.8	+32	38.4	8.71
69	+31° 1020	5	27.0	+31	54.5	7.71
70	+33° 1102	5	28.2	+33	27.8	6.81
71	+32° 1064	5	31.5	+32	48.7	7.01
72	+33° 1102	5	31.7	+33	50.8	7.91
73	+33° 1127	5	33.4	+33	14.2	7.11
74	+31° 991	5	21.1	+31	10.0	7.81
75	+31° 989	5	20.9	+31	40.8	7.71
76	+32° 1003	5	19.9	+32	4.8	7.41
77	+30° 898	5	17.9	+30	4.2	6.21
78	+29° 893	5	17.0	+29	51.3	8.01
79	+31° 955	5	15.3	+31	0.2	6.41
80	+29° 876	5	13.8	+29	34.3	7.51
81	+31° 959	5	12.8	+31	13.0	7.51
82	+30° 844	5	7.5	+30	13.3	9.01
83	+30° 838	5	6.6	+30	19.3	8.01

Cath

Mach 5

954 simplified.

Dec. 13, 1911 (Cont)

T36997

No.	Class	Set.	Remark
84	Qo	3	
85	Ko	5	
86	Qo	4	
87	So	5	
88	Ko	6	
89	Ko	4	
90	So ²	4	Core focus
91	So	3	
92	Qo	3	
93	Qo	3	
94	F	2	
95	Ko	1	

Time 12:18³

96 1 Q5-
97 21. F5:

84	+30° 532	5	5.6	+30	52.9	8.01
85	+31° 895	5	5.3	+31	13.8	6.81
86	+30° 829	5	5.3	+30	30.2	7.91
87	+30° 827	5	5.0	+30	13.7	7.51
88	+30° 812	5	2.2	+30	37.7	7.01
89	+30° 804	5	1.3	+30	36.3	7.01
90	+30° 803	5	1.0	+30	23.4	7.81
91	+31° 871	5	1.6	+31	51.0	7.91
92	+31° 867	5	0.7	+31	40.0	7.81
93	+31° 905	5	6.7	+31	38.3	8.31
94	+31° 910	5	7.6	+31	22.5	8.21
95	+31° 914	5	8.1	+31	39.5	8.01

871^a confirmed.Ident. by G. B. M. Jan. 31, '12
checked by A. D. D. Feb. 9, 1912.

96	+30 860	5	10.7	+30	21	2.0	18 m	37525
97	+28 818	5	23.8	+28	84	8.5	39 m	38921

Time ⁹ 43

Dec. 14, 1911

138586

No. class Sect. Remark

1	Q ₂	5	
2	K ₂₀	3	
3	Q ₃	5	
4	K ₅	4	
5	Q ₀	10	
6	K ₈	3	
7	Q ₂₀	6	
8	K ₀	4	
9	F ₀	4	
10	K ₅	2	
11	K ₀	4	On extreme edge
12	F ₅	4	
13	Q ₂₀	3	
14	Ma	5	
15	K ₅	6	
16	K ₂	2	very faint
17	K ₀	4	
18	K ₀	7	
19	F ₂₀	9	
20	K ₅	3	
21	B ₉	5	
22	K ₀	4	
23	K ₅	6	
24	F ₅	3	
25	Ma?	2	very faint.
26	K ₅	3	
27	F ₀	4	

1	-26° 16796	23	43.3	-26	1.9	6.5	1	✓	C
2	-25° 16678	23	46.2	-25	41.0	6.7	1	✓	
3	-24° 17898 ^H	23	46.9	-24	55.7	6.3	1	✓	
4	-25° 16707	23	50.1	-25	26.2	6.3	1	✓	
5	-25° 18353	25	42.4	-25	49.8	4.6	1	✓	
6	-28° 18361	23	42.8	-28	32.3	6.8	1	✓	M
7	-27° 16479	23	47.9	-27	44.5	6.4	1	✓	
8	-27° 16443 ^H	23	50.7	-27	19.0	6.4	1	✓	
9	-27° 16506	23	53.1	-27	13.7	8.0	1	✓	
10	-27° 16522	23	55.9	-27	50.0	7.8	1	✓	
11	-24° 17960	23	56.7	-24	50.6	6.7	1	✓	E
12	-26° 8	0	1.0	-26	2.9	6.9	1	✓	
13	-26° 35	0	3.6	-26	34.0	7.2	1	✓	
14	-26° 56	0	7.4	-26	42.9	6.0	1	✓	
15	-26° 57	0	7.4	-26	58.9	6.3	1	✓	
16	-27° 37	0	6.3	-27	33.3	7.4	1	✓	
17	-28° 47	0	8.0	-28	13.2	7.4	1	✓	
18	-28° 26	0	5.2	-28	30.1	5.4	1	✓	
19	-28° 16	0	3.0	-28	41.1	5.5	1	✓	
20	-29° 18947	23	57.5	-29	53	8.1	1	✓	
21	-29° 18945	23	57.2	-29	6.3	8.4	1	✓	23 57.2, 4.6 mag 45946, 4.6 mag
22	-29° 18925	23	54.9	-29	25.1	6.9	1	✓	
23	-30° 19765	23	53.1	-30	10.9	5.8	1	✓	
24	-31° 19492	23	47.5	-31	2.8	7.2	1	✓	
25	-30° 19728	23	47.2	-30	5.0	7.5	1	✓	
26	-30° 19702	23	43.7	-30	5.4	7.6	1	✓	
27	-33° 16729	23	45.0	-33	7.5	7.5	1	✓	

Dec. 14, 1911 (Cont.)
B 8586

No.	Class	Set.	Remarks
28	Ko	5	
29	A	6	Two spectra superposed Southern hyd. line strong
30	A	4	Superposed on 29.
31	F5	5	
32	F5	4	
33	A	2	
34	B3	10	Remained out
35	A0	2	
36	B5	7	
37	A0	8	
38	A	4	Partly superposed on 37
39	A2	3	
40	A0	4	
41	A	3	
42	F5	4	
43	Ko	4	
44	Ko	8	
45	Ko	3	
46	Ko	6	
47	F5	3	
48	Ko	6	
49	B9	8	
50	Ma	3	
51	Ko	8	

June 9, 5452

28	-33°	16732	23	45.4	-33	49.5	6.8	1	✓
29	-32°	17724	23	48.8	-32	55.2	6.7	1	✓
30	-32°	17723	23	48.8	-32	57.6	6.0	1	✓
31	-33°	16780	23	51.2	-33	52.9	6.7	1	✓
32	-32°	17761	23	53.1	-32	22.9	7.5	1	✓
33	-30°	19776	23	54.5	-30	45.8	8.3	1	✓
34	-30°	19790	23	55.9	-30	24.9	5.2	1	✓
35	-30°	19795	23	56.5	-30	50.8	8.5	1	✓
36	-30°	19809	23	57.8	-30	50.2	6.9	1	✓
37	-29°	18950	23	57.9	-29	57.9	6.3	1	✓
38	-30°	19813	23	58.0	-30	4.9	7.4	1	✓
39	-30°	19818	23	58.4	-30	19.6	8.0	1	✓
40	-29°	18964	23	59.8	-29	50.7	7.5	1	✓
41	-30°	19820	23	58.5	-30	57.0	8.3	1	✓
42	-31°	19578	23	57.2	-31	47.8	7.8	1	✓
43	-33°	16836	23	58.8	-33	9.8	7.0	1	✓
44	-34°	17	0	1.7	-34	13.4	5.7	1	✓
45	-31°	36	0	4.3	-31	58.0	7.0	1	✓
46	-32°	72	0	9.8	-32	8.0	5.9	1	✓
47	-32°	66	0	8.6	-32	50.9	7.6	1	✓
48	-33°	73	0	10.4	-33	22.9	6.5	1	✓
49	-31°	138	0	17.0	-31	42.7	6.6	1	✓
50	-30°	101	0	17.1	-30	32.5	6.8	1	✓
51	-29°	86	0	15.3	-29	40.9	5.3	1	✓

Ident. by J. C. M. Feb. 7 '12

checked April 1, 1912 L. W.

Dec. 14, 1911

Time 10¹⁵₄₀

B 12013

No.	Obs	Int.	Remarks
1	A	5	E
2	A	8	E
3	Ko	4	E
4	Ko	8	
5	Ko	4	
6	Qo	3	
7	Jo	4	
8	Ko	8	
9	Ko	3	
10	Ko	6	
11	Bq	8	
12	Ma	3	
13	Bo	4	
14	As	4	
15	Jo	7	
16	Ma	9	
17	As	4	
18	Ko	5	
19	Ko	8	E
20	As	3	E
21	J	6	E
22	As	3	
23	K	2	
24	As	4	
25	Jo	5	
26	Ko	5	
27	Jo	10	

1	-30°	19809	23	57.8	-30	50.2	6.9	1	-
2	-29°	19850	23	57.9	-29	57.9	6.3	1	-
3	-33°	16836	23	58.8	-33	9.8	7.0	1	
4	-34°	17	0	11.7	-34	13.4	5.7	1	
5	-31°	36	0	4.3	-31	58.0	7.0	1	
6	-33°	36	0	5.0	-33	6.5	8.2	1	
7	-32°	66	0	8.6	-32	50.9	7.6	1	
7	-33°	60	0	8.4	-33	44.2	8.4	1	
8	-32°	72	0	9.8	-32	8.0	5.9	1	
9	-33°	71	0	10.2	-33	27.4	7.3	1	
10	-33°	73	0	10.4	-33	22.9	6.5	1	
11	-32°	138	0	17.0	-31	42.7	6.6	1	
12	-30°	101	0	17.2	-30	32.5	6.1	1	
13	-31°	154	0	18.8	-31	22.6	7.4	1	
14	-31°	162	0	19.7	-31	26.6	7.2	1	
15	-32°	136	0	21.3	-32	30.7	7.5	1	
16	-33°	152	0	21.7	-33	42.2	5.2	1	
17	-33°	163	0	23.4	-33	15.9	7.4	1	
18	-32°	154	0	23.6	-32	48.3	6.5	1	
19	-30°	156	0	27.5	-30	14.5	5.8	1	
20	-35°	16047	23	56.6	-35	26.4	7.3	1	
21	-36°	16150	23	57.0	-36	56.7	6.8	1	
22	-36°	16162	23	58.6	-36	43.5	7.5	1	
23	-36°	4	0	0.3	-36	47.0	7.5	1	
24	-35°	20	0	2.4	-35	29.4	7.3	1	
25	-35°	22	0	2.7	-35	46.8	7.1	1	
26	-35°	36	0	4.4	-35	33.4	7.2	1	
27	-35°	42	0	5.4	-35	49.6	5.4	1	

Dec. 14, 1911 (cont)

B 12013

No.	Class	Int.	Remarks
28	K	2	
29	K2	5	
30	B5	2	
31	K	3	
32	F8	4	
33	G0	5	
34	Ma	4	
35	K0	3	
36	K0	5	
37	K5	4	
38	B9	4	
39	G6	7	
40	F8	6	
41	Ma	3	
42	G0	5	
43	B5	3	
44	K2	3	
45	G0	5	
46	B5	4	
47	B5	5	
48	F0	8	
49	F5	5	
50	A0	10	Burned out
51	K0	5	

Time 10:30

28	-35° 41	0	5.2	-35	9.3	7.5✓
29	-35° 65	0	8.7	-35	36.0	6.4✓
30	-34° 104	0	15.3	-34	57.4	8.0✓
31	-35° 98	0	14.7	-35	37.8	7.4✓
32	-36° 106	0	15.3	-36	2.2	8.3✓
33	-36° 112	0	16.5	-36	5.2	7.5✓
34	-36° 104	0	15.0	-36	29.6	7.1✓
35	-36° 100	0	18.9	-36	36.0	7.5✓
36	-37° 74	0	12.2	-37	11.9	6.6✓
37	-38° 93	0	16.6	-38	5.5	6.9✓
38	-38° 105	0	17.9	-38	5.9	7.8✓
39	-35° 170	0	27.6	-35	40.3	6.5✓
40	-34° 224	0	33.8	-34	38.5	6.7✓
41	-36° 241	0	36.6	-36	42.5	7.1✓
42	-37° 205	0	31.2	-37	58.4	7.1✓
43	-37° 182	0	27.3	-37	28.8	9.5✓/Compare C.P.D. Magn. there 8.3
44	-38° 174	0	28.5	-38	40.7	7.0✓
45	-38° 165	0	27.4	-38	48.2	6.8✓
46	-39° 128	0	27.5	-39	22.5	8.0✓
47	-39° 92	0	19.2	-39	57.0	6.8✓
48	B2M-39° 83	0	16.6	-39	57.3	6.6✓
49	B2M-39° 72	0	14.7	-39	56.0	6.7✓
50	-39° 175	0	36.7	-39	9.0	6.0✓
51	-39° 181	0	38.2	-39	6.5	5.8

 Hunt by J. C. M.
 Checked by A. D. W.

 Jan. 31, '12
 Feb. 2, '12

 Small
 mod
 int.

Dec. 14, 1911

Time

No. class det. Remark

Dec. 17, 1911

Time 10.22

I 37377

Mr.	Class	Inst.	Remark
1	A	7	E
2	Ko	4	
3	A	8	E
4	F	3	
5	Qo	3	
6	A	3	
7	Bq?	3	Conv focus
8	Qo	3	
9	A	3	
10	Qo	5	
11	Bq	5	
12	Bq	6	E
13	A	3	
14	Qo	2	
15	Bq	3	
16	A	1	
17	Bq	3	
18	A	2	
19	Qo	3	
20	Bq	4	
21	Ko	3	
22	A	3	Another star superposed
23	Qo	5	
24	Ma	2	
25	Ko	7	
26	Qo	3	
27	Qo	3	
28	Qo	2	

1	+26° 870	5 28.1	+26 49.6 67 v
2	+26° 884	5 29.9	+26 31.8 68 v
3	+25° 902	5 30.8	+25 48.8 57 v
4	+27° 833	5 31.6	+27 42.0 82 v
5	+26° 902	5 32.1	+26 57.6 86 v
6	+26° 903	5 32.6	+26 51.9 80 v
7	+27° 839	5 32.9	+27 41.3 84 v
8	+28° 849	5 32.5	+28 22.7 80 v
9	+27° 846	5 34.7	+27 13.3 78 v
10	+27° 849	5 35.2	+27 39.7 78 v
11	+26° 937	5 35.9	+26 16.3 74 v
12	+25° 963	5 36.9	+25 57.2 77 v
13	+28° 871	5 35.8	+28 7.3 84 v
14	+28° 873	5 36.0	+28 11.5 84 v
15	+28° 878	5 36.4	+28 37.4 87 v
16	+28° 883	5 37.2	+28 24.4 90 v
17	+28° 887	5 38.1	+28 33.5 81 v
18	+28° 893	5 38.7	+28 44.1 86 v
19	+27° 867	5 38.6	+27 34.5 80 v
20	+27° 874	5 39.7	+27 18.7 81 v
21	+27° 880	5 40.5	+27 30.0 70 v
22	+28° 902	5 39.5	+28 16.0 84 v
23	+27° 886	5 41.6	+27 27.3 72 v
24	+27° 887	5 41.7	+27 35.1 77 v
25	+27° 888	5 41.8	+27 55.1 65 v
26	+28° 918	5 42.4	+28 2.8 81 v
27	+28° 919	5 42.6	+28 24.4 84 v
28	+28° 924	5 43.2	+28 35.2 88 v

Corda made by

Dec. 19, 1911 (Cont)

I 37377

No.	Class	Int.	Remark
29	B5-	2	
30	K	1	
31	A0	10	Burned out
32	K0	5	E
33	A3	5	
34	B3	3	
35	F5	3	
36	B0	5	
37	G5-	4	
38	B0	9	
39	K0	4	
40	A	3	
41	B9	5	Hydrogen lines narrow
42	A	1	Partly superposed on #1
43	K0	5	
44	B2	7	Hydrogen lines narrow
45	A0	5	
46	B8	6	
47	F4	4	
48	A5	4	E
49	A	2	
50	A0	3	
51	B8	2	
52	K	2	
53	K0	2	
54	B9	5	
55	A	2	
56	B9	3	

29	+28° 927	5	43.8	+28 25.1 58.5 ✓
30	+28° 930	5	44.2	+28 14.2 5.2 ✓
31	+27° 899	5	44.2	+27 34.2 5.5 ✓
32	+25° 978	5	38.6	+25 30.4 66 ✓
33	+26° 973	5	41.8	+26 0.3 78 ✓
34	+26° 985	5	44.1	+26 24.5 5.1 ✓
35	+27° 906	5	46.0	+27 18.4 8.0 ✓
36	+27° 914	5	46.6	+28 40.9 7.7 ✓
37	+27° 923	5	48.0	+27 16.9 7.7 ✓
38	+25° 1052	5	49.0	+25 53.8 5.2 ✓
39	+25° 1058	5	49.9	+25 45.3 7.3 ✓
40	+27° 938	5	49.6	+27 35.4 5.3 ✓
41	+27° 938	5	50.0	+27 32.5 7.9 ✓
42	+27° 940	5	50.1	+27 33.2 7.0 ✓
43	+27° 943	5	51.0	+27 15.5 7.0 ✓
44	+27° 945	5	51.9	+27 33.5 6.8 ✓
45	+27° 966	5	54.9	+27 34.2 7.8 ✓
46	+26° 1046	5	54.5	+26 31.5 7.2 ✓
47	+25° 1089	5	53.9	+25 53.1 8.0 ✓
48	+25° 1108	5	56.1	+25 48.2 8.0 ^{+25 1109} ^{5 56.1} ^{+25 57.5} ^{mag. 8.3} ^{superposed?} ✓
49	+27° 968	5	55.8	+27 1.1 5.7 ✓
50	+27° 975	5	57.1	+27 56.4 8.3 ✓
51	+27° 979	5	57.4	+27 3.8 8.5 ✓
52	+26° 1074	5	57.4	+26 32.0 7.6 ✓
53	+26° 1079	5	58.0	+26 41.5 7.5 ✓
54	+26° 1082	5	58.3	+26 41.8 7.0 ✓
55	+26° 1088	5	58.9	+26 24.8 7.8 ✓
56	+27° 991	5	58.5	+27 52.7 8.5 ^{+28 10.6} ^{5 58.5} ^{1.27} ^{7.5} ^{mag. 8.9} ^{superposed?} ✓

Cards made out

Dec. 19, 1911 (Cont)
I 37377

No.	Class	Int.	Remark
57	B ₀	2	
58	A	3	E
59	A	2	E
60	B3	7	
61	K ₀	3	
62	B9	7	
63	A5	3 X	
64	F8	2	
65	K ₀	4	
66	B5	3	
67	B5	3	
68	F2	4	
69	B9	4	
70	B5	5	
71	B5	2	
72	B5	5	
73	B9	5	
74	F8	6	
75	K ₀	4	
76	F ₀	3	
77	F2	3	
78	A5	4	
79	A2	2	
80	B5	5	
81	B5	2	
82	A	2	Another star superposed ✓
83	A	3	Partly superposed on 84
84	A ₀	5	

57	+27° 99.4	5 52.9	+27 26 82 ✓
58	+27° 101.3	6 2.7	+27 98 82 ✓
59	+26° 112.2	5 2.6	+26 43 8.3 ✓
60	+29° 94.7	5 30.1	+29 7.6 6.2 ✓
61	+28° 84.6	5 31.4	+28 53.8 7.5 ✓
62	+29 93.3 +24 55.8	5 32.1 5 32.1	+29 24.5 7.0 +29 26.2 7.5 Superposed ✓
63	+29° 95.8	5 32.7	+29 12.9 8.7
64	+28° 85.6	5 33.3	+28 53.2 8.2 ✓
65	+29° 97.0	5 34.2	+29 7.8 7.0 ✓
66	+28° 86.8	5 35.4	+28 56.8 8.1 ✓
67	+29° 97.4	5 34.8	+29 28.7 8.2 ✓
68	+29° 98.3	5 36.3	+29 13.9 7.5 ✓
69	+29° 97.5	5 35.0	+29 56.3 8.0 ✓
70	+30° 99.3	5 35.2	+30 24.7 7.5 ✓
71	+30° 99.4	5 35.4	+30 33.1 7.9 ✓
72	+30° 99.7	5 36.3	+30 5.8 8.5 ✓
73	+29° 99.4	5 37.9	+29 22.3 8.0 ✓
74	+29° 99.7	5 38.2	+29 35.9 7.0 ✓
75	+30° 101.5	5 38.9	+30 28.4 7.3 ✓
76	+30° 102.0	5 39.6	+30 39.0 8.5 ✓
77	+29° 100.4	5 39.6	+29 41.7 8.2 ✓
78	+29° 100.9 +30° 102.4	5 40.0 5 40.7	+29 40.3 7.8 ✓ +30 30.2 6.7 ✓
79	+29 100.5	5 39.7	+29 4.7 8.2 ✓
80	+31° 111.5	5 41.1	+31 1.0 8.0 ✓
81	+30° 102.7	5 41.5	+30 40.0 9.0 ✓
82	+30° 103.2	5 42.2	+30 29.4 8.8 ✓
83	+30° 103.4	5 42.4	+30 41.7 8.2 ✓
84	+30° 103.3	5 42.4	+30 54.8 7.4 ✓

Cards made out

Dec. 18, 1911 (Cont.)

No. class Int. Remark I 37377

85	A	2	
86	B	2	
87	A	2	
88	K	1	
89	45	4	
90	B ₉	2	
91	B ₉	2	
92	B ₅	3	
93	A ₂	6	Lines narrow
94	A	3	
95	B ₈	2	
96	K ₅	3	
97	F ₀	5	
98	B ₉	4	
99	A ₃	6	
100	A ₃	3	
101	A	2	
102	A ₂	2	
103	B ₃	5	
104	B ₉	2	
105	B ₉	4	
106	K	1	
107	B ₃	5	Lines very indistinct
108	K	2	Partly superseded, see 107
109	M ₂	6	
110	F	3	
111	F ₅	4	
112	A	2	
113	B ₈	5	

85	+29° 1021	5 42.9	+29 82.4 9.0 ✓
86	+29° 1027	5 43.4	+29 44.0 8.5 ✓
87	+29° 1020	5 42.9	+29 20.0 9.0 ✓
88	+29° 1022	5 43.6	+29 28.1 8.2 ✓
89	+29° 1112	5 57.1	+29 31.6 6.0 ✓
90	+28° 983	5 44.7	+28 53.0 8.8 ✓
91	+28° 940	5 45.8	+28 21.5 8.5 ✓
92	+29° 1039	5 46.3	+29 8.4 7.5 ✓
93	+28° 952	5 47.3	+28 53.0 6.5 ✓
94	+28° 957	5 48.5	+28 16.0 8.4 ✓
95	+28° 958	5 49.0	+28 9.8 8.7 ✓
96	+28° 966	5 50.9	+28 6.7 6.9 ✓
97	+28° 969	5 51.4	+28 57.5 7.4 ✓
98	+29° 1058	5 49.2	+29 36.0 7.8 ✓
99	+29° 1062	5 49.7	+29 57.8 6.8 ✓
100	+29° 1066	5 50.3	+29 59.2 8.5 ✓
101	+29° 1074	5 52.1	+29 25.7 8.4 ✓
102	+29° 1075	5 52.2	+29 33.8 8.3 ✓
103	+28° 991	5 53.8	+28 40.3 7.9 ✓
104	+28° 994	5 54.8	+28 38.5 8.7 ✓
105	+29° 998	5 55.2	+28 59.0 8.5 ✓
106	+28° 997	5 56.1	+28 18.0 8.3 ✓
107	+28° 1008	5 58.9	+28 56.5 7.3 ✓
108	+29° 1111	5 57.1	+29 6.2 7.5 ✓
109	+29° 1112	5 57.1	+29 31.0 6.0 ✓
110	+29° 1123	5 57.5	+29 52.1 8.6 ✓
111	+29° 1128	5 58.5	+29 15.7 7.8 ✓
112	+29° 1133	6 1.3	+29 26.1 8.5 ✓
113	+28° 1036	6 2.0	+28 56.2 7.5 ✓

Cards made out

Dec. 19, 1911 (Cont.)

I 37377

No.	Class	Int.	Remarks
114	F ₆	3	
115	B ₉	3	
116	B	2	Poor focus
117	A ₅	2	E
118	A ₂₁	8	
119	A	3	
120	F ₈	2	
121	B ₅	4.5	
122	F ₈	2	
123	B ₈	7.6	
124	A ₀	4	
125	B ₉	4	
126	Ma	3	Another star superposed
127	B ₅	3	
128	F ₀	3	
129	B ₅	2	
130	B ₀	4	
131	B ₈	3	
132	B ₀	3	
133	K ₀	5	
134	A ₀	5	
135	K ₀	3	
136	A ₀	5	
137	K	1	
138	B ₉	3	
139	Ma	5	
140	B ₉	2	
141	Hel	4	No bright lines

114	+28° 1028	6 0.6	+28 24.9 8.3 ✓
115	+29° 1138	6 2.5	+29 42.9 7.7 ✓
116	+29° 1140	6 2.8	+29 30.8 7.6 ✓
117	+29° 968	5 4.0	+29 4.2 8.2 ✓
118	+30° 963	5 29.3	+30 23.9 6.0 ✓
119	+30° 965	5 30.0	+30 3.5 8.1 ✓
120	+30° 970	5 30.7	+30 0.0 8.2 ✓
121	+30° 968	5 80.1	+30 47.9 7.5 ✓
122	+31° 1040	5 30.5	+31 8.5 8.1 ✓
123	+31° 1048	5 31.2	+31 16.4 6.4 ✓
124	+31° 1056	5 32.0	+31 6.3 8.1 ✓
125	+31° 1043	5 30.6	+31 48.6 8.0 ✓
126	+31° 1049	5 31.3 ^(31, 16.3)	+31 50.0 6.6 ^{+31° 105.0 5 31 19.4}
127	+31° 1069	5 34.8	+31 58.2 7.9 ✓
128	+32° 1076	5 35.0	+32 10.2 8.0 ✓
129	+32° 1077	5 35.4	+32 19.6 8.3 ✓
130	+29° 964	5 33.2	+29 46.3 7.7 ✓
131	+30° 992	5 34.7	+30 57.3 8.1 ✓
132	+31° 1072	5 35.3	+31 14.7 8.2 ^{+31° 107.1 5 35.3}
133	+31° 1080	5 36.1	+31 14.7 6.7 ✓
134	+31° 1091	5 37.8	+31 35.7 7.5 ✓
135	+32° 1083	5 37.0	+32 35.0 7.8 ✓
136	+31° 1111	5 40.5	+31 44.1 7.0 ✓
137	+32° 1102	5 40.8	+32 6.8 8.8 ✓
138	+32° 1107	5 41.5	+32 9.0 8.4 ✓
139	+32° 1109	5 42.0	+32 4.9 6.6 ✓
140	+32° 1111	5 42.5	+32 11.8 8.5 ✓
141	M.S.C. 2099 1100 pos	5 45.9 ⁸	+32 81 (990) = Messier 37 ✓

Cards made on

superposed

Dec. 19, 1911 (Cont.)

I 37377

No.	Class	Int.	Remarks
142	A2	2	
143	B9	2	
144	F	2	
145	B9	2	
146	A	2	
147	A3	8	
148	F8	3	
149	B5	5	
150	B8	3	
151	F0	2	
152	B8	3	
153	K5	2	
154	A	1	Helium lines suspected maybe due to another star
155	B8	1	
156	F5	3	
157	K0	5	
158	A3	5	
159	B5	2	
160	A0	7	
161	B5	2	
162	F5?	2	Another star maybe superfluous
163	F8	6	
164	A	2	
165	A	3	
166	B8	3	
167	B5	2	
168	A3	2	
169	B5	3	

No.	Class	Int.	Remarks
142	A2	2	
143	B9	2	
144	F	2	
145	B9	2	
146	A	2	
147	A3	8	
148	F8	3	
149	B5	5	
150	B8	3	
151	F0	2	
152	B8	3	
153	K5	2	
154	A	1	Helium lines suspected maybe due to another star
155	B8	1	
156	F5	3	
157	K0	5	
158	A3	5	
159	B5	2	
160	A0	7	
161	B5	2	
162	F5?	2	Another star maybe superfluous
163	F8	6	
164	A	2	
165	A	3	
166	B8	3	
167	B5	2	
168	A3	2	
169	B5	3	

Cards made and

Dec. 19, 1911 (cont.)

I 37377

No. Class Int. Remark

170	B8	6	
171	A5	3	
172	F8	3	
173	A2	5	
174	F5	2	
175	B5	2	
176	B5	3	
177	B5	2	
178	F	5	
179	A2	5	
180	F	5	E
181	A2	6	North of two stars
182	K2	6	
183	B9	4	E
184	B	3	
185	A	2	
186	F5	3	
187	F8	3	
188	B	2	Very poor focus
189	K0	5	
190	A	4	The brightest of cluster. Probably this superfluous
191	A	6	E
192	A	3	Focus too poor
193	K	3	E
194	F	4	
195	A	7	E
196	A2	3	
197	K	3	Focus poor

Orbit

170	+32° 115.4	5	56.8	+32 0.3 7.0 ✓
171	+32° 119.0	5	57.7	+32 12.7 8.4 ✓
172	+31° 120.3	5	59.0	+31 12.9 8.0 ✓
173	+31° 120.7	5	57.7	+31 16.8 7.2 ✓
174	+31° 120.8	5	59.8	+31 15.5 8.7 ✓
175	+30° 112.1	5	59.0	+30 15.9 8.3 ✓
176	+30° 112.2	5	57.2	+30 35.1 8.0 ✓
177	+30° 113.8	5	1.3	+30 59.0 8.1 ✓
178	+30° 114.1	6	2.0	+30 12.1 8.0 +30 114.2 2.0 +30 113.3 8.3 Superfluous ✓
179	+31° 122.3	6	2.3	+31 12.3 7.9 ✓
180	+30° 115.1	6	3.2	+30 15.6 7.7 ✓
181	+32° 120.8	6	1.2	+32 11.1 7.4 ✓
182	+32° 121.7	6	2.8	+32 13.4 6.0 ✓
183	+32° 103.7	5	25.8	+32 28.4 8.7 ✓
184	+31° 102.0	5	27.0	+31 54.5 7.7 ✓
185	+32° 104.8	5	26.9	+32 14.0 8.7 ✓
186	+31° 102.5	5	28.0	+31 13.7 7.8 ✓
187	+32° 105.9	5	29.2	+32 28.4 7.7 ✓
188	+32° 105.8	5	29.2	+32 35.0 8.0 ✓
189	+33° 110.2	5	28.2	+33 27.8 6.8 ✓
190	+34° 110.2	5	26.7	+34 2.5 8.8 ✓
191	+34° 108.3	5	24.0	+34 36.8 6.9 ✓
192	+34° 111.8	5	27.5	+34 113.0 8.1 ✓
193	+35° 118.8	5	28.3	+35 30.3 7.0 ✓
194	+34° 112.3	5	26.8	+34 59.1 7.9 ✓
195	+35° 120.7	5	32.2	+35 32.7 6.8 ✓
196	+34° 112.3	5	28.8	+34 11.8 8.3 ✓
197	+34° 113.5	5	30.8	+34 27.8 8.1 ✓

Cards

made

out

Dec 19, 1911 (Cont.)

I 37377

No.	Class	Int	Remark
198	Ko	4	
199	A	2	
200	F8	6	
201	Ao	2	
202	F5	6	
203	A	2	
204	A2	4	
205	G5	5	
206	F5	6	
207	F	5	
208	B9	4	
209	A3	2	
210	B8	6	Lines narrow
211	B0	6	
212	A	1	
213	G5	3	
214	B	2	
215	A	2	
216	Mn	5	
217	Fo	5	
218	F8	3	
219	F8	3	
220	B9	4	
221	A3	3	
222	F8	5	
223	A2	3	
224	A2	6	

198	+33° 1120	5 31.7	+33 50.0 7.9 ✓
199	+33° 1117	5 30.9	+33 25.5 8.6 ✓
200	+32° 1064	5 31.5	+32 18.7 7.0 ✓
201	+32° 1066	5 31.7	+32 49.0 8.7 ✓
202	+33° 1127	5 33.4	+33 14.2 7.1 ✓
203	+33° 1129	5 33.8	+33 29.5 8.6 ✓
204	+33° 1134	5 34.7	+33 1.6 7.7 ✓
205	+33° 1137	5 35.3	+33 38.9 7.5 ✓
206	+33° 1139	5 35.5	+33 33.2 7.0 ✓
207	+33° 1141	5 37.1	+33 4.3 8.9 ✓
208	+33° 1152	5 38.7	+33 13.7 8.5 ✓
209	+32° 1104	5 40.9	+32 49.8 8.8 ✓
210	+34° 1172	5 37.4	+34 14.7 7.7 ✓
211	+35° 1239	5 38.2	+35 5.8 6.5 ✓
212	+34° 1173	5 37.6	+34 2.7 7.1 ✓
213	+34° 1182	5 39.7	+34 9.9 8.2 ✓
214	+34° 1172	5 42.2	+33 34.0 8.6 ✓
215	+33° 1174	5 42.4	+33 30.3 9.1 ✓
216	+33° 1179	5 43.1	+33 32.5 6.5 ✓
217	+34° 1202	5 43.0	+34 18.6 8.0 ✓
218	+34° 1203	5 43.2	+34 24.3 7.7 ✓
219	+33° 1193	5 46.9	+33 11.0 8.0 ✓
220	+32° 1136	5 47.8	+32 39.8 8.0 ✓
221	+33° 1197	5 47.9	+33 6.0 8.8 ✓
222	+33° 1199	5 48.1	+33 13.9 7.2 ✓
223	+32° 1118	5 50.1	+32 47.0 8.0 ✓
224	+33° 1209	5 50.7	+33 7.3 6.9 ✓

Cards made on

+35° 1238
5 42.2 +34° 38.9
way 8.8
superficial ✓+33° 1175
5 42.2 +33° 39.4
way 8.8
superficial ✓

Dec. 19, 1911 (Cont.)
I 37377

No.	Class	Int.	Remarks
225	W	3	
226	Jo	2	
227	Jo	5	
228	Jo	6	
229	K	3	
230	A	2	
231	A	3	
232	Bq	6	
233	B	2	
234	K	1	
235	A	5	E
236	A	5	E
237	Ko	5	
238	F	4	Good focus
239	G	6	
240	Mb	5	

Jan. 16, 20

241	2	Ko
242	1	K5

Cont. 132, 140

225	+32°	1158	5	51.9	+32	87.4	7.2 ✓
226	+32°	1164	5	53.0	+32	46.3	8.4 ✓
227	+32°	1165	5	53.1	+32	54.9	7.1 ✓
228	+32°	1166	5	53.4	+32	38.3	6.5 ✓
229	+33°	1225	5	54.0	+33	51.5	8.0 ✓
230	+33°	1280	5	54.9	+33	37.6	8.9 ✓
231	+33°	1238	5	53.8	+33	44.0	7.8 ✓
232	+33°	1236	5	56.0	+33	47.7	7.2 ✓
233	+33°	1240	5	56.5	+33	35.8	6.3 ✓
234	+33°	1244	5	57.5	+33	15.3	8.3 ✓
235	+34°	1265	5	58.3	+33	3.7	8.2 ✓
236	+34°	1263	5	58.3	+34	10.6	7.7 ✓
237	+34°	1231	5	50.8	+34	16.5	7.8 ✓
238	+35°	1305	5	50.8	+34	29.2	6.7 ✓
239	+35°	1304	5	50.4	+35	17.8	7.3 ✓
240	+35°	1288	5	47.2	+35	24.3	6.1 ✓
					+35	32.6	7.3 ✓

Cards made out

Ident. by L. D. W.

Checked by J. C. M. Jan. 12 '12

241	+34°	1132	5	30.4	+34	12	8.0 ✓
242	+34°	1132	5	30.4	+34	18	8.0 ✓

Time 10:10

January 8, 1911
T 37426

No.	Class	Int.	Remark
1	Qo	6	E
2	Qo	3	
3	Qo	4	
4	Qo	5	
5	Qo	4	
6	Qo	3	
7	Qo	3	
8	Qo	4	
9	Qo	2	
10	Qo	5	
11	Qo	9	
12	Qo	5	
13	Ko	4	
14	Qo	2	Another star superposed?
15	Qo	7	line, rather sharp
16	Ko	5	
17	B8	5	
18	Qo	4	
19	Qo	6	
20	Qo	3	
21	Qo	3	
22	Qo	3	
23	Qo	2	
24	Ko	3	
25	Qo	4	
26	Qo	4	
27	Qo	2	Another completely superposed on 26

1	+57° 75.2	3	42.0	+57	31.0	6.0 v
2	+56° 85.5	3	43.3	+56	59.3	8.0 v
3	+56° 85.7	3	44.2	+56	29.4	7.0 v
4	+57° 76.0	3	47.1	+57	1.1	7.0 v
5	+55° 83.9	3	49.9	+55	37.2	7.5 v
6	+55° 84.4	3	51.4	+55	50.5	7.0 v
7	+56° 87.5	3	53.0	+56	20.0	8.0 v
8	+57° 76.9	3	51.7	+57	17.9	8.0 v
9	+56° 87.2	3	51.6	+56	58.3	8.7 v
10	+58° 68.5	4	50.8	+58	31.8	8.0 v
11	+58° 69.0	4	52.4	+58	44.7	5.0 v
12	+58° 70.8	4	57.4	+58	9.5	7.5 v
13	+56° 87.9	3	53.5	+56	20.5	7.6 v
14	+55° 85.2	3	59.7	+55	30.8	8.5 v
15	+57° 78.5	4	3.2	+57	5.5	6.5 v
16	+57° 78.7	4	5.2	+57	29.1	6.0 v
17	+56° 84.9	4	5.0	+56	48.8	7.3 v
18	+58° 72.7	4	5.8	+58	24.7	7.1 v
19	+59° 79.3	4	10.6	+59	16.0	6.5 v
20	+58° 73.7	4	11.5	+58	8.6	8.7 v
21	+58° 73.8	4	12.8	+58	14.4	8.1 v
22	+56° 90.7	4	10.3	+56	58.2	8.3 v
23	+57° 79.5	4	10.8	+57	2.8	9.2 v
24	+56° 90.4	4	9.3	+56	21.4	8.0 v
25	+56° 90.5	4	10.1	+56	9.2	6.3 v
26	+55° 86.8	4	9.4	+55	10.7	8.0 v
27	+55° 86.9	4	9.5	+55	9.2	8.0 v

January 8, 1911 (Cont)
I 37426

M. class	Int.	Remark
28 G	2	
29 F	4	
30 F	5	
31 F	4	
32 F	2	
33 F	4	
34 A	2	
35 A	3	
36 F	6	
37 K	2	
38 G	3	
39 A	4	
40 A	2	
41 F	6	
42 G	2	
43 K	1	
44 A	3	
45 B5	2	
46 A	2	
47 G	5	
48 A	3	
49 F	3	
50 B	2	
51 A	4	
52 K	3	
53 G	2	
54 F	7	

28 +55° 877	4	13.3	+55	44.6	8.71
29 +56° 916	4	13.6	+56	2.4	8.01
30 +55° 881	4	15.1	+55	18.7	7.01
31 +54° 773	4	17.3	+54	41.7	7.51
32 +55° 889	4	19.9	+55	33.2	8.71
33 +55° 895	4	21.6	+55	8.9	7.51
34 +55° 897	4	21.9	+55	31.0	8.91
35 +56° 937	4	21.9	+56	24.2	8.51
36 +57° 817	4	23.0	+57	6.8	6.51
37 +56° 941	4	23.8	+56	58.2	8.51
38 +57° 822	4	24.6	+57	1.8	8.71
39 +56° 949	4	26.0	+56	48.1	8.01
40 +56° 944	4	24.7	+56	8.2	9.01
41 +55° 901	4	24.3	+55	12.3	7.41
42 +54° 782	4	24.6	+54	41.6	8.51
43 +55° 903	4	25.4	+55	39.8	9.21
44 +55° 904	4	26.0	+55	49.2	8.71
45 +56° 954	4	27.0	+56	20.5	8.01
46 +57° 827	4	28.6	+57	3.8	8.61
47 +57° 828	4	28.7	+57	35.2	7.31
48 +57° 830	4	28.9	+57	38.2	8.01
49 +56° 964	4	30.9	+56	54.9	8.01
50 +55° 917	4	32.2	+55	15.3	8.51
51 +54° 795	4	30.2	+54	22.5	8.01
52 +55° 922	4	34.5	+55	22.8	7.81
53 +55° 927	4	36.1	+55	46.5	8.21
54 +55° 928	4	36.2	+55	20.2	6.51

Copy

Copy

Copy

January 8 1911 (Cont.)
I 37426

No.	Class	Int.	Remarks
55	A2	3	
56	A	2	
57	A	4	Con focus
58	A3	3	
59	A	7	E 11.2 11.2
60	A2	7	
61	F5	3	
62	F5	2	
63	A	2	
64	F5	3	
65	A0	7	
66	A	3	
67	K	2	
68	F	2	
69	A	3	E
70	A5	3	E
71	A	7	E
72	A	6	E
73	A3	7	
74	A0	3	

June 1025

Cont. B 130, 200

55	+54° 50.9	4	34.7	+54	32.4	8.3 V
56	+54° 81.8	4	36.4	+54	32.9	8.8 V
57	+54° 82.9	4	40.2	+54	39.8	8.0 V
58	+54° 83.1	4	41.2	+54	46.8	8.0 V
59	+55° 94.1	4	43.2	+55	1.2	5.8 V
60	+56° 97.3	4	36.0	+56	29.9	5.8 V
61	+56° 97.6	4	38.8	+56	16.2	7.3 V
62	+56° 98.0	4	40.1	+56	10.0	7.6 V
63	+55° 73.6	4	39.6	+55	35.8	8.9 V
64	+57° 77.8	4	14.7	+57	54.0	8.1 V
65	+57° 80.0	4	15.0	+57	14.6	6.9 V
66	+58° 74.7	4	17.2	+58	11.8	8.7 V
67	+57° 80.9	4	20.0	+57	31.8	8.3 V
68	+57° 80.7	4	19.7	+57	52.9	8.7 V
69	+58° 75.3	4	19.2	+58	47.9	8.4 V
70	+59° 81.2	4	21.3	+59	2.6	8.5 V
71	+59° 81.7	4	25.4	+59	5.7	7.2 V
72	+59° 81.6	4	24.9	+59	2.3	7.2 V
73	+59° 82.6	4	30.8	+59	14.4	6.9 V
74	+58° 76.7	4	30.2	+58	38.1	8.6 V

Ident. by J. C. M. Jan. 31, '12
Checked by A. M. C. Mar. 1, 1912

Time 10:54

Mr. Class Int.

1 B8	7
2 B5	2
3 B	5
4 Q5	3
5 A	6
6 A	7
7 F0	5
8 Q20	4
9 Q0	9
10 Q20	4
11 F0	3
12 A	20
13 Q20	4
14 B8	4
15 B9	5
16 A0	6
17 A	4
18 B8	3
19 Q20	20
20 K0	4
21 H5	3
22 A	3
23 B9	4
24 A0	20
25 B9	5
26 F20	6
27 B5	6

January 8, 1911

E37452

Remark

E

E

Focus poor

E

1 +41° 63.1	3	8.6	+41	49.5	6.5 ✓
2 +42° 72.5	3	4.1	+42	21.9	8.2 ✓
3 +41° 63.8	3	5.4	+41	57.7	6.8 ✓
4 +41° 64.1	3	6.6	+41	18.1	8.3 ✓
5 +39° 73.7	3	4.7	+39	33.7	7.5 ✓
6 +39° 74.3	3	7.7	+39	57.2	6.8 ✓
7 +42° 73.6	3	8.0	+42	7.8	7.7 ✓
8 +41° 65.6	3	10.7	+41	24.0	8.1 ✓
9 +42° 75.0	3	11.8	+42	48.4	5.4 ✓
10 +42° 75.4	3	12.5	+42	17.9	8.0 ✓
11 +41° 66.7	3	13.1	+41	25.0	8.0 ✓
12 +41° 67.0	3	13.8	+41	11.3	8.0 ✓
13 +40° 72.5	3	13.9	+40	40.7	7.3 ✓
14 +40° 72.9	3	14.3	+40	48.5	8.2 ✓
15 +40° 73.3	3	15.2	+40	13.8	7.5 ✓
16 +40° 73.6	3	15.6	+40	44.3	6.5 ✓
17 +40° 73.7	3	15.8	+40	27.0	7.0 ✓
18 +39° 78.4	3	16.9	+39	56.0	8.2 ✓
19 +40° 74.8	3	17.2	+40	5.3	8.3 ✓
20 +39° 78.9	3	18.0	+39	37.7	6.8 ✓
21 +39° 79.0	3	19.4	+39	41.1	7.3 ✓
22 +41° 67.5	3	18.2	+41	29.5	8.4 ✓
23 +41° 68.1	3	16.8	+41	46.7	8.4 ✓
24 +41° 68.7	3	19.0	+41	43.6	8.8 ✓
25 +42° 77.2	3	20.7	+42	29.6	7.5 ✓
26 +41° 69.3	3	21.0	+41	42.2	6.9 ✓
27 +41° 69.6	3	21.6	+41	14.7	7.4 ✓

Circle made out

January 8, 1911 (Cont)
T 374.52

No.	Class	Set	Remark
28	Bg	5	
29	A5	6	
30	Bg	6	
31	A0	7	E
32	Bg	4	
33	A0	3	
34	F2	4	
35	F2	2	
36	A	3	
37	F8	4	
38	A5	2	
39	K	2	
40	Bg	3	
41	B8	6	
42	A0	4	
43	A	2	
44	F0	3	
45	A5	2	
46	A5	9	
47	A0	2	
48	A0	3	
49	B	2	
50	B	2	
51	A5	2	
52	Mn	4	
53	A	2	
54	A0	5	

28	+42° 77.6	3	22.4	+42	15.2	7.8 ✓
29	+40° 77.2	3	21.9	+40	15.6	6.5 ✓
30	+40° 77.6	3	22.7	+40	25.6	7.2 ✓
31	+39° 8.11	3	24.0	+39	24.9	6.0 ✓
32	+39° 8.29	3	27.8	+39	36.4	7.0 ✓
33	+40° 80.7	3	29.5	+40	48.7	7.9 ✓
34	+40° 81.3	3	31.2	+40	42.3	7.0 ✓
35	+41° 73.2	3	31.1	+41	28.1	7.8 ✓
36	+42° 78.6	3	25.5	+42	5.2	8.7 ✓
37	+42° 78.7	3	25.8	+42	24.6	7.5 ✓
38	+42° 78.9	3	26.1	+42	24.2	8.3 ✓
39	+42° 79.2	3	27.2	+42	47.4	8.0 ✓
40	+43° 77.3	3	27.8	+43	4.3	8.2 ✓
41	+42° 79.5	3	28.2	+42	6.0	6.7 ✓
42	+42° 80.3	3	29.2	+42	4.0	7.2 ✓
43	+43° 78.3	3	30.2	+43	35.4	8.5 ✓
44	+43° 78.8	3	31.0	+43	13.4	7.9 ✓
45	+43° 79.1	3	32.0	+43	2.9	7.9 ✓
46	+44° 63.1	2	59.7	+44	17.9	4.5 ✓
47	+44° 63.0	2	59.6	+44	49.1	8.5 ✓
48	+44° 63.4	2	59.7	+44	27.9	7.5 ✓
49	+44° 63.0	2	59.6	+44	47.1	8.5 ✓
50	+43° 64.9	3	2.8	+43	18.5	7.7 ✓
51	+43° 65.7	3	4.2	+43	19.2	7.3 ✓
52	+44° 64.8	3	6.3	+44	48.0	6.8 ✓
53	+44° 65.5	3	8.3	+44	41.9	8.8 ✓
54	+44° 65.6	3	8.7	+44	10.9	7.9 ✓

Goodly made in

January 8, 1911 (Cont)
I 37452

No.	Class	Int.	Remarks
55	B8	8	
56	B5	2	
57	O0	3	
58	K	2	
59	B8	4	
60	O	2	
61	O0	3	
62	B8	5	
63	B9	4	
64	B3	4	sp not seen distinctly.
65	O0	3	
66	K0	3	
67	K0	3	
68	O0	4	
69	O0	2	
70	O3	1	
71	K	2	Another star superposed?
72	B3	3	
73	K	2	
74	K	1	
75	B	2	
76	O0	4	Partly superposed
77	O0	3	" "
78	K0	2	
79	O0	3	
80	B5	2	
81	B5	3	

55	+43° 67.4	3	8.1	+43	29.5	6.0 ✓
56	+43° 68.1	3	9.8	+43	28.1	8.0 ✓
57	+45° 73.8	3	9.4	+45	27.3	9.0 ✓
58	+45° 74.0	3	10.4	+45	20.6	7.4 ✓
59	+44° 67.7	3	11.6	+44	51.4	7.8 ✓
60	+45° 74.6	3	11.7	+45	12.0	9.0 ✓
61	+44° 68.3	3	13.1	+44	26.8	8.2 ✓
62	+44° 69.5	3	15.7	+44	59.9	7.6 ✓
63	+44° 70.0	3	16.2	+44	46.8	8.5 ✓
64	+44° 71.4	3	19.3	+44	32.2	7.3 ✓
65	+43° 72.8	3	18.2	+43	52.7	8.4 ✓
66	+43° 73.0	3	18.4	+43	51.8	7.0 ✓
67	+43° 72.0	3	17.1	+43	8.5	7.6 ✓
68	+43° 73.2	3	18.8	+43	14.6	7.5 ✓
69	+44° 71.7	3	20.7	+44	19.7	8.5 ✓
70	+44° 72.1	3	21.4	+44	9.4	8.9 ✓
71	+44° 73.2	3	22.4	+44	20.3	7.5 ✓
72	+44° 73.4	3	22.7	+44	21.5	6.5 ✓
73	+44° 74.2	3	24.8	+44	18.0	7.3 ✓
74	+44° 74.4	3	25.0	+44	57.5	8.1 ✓
75	+44° 74.7	3	26.4	+44	49.6	8.4 ✓
76	+44° 75.7	3	28.3	+44	18.8	8.0 ✓
77	+44° 75.9	3	28.4	+44	18.6	8.0 ✓
78	+44° 76.8	3	30.7	+44	13.0	7.8 ✓
79	+44° 77.0	3	31.0	+44	27.0	8.0 ✓
80	+44° 77.3	3	31.5	+44	52.2	8.2 ✓
81	+45° 79.5	3	30.6	+45	32.2	7.5 ✓

cards made out

January 8, 1911 (Cont.)
T 37452

No.	Class	Int.	Remark
82	B	2	
83	A	3	
84	A	7	
85	K ₀	4	
86	K ₅	6	
87	A	3	
88	K ₅	3	
89	F ₀	5	
90	F ₅	4	
91	A	2	
92	A	2	
93	B	3	
94	A	3	
95	A	4	
96	B	2	
97	F ₀	3	
98	K ₀	2	
99	A	3	Another star superposed
100	B ₉	4	
101	B ₉	5	
102	B ₉	3	
103	B ₉	6	
104	A	3	
105	B ₉	4	
106	B ₀	3	
107	B ₉	4	
108	A	3	

82	+45° 798	3	31.2	+45	26.3	8.3 V
83	+44° 775	3	32.2	+44	57.7	8.1 V
84	+46° 692	2	57.9	+46	44.5	6.4 V
85	+47° 779	3	2.4	+47	10.6	6.9 V
86	+47° 782	3	3.3	+47	39.5	6.5 V
87	+47° 784	3	4.0	+47	15.8	8.2 V
88	+45° 716	3	0.5	+45	21.7	7.5 V
89	+45° 722	3	2.1	+45	33.6	7.0 V
90	+45° 724	3	2.3	+45	50.3	7.3 V
91	+45° 726	3	2.7	+45	33.1	8.8 V
92	+45° 728	3	3.3	+45	36.1	8.5 V
93	+46° 708	3	3.7	+46	15.5	8.2 V
94	+46° 713	3	4.9	+46	34.8	8.5 V
95	+46° 722	3	7.7	+46	23.9	7.3 V
96	+46° 726	3	8.6	+46	21.9	7.8 V
97	+46° 727	3	8.7	+46	29.8	8.3 V
98	+46° 733	3	10.2	+46	15.0	7.3 V
99	+46° 744	3	14.8	+46	47.3	8.0 V
100	+47° 817	3	14.7	+47	22.3	7.3 V
101	+47° 821	3	16.0	+47	52.3	7.1 V
102	+47° 826	3	16.7	+47	23.9	7.5 V
103	+47° 828	3	16.9	+47	41.6	6.7 V
104	+47° 830	3	17.4	+47	45.7	8.1 V
105	+47° 831	3	17.8	+47	13.6	7.9 V
106	+47° 833	3	18.7	+47	19.3	7.7 V
107	+47° 835	3	18.9	+47	47.8	7.5 V
108	+47° 840	3	19.6	+47	27.6	8.2 V

Cards

made

in

742 superposed

January 8, 1911 (Cont.)
I 37452

No.	Class	Int.	Remarks
109	A ₀	3	
110	B ₅	6	
111	B ₈	4	
112	F ₀	7	
113	B ₅	3	Partly superposed on 114
114	B ₉	8	
115	B ₉	6	
116	B ₈	7	
117	F ₀	5	
118	A ₁	2	
119	B ₉	5	
120	B ₅	2	
121	B ₉	5	
122	B ₃	10	Remnant of last subdivide
123	A ₀	10	" "
124	A ₁	4	E
125	A ₁	3	E
126	A ₁	4	E
127	B ₅ ?	7	E
128	A ₁	2	E
129	B ₃	7	E
130	A ₁	3	
131	A ₁	3	
132	F ₅	5	
133	B ₅	7	
134	A ₁	2	
135	A ₀	2	

109	+46° 76.1	3	19.6	+46	59.6	7.9 v
110	+46° 76.0	3	19.4	+46	26.6	6.5 v
111	+46° 76.2	3	20.3	+46	32.5	7.0 v
112	+45° 77.8	3	22.4	+45	33.6	6.0 v
113	+47° 84.8	3	20.11	+47	22.1	4.8 v
114	+47° 84.4	3	20.4	+47	35.5	7.0 v
115	+47° 84.6	3	21.4	+47	20.8	7.4 v
116	+47° 84.7	3	21.9	+47	30.6	6.5 v
117	+47° 85.0	3	23.1	+47	26.3	7.3 v
118	+46° 76.7	3	23.2	+46	55.0	8.5 v
119	+46° 77.3	3	25.8	+46	36.8	7.1 v
120	+46° 77.4	3	26.0	+46	5.1	7.7 v
121	+47° 86.5	3	28.0	+47	5.5	7.7 v
122	+47° 85.7	3	26.2	+47	42.6	5.3 v
123	+49° 85.7	2	58.6	+49	3.5	4.3 v
124	+49° 87.6	3	3.7	+49	1.6	7.4 v
125	+48° 86.2	3	3.0	+48	27.6	7.8 v
126	+49° 89.5	3	7.4	+49	49.4	7.7 v
127	+49° 89.9	3	8.3	+49	42.4	5.7 v
128	+49° 90.0	3	8.5	+49	14.0	7.5 v
129	+49° 90.2	3	8.8	+49	34.6	5.7 v
130	+48° 88.6	3	9.6	+48	6.8	7.5 v
131	+48° 88.8	3	11.0	+48	19.0	8.0 v
132	+48° 89.3	3	11.6	+48	32.8	6.5 v
133	+48° 89.9	3	13.0	+48	40.6	6.2 v
134	+47° 80.2	3	9.6	+47	21.3	8.2 v
135	+47° 80.9	3	11.9	+47	23.7	8.3 v

Condensed
made
for

January 8, 1911 (Cont)
I 37452

No.	Class	Int.	Remarks
136	B	2	
137	Bg	6	
138	A	2	
139	Ao	2	
140	B8	6	
141	F5	10	Classified from trail
142	A2	4	2
143	A	5	
144	B3	8	
145	A	3	
146	A	2	
147	B8	7	2
148	B3	9	
149	A	3	
150	Ao	5	
151	A	3	
152	Bg	7	
153	Bg	7	
154	A	5	
155	Bg	5	
156	Bg	6	
157	Ao	3	
158	A	2	
159	Ao	3	
160	B	3	
161	Ao	3	

June 11. 26

136	+48° 8.48	3	12.9	+48	6.5	8.0 v
137	+48° 9.03	3	13.6	+48	4.9	7.0 v
138	+48° 9.06	3	14.2	+48	35.6	8.0 v
139	+48° 9.07	3	14.9	+48	44.0	8.5 v
140	+48° 9.13	3	15.7	+48	35.2	6.5 v
141	+49° 9.17	3	14.0	+49	20.7	2.0 v
142	+49° 9.29	3	15.8	+49	14.3	7.3 v
143	+49° 9.36	3	17.3	+49	5.7	7.7 v
144	+48° 9.20	3	17.8	+48	33.5	6.0 v
145	+48° 9.27	3	18.6	+48	33.5	8.1 v
146	+48° 9.24	3	18.3	+48	52.0	8.8 v
147	+49° 9.44	3	18.5	+49	20.8	6.5 v
148	+49° 9.45	3	19.0	+49	1.3	5.3 v
149	+48° 9.33	3	19.5	+48	42.6	8.2 v
150	+48° 9.38	3	21.1	+48	41.4	6.5 v
151	+48° 9.41	3	21.4	+48	27.0	7.8 v
152	+48° 9.43	3	21.6	+48	14.1	7.0 v
153	+48° 9.42	3	21.5	+48	54.3	7.0 v
154	+48° 9.49	3	23.9	+48	8.0	7.5 v
155	+48° 9.62	3	27.9	+48	35.6	7.5 v
156	+48° 9.63	3	28.1	+48	44.6	7.0 v
157	+48° 9.68	3	29.7	+48	29.4	8.0 v
158	+48° 9.78	3	32.5	+48	40.5	8.7 v
159	+49° 10.14	3	34.8	+49	24.0	8.0 v
160	+48° 9.70	3	36.3	+48	20.4	8.3 v
161	+48° 9.98	3	38.2	+48	20.9	8.5 v

cards made out

9 dent. by J. C. M. Jan. 16 '12
checked by A. M. C. April 10, 1912

January 9, 1911

Time 1:35

I 374 35

No. class Int. Remark

1	A	2	E
2	B	2	E
3	A5	6	
4	A3	3	
5	F5	3	
6	F2	3	
7	A0	3	
8	A3	2	
9	B5	8	Focus very poor
10	B3	6	" poor E.
11	F5	2	
12	B	2	
13	B5	7	
14	B3	6	
15	A0	7	
16	A5	4	
17	A0	3	
18	A0	3	
19	A0	3	
20	A0	7	
21	F5	3	
22	F5	9	
23	Kp	4	Maybe two stars superposed
24	F8	3	
25	F0	4	
26	A0	7	
27	F2	3	

1	+54° 6' 8.4	3	26.2	+53	29.2	8.4	✓
2	+53° 29' 0	3	27.6	+53	23.1	8.3	✓
3	+54° 7' 0.7	3	34.7	+54	35.5	6.5	✓
4	+54° 7' 1.1	3	36.8	+54	35.5	8.5	✓
5	+54° 7' 1.3	3	38.5	+54	15.8	8.0	✓
6	+54° 7' 1.4	3	39.5	+54	20.2	7.8	✓
7	+54° 7' 1.7	3	40.1	+54	15.3	8.0	✓
8	+53° 7' 0.6	3	40.6	+53	40.0	8.2	✓
9	+52° 7' 1.4	3	38.5	+52	12.2	6.5	✓
10	+52° 7' 1.5	3	39.5	+52	1.8	6.6	✓
11	+52° 7' 2.2	3	42.7	+52	51.0	7.9	✓
12	+53° 7' 1.2	3	44.3	+53	7.1	8.5	✓
13	+52° 7' 2.6	3	44.7	+52	12.7	6.5	✓
14	+51° 20' 3	3	44.7	+51	47.3	6.5	✓
15	+53° 7' 1.8	3	47.5	+53	34.3	6.8	✓
16	+53° 7' 2.2	3	50.4	+53	27.1	6.8	✓
17	+52° 7' 5.0	3	52.7	+52	52.3	7.6	✓
18	+52° 7' 5.9	3	54.5	+52	40.1	8.1	✓
19	+53° 7' 3.0	3	54.9	+53	11.3	8.4	✓
20	+53° 7' 3.2	3	55.3	+53	37.0	6.0	✓
21	+54° 7' 3.4	3	53.2	+54	40.2	7.0	✓
22	+54° 7' 4.0	3	58.0	+54	25.9	6.0	✓
23	+52° 7' 8.1	3	57.5	+52	58.1	7.1	✓
24	+53° 7' 3.8	3	58.6	+53	28.8	8.0	✓
25	+54° 7' 4.5	4	1.4	+54	2.3	7.5	✓
26	+54° 7' 4.9	4	3.0	+54	8.5	7.0	✓
27	+54° 7' 5.1	4	3.8	+54	36.8	8.0	✓

Parks made cut

January 9
1911 (Cont.)
T 37435 -

No.	Class	Det.	Remark
28	Qo	10	
29	K	1	
30	Q	2	
31	Ko	2	
32	Q	2	
33	Jo	3	
34	Jo	5	
35	Q2	6	
36	Q	2	
37	B	9	Burned out. Cannot subdivide.
38	Q2	2	Superficial feeding
39	K	2	"
40	Q	2	
41	Q	2	
42	Q23	6	Partly superficial on #3
43	Qo	4	on #2
44	Y	3	
45	Jo	5	
46	Jo	6	
47	Jo	5	
48	Jo	3	
49	Jo	4	
50	Q2	8	
51	Ko	8	
52	Qo	8	Lines 414-31, 4677 about = to K
53	Ko	3	
54	Q3	8	

28	+53° 75.0	4	5.4	+53	14.0	5.0	✓
29	+53° 75.1	4	6.5	+53	37.4	8.2	✓
30	+52° 80.1	4	6.5	+52	46.5	8.2	✓
31	+53° 75.4	4	7.4	+53	9.6	8.0	✓
32	+52° 81.0	4	9.5	+52	59.5	8.0	✓
33	+53° 75.9	4	10.0	+53	20.5	8.0	✓
34	+53° 76.4	4	12.8	+53	9.6	7.0	✓
35	+52° 91.9	4	13.1	+51	35.0	6.6	✓
36	+52° 82.3	4	15.6	+52	30.9	8.0	✓
37	+53° 77.7	4	20.6	+53	35.7	6.0	✓
38	+55° 85.2	3	59.7	+55	30.8	8.5	✓
39	+55° 85.1	3	59.6	+55	26.8	8.9	✓
40	+55° 85.6	4	1.9	+55	23.4	9.0	✓
41	+55° 85.7	4	2.4	+55	21.5	8.8	✓
42	+55° 86.8	4	9.4	+55	10.7	8.0	✓
43	+55° 86.9	4	9.5	+55	9.2	8.0	✓
44	+55° 87.7	4	13.3	+55	44.6	8.7	✓
45	+56° 91.6	4	18.6	+56	2.4	8.0	✓
46	+55° 88.1	4	15.1	+55	18.7	7.0	✓
47	+54° 77.3	4	17.3	+54	41.7	7.5	✓
48	+55° 88.9	4	19.9	+55	33.2	8.7	✓
49	+55° 89.5	4	21.6	+55	8.9	7.5	✓
50	+57° 78.5	4	3.2	+57	5.5	6.5	✓
51	+57° 78.7	4	5.2	+57	29.1	6.0	✓
52	+56° 89.9	4	5.5	+56	48.8	7.3	✓
53	+56° 90.4	4	9.3	+56	21.4	8.0	✓
54	+56° 90.5	4	10.1	+56	9.2	6.3	✓

Transverse index of
38 + 39.2 p.c.

January 9th 1911 (Cont)

I 37435

No.	Class	Int.	Remarks
55	Fo	3	
56	A	1	
57	A	2	
58	A	1	
59	Ao	8	
60	Mb	2	
61	Ko	3	
62	Fo	8	
63	A	4	E
64	K	2	
65	Ao	6	
66	Ao	2	
67	A	3	
68	A	2	
69	A	2	
70	Ba	5	
71	Ao	4	
72	Ao	9	
73	As	3	
74	Ao	2	
75	Ao	4	
76	As	3	
77	A	3	
78	F	3	
79	A	7	Burned out. E
80	A	5	E
81	Ba	8	Burned out

55	+56° 907	4	10.3	+56	58.2	8.3	✓
56	+57° 795	4	10.8	+57	2.8	9.2	✓
57	+57° 797	4	14.0	+57	9.7	8.5	✓
58	+56° 915	4	13.1	+56	31.8	9.0	✓
59	+57° 800	4	15.0	+57	14.6	6.9	✓
60	+57° 806	4	18.7	+57	4.8	8.5	✓
61	+57° 809	4	20.0	+57	31.8	8.3	✓
62	+57° 817	4	23.0	+57	6.8	6.8	✓
63	+56° 937	4	21.9	+56	24.2	8.5	✓
64	+58° 724	4	3.4	+58	9.3	8.7	✓
65	+58° 727	4	5.8	+58	24.7	7.1	✓
66	+58° 726	4	5.4	+58	45.3	9.0	✓
67	+59° 779	4	3.7	+59	33.5	8.8	✓
68	+59° 780	4	4.0	+59	14.6	8.5	✓
69	+59° 781	4	4.4	+59	56.8	8.5	✓
70	+60° 792	4	6.1	+60	7.1	7.0	✓
71	+59° 789	4	8.9	+59	32.7	8.2	✓
72	+59° 793	4	10.6	+59	16.0	6.5	✓
73	+59° 795	4	11.2	+59	23.3	7.8	✓
74	+58° 737	4	11.5	+58	8.6	8.7	✓
75	+58° 738	4	12.8	+58	14.4	8.1	✓
76	+57° 798	4	14.7	+57	54.0	8.1	✓
77	+58° 747	4	17.2	+58	11.8	8.7	✓
78	+57° 807	4	19.7	+57	52.9	8.7	✓
79	+59° 812	4	23.3	+59	5.7	7.2	✓
80	+59° 816	4	24.9	+59	47.1	7.5	✓
81	+61° 687	4	4.2	+61	29.0	6.5	✓

Cards

made

out

January 9, 1911 (Cont)
T 374.35

No.	Class	Int.	Remark
82	Q	✓	E
82a	K	✓	E
83	Q3	3	E
84	Q	4	
85	K ₀	7	
86	F	4	E
87	F ₀	2	
88	K	3	E
89	K	3	E

Time 1:55 ~~92~~

ent. in 130, 191

82	+61° 6.2	4	5.46	+61	32.7	3	
82a	+61° 6.8	4	4.8	+61	25.6	7.9	✓
83	+61° 6.94	4	6.5	+61	25.6	7.9	✓
84	+60° 7.99	4	9.0	+60	14.6	7.8	✓
85	+60° 8.00	4	9.2	+60	25.8	8.7	✓
86	+61° 7.07	4	11.3	+60	23.7	5.7	✓
87	+59° 7.99	4	13.4	+61	40.8	6.7	✓
88	+61° 7.20	4	22.5	+59	54.8	8.0	✓
89	+60° 8.26	4	25.5	+61	3.6	7.0	✓
		4		+60	35.0	7.0	✓

Ident. by J. L. M. Jan. 16. 12
Checked by G. M. S. April 9, 1912

under mark 529

January 27, 1912

Time 12.13

137359

No. class 2nd Remark

1	95	3	
2	95	5	
3	78	7	
4	95	6	
5	95	10	Burned out.
6	95	5	
7	75	3	Partly superposed on 6.
8	92	8	
9	78	3	
10	92	4	
11	92	5	
12	90	3	
13	90	7	
14	95	3	
15	95	2	
16	92	21	
17	90	3	
18	90	6	
19	95	2	
20	78	4	
21	90	3	
22	90	2	
23	92	3	
24	90	6	
25	78	3	
26	92	8	
27	75	7	

1	-6° 29	0	7.9	-6	56.7	8.01
2	-6° 30	0	8.4	-6	24.3	7.6V
3	-8° 42	0	12.2	-8	1.2	7.3V
4	-8° 35	0	11.20	-8	57.2	6.5V
5	-9° 48	0	12.1	-9	37.6	8.9V
6	-7° 48	0	15.6	-7	15.9	7.6V
7	-6° 47	0	15.6	-7	10.3	8.5V
8	-5° 49	0	14.8	-5	59.9	7.0V
9	-5° 56	0	16.8	-5	18.2	8.6V
10	-5° 58	0	17.1	-5	27.0	7.8V
11	-5° 60	0	17.6	-5	19.1	8.5V
12	-4° 43	0	18.0	-4	47.6	8.7V
13	-5° 64	0	19.7	-5	48.3	7.0V
14	-5° 63	0	19.6	-5	13.0	8.8V
15	-4° 45	0	19.5	-4	45.8	9.0V
16	-5° 69	0	21.3	-5	37.5	8.8V
17	-6° 80	0	21.9	-6	26.3	8.3V
18	-6° 79	0	21.9	-6	42.2	7.8V
19	-7° 63	0	22.0	-7	18.9	8.7V
20	-6° 83	0	22.6	-6	54.0	8.5V
21	-7° 73	0	24.6	-7	7.2	8.5V
22	-7° 75	0	25.2	-7	0.9	8.7V
23	-5° 77	0	24.7	-5	58.8	8.6V
24	-5° 80	0	27.1	-5	20.6	7.0V
25	-6° 89	0	26.9	-6	32.2	8.8V
26	-7° 82	0	27.1	-7	18.1	7.7V
27	-6° 96	0	28.6	-6	21.8	6.5V

Cg

2200

28

January 27, 1912 (Cont.)

T 373.59

No.	Class	Dist.	Remarks
28	50	3	
29	48	3	
30	45	4	
31	45	4	
32	48	6	
33	40	7	
34	45	3	
35	48	3	
36	4	2	
37	40	4	
38	45	2	
39	9	2	
40	4	3	E
41	45	3	E
42	45	3	
43	40	3	
44	03	6	
45	40	5	
46	45	5	
47	42	5	
48	40	4	
49	4	3	
50	45	3	
51	45	3	E
52	45	2	E
53	45	5	E
54	40	3	

28	-6° 101	0	29.6	-6	54.1	8.5 ✓
29	-7° 90	0	29.6	-7	21.4	8.3 ✓
30	-6° 103	0	30.6	-6	47.7	8.5 ✓
31	-8° 110	0	32.4	-8	48.1	7.8 ✓
32	-8° 114	0	33.0	-8	26.8	7.7 ✓
33	-8° 117	0	33.4	-8	1.3	7.0 ✓
34	-7° 102	0	33.6	-7	54.7	8.4 ✓
35	-7° 106	0	34.8	-7	2.5	8.5 ✓
36	-7° 107	0	35.3	-7	39.6	8.7 ✓
37	-7° 109	0	36.0	-7	7.8	7.8 ✓
38	-6° 124	0	37.1	-6	26.7	8.5 ✓
39	-6° 131	0	38.7	-6	26.5	7.0 ✓
40	-7° 117	0	38.9	-7	21.3	8.3 ✓
41	-7° 118	0	39.1	-7	28.9	8.6 ✓
42	-6° 139	0	40.5	-6	47.1	8.0 ✓
43	-8° 119	0	34.5	-8	53.2	8.2 ✓
44	-8° 129	0	36.9	-8	40.9	7.6 ✓
45	-9° 70	0	18.5	-9	9.3	7.7 ✓
46	-8° 65	0	19.8	-8	40.7	8.1 ✓
47	-9° 79	0	20.0	-9	27.3	8.0 ✓
48	-9° 106	0	27.3	-9	5.7	8.3 ✓
49	-9° 111	0	28.4	-9	0.5	8.5 ✓
50	-8° 93	0	28.4	-8	42.0	8.1 ✓
51	-2° 26	0	7.2	-2	19.3	8.2 ✓
52	-2° 29	0	9.7	-2	27.6	8.3 ✓
53	-2° 31	0	10.4	-2	40.2	6.7 ✓
54	-2° 34	0	10.9	-2	49.3	7.3 ✓

C 2200

2200

2200

January 27, 1912 (Cont.)
I 37357

No.	Class	Set	Remark
55	45	6	
56	40	5	
57	48	4	Line 4077 appears strong. Confirm if possible.
58	48	2	
59	45	4	
60	40	7	
61	40	8	
62	45	5	
63	40	5	
64	45	7	
65	48	3	
66	40	4	
67	48	2	
68	40	10	
69	40	8	
70	45	5	
71	49	3	
72	45	7	
73	40	3	
74	42	6	
75	40	7	
76	45	4	
77	45	8	
78	45	3	
79	40	5	
80	45	3	
81	43	7	E

55	-3° 36	0	12.4	-3	17.0	7.81
56	-3° 38	0	13.7	-3	42.9	7.0 ✓
57	-4° 31	0	13.8	-4	7.0	8.0 ✓
58	-4° 38	0	15.7	-4	24.4	8.5 ✓
59	-3° 48	0	16.2	-3	51.4	8.0 ✓
60	-4° 40	0	16.6	-4	16.6	7.6 ✓
61	-3° 49	0	17.1	-3	1.6	6.0 ✓
62	-3° 57	0	22.2	-3	38.5	7.1 ✓
63	-4° 51	0	22.1	-4	16.3	7.4 ✓
64	-4° 54	0	22.6	-4	45.2	5.5 ✓
65	-5° 75	0	24.2	-5	4.9	8.0 ✓
66	-4° 59	0	25.8	-4	37.1	7.5 ✓
67	-4° 60	0	26.0	-4	50.5	8.7 ✓
68	-4° 62	0	27.8	-4	23.2	5.0 ✓
69	-4° 64	0	29.6	-4	11.8	8.2 ✓
70	-3° 79	0	32.2	-3	52.6	8.0 ✓
71	-4° 70	0	31.8	-4	47.1	8.7 ✓
72	-5° 101	0	33.3	-5	8.9	6.3 ✓
73	-5° 107	0	34.1	-5	1.8	8.3 ✓
74	-4° 85	0	35.6	-4	38.8	7.5 ✓
75	-5° 120	0	38.0	-5	25.3	6.5 ✓
76	-5° 124	0	39.3	-5	12.5	7.9 ✓
77	-0° 63	0	19.2	-0	51.7	6.2 ✓
78	-1° 46	0	19.5	-1	43.2	8.0 ✓
79	-1° 52	0	22.5	-1	54.5	7.8 ✓
80	-1° 51	0	22.4	-1	7.6	7.7 ✓
81	-1° 60	0	26.1	-1	26.3	7.5 ✓

Carroll

made

2/1

January 27, 1912 (Cont.)
I 37359

No. Obs. Int. Remark

82 Co 8

83 Fo 3

84 Fo 4

85 Fo 10

86 Ko 5

87 Fo 4

88 Fo 3

June 12.34 89 55 3

92

82	-2° 69	0	24.3	-2	35.4	7.3 ✓
83	-3° 64	0	26.2	-3	32.1	8.3 ✓
84	-3° 67	0	26.8	-3	11.6	8.5 ✓
85	-1° 68	0	28.1	-1	19.4	5.2 ✓
86	-1° 75	0	30.7	-1	18.7	6.8 ✓
87	-2° 84	0	31.9	-2	45.8	8.2 ✓
88	-2° 87	0	33.1	-2	33.9	8.3 ✓
89	-3° 86	0	34.8	-3	50.5	8.3 ✓

Ident. by J. C. M.
Checked by A. M. C.

Feb. 1 '12.
Mar. 11, '12

Card

37359

68

January 27, 1912

June 12.42

No. Class	Int.
1 Ko	3
2 Ma	5
3 α B9	2
4 γ 5	4
5 Ma	2
6 γ 8	4
7 γ 5	5
8 K5	3
9 γ 5	3
10 Ko	4
11 B3	3
12 Ko	3
13 K	1
14 Ko	5
15 γ 5	3
16 Ko	2
17 γ 5	5
18 Ma	8
19 K	2
20 α 3	5
21 Ko	7
22 γ	3
23 K5	2
24 γ 5	7
25 γ 5	9
26 Ma	8
27	

Remarks

E. Group for

June 12.46

1	-3° 18	0	7.0	-3	0.1	7.8 ✓
2	-3° 20	0	7.5	-3	49.8	6.7 ✓
3	-4° 17	0	8.0	-4	27.7	8.8 ✓
4	-4° 12	0	6.6	-4	42.5	7.8 ✓
5	-4° 11	0	5.5	-4	11.2	7.2 ✓
6	-3° 14	0	4.1	-3	52.7	8.0 ✓
7	-4° 7	0	3.7	-4	7.5	6.8 ✓
8	-3° 9	0	2.5	-3	22.0	7.4 ✓
9	-3° 5	0	1.3	-3	1.4	7.4 ✓
10	-3° 3	0	0.8	-3	14.8	6.5 ✓
11	-3° 2	0	0.3	-3	21.3	6.8 ✓
12	-2° 19	0	5.2	-2	2.5	7.0 ✓
13	-2° 10	0	3.5	-2	52.6	8.1 ✓
14	-1° 45 25	23	57.7	-1	18.4	7.0 ✓
15	-6° 30	0	8.4	-6	24.3	7.6 ✓
16	-6° 29	0	7.9	-6	56.7	8.0 ✓
17	-8° 24	0	6.8	-8	0.0	8.0 ✓
18	-8° 26	0	7.0	-8	35.1	5.8 ✓
19	-8° 18	0	5.7	-8	29.6	7.8 ✓
20	-9° 13	0	2.6	-9	47.1	7.3 ✓
21	-9° 5	0	0.9	-9	37.7	6.5 ✓
22	-8° 3	0	0.6	-8	21.0	8.0 ✓
23	-8° 6 24 2	23	58.1	-8	28.2	6.7 ✓
24	-6° 11	0	2.9	-6	3.4	6.8 ✓
25	-6° 6 35 7	23	57.9	-6	30.9	5.2 ✓
26	-6° 6 34 5	23	54.5	-6	49.2	5.0 ✓

Ident. by J. E. M. Feb. 7 '12

Checked by G. M. C. Mar. 11, 1912

January 27, 1912

B14808

Time 2:27

no.	class	Int.	Remark
1	K ₅	5	E
2	K ₀	4	
3	G	2	
4	A	2	
5	B ₅	6	
6	K ₀	7	
7	F	2	E
8	F	6	E
9	B ₄	2	E
10	K ₀	4	E
11	G	1	
12	F ₅	3	
13	F ₅	5	
14	K ₀	4	
15	F ₈	3	
16	F ₀	6	
17	A ₅	2	
18	B ₅	7	
19	F ₈	2	
20	F ₀	4	
21	B ₅	7	
22	A ₂	7	
23	A ₀	5	
24	F ₅	7	
25	A ₅	6	E
26	K ₀	6	
27	K	2	

1	-3°	99	0	40.2	-3	6.6	7.0 V
2	-4°	95	0	40.7	-4	30.3	8.0 V
3	-4°	97	0	41.2	-4	39.7	9.0 V
4	-5°	128	0	40.3	-5	17.7	9.2 V
5	-5°	124	0	39.3	-5	12.5	7.9 V
6	-5°	120	0	38.0	-5	25.3	6.5 V
7	-5°	116	0	36.9	-5	11.3	8.5 V
8	-4°	85	0	35.6	-4	38.8	7.5 V
9	-7°	106	0	34.8	-7	2.5	8.5 V
10	-7°	109	0	36.0	-7	7.8	7.8 V
11	-6°	124	0	37.1	-6	25.7	8.5 V
12	-7°	117	0	38.9	-7	21.3	8.3 V
13	-7°	118	0	39.1	-7	28.9	8.6 V
14	-6°	139	0	40.5	-6	47.1	8.0 V
15	-5°	134	0	43.0	-5	55.1	8.5 V
16	-6°	148	0	43.2	-6	6.1	8.0 V
17	-6°	146	0	43.1	-6	16.8	8.9 V
18	-5°	138	0	43.8	-5	49.4	7.2 V
19	-5°	139	0	43.8	-5	58.3	8.5 V
20	-4°	105	0	44.4	-4	52.4	8.5 V
21	-5°	147	0	46.3	-5	18.4	6.5 V
22	-3°	113	0	44.2	-3	56.0	7.3 V
23	-4°	112	0	48.3	-4	46.8	8.7 V
24	-4°	114	0	48.7	-4	31.3	7.3 V
25	-3°	132	0	49.4	-3	30.9	7.0 V
26	-2°	131	0	50.4	-2	32.6	6.5 V
27	-2°	132	0	51.1	-2	26.4	8.2 V

Canada

January 27, 1912 (Cont.)
B 14208

No.	Class	Up	Remark
28	fs	6	
29	md	4	
30	fs	2	
31	fs	2	
32	fs	5	
33	fs	5	
34	fs	6	
35	fs	10	Burned out.
36	fs	3	
37	fs	6	
38	fs	4	Surge haze.
39	fs	1	
40	fs	2	
41	fs	5	
42	fs	7	
43	fs	5	
44	fs	4	
45	fs	5	
46	fs	2	
47	fs	8	
48	fs	3	
49	fs	4	Hyd. lines very broad.
50	fs	7	
51	fs	5	
52	fs	2	
53	fs	4	C
54	fs	2	C

28	-2° 136	0	52.7	-2	47.9	7.4 ✓
29	-2° 140	0	53.3	-2	26.1	7.4 ✓
30	-3° 136	0	51.7	-3	14.1	7.8 ✓
31	-5° 160	0	50.5	-5	1.8	8.5 ✓
32	-5° 166	0	52.4	-5	6.1	7.8 ✓
33	-5° 165	0	52.3	-5	14.5	8.3 ✓
34	-5° 171	0	53.7	-5	25.6	7.5 ✓
35	-5° 177	0	55.7	-5	36.7	5.3 ✓
36	-6° 200	0	57.1	-6	4.6	8.3 ✓
37	-6° 201	0	57.3	-6	5.9	7.8 ✓
38	-6° 202	0	57.4	-6	14.7	8.5 ✓
39	-5° 185	0	58.6	-5	42.8	9.2 ✓
40	-5° 186	0	58.6	-5	4.5	8.2 ✓
41	-5° 189	0	59.4	-5	25.3	8.0 ✓
42	-5° 190	0	59.6	-5	40.9	7.8 ✓
43	-5° 192	2	0.4	-5	31.3	8.0 ✓
44	-5° 195	1	1.5	-5	29.6	8.0 ✓
45	-5° 198	1	1.9	-5	45.0	8.3 ✓
46	-5° 199	1	2.3	-5	48.1	8.5 ✓
47	-5° 202	1	3.4	-5	36.8	7.3 ✓
48	-6° 226	1	4.2	-6	6.9	8.5 ✓
49	-5° 207	1	4.8	-5	15.7	8.5 ✓
50	-5° 210	1	6.5	-5	36.7	7.3 ✓
51	-5° 215	1	7.2	-5	42.6	7.5 ✓
52	-5° 221	1	8.8	-5	42.0	8.4 ✓
53	-5° 223	1	9.2	-5	37.5	8.2 ✓
54	-5° 225	1	10.3	-5	34.6	9.0 ✓

Call
road

25

January 27, 1912 (Cont.)
 TB 14805

No.	Class	Int.	Remark
55	J8	5	E
56	Qo	4	
57	Y	7	E
58	J5	3	
59	Ko	8	
60	Ko	5	
61	J5	4	E
62	Y	2	E
63	Ko	2	E
64	Y	3	E
65	Q	6	E
66	Ko	3	
67	J5	5	
68	Y	1	
69	Y	3	
70	Ko	5	
71	J5	8	
72	J5	5	
73	J8	7	
74	J5	6	
75	K2	8	
76	J5	1	
77	J5	6	
78	J5	4	
79	K	2	
80	J5	2	
81	J5	2	

55	-5° 24.4	1	10.0	-6	23.6	7.8 ✓
56	-3° 15.3	1	0.3	-3	31.0	8.0 ✓
57	-2° 16.0	0	59.8	-2	30.2	6.8 ✓
58	-2° 16.7	2	1.1	-2	50.4	8.0 ✓
59	-3° 16.1	1	4.3	-3	1.5	6.2 ✓
60	-3° 16.4	1	6.0	-3	19.4	7.5 ✓
61	-2° 18.4	1	6.7	-2	53.0	8.3 ✓
62	-7° 10.7	0	35.3	-7	39.6	8.7 ✓
63	-8° 11.9	0	34.5	-8	53.2	8.2 ✓
64	-8° 12.6	0	36.4	-8	22.5	9.0 ✓
65	-8° 12.9	0	26.9	-8	40.9	7.6 ✓
66	-8° 14.5	0	42.4	-8	37.9	7.8 ✓
67	-8° 15.4	0	44.5	-8	57.2	8.5 ✓
68	-9° 17.5	0	45.4	-9	7.2	8.5 ✓
69	-9° 18.0	0	46.4	-9	5.8	8.5 ✓
70	-9° 17.1	0	44.3	-9	36.5	7.6 ✓
71	-9° 18.1	0	47.0	-9	31.2	6.2 ✓
72	-8° 16.5	0	48.4	-8	50.4	8.2 ✓
73	-8° 16.8	0	48.8	-8	48.4	7.8 ✓
74	-8° 16.9	0	48.9	-8	21.8	8.0 ✓
75	-8° 16.7	0	48.4	-8	7.7	6.2 ✓
76	-8° 16.3	0	47.4	-8	1.4	8.8 ✓
77	-6° 15.1	0	44.4	-6	53.8	7.8 ✓
78	-6° 15.3	0	44.8	-6	47.7	8.3 ✓
79	-6° 15.6	0	45.8	-6	24.6	8.6 ✓
80	-6° 15.9	0	46.5	-6	45.4	9.0 ✓
81	-6° 16.2	0	47.8	-6	13.1	8.6 ✓

cards
 22
 22
 22

January 27, 1912 (Cont.)
B14808

No. Class Det. Remarks

82	F5	5	
83	G5	3	
84	K0	7	
85	F5	3	
86	G0	8	
87	K2	7	
88	F8	4	
89	F8	5	
90	K0	5	
91	F2	3	
92	G0	4	
93	F0	7	
94	G2	8	
95	G5	8	
96	F	2	
97	G5	4	
98	G5	5	
99	F7	10+	Burned out.
100	G	7	E. Confirmed on another plate.
101	F5	10	Confirmed on long exposure.
102	F1	10+	E. Burned out.
103	G	3	E.
104	G5	5	E.
105	K0	2	E.
106	K2	2	E.
107	K0	4	
108	F7	10	Burned out.

82	-7° 146	0	49.1	-7	50.2	5.1 V
83	-6° 170	0	45.0	-6	53.4	5.6 V
84	-6° 176	0	51.4	-6	39.4	6.8 V
85	-6° 188	0	54.0	-6	6.3	8.5 V
86	-6° 190	0	54.4	-6	45.2	8.7 V
87	-7° 159	0	54.2	-7	54.5	7.3 V
88	-7° 165	0	55.1	-7	28.8	8.7 V
89	-8° 186	0	57.3	-8	27.2	8.3 V
90	-9° 215	0	58.7	-9	26.3	7.5 V
91	-9° 220	0	59.4	-9	28.2	8.2 V
92	-9° 221	1	0.5	-9	6.4	7.8 V
93	-6° 212	2	1.1	-6	56.8	7.5 V
94	-6° 220	1	3.2	-6	51.2	6.8 V
95	-7° 196	1	5.5	-7	38.0	6.5 V
96	-8° 207	1	2.9	-8	29.7	8.2 V
97	-8° 210	1	4.4	-8	41.8	8.1 V
98	-8° 214	1	6.6	-8	23.1	7.8 V
99	-8° 216	1	7.1	-8	41.6	5.2 V
100	-8° 224	1	10.4	-8	25.7	7.5 V
101	-10° 140	0	35.5	-10	43.0	7.0 V
102	-11° 128	0	36.9	-11	24.6	5.0 V
103	-11° 135	0	38.3	-11	52.8	8.3 V
104	-12° 132	0	38.9	-12	14.2	7.3 V
105	-11° 139	0	37.7	-11	57.2	8.0 V
106	-11° 142	0	40.5	-11	41.8	8.0 V
107	-11° 149	0	42.3	-11	45.4	8.0 V
108	-11° 153	0	42.9	-11	25.9	6.8 V

215 confirmed.

January 27, 1912 (Cont.)
B14808

No. Class Det. Remarks

109	F5	6	
110	F2	8	
111	K2	4	
112	F0	3	
113	K0	2	
114	F	2	Conv focus
115	K0	9	
116	O0	6	
117	G5	10	
118	G3	8	
119	F5	2	
120	G5	5	
121	G5	4	
122	G	4	
123	F5	2	
124	K0	3	
125	F5	2	
126	G5	8	
127	O	10	Burned out.
128	G2	4	
129	F2	10	Burned out.
130	G	10+	Burned out.
131	G5	3	Partly superimposed on 130 [Trail]
132	K0	4	
133	G5	7	
June 3.10	134	G0	
135	G0	6	

109	-10° 16.4	0	40.6	-10	8.8	7.8 ✓
110	-10° 17.3	0	44.0	-10	11.6	6.5 ✓
111	-10° 17.8	0	44.9	-10	37.7	7.7 ✓
112	-10° 18.0	0	45.7	-10	41.0	8.7 ✓
113	-10° 18.3	0	46.7	-10	6.5	8.6 ✓
114	-11° 16.3	0	45.0	-11	31.4	9.0 ✓
115	-12° 16.2	0	43.8	-12	3.2	6.0 ✓
116	-11° 17.7	0	50.3	-11	10.5	8.0 ✓
117	-12° 17.3	0	51.5	-12	9.4	6.5 ✓
118	-10° 20.9	0	53.6	-10	9.0	7.0 ✓
119	-10° 21.2	0	54.2	-10	12.4	8.6 ✓
120	-9° 19.6	0	52.5	-9	6.2	7.0 ✓
121	-9° 21.0	0	56.6	-9	54.3	8.2 ✓
122	-10° 22.0	0	55.7	-10	38.1	8.4 ✓
123	-11° 18.8	0	54.3	-11	0.8	8.7 ✓
124	-11° 19.1	0	55.0	-11	26.6	8.2 ✓
125	-10° 22.6	0	57.5	-10	50.1	8.8 ✓
126	-10° 22.9	0	58.4	-10	45.5	6.5 ✓
127	-10° 23.0	0	58.8	-10	36.9	6.0 ✓
128	-10° 23.2	0	59.2	-10	32.1	8.2 ✓
129	-10° 23.8	1	0.5	-10	33.6	6.5 ✓
130	-10° 24.0	1	1.3	-10	56.6	8.5 ✓
131	Trail of 130					
132	-10° 24.6	1	1.8	-10	52.1	8.2 ✓
133	-9° 22.7	2	2.9	-9	40.7	6.3 ✓
134	-9° 23.7	1	5.2	-9	59.4	8.0 ✓
135	-11° 20.7	0	58.8	-11	45.5	7.3 ✓

Sent by J. C. M. Feb. 13 '12

Received by A. M. C. Mar. 12, '12

Monday January 28, 1912

Time 11:13

I 37572

No. class alt. Remark

1	B8	6	
2	B	4	
3	A2	3	
4	K	2	
5	H5	7	
6	H5	7	
7	H5	6	
8	H	3	
9	H5	2	
10	H	3	
11	H	2	Trans very poor.
12	K	2	
13	A	2	
14	A	2	
15	H	2	Trans poor.
16	H5	2	
17	H5	1	
18	H0	4	
19	H0	3	
20	H2	2	
31	B2	6	
32	B9	5	
33	A2	2	
24	H	2	Partial superimposed on N 23
25	H5	2	
26	K	1	
27	H8	5	

1	+33° 187	1	5.2	+33	20.6	7.01
2	+33° 188	1	5.9	+33	43.6	7.00
3	+34° 224	1	9.4	+34	40.5	7.71
4	+34° 231	1	12.1	+34	21.6	7.84
5	+33° 220	1	15.4	+33	28.7	6.34
6	+33° 228	1	17.9	+33	49.7	6.54
7	+33° 234	1	18.9	+33	36.4	6.64
8	+33° 246	1	22.7	+33	26.6	8.14
9	+34° 206	1	4.5	+34	24.6	8.14
10	+33° 195	1	7.6	+33	57.1	8.24
11	+34° 220	1	8.1	+34	27.8	8.34
12	+33° 205	1	11.4	+33	59.3	7.34
13	+33° 207	1	11.9	+33	44.0	8.84
14	+33° 224	1	16.9	+33	55.0	8.54
15	+34° 250	1	19.5	+34	58.9	8.54
16	+35° 221	1	4.6	+35	29.9	8.24
17	+35° 237	1	8.4	+35	40.1	8.54
18	+35° 238	1	8.6	+35	33.1	8.04
19	+35° 249	1	11.9	+35	53.2	8.14
20	+35° 251	1	12.4	+35	39.7	8.64
21	+35° 260	1	15.1	+35	45.4	6.74
22	+36° 241	1	16.1	+36	7.5	7.34
23	+35° 264	1	16.4	+35	27.7	9.24
24	+35° 265	1	16.5	+35	19.1	8.04
25	+34° 243	1	16.9	+34	58.5	7.94
26	+35° 269	1	17.2	+35	12.9	8.74
27	+35° 270	1	17.5	+35	36.0	7.74

birds

made

on

January 28, 1912 (cont.)
T 37512

No. class Int. Remark

38	B ₉	5	
39	K	1	
30	K ₀	3	
31	B ₅	2	
32	B ₅	2.8	
33	B ₅	3	
34	B ₉	6	
35	B	2	
36	Q ₃	7	
37	B	3	
38	Q ₀	8	Metallic lines well seen.
39	B ₅	1	
40	Q ₂	4	Partly eclipsed on 41
41	Q ₂	3	
42	F ₈	4	
43	Q	3	
44	B	3	Port focus.
45	Q	2	
46	F ₀	4	
47	Q	3	
48	B ₅	4	
49	K	1	
50	B ₅	3	
51	B	1	
52	Q ₀	3	
53	B ₉	3	
54	B ₅	4	

28	+36° 25.9	1	20.1	+36	19.7	7.3 ✓
29	+35° 28.1	1	20.5	+35	53.2	8.3 ✓
30	+35° 28.2	1	20.9	+35	52.6	7.4 ✓
31	+36° 26.9	1	23.5	+36	48.0	8.3 ✓
32	+37° 24.2	1	7.2	+37	43.2	7.7 ✓
33	+37° 24.8	1	8.7	+37	41.3	7.8 ✓
34	+38° 22.9	1	9.0	+38	42.5	6.8 ✓
35	+38° 23.3	1	10.1	+38	1.5	8.1 ✓
36	+36° 22.0	1	10.6	+36	37.6	6.5 ✓
37	+37° 23.7	1	12.8	+37	16.3	7.9 ✓
38	+36° 23.7	1	15.4	+36	58.0	6.0 ✓
39	+36° 24.0	1	15.9	+36	46.2	8.0 ✓
40	+36° 24.4	1	16.7	+36	42.5	7.8 ✓
41	+36° 24.5	1	16.8	+36	57.6	8.1 ✓
42	+36° 25.3	1	18.6	+36	44.4	7.5 ✓
43	+36° 25.8	1	19.8	+36	51.8	8.7 ✓
44	+38° 22.0	1	6.4	+38	40.4	7.5 ✓
45	+40° 23.9	1	3.8	+40	20.9	8.3 ✓
46	+40° 24.4	1	4.1	+40	9.0	7.3 ✓
47	+40° 24.5	1	4.2	+40	32.7	7.8 ✓
48	+40° 24.8	1	4.8	+40	53.8	8.0 ✓
49	+40° 24.9	1	5.1	+40	28.9	7.3 ✓
50	+40° 25.0	1	5.3	+40	23.7	7.3 ✓
51	+39° 29.2	1	8.0	+39	53.2	8.3 ✓
52	+40° 25.7	1	8.2	+40	6.4	8.0 ✓
53	+40° 26.2	1	9.5	+40	15.0	8.5 ✓
54	+39° 30.1	1	10.6	+39	10.8	7.2 ✓

rough water and

January 28, 1912 (Cont.)
I 375-12

No. class det. Remarks

55	4	2	
56	35	1	
57	Q ₀	2	
58	4	2	
59	4	2	Partly superposed
60	F ₀	3	
61	B ₉	5	
62	Q ₃	5	
63	Q ₅	3	
64	Q ₂	2	E.
65	K ₀	5	
66	F ₅	2	
67	F ₀	5	
68	K ₀	3	
69	Q ₅	2	E.
70	B ₅	5	
71	B ₉	5	
72	F ₈	6	
73	F ₀	4	E.
74	F ₀	5	
75	F ₈	5	
76	F ₅	4	
77	B ₅	2	
78	F	8	E.
79	4	8	E.

June 1135

cont. 133, 168

55	+38° 2'41	1	11.9	+38	19.1	8.0 v
56	+39° 3'15	1	14.9	+39	50.9	7.7 v
57	+39° 3'18	1	15.7	+39	10.2	7.8 v
58	+38° 2'54	1	16.1	+38	18.3	8.2 v
59	+38° 2'55	1	16.2	+38	16.0	8.0 v
60	+38° 2'63	1	18.9	+38	54.7	7.7 v
61	+39° 3'34	1	19.4	+39	34.3	6.5 v
62	+40° 2'89	1	19.1	+40	20.9	6.0 v
63	+40° 2'82	1	17.1	+40	35.6	7.5 v
64	+42° 2'62	1	6.4	+42	8.8	8.7 v
65	+42° 2'71	1	8.2	+42	10.7	7.0 v
66	+41° 2'46	1	11.4	+41	49.0	8.4 v
67	+41° 2'52	1	11.8	+41	12.6	7.0 v
68	+42° 2'81	1	11.9	+42	45.0	6.5 v
69	+42° 2'84	1	12.7	+42	28.4	7.5 v
70	+42° 2'88	1	13.8	+42	50.0	6.5 v
71	+42° 2'93	1	15.9	+42	23.2	6.5 v
72	+42° 3'02	1	17.8	+42	41.2	6.0 v
73	+42° 3'05	1	18.2	+42	56.9	6.9 v
74	+41° 2'73	1	17.8	+41	32.9	7.3 v
75	+41° 2'83	1	20.1	+41	30.4	7.0 v
76	+41° 2'88	1	20.9	+41	31.5	7.5 v
77	+42° 3'08	1	19.9	+42	2.4	7.7 v
78	+42° 3'45	1	32.0	+42	33.8	6.0 v
79	+41° 3'28	1	33.0	+41	53.1	5.3 v

Ident. by J. C. M. Feb. 13 '12.

checked by A. M. C. Feb. 17 '12

January 29, 1912

I 374034

Time 12:40

No.	Class	Int.	Remarks
1	Ko	3	
2	G	2	e
3	G5	2	
4	F5	2	
5	G0	2	
6	Q0	5	
7	K0	4	
8	F5	2	
9	G5	1	
10	K	1	
11	G5	3	
12	G5	2	
13	G0	2	
14	Q	10+	Burned out.
15	F8	1	
16	G	1	Film scratched
17	Q	2	
18	K0	3	
19	F8	4	
20	F20	7	
21	G5	2	
22	F0	2	
23	G5	2	
24	G	2	
25	F0	5	
26	F0	5	
27	F5	21x	

1	+5°	356	2	25.9	+5	5.2	8.2 V
2	+4°	412	2	25.2	+4	34.4	8.3 V
3	+5°	361	2	27.0	+5	38.3	8.4 V
4	+6°	393	2	27.5	+6	10.2	8.5 V
5	+5°	353	2	25.0	+5	41.7	8.7 V
6	+6°	384	2	25.3	+6	18.4	8.0 V
7	+6°	380	2	24.6	+6	4.2	7.8 V
8	+6°	382	2	25.1	+6	46.1	8.5 V
9	+7°	398	2	25.3	+7	15.0	8.5 V
10	+7°	396	2	23.8	+7	42.0	8.5 V
11	+7°	394	2	22.0	+7	50.7	8.3 V
12	+8°	382	2	21.2	+8	7.1	8.5 V
13	+8°	380	2	20.9	+8	0.3	8.9 V
14	+7°	388	2	20.5	+7	48.4	4.5 V
15	+8°	376	2	20.2	+8	27.8	9.5 V
16	+8°	374	2	20.0	+8	12.0	9.1 V
17	+8°	372	2	17.9	+8	3.9	8.5 V
18	+5°	343	2	21.9	+5	6.7	8.3 V
19	+5°	340	2	19.5	+5	35.1	8.5 V
20	+6°	338	2	18.7	+5	37.6	7.5 V
21	+6°	336	2	18.4	+6	7.1	8.2 V
22	+4°	392	2	17.3	+4	21.9	8.5 V
23	+6°	360	2	18.0	+6	34.6	8.5 V
24	+8°	329	2	15.8	+6	55.6	8.7 V
25	+7°	375	2	15.2	+7	52.9	8.2 V
26	+8°	364	2	13.7	+8	12.5	7.8 V
27	+7°	367	2	13.4	+7	43.4	8.5 V

C999

2200

25

January 29, 1912 (Cont.)
I 37403

m. class int. Remark

28	Q5	6	
29	Q3	4	
30	F2	4	
31	K6	5	
32	Q6	2	
33	F	20	The preceding of two
34	K6	4	
35	F	6	E
36	Q	5	E
37	F6	6	
38	K6	3	
39	Q	3	E
40	Q	3	E
41	F5	3	E
42	F	6	E
43	mb-	5	E
44	F5	6	
45	Q2	6	Like very large, 37. I narrow as in last E.
46	Q2	4	
47	B9	4	
48	B5	10	Revered out.
49	K6	5	
50	K6	5	
51	F5	4	
52	Q5	20	
53	Q	20	
54	Q5	10	

28	+7°	371	2	13.9	+7	5.2	7.5✓
29	+6°	349	2	12.9	+6	47.7	8.0✓
30	+7°	363	2	11.1	+7	2.2	8.0✓
31	+7°	362	2	11.0	+7	31.2	7.5✓
32	+7°	357	2	9.1	+7	0.1	8.8✓
33	+6°	342	2	8.6	+6	16.9	8.5✓
34	+8°	303	2	6.9	+8	57.9	8.0✓
35	+4°	367	2	5.9	+4	20.1	7.3✓
36	+0.5°	293	2	3.0	+6	24.3	7.7✓
37	+8°	289	2	1.8	+8	17.6	7.7✓
38	+6°	285	2	0.2	+8	17.6	7.5✓
39	+4°	354	2	0.1	+4	56.4	7.7✓
40	+6°	327	1	59.5	+6	36.6	8.5✓
41	+5°	280	1	58.3	+5	58.8	7.8✓
42	+6°	324	1	58.2	+6	20.6	7.0✓
43	+7°	324	1	58.6	+7	33.0	7.0✓
44	+9°	323	2	19.7	+9	33.5	7.3✓
45	+9°	321	2	19.0	+9	55.2	7.0✓
46	+9°	319	2	18.4	+9	59.1	7.5✓
47	+9°	318	2	17.9	+9	51.4	7.6✓
48	+9°	316	2	17.0	+9	57.9	5.7✓
49	+9°	313	2	16.4	+9	36.9	7.7✓
50	+9°	315	2	16.8	+9	3.1	7.6✓
51	+10°	318	2	15.5	+10	11.0	7.9✓
52	+9°	305	2	13.1	+9	57.5	8.4✓
53	+9°	307	2	13.6	+9	4.5	8.6✓
54	+9°	306	2	13.1	+9	20.4	8.3✓

Calculated

up

January 29, 1912 (Cont.)
T 37423

No.	Class	Int.	Remark
55	B	1	
56	B ₀	2	
57	B ₀	2	
58	B ₀	2	
59	B ₀	10	
60	B ₅	8	
61	B ₅	1	
62	B ₀	5	
63	B ₅	4	
64	F ₀	2	
65	F ₀	3	
66	K ₅	3	
67	F ₈	4	
68	K ₅	3	E. Mag. Mar.
69	B ₅	1	
70	B ₅	2	
71	F ₅	4	
72	F ₀	3	
73	F ₈	4	
74	K	1	
75	B ₉	6	
76	F ₂₀	2	
77	B ₅	1	
78	B ₅	6	
79	K	1	
80	F ₀	3	
81	B ₅	2	

55	+9°	301	2	10.8	+9	10.1	8.5✓
56	+9°	299	2	10.0	+9	45.7	8.8✓
57	+9°	296	2	9.1	+9	6.6	8.6✓
58	+9°	294	2	8.9	+9	5.4	8.7✓
59	+8°	345	2	5.3	+8	9.8	4.6✓
60	+7°	347	2	3.7	+7	53.4	6.3✓
61	+7°	345	2	3.2	+7	39.1	8.5✓
62	+8°	330	2	0.6	+8	9.6	7.8✓
63	+8°	328	2	0.0	+8	8.9	8.1✓
64	+8°	339	2	4.0	+8	53.1	8.8✓
65	+9°	280	2	4.8	+9	37.7	8.4✓
66	+10°	292	2	0.4	+10	29.4	7.9✓
67	+9°	271	1	58.9	+9	47.8	7.7✓
68	+9°	266	2	57.7	+9	22.1	7.5✓
69	+10°	334	2	24.5	+10	26.8	8.8✓
70	+10°	330	2	22.7	+10	25.4	8.4✓
71	+11°	345	2	21.1	+11	21.4	8.0✓
72	+12°	338	2	20.7	+12	5.9	8.2✓
73	+12°	335	2	20.0	+12	18.3	8.0✓
74	+11°	340	2	20.0	+11	48.5	8.7✓
75	+12°	332	2	18.6	+12	14.6	7.8✓
76	+11°	336	2	18.0	+11	52.3	8.5✓
77	+11°	337	2	18.2	+11	15.9	9.0✓
78	+11°	335	2	17.8	+11	20.2	7.3✓
79	+10°	322	2	16.9	+10	41.6	8.3✓
80	+10°	321	2	16.6	+10	50.7	8.2✓
81	+11°	332	2	16.2	+11	14.2	8.8✓

Copy

322

28

January 29, 1912 (Cont)
T 37403

No. days Det. Remark

82	40	2	
83	70	4	
84	40	2	
85	45	5	
86	45	4	
87	45	4	
88	4	2	Compens
89	7	1	0, 6, 10
90	40	5	
91	40	4	
92	4	2	Focus very poor
93	45	2	
94	45	2	
95	40	2	
96	49	6	
97	40	5	
98	7	4	E Focus very poor.
99	45	3	
100	40	3	
101	40	2	
102	40	4	
103	4	1	
104	40	3	
105	40	5	
106	45	5	
107	45	6	2
108			

Time 1.00

82	+10° 316	2	15.0	+10	54.5	8.7	✓
83	+11° 326	2	14.1	+11	56.1	8.5	✓
84	+11° 315	2	11.2	+11	31.5	8.7	✓
85	+12° 317	2	11.0	+12	20.2	6.5	✓
86	+12° 315	2	10.3	+12	46.8	6.8	✓
87	+11° 309	2	8.6	+11	43.0	8.0	✓
88	+11° 307	2	7.6	+11	43.0	8.3	✓
89	+11° 305	2	7.2	+11	33.6	8.9	✓
90	+11° 300	2	6.4	+11	36.2	7.6	✓
91	+10° 306	2	8.1	+10	41.4	8.2	✓
92	+10° 303	2	7.9	+10	57.4	8.9	✓
93	+11° 295	2	5.1	+11	10.2	8.3	✓
94	+11° 290	2	3.3	+11	38.9	8.6	✓
95	+11° 288	2	2.4	+11	25.5	8.3	✓
96	+12° 292	2	2.0	+12	29.1	7.5	✓
97	+12° 282	2	58.7	+12	46.7	7.3	✓
98	+12° 281	2	58.0	+12	38.5	7.8	✓
99	+13° 395	2	20.7	+13	14.0	8.4	✓
100	+12° 327	2	17.3	+12	44.4	8.5	✓
101	+13° 371	2	12.4	+13	38.6	8.0	✓
102	+13° 366	2	10.2	+13	47.7	8.0	✓
103	+13° 368	2	10.7	+13	17.1	8.3	✓
104	+13° 364	2	9.4	+13	47.8	8.2	✓
105	+13° 357	2	4.9	+13	14.5	7.5	✓
106	+14° 343	2	3.0	+13	0.7	7.9	✓
107	+14° 357	2	5.2	+14	35.1	6.0	✓

Ident. by J. C. M. Feb. 13, 12.

Checked by A. M. C. Mar. 11, 12

cont. in 129, 166

Feb. 23, 1912

Time obs. 27 min. T 37500

No.	Class	Int.	Remark
1	G ₀	9	E.
2	G ₀	4	
3	G ₅	5	
4	K ₅	9	
5	F ₀	2	
6	A ₅	1	
7	A ₀	2	
8	G ₅	9	
9	A ₀	3	
10	B ₉	5	E.
11	G ₅	5	
12	G ₀	5	
13	F ₀	3	
14	G ₅	5	
15	A ₀	4	
16	F ₀	5	
17	A ₃	2	
18	B ₈	7	E.
19	A ₀	2	
20	G ₅	2	
21	F ₈	2	
22	A ₀	2	
23	K ₀	2	
24	F ₅	3	
25	F ₅	2	
26	A ₀	2	
27	G ₅	4	

No	Om	RA	Dec	Mg	
1	+43 1575 6 36 18.5	+43 43.1	5.7	also double with 1596.	
2	+44 1528 6 34 53.8	+44 23.0	7.8	✓	
3	+44 1525 6 34 12.7	+44 38.6	7.0	✓	
4	+44 1575 6 32 31.3	+44 37.4	5.5	✓	
5	+43 1589 6 33 36.1	+43 48.8	8.9	✓	
6	+44 1522 6 33 19.6	+44 6.0	8.4	✓	
7	+43 1590 6 33 48.5	+43 11.8	8.9	✓	
8	+42 1585 6 28 57.5	+42 36.9	4.8	✓	
9	+42 1586 6 29 3.4	+42 6.9	8.2	✓	
10	+41 1480 6 28 25.0	+41 41.9	7.0	✓	
11	+44 1507 6 29 41.0	+44 27.1	7.2	✓	
12	+44 1596 6 29 26.6	+44 8.1	6.8	✓	
13	+44 1501 6 27 58.2	+44 25.7	7.8	✓	
14	+43 1565 6 25 25.0	+43 47.1	7.3	✓	
15	+42 1577 6 25 37.5	+42 42.8	8.0	✓	
16	+43 1562 6 24 13.3	+43 10.5	7.5	✓	
17	+42 1566 6 22 25.7	+42 9.2	8.6	✓	
18	+41 1481 6 20 10.2	+41 29.4	7.0	✓	
19	+42 1561 6 20 31.5	+42 52.5	8.5	✓	
20	+43 1549 6 21 12.4	+43 48.4	8.0	✓	
21	+44 1476 6 22 2.7	+44 18.9	8.3	✓	
22	+44 1464 6 20 23.8	+44 23.5	8.5	✓	
23	+43 1548 6 20 14.5	+43 58.3	7.6	✓	
24	+44 1463 6 19 57.6	+44 1.5	8.0	✓	
25	+43 1543 6 18 5.5	+43 34.7	8.4	✓	
26	+43 1538 6 15 56.1	+43 57.9	8.9	✓	
27	+44 1552 6 16 8.1	+44 1.9	7.0	✓	

Feb 29, 1912 (Cont.)

I 37500

time class	Nr. Class	Int.	Remark
28 A	2		
" 10 29 A2	3		
30 A0	7		
31 K0	3		
32 A0	3		
33 B9	4		
34 F5	2		
35 G5	6		
36 A5	7		
37 A0	8		
38 G5	2		
39 A	2	E	
40 B9	6	E	
41 K	6	E	
42 A	3	E	
43 A0	4		
44 F8	4		
45 A0	3		
46 A0	3		
47 A	2		
48 A	1		
49 Ma	2		
50 G	2		
51 F5	2		
52 B8	3		Difficult due to superposition of 53.
53 A	4		Partly superposed on 52
54 F5	1		

No	Dm	RA	Dec	mag
28	+41 14.37	6 15 37.6	+41 37.5	8.4 ✓
29	+42 15.47	6 14 36.7	+42 37.0	8.0 ✓
30	+43 15.27	6 14 18.7	+43 36.5	6.9 ✓
31	+43 15.24	6 13 58.3	+43 17.7	6.9 ✓
32	+43 15.22	6 12 44.4	+43 17.9	7.4 ✓
33	+42 15.43	6 12 32.1	+42 58.2	7.7 ✓
34	+43 15.21	6 12 48.6	+43 45.6	8.0 ✓
35	+44 14.26	6 11 29.0	+44 7.4	6.7 ✓
36	+44 14.29	6 11 44.3	+44 28.4	7.3 ✓
37	+42 15.36	6 10 57.0	+42 28.6	6.5 ✓
38	+42 15.33	6 9 57.6	+42 53.8	7.4 ✓
39	+41 13.16	6 4 31.7	+41 47.2	8.0 ✓
40	+41 13.92	6 3 25.0	+41 40.9	7.3 ✓
41	+41 13.57	5 57 8.1	+41 51.8	6.3 ✓
42	+46 11.85	6 36 8.3	+46 10.0	8.7 ✓
43	+46 11.80	6 34 19.8	+46 7.2	8.0 ✓
44	+45 13.40	6 37 14.6	+45 57.9	8.1 ✓
45	+45 10.38	6 30 57.6	+45 55.7	8.6 ✓
46	+45 13.28	6 27 6.0	+45 17.2	5.7 ✓
47	+44 14.24	6 26 16.4	+44 47.6	8.6 ✓
48	+45 13.22	6 24 51.2	+45 20.0	8.2 ✓
49	+45 13.24	6 24 54.0	+45 44.2	8.7 ✓
50	+46 11.62	6 23 50.8	+46 11.2	9.1 ✓
51	+45 13.17	6 23 2.6	+45 56.6	9.2 ✓
52	+46 11.57	6 22 21.8	+46 34.7	7.0 ✓
53	+46 11.58	6 22 22.6	+46 40.0	8.0 ✓
54	+46 11.56	6 22 6.9	+46 41.5	8.9 ✓

Feb. 23, 1912 (Cont)

I 37.000

No.	Class	Sub.	Remark
55	K ₁	5	
56	B ₉	3	
57	B ₉	3	
57a	B ₉	2	
58	B ₉	2	
59	B ₉	1	
60	B ₉	2	
61	B ₉	4	
62	K	1	
63	B ₉	4	
64	F ₅	3	The northern of two
65	B ₉	2	
66	F ₁	5	
67	B ₉	4	
68	F ₈	4	
69	B ₉	4	
70	B ₉	3	
71	B ₅	5	Hand spec. Mag. Comp. Look up.
72	B ₅	3	
73	B ₅	4	
74	B ₅	5	
75	B ₅	7	
76	B ₉	3	
77	K ₂	9	
78	B ₉	1	
79	F ₈	2	
80	F	2	
81	F	2	

No	DM	RA	Dec	Mg	
55	+47 13.10	6 21 57.7	+47 21.1	6.8	v
56	+46 115.2	6 20 59	+46 15.5	8.9	v
57	+46 115.2	6 20 59	+46 15.5	8.9	v
57a	+45 13.13	6 21 58.7	+45 20.5	7.0	v
58	+45 13.13	6 18 35.7	+45 20.1	8.8	v
59	+45 13.07	6 18 43.8	+45 30.1	8.5	v
60	+44 145.6	6 18 32.8	+44 55.5	8.3	v
61	+44 144.2	6 15 33.7	+44 48.4	7.7	v
62	+45 129.6	6 13 52.5	+45 10.4	8.0	v
63	+47 134.0	6 35 24.5	+47 20.5	8.3	v
64	+47 133.6	6 34 33.0	+47 13.5	8.5	v
65	+47 133.3	6 33 23.0	+47 50.0	8.0	v
66	+47 132.8	6 31 43.5	+47 52.6	7.5	v
67	+47 132.8	6 30 48.5	+47 52.6	7.5	v
68	+48 141.1	6 27 58.2	+48 21.4	8.2	v
69	+48 140.6	6 26 56.3	+48 36.7	8.0	v
70	+48 140.4	6 25 58.0	+48 10.1	8.3	v
71	+48 140.2	6 24 10.8	+48 9.8	7.8	v
72	+47 131.6	6 22 20.4	+47 18.8	8.0	v
73	+48 139.8	6 22 24.8	+48 28.3	7.8	v
74	+48 139.5	6 20 1.3	+48 53.4	8.4	v
75	+48 138.7	6 16 31.8	+48 51.7	7.0	v
76	+48 143.6	6 16 36.9	+48 50.5	8.7	v
77	+47 148.8	6 13 44.3	+47 21.3	6.0	v
78	+48 138.0	6 13 8.8	+48 44.5	8.9	v
79	+47 127.2	6 4 41.3	+47 20.7	8.7	v
80	+48 137.5	6 11 25.7	+48 34.1	7.1	v
81	+48 137.4	6 11 6.5	+48 53.9	7.1	v

Feb. 23, 1912 (cont.)

T37500

No.	Class	Sub.	Remarks
82	F	2	
83	K	3	
84	K	2	
85	K	4	E
86	F	3	E
87	F	5	
88	Q3	4	
89	B8	3	
90	K	5	
91	Q3	7	
92	B9	6	E
93	K	8	E
94	Q	2	E
95	F	3	
96	Q	5	E
97	K	4	
98	Q	3	
99	Q	2	
100	F	2	
101	B9	5	
102	Q2	2	
103	Q	1	
104	F	3	
105	Q	4	
106	Q	4	E
107	K	4	
108	F	4	
109	K	3	

No.	Orn	RA	Dec	Mag
82	+49 1451	6 9 42.7	+49 12.0	8.6 ✓
83	+51 1185	6 12 58.8	+51 8.6	7.0 ✓
84	+50 1297	6 11 57.1	+50 78.5	7.9 ✓
85	+51 1186	6 13 40.9	+51 41.8	7.4 ✓
86	+51 1184	6 11 54.3	+51 37.1	8.2 ✓
87	+52 1046	6 2 27.0	+52 1.8	7.7 ✓
88	+51 1161	6 1 12.4	+51 41.8	8.0 ✓
89	+51 1162	6 2 58.3	+51 11.5	8.3 ✓
90	+51 1162	6 2 20.4	+51 11.9	6.0 ✓
91	+51 1146	5 53 1.0	+51 34.6	6.3 ✓
92	+51 1139	5 48 46.5	+51 2.7	6.7 ✓
93	+48 1436	6 36 56.9	+48 55.5	5.5 ✓
94	+49 1544	6 35 7.3	+49 31.3	8.4 ✓
95	+49 1539	6 33 44.3	+49 28.9	8.0 ✓
96	+50 1349	6 35 6.3	+50 31.4	7.3 ✓
97	+49 1534	6 32 2.8	+49 31.7	7.4 ✓
98	+49 1524	6 27 15.4	+49 37.3	8.6 ✓
99	+49 1521	6 27 18.9	+49 26.5	8.7 ✓
100	+49 1517	6 24 48.8	+49 45.4	8.8 ✓
101	+49 1517	6 24 36.3	+49 58.7	7.5 ✓
102	+49 1511	6 22 56.8	+49 56.2	8.8 ✓
103	+49 1507	6 22 5.9	+49 41.0	8.8 ✓
104	+49 1516	6 20 37.4	+49 32.6	8.3 ✓
105	+49 1497	6 17 40.4	+49 48.4	8.7 ✓
106	+51 1194	6 15 24.7	+51 27.6	8.0 ✓
107	+51 1206	6 21 12.2	+51 3.7	7.0 ✓
108	+51 1216	6 30 41.0	+51 44.0	8.2 ✓
109	+45 1181	6 36 41.0	+45 53	8.2 ✓

Double

Multiple

B

March 16, 1912

Time 12.35

B 38265 short disp

No.	Class	Dist.	Remark
1	75	5	
2	K	3	E
3	72	5	E
4	Ko	5	
5	A	8	E
6	85	3	E
7	78	7	
8	B	7	E
9	B	7	E
10	A	8	
11	85	7	
12	85	3	
13	A	5	
14	Ko	2	
15	80	3	
16	75	5	
17	75	3	
18	Ko	2	
19	80	4	
20	B	2	
21	K	2	
22	78	7	
23	7	8	E
24	75	3	
25	70	6	
26	Ko	3	
27	72	9	

1	-70°	87	1	37.3	-70	37.1	8.6	✓
2	-70°	91	1	39.9	-70	12.1	9.2	✓
3	-69°	77	1	41.7	-69	43.0	8.6	✓
4	-68°	73	1	36.4	-68	53.5	8.8	✓
5	-68°	76	1	37.5	-68	38.2	9.2	✓
6	-68°	75	1	37.2	-68	25.9	9.2	✓
7	-68°	77	1	37.6	-68	17.7	8.1	✓
8	-67°	108	1	36.8	-67	52.0	8.2	✓
9	-67°	106	1	33.5	-67	43.0	8.4	✓
10	-67°	102	1	31.4	-67	46.5	7.8	✓
11	-68°	69	1	34.6	-68	12.3	8.2	✓
12	-68°	70	1	35.0	-68	41.6	9.0	✓
13	-68°	68	1	32.7	-68	53.3	8.8	✓
14	-69°	65	1	29.0	-69	0.7	9.4	✓
15	-69°	66	1	29.0	-69	11.5	9.2	✓
16	-69°	70	1	30.8	-69	34.4	8.8	✓
17	-69°	73	1	31.4	-69	47.5	9.2	✓
18	-69°	69	1	30.5	-69	40.4	9.4	✓
19	-69°	64	1	28.0	-69	55.5	9.0	✓
20	-69°	75	1	36.6	-69	47.7	9.4	✓
21	-70°	79	1	30.3	-70	46.5	9.4	✓
22	-70°	77	1	28.1	-70	38.1	8.4	✓
23	-71°	69	1	30.3	-71	30.4	7.7	✓
24	-71°	67	1	27.7	-71	15.4	8.6	✓
25	-70°	76	1	25.0	-70	46.5	8.2	✓
26	-70°	67	1	20.9	-70	8.0	9.2	✓
27	-70°	64	1	18.2	-70	22.4	7.4	✓

March 16, 1912 (Cont.)

73 38365

No.	Class	Set	Remarks
28	H ₂	2	
29	H ₂	7	
30	H ₂	10	
31	H ₂	6	
32	H ₂	3	
33	H ₂	2	
34	H ₂	3	
35	H ₂	10+	
36	H ₂	7	
37	H ₂	3	
38	H ₂	2	
39	H ₂	3	
40	K ₂	4	
41	K ₂	2	
42	K ₂	1	
43	H ₂	7	
44	K ₂	2	
45	H ₂	2	Difficult
46	H ₂	1	
47	H ₂	3	
48	H ₂	7	
49	H ₂	9	
50	H ₂	2	
51	H ₂	5	
52	H ₂	2	
53	H ₂	3	
54	K ₂	6	

28	-69°	56	1	19.6	-69	43.7	9.2 ✓
29	-69°	55	1	18.9	-69	44.1	8.0 ✓
30	-69°	53	1	15.8	-69	33.5	7.2 ✓
31	-68°	51	1	16.3	-68	43.5	8.2 ✓
32	-69°	52	1	14.2	-69	11.0	9.0 ✓
33	-68°	49	1	13.3	-68	58.5	9.5 ✓
34	-69°	47	1	11.9	-69	8.4	9.4 ✓
35	-69°	45	1	11.5	-69	32.4	5.2 ✓
36	-69°	44	1	10.8	-69	28.9	7.7 ✓
37	-69°	41	1	5.2	-69	27.4	9.2 ✓
38	-69°	37	1	5.0	-69	31.2	9.2 ✓
39	-69°	38	1	5.0	-69	49.2	9.2 ✓
40	-70°	49	1	4.7	-70	14.0	9.0 ✓
41	-70°	51	1	6.1	-70	19.5	9.2 ✓
42	-70°	52	1	6.8	-70	37.2	10.3 ✓
43	-71°	61	1	20.7	-71	19.6	7.9 ✓
44	-70°	70	1	21.9	-70	46.8	9.4 ✓
45	-70°	63	1	18.2	-70	50.0	9.6 ✓
46	-70°	61	1	15.9	-70	12.8	9.6 ✓
47	-70°	55	1	12.5	-70	53.9	9.2 ✓
48	-71°	58	1	15.3	-71	46.5	8.2 ✓
49	-71°	50	1	9.3	-71	32.6	8.2 ✓
50	-71°	52	1	10.2	-71	7.3	9.4 ✓
51	-71°	47	1	7.3	-71	0.8	8.8 ✓
52	-71°	45	1	5.9	-71	9.1	9.0 ✓
53	-71°	44	1	5.5	-71	18.6	8.8 ✓
54	-71°	40	1	4.5	-71	20.0	8.9 ✓

March 16, 1912 (Cont.)
B 38365

Ms. Class	Int.	Remark
55 $\frac{1}{2}$ o	6	
56 $\frac{1}{2}$ o	2	
57 $\frac{1}{2}$ o	2	
58 Ma	4	
59 Ko	7	
60 cl.	9	No bright lines. Dark with mch. activity.
61 $\frac{1}{2}$ o	3	
62 $\frac{1}{2}$ o	5	
63 Ko	8	
64 Ko	6	
65 $\frac{1}{2}$ o	2	Difficult
66 $\frac{1}{2}$ o	3	
67 $\frac{1}{2}$ o	2	
68 $\frac{1}{2}$ o	9	
69 $\frac{1}{2}$ o	1	Partly superposed on 68
70 Ma	3	
71 $\frac{1}{2}$ o	5	
72 $\frac{1}{2}$ o	4	
73 $\frac{1}{2}$ o	7	
74 $\frac{1}{2}$ o	10	
75 $\frac{1}{2}$ o	8	
76 $\frac{1}{2}$ o	7	
77 $\frac{1}{2}$ o	6	Seen as an edge on full disc of 77.
78 $\frac{1}{2}$ o	8	
79 $\frac{1}{2}$ o	3	
80 $\frac{1}{2}$ o	10	
81 $\frac{1}{2}$ o	7	

55	-71°	4.3	1	4.9	-71	8.4	8.81
56	-70°	4.7	1	4.3	-70	57.8	9.21
57	-71°	3.8	1	2.4	-71	7.0	9.61
58	-71°	3.6	2	0.3	-71	12.6	9.61
59	-71°	3.7	1	1.3	-71	36.0	8.71
60	-71°	3.5	0	59.0	-71	31.2	7.01
61	-71°	3.9	2	2.5	-71	58.4	9.21
62	-72°	8.5	1	4.7	-72	30.2	8.51
63	-72	8.3	1	1.0	-72	24.3	8.01
64	-72°	7.6	0	57.3	-72	13.2	8.21
65	-72°	7.5	0	56.9	-72	12.8	9.11
66	-70°	4.6	21	1.6	-70	15.2	9.51
66	Approx	1875	0	57.3	-70	51	9.51
67	Approx	1875	0	59.3	-70	51	✓
68	-70°	4.4	0	58.7	-70	51.0	7.91
69	-70°	4.3	0	58.5	-70	56.6	9.61
70	-71°	3.3	0	53.4	-71	8.1	9.41
71	-71°	3.4	0	53.5	-71	32.5	8.61
72	-70°	4.1	0	57.7	-70	37.4	9.21
73	-70°	4.2	0	52.6	-70	17.9	8.21
74	-70°	4.0	0	50.3	-70	12.3	6.61
75	-69°	2.8	0	50.6	-69	18.2	8.31
76	-69°	2.7	0	49.5	-69	45.9	8.31
77	-70°	3.6	0	47.7	-70	10.9	7.61
78	-70°	3.9	0	49.5	-70	47.8	9.21
79	-71°	3.2	0	49.4	-71	29.0	9.31
80	-71°	2.8	0	46.2	-71	50.1	7.01
81	-71°	2.6	0	39.6	-71	51.1	8.41

March 16, 1912 (Cont)

1338365

No.	Class	Int.	Remark
82	K5	4	
83	K0	3	
84	Q2	5	
85	K2	6	
86	K5	5	
87	F5	9	
88	Q2	8	
89	K0	2	
90	F0	4	
91	F5	6	
92	K0	3	
93	K0	3	
94	F2	6	
95	F0	5	
96	F2	7	
97	Q3	8	
98	K5	5	
99	Q0	8.5	
March 18, 1912	F0	6	
June 12, 30	K5	6	
102	K0	6	
103	K0	5	
104	K	2	
105	Q2	8	
106	Q2	3	
107	K5	2	
108	K2	1	

82	-71°	24	0	34.6	-71	47.2	9.11
83	-70°	23	0	38.2	-70	58.9	9.41
84	-70°	32	0	37.7	-70	42.0	8.91
85	-69°	26	0	44.2	-69	48.3	8.91
86	-68°	31	0	47.5	-68	50.6	9.11
87	-68°	29	0	43.5	-68	12.9	8.31
88	-68°	28	0	42.5	-68	23.6	8.21
89	-68°	27	0	40.6	-68	33.3	9.61
90	-69°	25	0	41.5	-69	32.3	8.91
91	-69°	24	0	39.1	-69	24.9	8.91
92	-69°	23	0	38.2	-69	19.4	9.41
93	-69°	22	0	36.1	-69	8.8	9.21
94	-69°	21	0	35.5	-69	47.0	8.91
95	-69°	18	0	34.4	-69	43.8	9.3
96	-69°	19	0	32.4	-69	40.3	9.21
97	-68°	25	0	34.2	-69	25.6	8.91
98	-68°	25	0	35.5	-68	52.2	8.21
98	-69°	17	0	32.6	-69	5.4	9.01
99	-69°	15	0	29.5	-69	17.1	8.11
100	-69°	16	0	30.0	-69	2.0	9.01
101	-68°	16	0	27.4	-68	57.1	9.31
102	-69°	14	0	26.2	-69	3.0	8.91
103	-69°	12	0	25.6	-69	43.7	9.01
104	-69°	13	0	26.2	-69	38.1	9.41
105	-70°	29	0	31.3	-70	7.4	7.81
106	-70°	31	0	34.4	-70	24.8	9.31
107	-70°	28	0	31.2	-70	57.0	9.41
108	-70°	26	0	27.0	-70	11.3	9.41

C

M

E

March 18, 1912 (Cont.)
B38365+

No. Class Int. Remark

109	K ₅	3	
110	K ₀	9	
111	K ₀	6	
112	K ₀	4	
113	Q	9	Poor focus
114	B ₉	8	
115	K ₀	4	
116	B ₈	10	
117	Q	4	Poor Really superimposed on 116
118	K ₅	3	
119	B ₅	4	
120	B ₀	4	
121	F ₀	6	
122	K ₅	2	
123	Q ₀	10	Burned out.
124	K ₅	8	
125	F ₅	4	
126	K ₅	6	
127	K ₀	6	
Time 12.40	128	K ₀	7
21 hrs. 44 min 29	129	Ma	6
130	K ₅	7	
131	Q ₅	68	
132	K ₀	8	
133	F ₂	10	
134	F ₀	5	
135	K ₀	5	

109	-70°	25	0	26.0	-70	11.2	9.4√
110	-70°	15	0	21.0	-70	0.2	8.7√
111	-67°	107	1	34.3	-67	11.6	8.6√
112	-67°	104	1	32.2	-67	21.8	8.7√
113	-67°	95	1	27.1	-67	8.5	7.6√
114	-66°	98	1	20.9	-66	47.6	8.1√
115	-66°	100	1	21.4	-66	13.0	8.8√
116	-67°	89	1	17.6	-67	2.4	6.9√
117	-67°	88	1	17.6	-67	6.1	8.4√
118	-66°	94	1	17.0	-66	45.6	9.4√
119	-66°	93	1	15.6	-66	52.0	9.1√
120	-67°	86	1	15.2	-67	27.3	9.1√
121	-67°	85	1	14.4	-67	20.1	8.3√
122	-67°	82	1	13.0	-67	17.7	9.2√
123	-67°	81	1	12.7	-67	3.5	6.2√
124	-67°	91	1	19.5	-67	31.3	8.7√
125	-67°	93	1	22.6	-67	50.3	8.8√
126	-68°	56	1	21.7	-68	4.1	8.4√
127	-68°	57	1	22.2	-68	29.4	8.4√
128	-68°	59	1	24.9	-68	49.2	7.9√
129	-68°	60	1	25.2	-68	7.9	8.4√
130	-68°	53	1	19.5	-68	38.0	8.6√
131	-68°	50	1	15.8	-68	5.0	8.6√
132	-67°	84	1	13.0	-67	46.3	7.8√
133	-68°	47	1	12.2	-68	5.6	7.2√
134	-67°	75	1	5.0	-67	28.0	8.8√
135	-67°	74	1	4.6	-67	32.9	8.7√

Calculated
by
C. J. L.

March 18, 1912

B 35365 (cont.)

No.	Class	Int.	Remark
136	F5	3	
137	R	2	
138	Ma	4	
139	A5	4	
140	K0	2	
141	B8	2	Link refs on long dispersion
142	K0	2	
143	G5	6	
144	G0	3	
145	G5	6	
146	F8	2	
147	G0	5	
148	G0	10	
149	G0	3	
150	F	1	
151	F8	3	
152	K0	4	
153	F5	9	Burned out
154	F0	6	
155	G0	2	
156	R2	2	
157	G	1	
158	G5	6	
159	F2	7	
160	F5	2	
161	A2	4	
162	G	10	

136	-68°	40	2	1.8	-68	38.7	9.4	✓
137	-68°	38	0	58.7	-68	42.7	9.6	✓
138	-68°	37	0	56.0	-68	46.0	9.6	✓
139	-69°	31	0	56.3	-69	12.7	9.2	✓
140	-69°	32	0	56.8	-69	14.7	9.4	✓
141	-69°	30	0	55.2	-69	48.9	9.6	✓
142	-69°	29	0	52.0	-69	48.5	9.6	✓
143	-68°	35	0	53.3	-68	52.2	8.9	✓
144	-68°	36	0	54.9	-68	41.9	9.3	✓
145	-67°	65	0	55.2	-67	55.5	8.9	✓
146	-68°	34	0	52.4	-68	10.4	9.6	✓
147	-68°	33	0	53.8	-68	7.4	9.4	✓
148	-67°	62	0	53.0	-67	14.2	7.6	✓
149	-66°	72	0	52.4	-66	58.2	9.0	✓
150	-67°	59	0	49.6	-67	8.3	9.6	✓
151	-67°	57	0	48.0	-67	34.8	8.9	✓
152	-66°	74	0	53.0	-66	26.8	9.0	✓
153	-66°	69	0	49.7	-66	8.3	8.0	✓
154	-66°	66	0	48.9	-66	32.7	8.4	✓
155	-66°	63	0	45.3	-66	53.1	9.4	✓
156	-66°	65	0	46.9	-66	1.0	9.4	✓
157	-66°	64	0	46.6	-66	1.4	9.2	✓
158	-66°	57	0	43.5	-66	15.1	8.8	✓
159	-65°	86	0	44.3	-65	41.1	8.6	✓
160	-65°	85	0	43.3	-65	46.7	9.2	✓
161	-65°	81	0	40.6	-65	57.0	9.2	✓
162	-66°	83	0	39.3	-66	18.7	7.2	✓

March 18, 1912

B 38365 (cont.)

No.	Class	Int.	Remark
163	A2	10	
164	ly	10+	
165	ly	2	
166	ly	9	
167	ly	2	
168	ly	1	
169	ly	3	
170	ly	4	
171	A2	3	
172	ly	2	
173	ly	3	
174	ly	5	
175	ly	8	E.
176	ly	7	E.
177	mb	7	
178	ly	3	
179	ly	3	
180	ly	8	
181	ly	9	
182	ly	2	
183	ly	3	
184	ly	2	
185	ly	1	Orbit unless confirmed
186	ly	2	
187	A5	3	
188	mb	10	
189	ly	5	

163	-66°	50	0	37.4	-66	17.6	6.8	✓
164	-66°	47	0	37.1	-66	9.3	6.0	✓
165	-66°	46	0	35.5	-66	32.6	9.4	✓
166	-66°	43	0	32.7	-66	43.9	7.8	✓
167	-67°	48	0	35.9	-67	12.0	9.2	✓
168	-67°	51	0	38.4	-67	40.4	9.6	✓
169	-68°	24	0	34.2	-68	15.8	9.4	✓
170	-68°	22	0	32.6	-68	38.1	8.7	✓
171	-68°	20	0	30.5	-68	18.2	9.3	✓
172	-68°	19	0	29.0	-68	34.9	9.4	✓
173	-68°	15	0	26.9	-68	42.0	9.4	✓
174	-68°	18	0	28.2	-68	6.2	9.1	✓
175	-68°	13	0	28.1	-68	23.6	9.6	✓
176	-68°	13	0	27.8	-68	26.2	8.8	✓
177	-65°	127	1	13.2	-65	52.2	8.2	✓
178	-66°	92	1	12.6	-66	37.5	9.1	✓
179	-66°	89	1	9.1	-66	45.1	9.1	✓
180	-66°	88	1	6.2	-66	51.0	8.2	✓
181	-66°	87	1	6.0	-66	35.2	7.8	✓
182	-66°	85	1	2.2	-66	31.9	9.5	✓
183	-66°	84	1	1.8	-66	19.5	9.1	✓
184	-66°	83	1	1.0	-66	43.6	9.5	✓
185	-66°	82	0	57.9	-66	56.7	9.8	✓
186	-67°	66	0	56.1	-67	8.3	9.5	✓
187	Approx. 1875	0	0	58.3	-67	56		✓
188	-66°	80	0	57.9	-66	7.8	7.8	✓
189	-66°	79	0	57.1	-66	19.5	8.8	✓

March 19, 1912

B 38365 (cont.)

No.	Class	Int.	Remark
190	Ko	2	
191	Ko	8	
192	Mo	2	
193	Ko	4	
194	Ly	5	
195	A2	4	
196	F2	6	
197	Ko	3	Partly superimposed on 196
198	Ly	3	
199	Ly	5	
200	F	6	Poor focus.
201	Ly	10	
202	F	10	
203	Ly	8	
204	F8	3	
205	Ko	7	
206	A	6	

23.20

207 4 Ly

190	-65°	110	0	59.1	-65	46.3	9.4 ✓
191	-65°	112	0	57.8	-65	22.3	8.0 ✓
192	-65°	108	0	53.4	-65	2.1	9.5 ✓
193	-64°	103	0	56.5	-64	53.6	9.2 ✓
194	-64°	102	0	55.8	-64	58.3	8.7 ✓
195	-65°	102	0	55.7	-65	20.3	8.8 ✓
196	-65°	101	0	53.2	-65	26.3	8.3 ✓
197	-65°	100	0	53.2	-65	23.3	8.9 ✓
198	-65°	96	0	50.9	-65	52.9	9.4 ✓
199	-65°	89	0	47.6	-65	31.4	8.8 ✓
200	-64°	93	0	51.7	-64	45.1	8.3 ✓
201	-64°	91	0	51.2	-64	38.4	7.7 ✓
202	-64°	84	0	47.4	-64	25.3	7.3 ✓
203	-64°	81	0	45.2	-64	44.9	8.3 ✓
204	-65°	75	0	38.3	-65	44.2	9.0 ✓
205	-65°	73	0	38.0	-65	30.2	8.6 ✓
206	-65°	68	0	36.3	-65	11.8	8.2 ✓

Identified by J. C. M. April 24, 1912.

Checked by A. M. C. April 25, 1912

207 -69 5 0 12.1 -69 45 8.6 46m B38365

mmsey, March 18, 1912

2316

I 37527

No.	Class	Int.	Remark
1	F	5	E.
2	h5	9	E.
3	A	2	E.
4	h5	3	
5	h5	3	
6	A	3	E.
7	A	8	E.
8	A2	3	E.
9	h5	3	
10	B9	4	
11	A0	3	
12	h5	5	
13	F8	8	
14	A3	3	
15	h	1	
16	A2	3	
17	A	2	
18	h5	3	
19	h5	4	
20	h	2	
21	K0	3	
22	h5	3	
23	A	2	
24	K0	2	
25	K0	2	
26	A5	2	Difficult
27	F0	2	

1	+30°	1442	7	2.2	+30	42.2	7.8 ✓
2	+30°	1439	7	1.9	+30	29.4	4.7 ✓
3	+30°	1436	7	1.2	+30	35.4	8.1 ✓
4	+30°	1431	7	0.1	+30	22.6	7.5 ✓
5	+30°	1430	6	59.9	+30	35.9	7.8 ✓
6	+29°	1466	6	59.9	+29	10.3	8.6 ✓
7	+28°	1314	6	58.3	+28	25.0	6.8 ✓
8	+28°	1310	6	57.1	+28	25.2	7.8 ✓
9	+30°	1423	6	58.9	+30	4.1	8.6 ✓
10	+29°	1454	6	56.4	+29	43.6	8.3 ✓
11	+29°	1451	6	56.0	+29	56.1	8.5 ✓
12	+30°	1413	6	55.7	+30	34.5	7.3 ✓
13	+29°	1441	6	54.3	+29	35.6	6.3 ✓
14	+30°	1406	6	54.4	+30	41.3	8.5 ✓
15	+30°	1402	6	53.2	+30	4.5	8.7 ✓
16	+29°	1434	6	52.7	+29	57.9	8.5 ✓
17	+29°	1433	6	52.4	+29	35.3	8.9 ✓
18	+29°	1430	6	52.1	+29	25.2	7.5 ✓
19	+29°	1429	6	51.9	+29	57.1	7.8 ✓
20	+30°	1393	6	51.8	+30	5.8	8.2 ✓
21	+29°	1425	6	50.9	+29	58.4	7.5 ✓
22	+30°	1387	6	50.9	+30	28.8	7.5 ✓
23	+30°	1379	6	49.4	+30	29.5	9.1 ✓
24	+30°	1368	6	47.8	+30	13.3	8.3 ✓
25	+30°	1369	6	48.0	+30	47.2	8.1 ✓
26	+30°	1364	6	46.8	+30	44.5	8.9 ✓
27	+30°	1361	6	46.6	+30	52.6	8.6 ✓

March 18, 1912

I 37527 (cont.)

No.	Class.	Int.	Remark
28	Bo	3	
29	B8	4	
30	Bo	3	
31	Bo	2	
32	B5	5	line 4227 strong
33	A2	3	
34	Bo	2	
35	B9	3	
36	B5	2	
37	Bo	3	
38	Bo	2	
39	Bo	7	
40	B9	5	
41	Bo	3	
42	Bo	2	
43	Bo	3	
44	A	8	8.
45	A	3	8.
46	A	10	8; maybe B8
47	B9	3	
48	B9	3	
49	A	2	
50	Bo	3	
51	A2	6	
52	Bo	2	
53	A3	3	
54	A2	4	

28	+30°	1359	6	46.2	+30	20.7	8.1	
29	+30°	1357	6	45.5	+30	0.2	7.8	✓
30	+30°	1354	6	44.2	+30	38.5	8.3	✓
31	+29°	1391	6	44.4	+29	41.3	8.0	✓
32	+29°	1382	6	43.5	+29	36.7	7.7	✓
33	+29°	1374	6	42.1	+29	18.3	8.2	✓
34	+30°	1345	6	42.0	+30	0.6	7.9	✓
35	+29°	1361	6	40.8	+29	42.7	8.6	✓
36	+30°	1332	6	38.5	+30	15.5	7.8	✓
37	+29°	1336	6	36.5	+29	27.8	8.3	✓
38	+29°	1332	6	36.2	+29	30.5	8.5	✓
39	+29°	1327	6	35.6	+29	6.8	6.0	✓
40	+29°	1320	6	33.3	+29	50.5	7.8	✓
41	+29°	1307	6	32.1	+29	50.6	7.2	✓
42	+29°	1309	6	32.2	+29	5.9	8.3	✓
43	+28°	1207	6	32.2	+28	19.0	6.6	✓
44	+28°	1196	6	30.4	+28	22.9	6.0	✓
45	+27°	1182	6	29.8	+27	55.2	7.4	✓
46	+29°	1293	6	29.2	+29	5.8	6.2	✓
47	+29°	1297	6	29.9	+29	52.1	7.8	✓
48	+30°	1400	6	31.6	+30	20.0	8.0	✓
49	+30°	1397	6	31.0	+30	17.6	8.2	✓
50	+30°	1390	6	30.3	+30	25.5	8.0	✓
51	+31°	1363	6	28.7	+31	0.0	7.0	✓
52	+31°	1364	6	29.0	+31	20.1	8.1	✓
53	+31°	1356	6	27.6	+31	1.9	8.1	✓
54	+31°	1354	6	27.2	+31	27.9	7.8	✓

March 18, 1912

I 37527 (cont.)

No.	Class	Int.	Remarks
55	K2	2	
56	K0	3	
57	A0	3	
58	A2	3	
59	A	2	E.
60	F5	2	
61	A	2	
62	A	4	E.
63	A	9	E.
64	A2	4	E.
65	A	2	E.
66	F5	4	E.
67	F0	4	E.
68	K0	5	E.
69	F5	6	E.
70	A3	2	
71	A5	6	
72	F5	4	
73	F0	2	
74	F	1	
75	A0	2	
76	Ma	4	
77	A3	3	
78	K0	2	
79	K5	2	
80	F0	3	
81	A5	4	

55	+31°	1351	6	26.6	+31	35.2	6.5V
56	+31°	1342	6	25.6	+31	32.7	7.0V
57	+31°	1338	6	25.2	+31	4.4	8.4V
58	+30°	1256	6	23.8	+30	25.3	7.0V
59	+30°	1270	6	26.3	+30	31.3	8.7V
60	+30°	1275	6	27.1	+30	12.7	8.4V
61	+29°	1282	6	27.1	+29	50.3	8.6V
62	+28	1173	6	26.5	+28	22.4	8.0V
63	+28°	1168	6	26.1	+28	7.8	5.1V
64	+31°	1505	7	2.3	+31	35.7	8.2V
65	+32°	1495	7	1.8	+32	23.0	8.7V
66	+32°	1492	7	1.4	+32	27.4	7.3V
67	+32°	1497	7	1.9	+32	51.1	8.2V
68	+32°	1491	6	1.3	+32	50.9	7.0V
69	+33°	1486	7	1.9	+33	20.8	7.3V
70	+32°	1486	6	59.3	+32	49.1	8.5V
71	+33°	1479	6	58.9	+33	29.8	8.0V
72	+33°	1474	6	58.2	+33	24.9	8.0V
73	+33°	1473	6	57.3	+33	1.1	8.1V
74	+32°	1478	6	57.5	+32	39.8	8.3V
75	+31°	1495	6	59.1	+31	32.6	8.7V
76	+31°	1487	6	56.4	+31	37.6	6.7V
77	+31°	1484	6	56.2	+31	35.1	8.6V
78	+31°	1474	6	53.4	+31	46.0	8.0V
79	+31°	1473	6	53.3	+31	34.1	7.8V
80	+32	1471	6	53.0	+31	26.5	8.0V
81	+32°	1461	6	52.6	+32	8.0	8.3V

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I 37527 (cont.)

No.	Class	Int.	Remark
82	Fo	7	
83	Fo	3	
84	h _o	2	
85	F	1	
86	h _o	2	
87	A5	3	
88	h	2	
89	F	1	
90	h _o	2	
91	A5	2	
92	A5	1	
93	A5	3	
94	A5	1	
95	Fo	2	
96	A	2	Partly superseded on 97
97	B ₉	7	
98	B ₉	5	
99	Fo	2	
100	Fo	2	
101	A2	10	
102	A3	2	Probably a trail of 101
103	B ₉	4	
104	A5	2	
105	B ₈	3	
106	h ₅	3	
107	Ao	4	
108	A	1	

82	+32°	1460	6	51.9	+32	55.3	6.8	✓
83	+32°	1458	6	51.7	+32	57.3	8.3	✓
84	+31°	1457	6	48.8	+31	38.1	8.5	✓
85	+31°	1453	6	48.3	+31	24.2	8.5	✓
86	+31°	1449	6	47.4	+31	34.1	8.3	✓
87	+32°	1447	6	47.7	+32	26.9	8.3	✓
88	+32°	1442	6	46.9	+32	36.4	8.6	✓
89	+32°	1441	6	46.8	+32	5.8	8.7	✓
90	+31°	1442	6	46.0	+31	56.1	8.6	✓
91	+31°	1438	6	45.6	+31	33.7	8.5	✓
92	+31°	1441	6	45.9	+31	6.5	8.5	✓
93	+31°	1433	6	44.6	+31	17.7	7.8	✓
94	+31°	1434	6	44.9	+31	41.2	8.5	✓
95	+32°	1437	6	45.5	+32	40.3	8.0	✓
96	+32°	1434	6	44.8	+32	22.9	8.6	✓
97	+32°	1433	6	44.7	+32	41.3	7.0	✓
98	+33°	1428	6	44.8	+33	10.6	8.3	✓
99	+33°	1427	6	44.5	+33	51.6	9.0	✓
100	+33°	1424	6	43.4	+33	51.2	8.5	✓
101	+34°	1481	6	43.2	+34	7.9	8.2	✓
102	Trail of	101						✓
103	+33°	1422	6	42.7	+33	57.6	8.3	✓
104	+34°	1475	6	42.6	+34	1.5	8.9	✓
105	+33°	1417	6	42.1	+33	26.8	8.2	✓
106	+32°	1418	6	41.3	+32	55.1	8.3	✓
107	+32°	1421	6	41.9	+32	19.3	7.8	✓
108	+33°	1421	6	42.7	+33	17.3	9.0	✓

Good
mark
✓

March 18, 1912.

I 37527 (cont.)

No.	Class	Int.	Remarks
109	g	1	Partly superposed on 107
110	A	2	
111	g ₅	2	
112	g ₀	3	
113	F ₀	7	
114	F ₂	2	
115	A	2	
116	F ₈	3	
117	A ₂	3	
118	A ₀	7	
119	A	1	
120	B ₉	3	
121	A	1	
122	A ₅	1	
123	A	1	
124	A	2	
125	A ₀	3	
126	B ₉	3	
127	F ₅	3	
128	g ₅	2	
129	F ₀	2	
130	A ₀	5	
131	g	1	
132	F	1	
133	F ₂	2	
134	F ₀	5	
135	A	1	

109	+22°	1420	6	41.7	+32	6.1	7.1 ✓
110	+31°	1420	6	41.2	+31	58.8	8.7 ✓
111	+31°	1418	6	40.6	+31	41.7	7.5 ✓
112	+32°	1416	6	40.4	+32	16.7	8.3 ✓
113	+32°	1414	6	40.2	+32	45.6	5.8 ✓
114	+31°	1415	6	39.2	+31	22.0	8.5 ✓
115	+32°	1406	6	38.8	+32	5.6	8.7 ✓
116	+31°	1413	6	38.4	+31	50.8	7.3 ✓
117	+31°	1414	6	38.6	+31	10.6	7.8 ✓
118	+30°	1318	6	35.8	+30	58.6	7.0 ✓
119	+30°	1320	6	36.2	+30	20.0	8.9 ✓
120	+30°	1314	6	35.3	+30	37.3	8.2 ✓
121	+30°	1313	6	35.1	+30	39.0	8.6 ✓
122	+30°	1312	6	34.8	+30	58.8	8.9 ✓
123	+30°	1311	6	34.4	+30	54.8	9.0 ✓
124	+31°	1391	6	34.2	+31	5.8	8.6 ✓
125	+31°	1392	6	34.2	+31	30.5	7.8 ✓
126	+31°	1389	6	33.2	+31	56.6	8.2 ✓
127	+30°	1303	6	32.5	+30	48.7	8.0 ✓
128	+31°	1383	6	31.7	+31	28.2	8.0 ✓
129	+31°	1381	6	31.3	+31	14.1	7.7 ✓
130	+31°	1369	6	29.7	+31	53.2	7.1 ✓
131	+31°	1366	6	29.2	+31	35.2	8.7 ✓
132	+31°	1358	6	28.0	+31	49.3	7.8 ✓
133	+32°	1354	6	28.7	+32	37.4	8.6 ✓
134	+33°	1377	6	29.4	+33	9.4	7.4 ✓
135	+33°	1373	6	28.3	+33	4.5	9.1 ✓

corrections made

March 18, 1912

I 37527 (cont.)

No.	Class	Int.	Remark
136	ly5	2	
137	A2	3	
138	A2	6	
139	B8	6	
140	ly5	1	
141	A2	2	
142	A0	7	
143	A0	8	
144	B9	7	E.
145	A	3	E.
146	K0	5	
147	K0	6	
148	A0	4	
149	K0	7	
150	F0	4	
151	ly5	9	
152	A	1	
153	ly5	2	
154	B9	3	
155	K0	4	
156	A	2	
157	F8	3	
158	A3	5	
159	K0	2	
160	ly0	3	
161	A0	3	
162	F5	3	

136	+32°	1350	6	27.7	+32	51.5	8.5 ✓
137	+32°	1344	6	26.6	+32	45.0	8.4 ✓
138	+32°	1343	6	26.5	+32	24.3	7.3 ✓
139	+32°	1338	6	26.1	+32	40.8	7.8 ✓
140	+33°	1361	6	26.3	+33	26.7	8.8 ✓
141	+33°	1357	6	24.5	+33	37.5	8.2 ✓
142	+33°	1356	6	24.2	+33	7.9	6.5 ✓
143	+32°	1324	6	23.0	+32	33.0	5.8 ✓
144	+32°	1320	6	22.2	+32	15.4	6.8 ✓
145	+34°	1549	6	1.7	+34	0.2	8.5 ✓
146	+34°	1536	6	59.3	+34	9.8	7.0 ✓
147	+34°	1533	6	58.7	+34	2.3	6.6 ✓
148	+34°	1534	6	58.7	+34	42.6	8.0 ✓
149	+34°	1530	6	57.9	+34	13.0	6.0 ✓
150	+33°	1472	6	57.3	+33	57.6	8.0 ✓
151	+34°	1524	6	56.6	+34	41.8	6.0 ✓
152	+33°	1469	6	56.7	+33	54.0	9.1 ✓
153	+33°	1468	6	56.5	+33	57.3	7.9 ✓
154	+34°	1520	6	55.4	+34	30.3	8.6 ✓
155	+34°	1516	6	54.2	+34	5.5	7.5 ✓
156	+33°	1461	6	54.2	+33	41.8	9.0 ✓
157	+33°	1459	6	53.9	+33	29.8	8.4 ✓
158	+33°	1454	6	52.2	+33	53.2	7.5 ✓
159	+33°	1447	6	50.4	+33	26.5	8.5 ✓
160	+33°	1446	6	50.1	+33	14.9	8.0 ✓
161	+33°	1445	6	50.0	+33	44.7	8.6 ✓
162	+34°	1501	6	48.6	+34	30.3	8.9 ✓

Coudé 11111

B

March 18, 1912

I 37 527 (cont.)

No. Class Int. Remark.

163	lyo	7	
164	A	2	Maybe A5
165	Bq	3	
166	K	1	
167	Bq	3	
168	Ho	2	
169	ly5	5	
170	AO	2	
171	A	1	
172	A	1	
173	lyo	2	
174	ly5	5	
175	Bq	4	
176	A2	4	
177	ly5	4	
178	A	3	
179	A	2	
180	A	2	Maybe A3
181	AO	2	
182	F8	3	
183	A2	2	
184	F5	4	
185	A3	3	
186	ly5	4	Partly superposed on 187
187	A	3	
188	F5	4	
189	K	1	

163	+33°	14.33	6	47.5	+33	52.6	6.3	✓	
164	+34°	14.96	6	47.2	+34	50.7	9.0	✓	
165	+34°	14.98	6	46.6	+34	50.0	8.4	✓	+34° 14.95 superposed
166	+35°	15.22	6	46.1	+35	1.6	8.7	✓	
167	+35°	15.17	6	44.7	+35	29.4	8.5	✓	
168	+35°	15.13	6	43.6	+35	7.3	8.4	✓	
169	+35°	15.11	6	43.4	+35	56.9	6.5	✓	
170	+35°	15.05	6	42.7	+35	56.9	8.5	✓	
171	+36°	15.17	6	42.1	+36	3.7	9.0	✓	
172	+34°	14.76	6	42.6	+34	49.4	9.1	✓	
173	+35°	14.96	6	40.8	+35	2.0	8.7	✓	
174	+35°	14.95	6	40.6	+35	12.9	6.9	✓	
175	+35°	14.91	6	38.6	+35	24.4	8.0	✓	
176	+34°	14.62	6	38.9	+34	15.6	7.9	✓	
177	+33°	14.14	6	38.9	+33	58.2	8.1	✓	
178	+34°	14.58	6	38.7	+34	5.2	9.1	✓	
179	+33°	14.15	6	40.7	+33	23.7	9.0	✓	
180	+33°	14.12	6	38.6	+33	12.3	8.8	✓	
181	+33°	14.10	6	38.0	+33	14.7	8.5	✓	
182	+33°	14.01	6	36.5	+33	10.3	7.8	✓	
183	+32°	13.95	6	36.3	+32	12.7	8.7	✓	
184	+32°	13.89	6	35.2	+32	6.9	8.0	✓	
185	+33°	13.94	6	34.6	+33	6.1	8.6	✓	
186	+32°	13.78	6	33.3	+32	41.9	6.6	✓	
187	+32°	13.77	6	33.2	+32	37.2	8.7	✓	
188	+32°	13.72	6	32.3	+32	45.8	7.5	✓	
189	+32°	13.70	6	31.7	+32	32.5	8.2	✓	

March 18, 1912.

I 37527 (cont.)

No.	Class	Int.	Remark
190	A2	5	
191	h5	1	
192	F	2	Difficult
193	h	2	
194	A5	1	
195	h	2	
196	h0	3	
197	A5	2	
198	B9	5	
199	B9	4	
200	A2	4	
201	A0	8	
202	A3	2	
203	A	1	
204	F5	7	
205	F0	3	
206	A	2	
207	A	2	
208	A	1	
209	F0	3	
210	A	2	
211	A	2	
212	h5	2	
213	h5	4	
214	h	3	
215	h0	4	
216	h0	5	

190	+33°	1383	6	31.3	+33	9.9	7.4	✓
191	+33°	1407	6	37.6	+33	56.0	8.3	✓
192	+34°	1451	6	36.6	+34	26.2	8.9	✓
193	+35°	1489	6	37.2	+35	7.9	8.2	✓
194	+35°	1487	6	36.7	+35	11.3	8.7	✓
195	+33°	1395	6	34.7	+33	57.5	8.2	✓
196	+34°	1442	6	34.6	+34	18.3	8.3	✓
197	+34°	1439	6	34.0	+34	26.6	8.8	✓
198	+34°	1435	6	33.4	+34	15.3	7.9	✓
199	+34°	1434	6	33.0	+34	13.6	7.8	✓
200	+35°	1476	6	34.1	+35	22.4	8.0	✓
201	+36°	1494	6	34.5	+36	14.4	6.7	✓
202	+36°	1490	6	33.6	+36	28.2	8.5	✓
203	+36°	1486	6	33.2	+36	18.3	8.5	✓
204	+36°	1482	6	31.9	+36	4.7	6.5	✓
205	+35°	1464	6	30.9	+35	41.8	8.3	✓
206	+34°	1427	6	31.9	+34	59.3	8.7	✓
207	+34°	1428	6	32.1	+34	9.8	8.5	✓
208	+34°	1417	6	29.3	+34	4.6	8.9	✓
209	+34°	1416	6	29.3	+34	24.9	8.2	✓
210	+34°	1415	6	29.0	+34	9.6	9.0	✓
211	+34°	1412	6	28.6	+34	57.3	8.8	✓
212	+33°	1370	6	27.5	+33	45.5	8.6	✓
213	+33°	1368	6	27.1	+33	29.9	7.9	✓
214	+34°	1402	6	26.4	+34	18.1	8.0	✓
215	+35°	1437	6	23.1	+35	9.7	6.8	✓
216	+35°	1436	6	23.0	+35	24.3	6.5	✓

Carroll's mark

EF

March 17, 1912

I 37527 (cont.)

No. Class Int. Remark

217	A	8	E.
218	A	1	E.
219	g	1	E.
220	A	2	
221	g5	5	
222	A	1	
223	A5	4	
224	g5	3	
225	g5	6	Focus from.
226	A5	2	
227	A5	3	
228	A	2	
229	Bq	7	
230	g	3	
231	Hb	4	
232	K	7	E.
233	g5	2	E.
234	A5	3	
235	K	2	
236	A	4	E.
237	A	5	Another star superposed?
238	K5	5	E.
239	A3	4	E.
240	g0	3	E.
241	A2	4	E.
242	K	1	
243	F0	2	

217	+36°	1571	6	59.7	+36	48.6	6.8V
218	+36°	1569	6	59.2	+36	7.3	8.41
219	+36°	1567	6	58.4	+36	5.2	8.3V
220	+35°	1552	6	57.1	+35	53.2	8.8V
221	+36°	1563	6	56.2	+36	46.6	7.4V
222	+36°	1559	6	55.7	+36	33.6	9.1V
223	+35°	1545	6	55.1	+35	44.7	8.1V
224	+36°	1557	6	55.0	+36	49.0	7.8V
225	+36°	1555	6	54.8	+36	31.1	7.0V
226	+35°	1539	6	51.7	+35	11.9	8.4V
227	+35°	1533	6	50.1	+35	40.3	8.5V
228	+36°	1548	6	51.5	+35	2.5	9.1V
229	+37°	1629	6	49.7	+37	17.0	7.7V
230	+37°	1625	6	48.6	+37	4.0	8.4V
231	+37°	1620	6	47.5	+37	34.9	6.9V
232	+38°	1656	6	49.2	+38	14.8	6.5V
233	+38°	1641	6	45.7	+38	5.4	6.6V
234	+36°	1528	6	46.4	+36	54.8	8.5V
235	+37°	1609	6	44.9	+37	7.4	7.6V
236	+37°	1598	6	41.0	+37	43.7	8.4V
237	+36°	1511	6	40.5	+36	34.3	8.4V
238	+37°	1592	6	39.9	+37	40.9	6.5V
239	+37°	1588	6	39.1	+37	7.8	7.5V
240	+37°	1587	6	39.0	+37	40.0	7.1V
241	+36°	1504	6	37.8	+36	42.2	7.3V
242	+36°	1501	6	37.1	+36	32.4	8.3V
243	+36°	1497	6	36.2	+36	9.9	8.5V

Corda
Mule

+37° 1628 Superposed

S

March 19, 1912.

I 37527 (cont.)

No.	Class	Int.	Remark
244	ly	2	
245	fo	5	
246	h	1	
247	ly5	7	E.
248	ly5	3	E.
249	fo	5	
250	a	3	
251	ly5	4	E.
252	ly	5	E.

Time: 0.13

253 l. fo

244	+35°	1472	6	33.5	+35	41.3	2.9✓
245	+37°	1571	6	34.4	+37	8.2	7.8✓
246	+37°	1568	6	33.7	+37	9.1	8.0✓
247	+37°	1567	6	33.4	+37	16.8	6.5✓
248	+37°	1565	6	32.5	+37	14.4	7.8✓
249	+37°	1553	6	28.7	+37	13.8	8.0✓
250	+37°	1547	6	27.0	+37	11.6	8.0✓
251	+37°	1539	6	25.3	+37	10.9	7.2✓
252	+37°	1540	6	25.5	+37	49.9	6.8✓

Upper Middle

Identified by J. C. M. March 20, 1912

Checked by A. M. C. April 2, 1912

✓ 253 +37 1577 6 30.3 +37 158 8.0 in B&C

