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E.

May 17. 1886.

Plate 196.

V	Hα.	Type	No Remarks. Lines	K	Focus	Other Lines.	V	H
22.2	6.5	I	4	K=H	1	—	11.1	13.0
22.0	9.8	I	3	N	1	—	11.0	19.6
21.5	10.4	I	4	N	2	—	10.8	20.8
? 21.5	21.9	II[a] 1	2	K=H	2	seen	10.8	43.8
21.0	16.4	I	6	N	2	—	10.5	32.8
20.5	11.0	I b 2	4	K=.5H	2	seen	10.2	22.0

May 21 1886

Plate 196.

10 45	19.6	6.9	I	5	N	1	—	9.8	13.8
	19.4	6.4	I	5	N	3	—	9.7	12.8
	20.0	14.0	I	4	N	1	—	10.0	28.0
	19.0	13.0	I	6	N	2	—	9.5	26.0
	19.1	14.5	I	5	N	2	—	9.6	29.0
	19.0	16.0	I	5	N	2	—	9.5	32.0
	18.8	17.2	III	2	K=H	3	—	9.4	34.4
III & 5.4, 5.8.	18.6	22.6	III	3	K=2H	3	7.	9.3	45.2
	18.8	7.9	I	3	N	1	—	9.4	15.8
	18.1	8.1	I	3	N	1	—	9.0	16.2
	17.9	11.2	I	6	N	2	—	9.0	22.4
	18.3	17.4	I d	5	N	1	—	9.2	34.8
	17.4	22.8	III ?	1	N	1	—	8.7	45.6
	17.1	19.3	III	2	N	1	7.	8.6	38.6
	17.0	18.4	I	4	N	1	—	8.5	36.8
	17.0	19.7	III	2	K=H	1	—	8.5	39.4
	16.5	21.3	I	6	N	3	—	8.2	42.6
	16.6	7.8	III ?	1	N	1	—	8.3	15.6
	16.2	7.7	II	1	N	1	—	8.1	15.4

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Mean 1.3

	No.	R.A.	Dec.	Mag.	Var. Mag.				B-V.				Corr. B-V.
23 58 +63.3	2107	23 59.0	+63 22	5.4	—				6.8	.9	7.7	6.0 5.8	5.5
23 52 +72.9	1135	23 54.3	+72 48	6.5	·				7.5	1.3	8.8	7.1 6.9	6.2
23 41 +64.1	1861	23 41.7	+64 4	6.5	·				6.9	.9	7.8	6.1 5.9	5.6
22 32 +72.9	1049	22 32.2	+72 54	5.5	—				6.7	1.3	8.0	6.3 6.1	5.4
23 9 +73.5	1023	23 9.5	+73 27	6.2	4112	5.6	23	+1 +4	6.5	1.4	7.9	6.2 6.0	5.2
	1063	23 47.9	+73 36	7.0									
23 48 +73.6	1861	23 41.7	+64 4	6.5	—				7.3	1.4	8.7	7.0 6.8	6.0
23 5 +54.8	3076	23 49.9	+54 55	6.0	4232	5.5	21	+1 +2	7.0 6.0	.6	7.6	5.9 5.7	5.7
23 51.9 +54.9	3082	23 51.7	+54 57	5.0	4237	5.0	16	-3 -3	6.0	.6	6.6	4.9 4.7	4.7
23 25 +64.9	1819	23 25.7	+64 56	6.2	·				7.1	.9	8.0	6.3 6.1	5.8
23 32 +74.5	1032	23 33.1	+74 28	6.5	·				6.5	1.4	7.9	6.2 6.0	5.2
23 23 +74.5	1022	23 23.3	+74 26	7.0	·				6.9	1.4	8.3	6.6 6.4	5.6
23 12 +74.5	1016	23 12.3	+74 31	6.6	·				6.6	1.4	8.0	6.3 6.1	5.3
23 3 +74.6	1006	23 3.3	+74 36	4.6									
23 59 +74.6	1002	23 1.8	+74 48	7.3	—				6.5-6.7	1.4	7.9-8.1	6.2 6.0 / 6.4 6.2	5.2 / 5.4
22 44 +65.4	1814	22 44.5	+65 26	3.8	—				5.7-6.2	1.0	6.7-7.2	5.0 4.8 / 5.3 5.0	4.4 / 4.6
23 55 +65.3	1987	23 55.2	+65 17	6.3	·				6.8	0.9	7.7	6.0 5.8	6.0 5.5
23 55 +65.6	1985	23 54.6	+65 38	6.9	·				7.4	1.0	8.4	7.1 6.9	7.1 6.1
23 40 +65.9	1943	23 39.4	+65 58	6.3	4199	6.0	14	-5 -5	6.4	1.0	7.4	5.7 5.5	5.5 5.1
23 1 +74.8	1002	23 1.8	+74 48	7.3	·				6.8	1.5	8.3	6.6 6.4	5.5
22 44 +65.8	1813	22 44.5	+65 46	7.0					6.8				5.5
22 58 +66.4	1575	22 58.1	+66 27	5.5	—				7.0	1.0	8.0	6.3 6.1	5.7
	2923	22 54.0	+56 10	6.0									
23 6 +56.4	2966	23 6.3	+56 22	6.0	4105	5.5			7.0-7.4	.6	7.6-8.0	6.3 6.1	6.3 6.1
23 4.5 +66.4	1587	23 4.2	+66 28	6.7	·				7.4	1.0	8.4	6.7 6.5	6.4 6.2
22 58 +66.5	1575	22 58.1	+66 27	5.5	—				7.1-7.4	1.0	8.1-8.4	6.7 6.5	6.4 6.2
22 29 +75.5	836	22 29.7	+75 27	5.7	3996	5.7	22	+3 +3	6.4	1.5	7.9	6.2 6.0	5.9 5.7
23 5 +66.4	1679	23 5.2	+66 21	6.0					6.6	1.0	7.6	6.3 6.1	5.8 5.6
	3111	23 47.2	+56 41	5.0	—				7.0	1.0	8.0	6.7 6.5	6.3 6.1
	3115	23 48.3	+56 38	7.5									
23 47 +55.7	3115	23 48.3	+56 38	7.5	—				6.8	.6	7.4	5.7 5.5	5.5

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Eo.

Plate 196. May 21. 1886.

V	H	Type	No Lines	K	Focus	Other Lines	V	H
		No Remark		K=1.2 H				
16.3	8.1	II	5 2	~~K=H~~	2	—	8.0	16.2
16.4	8.7	I	4	N	1	—	8.2	17.4
16.5	16.2	I ?	4	N	1	—	8.2	32.4
Recorded one P. H.	~~16.5 21.2~~	~~I~~	~~6~~	~~K~~	~~3~~	~~—~~	~~8.2~~	~~43.4~~
15.9	11.1	I	8	N	4	—	8.0	22.2
15.8	13.3	I	4	N	1	—	7.9	26.6
15.8	13.9	I I ?	3 3	N N	1-1	— —	7.9	27.8
15.4	16.6	~~III~~ II	3 2	K=H	3	—	7.7	33.2
15.5	22.7	I	4	K=H ~~K~~	1	—	7.8	45.4
15.0	9.2	I	6	N	2	—	7.5	18.4
14.5	13.4	III bc	3 3 2	K=1.2 H ~~K=H~~	5	Bright Rem.	7.2	26.8
14.5	14.6	I b.	4 8	N	4	—	7.2	29.2
14.3	12.1	II a ?	5 2	K=H	2	Rem.	7.2	24.2
14.0	10.2	III	2	K=H	2	—	7.0	20.4
14.0	14.2	I	6	N	2	—	7.0	28.4
13.8	14.4	I	5	N	2	—	6.9	28.8
13.4	8.1	I	5	N	1	—	6.7	16.2
13.6	9.7	II	2	K=H	1	—	6.8	19.4
13.3	15.8	I	4	N	1	—	6.6	31.6
13.9	21.4	I	3	N	1	—	7.0	42.8
13.8	22.0	III	1	N	2	—	6.9	44.0
13.0	19.8	I	6	N ?	3	—	6.5	39.6
12.7	20.6	I	7	N	5	—	6.4	41.2
12.3	19.0	I	4	N	2	—	6.2	38.0
12.3	21.1	I	6	N	2	—	6.2	42.2
12.3	6.1	I	3	N	1	—	6.2	12.2
12.0	11.9	I	5	N	1	—	6.0	23.8
12.0	20.4	II a	6 2	K=H	2	Rem	6.0	40.8
12.0	21.5	II ?	2	K=H	1	—	6.0	43.0
11.6	~~22.5~~	~~X~~	3	N	1	—	5.8	43.0

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Mean 13

	No.	R.A.	Dec.	Mag.				Bv.				
23 47 +56.7	3111	23	47.2	+56	41	5.0	—	6.3	.7	7.0	5.3 5.1	5.0
0 10 +75.5	7	0	10.2	+75	28	7.4	.	7.0	1.5	8.5	6.8 6.6	5.7
23 18 +56.7	2999	23	17.6	+56	44	7.0	.	7.2	.7	7.9	6.2 6.0	5.9
~~23 30 +75.5~~	~~836~~	~~23~~	~~29.7~~	~~+75~~	~~27~~	~~5.7~~	~~3996 5.7 23 +6 +4~~	6.5	1.5	8.0	6.3 6.1	
23 41 +67.0	1562	23	41.0	+67	0	5.5	4204 5.1 17 +0 -2 -2	5.8	1.0	6.8	5.1 4.9	4.5
23 30 +67.1	1542	23	30.0	+67	3	7.2	.	7.3	1.0	8.3	6.6 6.4	6.0
23 26 +57.1	2758	23	26.0	+57	6	8.0	.	7.5 7.3	.7	8.2	6.5 6.3	6.2
23 13 +67.3	1514	23	12.7	+67	19	5.2	—	6.1	1.0	7.1	5.4 5.2	4.8
22 16 +75.8	820	22	16.6	+75	46	6.8	—	6.7	1.5	8.2	6.5 6.3	5.4
0 8 +76.2	5	0	8.1	+76	9	6.5	35 6.2 19 +2 0	6.5	1.6	8.1	6.4 6.2	5.3 5.2
23 33 +76.8	928	23	33.4	+76	50	3.5	—	5.4 - 6.0	1.6	7.0 - 7.6	5.9 5.7	4.1 4.0
23 23 +57.7	2748	23	23.4	+57	46	5.7	4153 4.8 18 +1 +1	5.9	.7	6.6	4.9 4.7	4.6
23 45 +76.8	934	23	45.0	+76	48	6.9	—	6.7	1.6	7.3	5.6 5.4	5.5 5.4
23 40 +57.8	2804	23	40.0	+57	50	5.3	—	6.5 - 7.0	.7	7.2 - 7.7	5.3 5.1	6.0 5.8 5.2 5.7
23 26 +77.0	909	23	26.2	+77	0	6.8	.	7.0	1.6	8.6	6.9 6.7	5.7
23 25 +77.1	908	23	25.2	+77	5	7.0	.	7.3	1.6	8.9	7.2 7.0	6.0
23 57 +68.1	1426	23	57.8	+68	4	7.0	.	6.8	1.1	7.9	6.2 6.0	5.5
23 42 +58.2	2653	23	42.1	+58	10	6.8	—	6.8	.7	7.5	5.8 5.6	5.5
23 12 +77.4	896	23	11.9	+77	22	7.3	.	7.3	1.7	9.0	7.3 7.1	6.0
22 23 +76.7	859	22	23.4	+76	42	7.3	.	7.3	1.6	8.9	7.2 7.0	6.2 6.0
	~~1468~~	~~22~~	~~44.1~~	~~+67~~	~~49~~	~~6.5~~						
22 44 +67.8	1468	22	44.1	+67	49	6.5	—	6.8 - 7.2	1.1	7.9 - 8.3	6.9 6.7	6.6 6.4 5.5 5.3
23 3.5 +58.5	2552	23	3.6	+58	34	6.1		6.5	.7	7.2	5.5 5.3	5.2
23 0 +58.6	2545	23	0.5	+58	38	5.3	4086 5.0 14 -5 -3.5	5.7	.7	6.4	4.7 4.5	4.4
22 41 +77.7	871	22	41.5	+77	44	7.2	.	7.0	1.7	8.7	7.0 6.8	5.7
~~0 40 +77.2~~	~~27~~	~~0~~	~~40.5~~	~~+77~~	~~10~~	~~6.7~~						
22 22 +77.5	860	22	22.4	+77	30	6.8	.	6.6	1.7	8.3	6.6 6.4	5.3
0 40 +77.2	27	0	40.5	+77	10	6.7		7.0	1.6	8.6	6.9 6.7	5.7
23 38 +68.9	1393	23	38.2	+68	56	6.8	.	7.0	1.1	8.1	6.7 6.5	5.7
23 1.8 +58.9	2546	23	1.1	+58	58	6.5	—	6.7	.7	7.4	5.7 5.5	5.4
	2533	22	56.7	+58	51	7.5						
22 56.9 +58.8	~~2629~~	~~22~~	~~56.4~~	~~+59~~	~~4~~	~~7.0~~	—	7.4	.7	8.1	6.4 6.2	6.1
22 56.4 +59.1	2629	22	56.4	+59	4	7.0	—	7.4	.7	8.1	6.4 6.2	6.1

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Plate 196.

V	H	Type	No. Lines	K	Focus	Other Lines	V	H
11.7	22.4	~~I~~ II[a] 7	~~4~~[2]	~~K~~ K=H	2	Reeu	5.8	44.8
11.5	9.9	I	~~5~~[6]	N	3	—	5.8	19.8
11.6	13.7	I	3	N	1	—	5.8	27.4
11.5	16.5	III, P	2	~~K~~ K=H	1	—	5.8	33.0
11.5	20.2	I	~~4~~[6]	~~K~~ K=.1H	4	—	5.8	40.4
11.4	20.5	I	~~5~~[8]	N	3	7	5.7	41.0
11.3	22.9	I ?	2	N	1	—	5.6	45.8
11.1	17.0	I	3	N	1	—	5.6	34.0
11.2	7.7	I	5	N	2	—	5.6	15.4
11.0	15.0	I	~~4~~[8]	K=.4H ~~K=.5H~~	4	—	5.5	30.0
10.5	21.2	I	3	N	2	—	5.2	42.4
10.3	14.7	I P	3	N	1	—	5.2	29.4
10.2	15.1	I	4	N	2	—	5.1	30.2
10.0	10.9	I	~~4~~[8]	K=.5H	4	7	5.0	21.8
10.0	15.5	I	~~4~~[5]	K=H ~~K~~	2	—	5.0	31.0
9.9	16.8	I	~~4~~[8]	K=.7H ~~K=.5H~~	4	—	5.0	33.6
9.5	15.5	I	4	K=H ~~K~~	2	—	4.8	31.0
9.2	17.0	I	3	N	2	—	4.6	34.0
9.7	24.0	I[d]	~~4~~[4]	K=H ~~K~~	2	—	4.8	48.0
9.6	6.9	I	2	N	1	—	4.8	13.8
9.7	8.8	III ~~I~~ ?	~~4~~[4]	N	1	—	4.8	17.6
9.0	9.5	I	6	N	3	—	4.5	19.0
9.0	11.7	I	3	N	1	—	4.5	23.4
8.6	16.3	I	~~5~~[6]	K=H ~~K~~	2	—	4.3	32.6
8.7	7.0	I	~~4~~[6]	K=H ~~K~~	3	—	4.4	14.0
8.5	6.2	I[d]	~~4~~[6]	N	3	—	4.2	12.4
8.4	5.5	I[d]	5	N	3	—	4.2	11.0
8.2	16.7	I	~~4~~[6]	K=H ~~K~~	2	—	4.1	33.4

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Mean 13

	No.	R.A.	Dec.	Mag.		Bv.					
22 53 +59.0	2615	22	53.2	+59	2	6.5	—	7.3	.7	8.0	6.3 6.1 6.0 ✓
23 42 +59.2	2777	23	41.8	+59	10	6.5	.	6.5	.7	7.2	5.5 5.3 5.2 ✓
23 26.5 +59.3	2745	23	26.9	+59	14	7.0	.	7.6	.7	8.3	6.6 6.4 6.2 6.3 ✓
23 16 +59.3	2710	23	16.1	+59	20	6.0	—	7.2–7.6	.7	7.9	8.3 {6.6 6.4} {5.7 6.3} ✓
22 28 +78.1	801	22	28.6	+78	4	5.7	—	6.2	.7	7.9	6.2 6.0 4.9 ✓
22 25 +78.1	796	22	25.6	+78	1	6.0	3986 5.8 23 +4 +0.4	6.4	.7	8.1	6.4 6.1 5.1 ✓
22 51 +59.2	2607	22	51.0	+59	11	7.3		7.3	.7	8.0	6.3 6.1 6.0 ✓
23 14 +59.5	2701	23	14.0	+59	29	6.7	.	7.3	.7	8.0	6.3 6.1 6.0 ✓
23 50 +59.3	2795	23	50.3	+59	13	6.7	.	6.7	.7	7.4	5.7 5.5 5.4 ✓
23 21 +69.6	1332	23	21.1	+69	34	6.2	—	6.0	1.1	7.1	5.4 5.2 4.7 ✓
22 57.5 +59.7	2631	22	57.4	+59	40	6.7	.	6.9	.7	7.6	5.9 5.7 5.6 ✓
23 22 +79.0	835	23	22.5	+78.78	60 8	7.5	.	7.1	1.8	8.9	7.2 7.0 6.8 ✓
23 20.3 +69.9	1331	23	20.2	+69	53	6.8	.	6.9	1.2	8.1	6.4 6.2 5.6 ✓
0 1 +78.9	1	0	1.5	+78	55	6.5	—	6.4	1.8	8.2	6.5 6.3 5.1 ✓
23 13 +79.1	777	23	13.9	+79	6	7.8	—	6.9	1.8	8.7	7.0 6.8 5.6 ✓
23 10 +70.2	1311	23	10.0	+70	6	6.0	—	6.2	1.2	7.4	5.7 5.5 4.9 ✓
23 20 +60.3	2540	23	19.8	+60	17	7.0	—	6.8	.8	7.6	5.9 5.7 5.5 ✓
	2521	23	19.7	+60	21	7.0					✓
~~22 59 +79.6~~	~~759~~	~~22~~	~~58.6~~	~~+79~~	~~34~~	~~7.5~~	.	6.9	1.9	8.8	7.1 6.9 5.6 ✓
22 29 +69.7	1263	22	29.2	+69	37	6.2	—	6.7	1.1	7.8	6.1 5.9 5.4 ✓
23 54 +60.1	2656	23	54.0	+60	2	6.8	.	7.8	.8	8.6	6.9 6.7 6.5 ✓
23 46.5 +60.1	2636	23	46.7	+60	3	7.0	—	7.6–8.1	.8	8.4–8.9	{6.5 7.2 6.3 6.8} ✓
0 17 +79.3	10	0	17.9	+79	14	7.0	.	6.5	1.8	8.3	6.6 6.4 5.2 ✓
23 56 +79.5	799	23	55.4	+79	30	7.5	.	7.5	1.8	9.3	7.6 7.4 6.2 ✓
23 44 +79.5	769	23	4.6	+79	47	7.5	—	6.9	1.9	8.8	7.1 6.9 5.6 ✓
23 54 +60.5	2657	23	54.3	+60	24	6.0	—	6.6	.8	7.4	5.7 5.5 5.3 ✓
23 58 +60.6	2667	23	57.6	+60	31	6.0	4258 6.0 13 +6	6.5	.8	7.3	5.6 5.4 5.2 ✓ 2667
	~~2669~~	~~23~~	~~58.8~~	~~+60~~	~~17~~	~~8.1~~					
0 59.9 +78.9	34	1	0.0	+78	54	5.6	180 5.6 26 +7	6.4	1.8	8.2	6.5 6.3 5.1 ✓
~~+5 +79.2~~	~~36~~	~~1~~	~~3.9~~	~~+79~~	~~8~~	~~6.5~~	.				
22 58 +80.0	761	22	58.8	+79.80	60 0	7.2	—	6.7	1.7	8.4	6.7 6.5 5.4 ✓

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May 21, 1886.

Plate 196.

V	H	Type	No. Lines. No. Remark.	K	Focus	Other Lines.	V	H
7.8	14.1	I	6	N	2	—	3.9	28.2
7.8	17.8	I	3	N	2	—	3.9	35.6
7.8	23.8	I	B 4	K=H	1	—	3.9	47.6
7.8	8.8	I	I? 2 3.	N N	1 1	— —	3.9	17.6
Not formed on plate. 7.1	7.7	I	4	N	2	—	3.6	15.4
7.6	12.5	I	5	N	2	—	3.8	25.0
7.6	13.0	I	I 3 3	N N	1 1	— —	3.8	26.0
Recorded above 7.8	14.1	I	5	N	2	—	3.9	28.2
7.4	13.5	I	3	N	1	—	3.7	27.0
7.0	7.2	II	B 2	K=H	1	—	3.5	14.4
6.9	5.8	I	4	N	1	—	3.4	11.6
6.5	6.6	I	5	K=H	2	—	3.2	13.2
5.9	6.0	II a	8 2	K=H	2	Reeve.	3.0	12.0
7.1	10.2	II	3	N	3	—	3.6	20.4
III? 6.6, 6.9	7.3	15.8	III	1	N	2	—	3.6	31.6
4.9	9.7	I	3	N	1	—	2.4	19.4
4.7	8.1	I	3	N	2	—	2.4	16.2
4.3	12.4	I	4	N	2	—	2.2	24.8
4.4	19.5	I	3	N	2	—	2.2	39.0
4.1	10.0	I d	4	N	2	—	2.0	20.0
3.8	7.1	I	3	N	1	—	1.9	14.2
3.5	12.9	I	B 4	K=H	2	—	1.8	25.8
3.5	17.8	III	1	N	3	—	1.8	34.0
3.2	16.6	I	6	N	3	—	1.6	33.2
3.6	22.1	I d	5	K=H	3	—	1.8	44.2
2.7	6.6	I	4	K=H	2	—	1.4	13.2
2.7	11.1	I	3	N	1	—	1.4	22.2
1.8	10.6	I	3	N	1	—	0.9	21.2
1.6	9.9	I	4	K=H	2	—	0.8	19.8
1.3	14.6	I?	1	N	1	—	0.6	29.2

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* Spectra of both stars superimposed on plate. Estimate of brightness given is of the combined light of both.

Mean 13

	No.	R.A.	Dec.	Mag			B-V					
23 26 +71.2	1208	23	26.4	+71	12	6.8	.			6.8	1.2	8.0
23 10 +61.2	2413	23	10.3	+61	10	6.5	.			6.9	.8	7.7
22 46 +60.9	2450	22	45.7	+60	56	6.0	—			6.9	.8	7.7
23 47 +61.0	2562	23	47.5	+61	2	6.8	.			8.0 7.4	.8	8.8
~~23 0 +86 +79 46 6.5~~												
23 32 +61.3	2490	23	32.0	+61	20	6.5	.			7.3	.8	8.1
23 33 +71.2	1218	23	32.9	+71	9	8.2	.			7.6 7.3	1.2	8.8
23 36 +80.5	780	23	37.1	+80	30	7.8				7.5	2.0	9.5
23 53 +61.3	2580	23	53.4	+61	22	7.2	—			6.9	8	7.7
0 17 +71.0	16	0	17.5	+71	0	6.6	.			7.3	1.2	8.5
23 56 +61.5	2586	23	56.8	+61	29	5.6	—			6.7	.8	7.5
15.6 + 80.1	36	1	6.2	+80	8	6.7	*					
~~23 41.5 +61.4 + 5.6 +~~	~~2533~~	~~23~~	~~41.8~~	~~+61~~	~~24~~	~~5.9~~	—			6.7	.8	7.5
23 42 +61.4	2533	23	41.8	+61	24	5.9	—			6.9	.8	7.7
23 18 +61.5	2444	23	18.4	+61	29	5.3	—			6.8–7.4	.8	7.6–8.2
23 56 +72.4	1136	23	56.0	+72	21	7.0	.			7.5	1.3	8.8
0 50 +81.1	25	0	49.6	+81	6	7.5	.			7.1	2.0	9.1
23 32 +62.9	2268	23	33.1	+62	55	6.7				7.6	.9	8.5
	2171	23	1.9	+62	51	6.2	.					
23 1 +62.9	~~13~~	0	~~29.0~~	~~+81~~	~~42~~	~~6.5~~				6.9	.9	7.8
0 29 +81.7	13	0	29.0	+81	42	6.5	85	6.3	30 +11 (+11 XX2)	7.2	2.1	9.3
23 56 +62.8	2356	23	56.0	+62	50	6.5	•			7.0	.9	7.9
23 50 +82.4	743	23	49.7	+82	23	6.0	—			7.2	2.2	9.4
22 49 +82.4	703	22	47.9	+82	23	5.0	—			6.6–7.0	2.2	8.8–9.2
23 9 +73.5	1023	23	9.5	+73	27	6.2	4112	5.6	23 +11	6.5	1.4	7.9
22 32 +72.9	1049	22	32.2	+72	54	5.5	—			6.4	1.3	7.7
23 59 +63.4	2107	23	59.0	+63	22	5.4	—			6.5	.9	7.4
23 48 +73.7	1063	23	47.9	+73	36	7.0	4226	6.6	16 -3	6.8	1.4	8.2
23 41 +64.1	1861	23	41.7	+64	4	6.5						
0 41 +82.9	20	0	41.6	+82	55	6.5	—					
23 24 +74.5	1022	23	23.3	+74	26	7.0						

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Plate 284.

ν	h.	Type	Remark	Lines	K	Focus	Other Lines.	
21.9	7.1	I		7	K=H	1	—	
22.5	21.8	Id.		4	K=H?	1	—	
21.6	19.7	I		4	N	1	—	
21.1	6.5	I		5	K=H	1	—	
21.2	14.0	II		2	K=H?	1	—	
21.2	15.2	I		10	N	5	F.	
20.5	10.9	Ib	9	7	N	2	—	
20.4	12.0	I		8	N	3	—	
20.3	10.0	Ib	10	7	N	4	—	
20.5	22.4	I		4	N	2	—	
20.4	19.5	I		5	N	1	—	
20.0	7.4	I		6	N	2	—	
19.8	14.9	I		6	N	2	—	
19.7	17.9	I		5	N	1	—	
19.6	19.0	I		5	N	1	—	
19.7	20.7	I		5	N	1	—	
20.0	22.3	?I?		09?	N?	5	F	
19.5	8.9	I		8	K=1H	4	—	
19.5	11.3	IIa	11	2	K=H	1	Rem.	
19.0	23.1	VII		3	K=H	2	F Rem.	
18.5	7.3	I		6	N	1	—	
18.0	8.0	III?		2	K=H	1	—	
18.0	7.5	I		7	N	2	—	
17.7	7.9	I		5	K=H	1	—	
18.0	9.9	I		5	N	1	—	
18.3	15.2	I		6	N?	2	—	
18.8	23.4	I		5	K=H?	1	—	
17.0	12.3	I		7	K=H	2	—	
16.6	9.1	I		8	N	5	F.	

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Mean 6

h m	°	No.	R.A.	Dec.	Mag.		Bv.			
1 48	+58.9	341	1 48.3	+58 55	7.0	—	6.4	.7	7.1	5.8 / 5.8 ✓
0 37	+68.5	49	0 37.6	+68 32	6.4	—	~~6.7~~	~~.1~~	7.8	~~6.5~~ ✓
1 21	+69.3	103	1 21.9	+69 17	7.0	.	6.7	1.1	7.8	6.5 / 6.1 ✓
1 50	+59.3	376	1 50.7	+59 15	7.0	—	6.7	.7	7.4	6.1 / 6.1 ✓
1 20	+69.6	102 ~~358~~	1 20.5	+69 ~~34~~ 31	6.1 ~~6.0~~	—	6.5	1.1	7.6	6.3 / 5.9 ✓
1 16	+59.5	248	1 16.4	+59 29	3.0	219 2.8 22 +9 +8	4.3	.7	5.0	~~3.6~~ 3.7 / 3.7 ✓
1 33	+59.8	307	1 33.6	+59 49	6.0	266 5.5 10 -3 -5	5.8	.7	6.5	5.1 5.2 / 5.2 ✓
1 32	+69.9	114	1 31.8	+69 52	5.2	260 5.1 (24+1) 2 4 +10 +11	~~6.0~~	1.2	~~7.5~~	6.1 4.2 / 5.7 ✓
1 34.9	+49.9	444	1 34.6	+49 ~~46~~ 58	4.1	269 4.2 20 +7				
~~1 39~~	~~+60.8~~	~~422~~	~~1 43.9~~	~~+69 8~~	~~8.0~~	.	5.0	1.2	6.2	~~5.1~~ 4.9 / ~~4.4~~ ✓
0 48	+59.6	146	0 48.1	+59 35	6.3	145 5.5 8 +5 -6	5.6	.7	6.3	~~4.9~~ 5.0 / 5.0 ✓
0 49	+69.7	55	0 48.7	+69 43	6.8	.	6.6	2.2	8.8	7.5 / 6.0 ✓
1 43	+50.0	379	1 43.0	+50 5	6.1	284 5.4 1.3 ±0 +	6.2	.5	6.7	~~5.3~~ 5.4 / 5.6 ✓
1 15	+70.2	102	1 15.2	+70 13	6.1	.	6.3	1.2	7.5	6.2 / 5.7 ✓
0 57	+70.1	78	0 57.0	+70 ~~10~~ 9	6.7	.				
~~1 5~~	~~+60.2~~	~~198~~	~~1 5.6~~	~~+60 8~~	~~7.5~~		6.4	1.2	7.6	6.3 / 5.8 ✓
0 50	+70.2	65	0 50.8	+70 13	6.5	.	6.4	1.2	7.6	6.3 / 5.8 ✓
~~0 54~~	~~+70.1~~	~~53~~	~~0 50.7~~	~~+70 13~~	~~7.3~~					
0 54	+60.3	~~157~~	~~0 54.7~~	~~+60 8~~ 10	6.5	.	6.7	.8	7.5	6.2 / 6.1 ✓
		144	0 48.0	+59 56	2.3					
0 48	+59.9	~~146~~	~~0 48.1~~	~~+59 35~~	~~6.3~~	.	4.1	.7	4.7	3.4 / 3.4 ✓
1 50	+70.2	153	1 50.1	+70 11	4.6	—	5.4	1.2	6.6	5.3 / 4.8 ✓
1 33	+60.7	312	1 33.1	+60 41	6.3	—	6.1	.8	6.9	5.6 / 5.5 ✓
0 45	+60.4	124	0 44.5	+60 19	5.0	—	~~5.6~~	.8	6.4	~~5.1~~ 5.0 ✓
1 48	+60.8	400	1 48.4	+60 50	7.5	.	6.5	.8	7.3	6.0 / 5.9 ✓
1 56	+70.9	163	1 56.7	+70 52	7.2	—	6.7 - 7.1	1.2	7.9	8.3 / 6.1 ✓ 6.5
1 48	+60.9	398	1 48.3	+60 59	6.6	.	5.7	.8	6.5	5.2 / 5.1 ✓
1 46	+61.6	416	1 41.7	+61 13	6.3	—	6.8	.5	7.3	6.0 / 6.2 ✓
1 45	+71.0	111	1 45.3	+71 10	7.4	.				
~~1 38~~	~~+61.8~~	~~329~~	~~1 38.7~~	~~+61 7~~	~~8.8~~		7.1	1.2	8.3	7.0 / 6.5 ✓
1 4	+60.9	186	1 4.0	+60 56	6.6		6.8	.8	7.6	6.3 / 6.2 ✓
0 25	+70.1	24	0 24.8	+70 10	6.2					
~~0 23~~	~~+69.7~~	~~23~~	~~0 23.6~~	~~+69 44~~	~~8.2~~	—	6.3	1.2	7.5	6.2 / 5.7 ✓
1 28	+61.6	304	1 28.4	+61 37	6.5	—	6.0	.8	6.8	5.5 / 5.4 ✓
1 51	+71.7	117	1 51.2	+71 42	4.0	306 4.1 20 +7 +6 +3	4.8	1.3	6.1	~~4.4~~ 4.8 / 4.2 ✓

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June 22, 1886.

Plate 284.

V	H.	Type	No. Remarks	No. lines	K	Focus	Other Lines
16.0	19.6	I[d] ~~I~~	~~3~~ 6	7	~~K~~ ~~K=H~~	~~2~~ 1	~~F? F?~~ —
16.0	10.3	I	4		K=H ~~K~~	1	—
15.7	12.9	~~III~~ II[b]	12	2	K=H	2	Reen.
16.0	20.4	~~III~~ III	~~3~~ 2	2	K=H	~~K=H~~ 1	~~2~~ —
15.1	12.7	I	5		N	1	—
15.0	12.7	I	5?		N	2	—
15.1	21.8	I	5		N	1	—
14.2	8.8	I?	9?		N	5	F?
13.8	9.6	I	6		K=.3 H N	2	—
14.0	10.4	II[a]	13	2	K=H	2	F? Reen.
13.7	14.8	I	4		N	1	—
13.8	16.0	I	5		N	2	—
13.6	9.1	I	4		N	1	—
13.1	13.2	I	5		N	2	—
13.4	18.3	I	7		N	3	F?
13.1	20.7	I	6		N	1	—
13.0	17.6	I	5		N	2	—
12.7	17.0	I	5		N	1	—
12.5	16.2	I	6		N	2	F?
12.7	15.3	I	5		K=H N	1	—
12.5	12.5	I I	4 5		N N	1 1	— —
12.7	11.7	I	5		N	1	—
13.0	11.4	II	2		K=H N	1	Reen.
12.2	7.9	I	8		N	5	—
12.4	9.4	I	4		N	1	—
11.6	7.3	I	6		N	3	—
11.5	8.1	I[b]	14	6	N	3	Reen
11.1	7.0	I[a]	5		K=H? N	2	—

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Mean 6

	No.	R.A.	Dec.	MAG.		Bv.				
0 57 +61.9	206	0 57.3	+61 59	6.5						
	208	0 57.5	+61.9	8.0	—	5.9 6.0	.8	6.7	5.4	5.3 ✓
1 34 +52.1	420	1 34.5	+52 9	7.0	—	6.7	.5	7.2	5.9	6.1 ✓
1 25 +62.4	86	1 27.0	+72 17	5.2						
	294	1 25.6	+62 3	6.5	—	6.2 – 6.5	1.3	7.5	7.8	6.2 5.6 6.5 5.9 ✓
0 39 +71.9	37	0 38.8	+71 53							
0 53 +61.8	196	0 38.8	+61.8	7.8	—	6.5 – 6.8	6.4 6.5 .8	7.3	6.0	5.9 6.2 ✓
1 26.7 +62.6	382	1 26.3	+52	6.6						
	277	1 26.9	+62.5	7.2		6.7	.5	7.2	5.9	6.1 ✓
1 27 +62.6	277	1 26.9	+62 39	7.2	.	6.6	.8	7.4	6.1	6.0 ✓
0 29 +72.1	35	0 28.8	+72 6	6.7	.	6.4	1.3	7.7	6.4	5.8 ✓
1 44 +62.9	320	1 44.1	+62 57	3.3		4.6	.9	5.6	4.3	4.0 ✓
1 50 +73.1	108 82	1 50.5	+73 8	6.2	—	6.0	1.3	7.3	6.0	5.4 ✓
1 34 +63.1	238	1 37.3	+63 8	6.1	—	5.9	.9	6.8	5.5	5.3 ✓
1 14 +73.3	71	1 14.2	+73 22	7.8	.	6.8	1.4	8.2	6.9	6.2 ✓
	60	1 5.8	+73 12	8.5						
1 5 +73.2	61	1 5.8	+73 14	7.0	.	6.4	1.3	7.7	6.4	5.8 ✓
38 +53.3	386	38.4	+53 17	7.2	.					
1 43 +63.8	253	1 43.0	+63	9.1		6.8	.6	7.4	6.1	6.2 ✓
1 25 +73.6	81	1 25.6	+73 33	6.5	.	6.1	1.4	7.5	6.2	5.5 ✓
1 2 +63.5	149	1 2.1	+63	6.0	188 5.4 10 -3	5.5	.9	6.4	5.1 5.0	4.9 ✓
0 59.9 +53.5	229	0 59.7	+53 27	6.8	.	6.8	.6	7.4	6.1	6.2 ✓
0 54 +73.7	51	0 54.5	+73 36	6.8	.	6.2	1.4	7.6	6.3	5.6 ✓
1 12.7 +58.9 Brighter object	281	1 12.2	+53 52	7.3	.	6.8	.6	7.4	6.1	6.2 ✓
1 11 +63.8	176	1 11.5	+63	6.6	.	5.7	.9	6.6	5.3	5.1 ✓
1 10 +73.8	66	1 10.4	+73 49	6.8	—	6.5	1.4	7.9	6.6	5.9 ✓
1 27.9 +64.0	202	1 27.7	+64.0	6.8	.	6.7 6.6	.9	7.6	6.3	6.1 ✓
1 30 +53.9	354	1 30.1	+53 52	7.5	.	6.8	.6	7.4	6.1	6.2 ✓
1 37 +53.8	362	1 31.0	+58 43	7.8	—					
	225	1 32.7	+63	8.0		6.8	.6	7.4	6.1	6.2 ✓
1 49 +63.9	265	1 49.0	+63	5.5	300 5.2 10 -3	5.3	.9	6.2	4.9 4.8	4.1 ✓
1 40 +73.9	112	1 52.9	+73 52	7.3	.					
1 53 +64.4	243	1 40.8	+64	6.6		6.8	1.4	8.2	6.9	6.2 ✓
1 52 +64.2	282	1 52.2	+64	6.0	311 5.7 7 -6	5.5	.9	6.4	5.1 5.0	4.9 ✓
1 42 +64.5	396	1 42.5	+64 26	5.7	283 5.5 19 +6	5.8	.6	7.4	6.1 6.0	5.2 ✓
1 53 +64.4	285	1 53.8	+64	6.5	✓ —	5.6	.9	7.5	6.2	5.0 ✓

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June 22, 1886.

Plate 284.

ν	h.	Type	Remark	No.	No. Lines	K	Focus	Other Lines.
11.9	18.1	I			8	N	3	—
11.8	19.7	I			6	N	2	—
11.5	19.8	I			9	K=2H	3	—
11.5	19.9	I			6	N	2	—
11.8	20.8	II			2	K=H	2	—
10.5	7.6	I			6	N	1	—
10.6	10.2	I			6	N	2	—
10.5	11.5	I			3	N	1	—
11.0	17.8	I	b	15	3	N	1	—
10.6	18.2	I			5	N	1	—
10.0	10.5	I			4	N	1	—
10.0	12.4	I			4	K=H	1	—
10.0	12.8	I			6	N	11	— —
9.8	14.1	I			7	N	3	—
9.5	15.2	I			7	K=.5H	2	—
9.4	9.9	III			2	K=1.2H ~~K=1.5H~~	3	—
9.2	11.2	I			4	N	1	—
9.0	20.5	I			7	N	2	—
8.3	19.6	I			5	K=H	1	—
8.3	22.6	I			5	N	1	—
7.9	10.3	I			5	N	2	—
7.5	8.5	I	b	16	8	K=H	1	—
7.1	10.3	I			6	K=H	3	—
6.9	10.5	I			6	N	2	—
6.8	13.0	I			5	N	1	—
7.4	20.8	III			3	K=H	1	—
7.0	22.4	I			6	N	2	—
6.7	13.6	I			4	N	1	—

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1886phae.proj..829F

Mem 6

	No.	R.A.	Deg.	Mag.			Bv,				
1 21 +64.2	127	1	2.4	+64	5.9	191 5.5	5.3	.9	6.2	4.9	4.7
0 38 +74.1	29	0	38.2	+74	5.8	114 5.3	5.7	1.4	7.1	5.8	5.1
1 2 +54.4	236	1	2.3	+54	4.8	—	5.4	.6	6.0	4.7	4.5
0 36 +74.2	27	0	36.2	+74	5.5	104 5.6	5.8	1.4	7.2	5.9	5.2
0 58 +54.2	223	0	58.7	+54	5.7	—	6.0	.6	6.6	5.3	5.4
1 44 +54.9	408	1	44.2	+54	6.6	.	6.2	.6	6.8	5.5	5.6
1 48 +74.8	91	1	48.8	+74	6.5	.	6.0	1.5	7.5	6.2	5.4
1 30 +55.0	375	1	30.4	+55	7.5	.	6.5	.6	7.1	5.8	5.4
1 9 +54.7	258	1	9.0	+54	7.5	.	6.6	.6	7.2	5.9	6.0
0 48 +74.8	41	0	47.7	+74	8.0	.	6.8	1.4	8.2	6.9	6.2
1 38 +55.1	391	1	34.4	+55	7.1	.	6.8	.6	7.4	6.1	6.2
1 32 +75.1	72	1	32.1	+75	7.0	—					
	185	1	28.9	+65	8.7		6.9	1.5	8.4	7.1	6.3
	360	1	26.2	+55	7.2						
1 26 +65.1	182	1	26.0	+65	7.8	.	6.5 6.4	1.0	7.5	6.2	5.9
1 20.5 +65.4	175	1	20.8	+65	6.0	233 5.9	5.5	.9	6.4	5.1	4.9
1 10 +75.5	59	1	10.3	+75	6.2	—	5.8	1.5	7.3	6.0	5.2
1 51 +75.4	86	1	51.8	+75	5.0	—	5.9-6.2	1.5	7.4	7.1 6.1 6.4	5.3 5.6
1 42 +75.6	76	1	42.2	+75	6.8	.	6.4	1.5	7.9	6.6	5.8
0 49 +65.5	115	0	49.4	+65	6.0	151 6.0	5.4	1.0	6.4	5.1	4.8
1 2	255	1	2.2	+55	8.0	—					
0 50 +56.0	196	0	58.2	+56	6.6		6.6	.6	7.2	5.9	6.0
0 10 +75.5	7	0	10.2	+75	7.4	.	6.4	1.5	7.9	6.6	5.8
1 35 +56.4	334	1	35.3	+56	6.5						
1 51 +76.6	83	1	50.8	+76		5.3	6.0	1.6	7.6	6.3	5.4
1 48 +66.3	175	1	48.2	+66	7.2	—	6.3	1.0	7.3	6.0	5.7
1 49 +76.7	63	1	50.8	+76	5.3	—	5.7	1.6	7.3	6.0	5.1
1 35 +56.8	330	1	34.8	+56	6.4	.					
1 50 +66.9	161	1	38.9	+66	8.4		6.3	.7	7.0	5.7	5.7
1 25.9 +66.8	134	1	26.0 25.9	+66	7.3	.	6.2	1.0	7.2	5.9	5.6
0 19 +76.2	10	0	21.7	+76	6.5	—	6.4-6.7	1.6	8.0 8.3	7.0 6.7	6.1 5.8
0 8 +76.1	5	0	8.1	+76	6.5	35 6.2	6.3	1.6	7.9	6.6	5.7

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June 22, 1886.

Plate 284.

V.	Mo.	Type	Remark	No. Lines	K	Focus	other Lines.
6.0	10.8	III		2	~~X~~ K=H	1	—
6.0	11.9	I		~~8~~ 8	N	3	7
6.0	12.2	III?		2	K=H	1	—
6.0	13.1	I		~~5~~ 6	N	1	—
6.4	16.5	I		~~4~~ 6	N	2	—
5.9	15.0	III	b 17	~~4~~ 2	K=H	2	Reen.
5.9	16.1	~~X~~ II a	18	~~3~~ 2	~~X~~ K=H	1	Reen.
5.6	17.0	~~X~~ II a	19	~~4~~ 2	K=H	2	Reen.
6.0	18.3	I		~~4~~ 6	~~X~~ K=H	1	—
6.0	21.9	I		4	N	1	—
5.8	21.2	I I'		3 H'	N N'	1 1	— —
5.5	20.0	I		~~6~~ 8	N	2	—
4.8	11.1	I		~~3~~ 5	N	2	—
4.5	17.8	I		~~4~~ 7	N	3	—
4.4	9.5	I		~~4~~ 6	N	5	—
4.0	11.6	I		~~4~~ 5	N	1	—
3.7	13.3	III	b 20	~~3~~ 2	K=H ?	2	Reen.
3.0	19.3	I		~~4~~ 6	N	1	—
3.4	22.9	III		2	K=H	2	—
2.7	15.8	I		~~5~~ 6	N	2	—
2.3	7.2	I		3	N	1	—
2.3	10.4	I		3	N	1	—
1.7	15.4	I ?		~~4~~ ?	X ?	5	I.

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	Nr.	R.A.	Dec.	Mag.		Br	Mean 6.					
1 48 +77.2	73	1 48.5	+77	12	6.3	—	6.5–6.8	1.6	8.1	8.4	6.8 / 7.1	5.9 ✓ / 6.2
1 31.9 +64.4	149	1 31.7	+67	18	6.1	257 5.5 9 −4	5.4	1.0	6.4	5.1		4.8 ✓
1 28 +57.2	349	1 28.7	+57	14	6.0	—	6.7–7.1	.7	7.4	6.1	6.5	6.1 / 6.5 ✓
✓ 28 +77.2	58	1 27.6	+77	14	6.5	.	5.9	1.6	7.5	6.2		5.3 ✓
1 8 +64.1	108	1 8.5	+67	3	6.8	.	5.8	1.0	6.8	5.5		5.2 ✓
1 15.8 +64.4	123	1 15.8	+67	22	5.2	—	5.4–6.0	1.0	6.4–7.0	5.1 / 5.7		4.8 / 5.4 ✓
1 14 +57.4	274	1 14.2	+57	23	7.0	—	6.6	.7	7.3	6.0		6.0 ✓
1 11 +57.5	260	1 11.0	+57	28	6.1	—	5.8	.7	6.5	5.2		5.2 ✓
0 41 +77.2	27	0 40.5	+77	10	6.7	.	6.4	1.6	8.0	6.7		5.8 ✓
0 53 +57.0	180	0 53.1	+57	2	6.8	.	6.9	.7	7.6	6.3		6.3 ✓
0 55.9 +57.2	188	0 55.7	+57	12	7.6	.	7.0 6.8 ✓	.7	7.7	6.4		6.4 ✓
0 59.9 +57.5	200	0 59.7	+57	29	6.5	177 5.7 10 −3	6.0	.7	6.7	5.4 / 5.3		5.4 ✓
1 3 +57.9	370	1 32.7	+57	54	6.8	.	6.4	.7	7.1	5.8		5.8 ✓
1 0.9 +68.0	77	1 0.9	+68	0	6.0	184 5.3 9 −4	5.1	1.1	6.2	4.9 / 4.8		4.5 ✓
1 44.4 +67.9	169	1 44.8	+67	58	5.2	290 5.1 8 −5	4.8	1.1	5.9	4.6 / 4.5		4.2 ✓
1 31 +58.4	273	1 30.9	+58	19	7.2	.	6.4	.7	7.1	5.8		5.8 ✓
1 25 +58.5	260	1 24.5	+58	29	6.0	—	6.0–6.4	.7	6.7–7.1	5.4 / 5.8		5.4 / 5.8 ✓
0 52 +68.6	64	0 52.0	+68	34	7.0	.	5.8	1.1	6.9	5.6		5.2 ✓
0 48 +58.4	138	0 48.0	+58	23	5.0	—	6.1–6.4	.7	6.8	7.1	5.5 / 5.8	5.5 / 5.8 ✓
2 0 +78.9	34	2 0.0	+78	54	5.6	180 5.6 18 +5	5.6	1.8	7.4	6.1 / 7.0		5.0 ✓
1 48 +58.9	341	1 48.3	+58	55	7.0	.	6.6	.7	7.3	6.0		— ✓
1 56 +79.0	63	1 56.6	+79	0	6.7	.	6.6	1.8	7.8	6.5		— ✓
16.0 59 5	248	1 16.4	+59	29	3.0		4.4					
1 4 +77	36	1 3.9	+77	8	6.8	✓		1.8	6.2	4.9		— ✓

309 / 23 — 57.59 / 23

278 / 21 — 55.50 / 21

282 / 22 — 55.59 / 22

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October 13. 1886.

Plate 186.

2 30 V	H	Type	No. Lines Remarks.	K	Focus	No. other Lines.	
21.0	11.1	I b	21 6	N	2	Freen.	0
21.0	11.9	I	5	N	1	—	0
20.8	6.2	II a	22 2	K=1.2H ?	2	—	0
19.9	17.3	I	6	K=H	1	—	23
19.1	8.2	I	3	N	1	—	0
19.0	8.5	I	7	N ?	3	—	0
18.5	8.8	I	7	N	1	—	0
18.1	7.5	I b	23 4	N	1	—	0
18.0	10.2	I	8	N	2	—	0
19.3	16.8	II a	24 3	K=H	5	Freen.	0
19.0	17.1	I	7	K=.1H	2	—	23
19.1	20.6	I	4	K=H	1	—	23
18.3	18.2	I	4	N	1	—	23
18.0	16.5	I ?	2	N	1	—	0
17.5	8.8	I	4	N	1	—	0
17.5	12.0	I	6	N	1	—	0
17.2	11.5	I	6	N	2	—	0
17.0	11.2	I	7	N	2	—	0
16.7	11.6	I	6	K=.1H	2	—	0
16.5	10.0	I	5	K=H	1	—	0
17.4	19.7	I	3	N ?	1	—	23
16.5	20.1	I	7	K=.2H	2	—	23
16.4	21.4	I	5	N	1	—	23
16.0	22.8	I	5	K=H	1	—	23
15.5	24.0	III ?	2	K=H ?	2	—	23
15.9	19.6	I	7	N	3	—	23
15.0	15.6	I	6	K=.8H	1	—	23
15.2	14.9	I d	5	K=H	1	—	23

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	No.	R.A.	Dec.	MAG.					Br.	Mean 1.2			
0 24.5 +62.1	102	0 24.8	+62 8	4.5	71	4.2	2.4		5.8	.8	6.6		4.6
0 17 +52.3	61	0 17.3	+52 15	6.0	57	5.8	12		6.5	.5	7.0		5.3
0 40 +57.0	150	0 40.4	+57 2	3.8	—				5.7	.7	6.4		4.5
23 54 +72.9	1126	23 54.3	+72 48	6.5									
~~23 59 +63.4~~	~~2187~~	~~23 57.0~~	~~+63 22~~	~~5.4~~	—				6.8	.9	7.7		5.6
0 34 +58.0	132	0 34.2	+57 58	6.5	.				7.0	.7	7.7		5.8
0 29 +53.1	105	0 28.9	+53 6	4.1					4.7	.6	5.3		3.5
0 28 +53.4	102	0 28.1	+53 22	5.8	77	5.0	15		5.9	.6	6.5		4.7
0 41 +63.5	99	0 42.0	+63 27	5.8	130	5.4	24		6.9	.9	7.8		5.7
0 23.7 +53.7	82	0 23.8	+53 43	5.2	69	4.8	14		5.6	.6	6.2		4.4
0 2 +58.3	3	0 1.5	+58 21	2.2	—				4.2	.7	4.9		3.0
23 59 +63.4	2107	23 59.0	+63 22	5.4	—				6.0	.9	6.9		4.8
33 +73.2	1047	23 33.1	+73 10	5.6	—								
~~23 44 +63.2~~	~~2064~~	~~23 43.9~~	~~+63 11~~	~~6.6~~					7.4	.9	8.3		6.2
23 48 +73.7	1063	23 47.9	+73 36	7.0	4226	6.6	16		6.8	1.4	8.2		5.6
0 3 +58.9	11	0 3.0	+58 51	7.3					7.0	.7	7.7		5.8
0 54 +73.7	51	0 54.5	+73 26	6.8	.				6.8	1.4	8.2		5.6
0 22 +63.9	53	0 22.1	+63 57	7.0	.				7.1	.9	8.0		5.7
0 22 +59.2	68	0 22.3	+59 10	6.0	64	6.0	12		6.5	.7	7.2		5.3
0 38 +74.0	29	0 38.2	+74 4	5.8	114	5.3	25		6.4	1.4	7.8		5.2
0 36 +74.2	27	0 36.2	+74 12	5.5	—				6.4	1.4	7.8		5.2
0 28 +59.6	84	0 28.3	+59 31	6.0	—				6.5	.7	7.2		5.3
23 50 +59.2	2795	23 50.3	+59 13	6.7					6.8	.7	7.5		5.6
23 33 +74.5	1032	23 33.1	+74 28	6.5									
~~23 49.8 +54.9~~	~~3076~~	~~23 49.9~~	~~+54 55~~	~~6.0~~	—				6.5	.6	7.1	5.5	5.3
23 23 +74.4	1022	23 23.3	+74 26	7.0	.				6.7	1.4	8.1		5.5
23 12 +74.6	1016	23 12.3	+74 31	6.6	—				6.8	1.4	8.2		5.6
23 3 +74.6	1006	23 3.3	+74 36	4.6					6.2 - 6.4	1.4	7.6 - 7.8		5.0 5.2
23 51.9 +54.9	3082	23 51.7	+54 57	5.0	4237	5.0	12		5.6	.6	6.2		4.4
23 54 +60.4	2657	23 54.3	+60 24	6.0	—				6.4	.8	7.2		5.2
23 54 +65.3	1987	23 55.2	+65 17	6.3					6.7	.9	7.6		5.5

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Plate 186.

V	H	Type	No.	Remarks	No. Lines	K	Focus	Other Lines.	
15.0	16.0	I	I	3	4	NN	1 1	— —	
14.5	15.2	I		4	6	N	1	—	
16.1	6.3	I		5		N	2	—	
15.9	6.1	I		3		N	1	—	
14.9	5.2	I?		4	6?	N	4	—	
14.2	12.1	I		6		N	2	—	
14.0	11.9	I		4		N	1	—	
13.8	13.1	I		6		N	2	—	
13.5	11.6	I		4		N	2	—	
13.8	8.1	III	b.c. 25	1	2	K=1.5H	4	Bright Lines.	
13.6	6.7	I		5		N	1	—	
13.3	7.7	I	I	4	5	K=H	K=H 1 1	— —	
13.4	14.2	I		4		N	1	—	
13.5	14.6	I	I	3	4	N	K=H 1 1	— —	
13.2	15.5	I		5	6	N	2	—	
13.4	15.9	I		4		K=H	1	—	
13.0	16.3	I		5	6	K=.4H	2	—	
13.1	17.4	III	a 26	1	2	K=H	1	Rlll.	
13.0	18.0	I		4		N?	2	—	
13.6	21.0	I	b 27	5		N	2	Rlll.	
12.4	20.7	II la	28	4	2	K=H	2	Rlll.	
12.0	18.2	I		4	4	K=H	1	—	
11.9	19.5	III	b.c 29	2	2	K=1.2H.	3	Bright lines.	
11.8	20.6	I		7		N	2	—	
11.3	20.3	I		4	4	N	1	—	
11.0	20.4	I		3		N	1	—	
11.5	11.4	I		5	7	N	3	—	
10.9	12.0	I		4	5	K=H	1	—	

III 2: 6.7, 7.0

3 23

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Mean 12

	No.	R.A.	Dec.	Mag.			Br.				
0 4 +65.3	13	0 42	+65 19	7.0	.		7.3 7.0	.9	8.2	6.6	6.1
0 10 +75.5	7	0 10.2	+75 28	7.4	.		6.8	.5	8.3	6.7	5.6
0 37 +54.8[4]	143	0 37.0	+54 26	5.8	110	5.4 11	5.9	.6	6.5	4.9	4.7
0 38 +54.5	148	0 38.0	+54 31	7.3	.		7.0	.6	7.6	6.9	5.8
0 48 +59.9	144	0 48.0	+59 56	2.3			4.4	.8	5.2	3.6	3.2
0 23.5 +65.7	67	0 23.2	+65 43	6.5	.		6.1	1.0	7.1	5.5	4.9
0 18 +55	74	0 18.8	+55 50	6.5	.		6.4	.6	7.0	5.4	5.2
0 17 +61.0	69	0 16.8	+61 2	6.1	56	5.4 12	5.8	.8	6.6	5.0	4.6
0 26 +65.9	70	0 26.0	+65 57	6.5			6.5	1.0	7.5	5.6	5.3
0 32 +55.7	139	0 32.3	+55 45	Var.	—		4.8 - 5.3	.6	5.4	5.9	4.1
0 49 +65.6	115	0 49.4	+65 33	6.0	151	6.0 17	6.7	1.0	7.7	6.0	5.5
0 28 +56.4	91	0 28.1	+56 30	7.4	—		6.9 6.7	.6	7.5	5.9	5.7
0 13 +66.2	20	0 13.4	+66 12	7.0	.		7.4	1.0	8.4	6.8	6.2
0 9 +56.1	31	0 9.4	+56 6	7.2	.		7.8 7.4	.6	8.4	6.8	6.6
0 8 +76.2	5	0 8.1	+76 9	6.5	.		6.4	1.6	8.0	6.4	5.2
0 5 +61.2	16	0 5.5	+61 14	6.7	—		6.7	.8	7.5	5.9	5.5
0 3 +56.4	11	0 2.9	+56 21	6.7	—		6.5	.6	7.1	5.5	5.3
23 54 +66.4	1679	23 57.2	+66 21	6.0	—		6.7 - 7.0	1.6	7.7 - 8.0	6.1 - 6.4	5.8
23 56 +61.4	2586	23 56.8	+61 29	5.6			6.5	.8	7.3	5.7	5.3
23 39 +66.0	1943	23 39.4	+65 58	6.3	4199	6.0 14	6.4	1.0	7.4	5.8	5.2
23 47 +56.7	3111	23 47.2	+56 41	5.0	—		6.3	.7	7.0	5.4	5.1
23 45 +76.8	934	23 45.0	+76 48	6.9	—		6.9	1.6	8.5	6.9	5.7
23 33 +76.8	928	23 33.4	+76 50	3.5	—		5.5 - 5.8	1.6	7.1 - 7.4	5.5 - 5.8	4.3 4.6
23 41 +67.0	1862	23 41.6	+67 0	5.5	4204	5.1 18	5.9	1.0	6.9	5.3	4.7
23 26 +77.0	909	23 26.2	+77 0	6.8	.		6.7	1.6	8.3	6.7	5.5
23 26 +77.1	908	23 25.2	+77 5	7.0	.		7.0	1.6	8.6	7.0	5.8
0 25 +62.1	102	0 24.8	+62 8	4.5	71	4.2 17	5.1	.8	5.9	4.2	3.4
0 41 +77.2	27	0 40.5	+77 10	6.7	—		6.9	1.6	8.3	6.9	5.7

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October 14, 1886

Plate 186.

8 45

V	H	Type	No. Lines	Remarks:	K	Focus	Other Lines.
11.0	6.2	II a	30		K=1.5H	G	seen.
10.6	17.5	II a	31		K=H	1	seen.
10.5	17.9	II a	32		K=H	1	seen.
9.2	7.0	I	5		N	1	—
9.4	8.1	I	5		N	1	—
9.2	7.9	II a	33	2	K=H	1	seen.
9.0	8.7	I	4		K=H	1	—
8.5	9.1	II a	34	2	K=H	1	seen.
9.7	17.2	I	5		N	1	—
9.2	16.7	II a	35	2	K=H	5	F. seen
9.1	17.4	I	6		N	1	—
9.5	20.8	I	4		N?	1	—
10.0	22.5	III	2		K=H	1	F?
8.5	5.5	I	6		N	2	—
8.3	7.8	II a	36	2	K=H	1	seen.
8.0	16.3	I	6		K=5H	1	—
7.5	21.8	I	4		N	1	—
7.1	20.8	I	3		N	1	—
7.5	19.7	I	3		N	1	—
7.1	14.8	I b	37	5	N	2	seen
7.4	11.4	I	5		N?	2	—
7.1	10.7	I	7		K=.2H	2	—
7.5	9.2	I	5		N	1	—
7.7	7.4	I	5		N	1	—
6.5	10.0	I	4		K=.7H	1	—
5.8	11.4	I	4		N	1	—
5.5	12.6	I	5		N	1	—
5.1	18.5	II a	38	2	K=H	1	seen

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Mean 12

	No.	R.A.	Dec.	Mag.		Br.			
0 40 +57.0	150	0 40.4	+57 2	3.8	—	5.2	.7	5.9	4.0
23 58 +57.6	2865	23 58.7	+57 38	6.5	—	6.9	.7	7.6	5.7
23 57 +57.7	2855	23 57.4	+57 43	6.5	—	6.8	.7	7.5	5.6
1 28 +77.2	58	1 27.6	+77 14	6.5	.	6.5	1.6	8.1	5.3
0 34 +57.9	132	0 34.2	+57 58	6.5	.	6.4	.7	7.1	5.2
~~0 27.6 +77.3~~									
~~0 47.9 +57.9~~	81	0 47.6	+57 60	6.7	—	7.0	1.1	8.1	5.8
0 43 +68.1	57	0 43.6	+68 5	7.4	—	7.5	1.1	8.6	6.3
1 11 +78.0	49	1 11.2	+77 58	6.0	—	6.7	1.7	8.4	5.5
23 57 +68.1	1426	23 57.8	+68 4	7.0	.	7.0	1.1	8.1	5.5
0 1 +58.4	3	0 1.5	+58 21	2.2	—	~~5.7~~ 4.2	.7	6.4	~~4.8~~ 3.0
23 58 +63.4	2407	23 59.0	+63 22	5.4	1 5.5 13 ~~24~~ 3	5.9	.9	6.8	4.7
23 44 +63.2	2064	23 43.9	+63 11	6.6		6.6	.9	7.5	5.4
23 40 +57.9	2804	23 40.0	+57 50	5.3	—	6.5–6.8	.7	7.2–7.5	~~5.5 5.8~~ 5.3 ~~5.6–5.9~~ 5.65
1 0.9 +68.0	77	1 0.9	+68 0	6.0	184 5.3 21 ~~24~~ ~~5~~	6.3	1.1	7.4	5.1
0 42 +63.5	99	0 42.0	+63 27	5.8	—	6.4	.9	7.3	5.2
0 3 +58.9	11	0 3.0	+58 51	7.3	—	6.5	.7	7.2	5.3
23 42 +59.2	2777	23 41.8	+59 10	6.5	.	7.0	.7	7.7	5.8
23 13 +79.1	777	23 13.9	+79 6	7.8	.	7.4	1.7	9.1	6.2
23 50 +59.2	2795	23 50.3	+59 13	6.7	.	6.9	.7	7.6	5.7
0 18 +79.2	10	0 17.9	+79 14	7.0	.	6.8	1.8	8.6	5.6
0 22 +59.2	68	0 22.3	+59 10	6.0		6.7	.7	7.4	5.5
1 0 +78.9	34	1 ~~0.0~~	+78 54	5.6	—	6.3	1.8	8.1	5.1
0 30.5 +59.0	92	0 30.6	+59 1	6.5	.	6.8	.7	7.5	5.6
0 52 +68.6	64	0 52.0	+68 34	7.0	.	7.0	1.1	8.1	5.5
0 28 +59.5	84	0 28.3	+59 31	6.0	—	6.7	.7	7.4	5.5
0 32 +69.9	32	0 31.6	+69 55	7.0	.	7.2	1.2	8.4	6.0
0 24 +70.2	24	0 24.8	+70 10	6.2	.	6.8	1.2	8.0	5.6
23 54 +60.4	2657	23 54.3	+60 24	6.0	—	6.9	.8	7.7	5.4
~~0 54 +60.5~~	157	0 54.7	+60 18	6.5	—				

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Plate 186.

V	H	Type	No. Lines	K	Focus	other Lines.
		Remarks				
5.0	17.7	I	5	N	1	—
4.7	10.9	I	4	N	1	—
4.5	8.3	I	4	N	1	—
5.0	5.2	?	0?	K=3 N	4	—
4.3	6.1	I ?	4	K=H N	1	—
3.7	13.0	I	6	N?	1	—
2.0	20.9	I d	5	N	1	—
2.3	7.6	II a	39	K=H N	1	—

Plate 173.

22.0	16.7	I	6	K=.8 H	1	—
21.1	12.3	I	7	K=.2 H	2	—
20.1	21.2	I	5	N	2	—
19.9	9.4	I	4	K=H	1	—
19.6	8.8	I	6	K=H	1	—
19.0	18.6	I	8	N	3	—
17.6	8.5	I	2	N	1	—
18.1	15.8	I	4	N	1	—
17.2	16.1	I	5	K=.5 H	1	—
17.0	18.8	I	4	N	1	—
16.8	21.5	I	6	N	2	—
16.4	18.1	I	3	N	1	—
16.4	15.7	II a	40 2	K=H	1	seen.
16.2	9.3	I I	5 5	N N	2 1	— —
15.8	12.5	I	3	N	1	—
15.5	22.7	II a II a	41 2	K=H K=H	1 1	Fl. seen. Fl. seen.
15.0	22.4	I	5	N	2	—

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Mean 12

	No.	R.A.	Dec.	Mag.		Bz.				
23 57 +60.5	2667	23 57.6	+60 31	6.0	4258 6.0 15	6.7	1.8	7.5	5.5	✓
1 6 +80.1	36	1 6.2	+80 8	6.7	.	6.8	1.9	8.7	5.6	✓
0 50 +70.2	65	0 50.8	+70 13	6.5	.	7.1	1.2	8.3	5.9	✓
0 48 +59.9	144	0 48.0	+59 56	2.3	—	4.8	.8	5.6	3.6	✓
0 44 +60.3	124	0 44.5	+60 19	5.0	—	6.7	.8	7.5	5.5	✓
0 16.8 +61.0	69	0 16.8	+61 2	6.1		6.4	.8	7.2	5.2	✓
23 41 +67.0	1562	23 41.0	+67 0	5.5	4204 5.1	6.4	1.0	7.4	—	✓
1 51 +80.6	64	1 51.8	+80 36	6.1	—	7.0	2.0	9.0	—	✓

Mean 15

1 50 +76.6	63	1 50.8	+76 35	5.3	—	6.7	1.6	8.3	5.2	✓
2 19 +66.7	213	2 17.2	+66 45	4.7	—	5.8	1.0	6.8	4.3	✓
1 37 +67.3	149	1 31.7	+67 18	6.1	257 5.5 23	6.8	1.0	7.8	5.3	✓
2 32 +67.2	224	2 32.4	+67 12	6.6	—	7.0	1.0	8.0	5.5	✓
3 2 +77.2	115	3 2.2	+77 11	6.2	—	6.7	1.6	8.3	5.2	✓
1 45 +67.9	169	1 44.8	+67 58	5.2	290 5.1 18	5.8	1.1	6.9	4.3	✓
2 39 +68.3	200	2 39.1	+68 17	6.5	.	7.2	1.1	8.3	5.7	✓
2 0 +78.5	73	1 59.9	+78 29	7.3	.	7.3	1.7	9.0	5.8	✓
1 56 +79.0	63	1 56.6	+79 0	6.7	—	6.9	1.8	8.7	5.4	✓
1 48 +58.9	341	1 48.3	+58 55	7.0	.	7.3	1.7	8.0	5.5	✓
1 8 +78.8	34	1 8.0	+78 54	5.6	180 5.6 25	6.3	1.8	8.1	4.8	✓
1 51 +59.3	376	1 50.7	+59 15	7.0	.	7.4	.7	8.1	5.9	✓
2 0 +59.3	422	2 0.1	+59 18	6.8	—	7.5	.7	8.2	6.0	✓
2 26 +69.2	519	2 26.1	+59 13	6.8	.	7.0 6.7	.7	7.7	5.5	✓
2 36 +79.6	86	2 36.1	+79 29	7.0	.	7.2	1.8	9.0	5.7	✓
1 33 +59.8	306	1 32.8	+59 49	7.0	6.8 —	6.9	.7	7.6	5.4	✓
1 34 +69.8	307	1 33.6	+59 49	6.0	266 5.5 20	6.8	.7	7.5	5.3	✓

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Plate 173.

V	H	Type	No. lines	K	Focus	No. other Lines.	Remarks
15.0	20.6	I	6	N	3	—	
14.5	20.4	I	5	N	1	—	
14.7	18.0	I	4	N	1	—	
14.5	17.5	I	8	K=.2 H	4	—	
14.0	16.4	I	6	K=.1 H ~~K=.2 H~~	2	—	
13.5	16.4	I	5	K=.4 H ~~K=.2 H~~	1	—	
13.7	17.8	I	4	K=H	1	—	
13.5	18.6	I	5	N	1	—	
13.1	16.3	I?	K?	~~K=H~~	1	—	
13.0	18.6	I	5	N	2	—	
12.9	18.2	I	4	K=.7 H	1	—	
13.3	22.4	I	3	N	1	—	
14.0	23.4	II	4 5	N N	1 1	— —	
13.0	11.9	I	6	K=.5 H	2	—	
12.5	7.1	II a	42 4	K=H	2	Rem	
12.1	20.9	III	1	N	1	—	
11.7	17.2	I	10	K=.2 H	5	F.	
10.6	9.3	I	4	N	1	—	
10.5	12.1	III b	43	K=H	2	Rem.	
10.2	20.8	III	2	K=H	1	—	
9.6	16.2	III	2	K=H	1	—	
9.1	19.4	I	10	N? K=.1 H	5	F.	
8.8	20.6	I	7	K	3	—	
8.6	20.9	II a	44 2	K=H	1	—	
8.8	17.2	I	6	K=.5 H	2	—	
8.5	15.8	III	2	K=H	1	—	
8.4	14.0	I	4	K=H	1	—	
8.8	13.7	I	3	N	1	—	

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Mean 15

	No.		R.A.	Dec.	Mag.				Br.				
132+69.8	114	1	31.8	+69 52	5.2	260	5.1	19	5.8	1.2	7.0	4.8 4.9	4.3 ✓
15+80.1	36	1	6.2	+80 8	6.7	.			6.8	1.9	8.7	6.5 6.6	5.3 ✓
135+80.2	55 58	1 1	34.1 39.7	+80 10 +80 11	7.5 6.8	?			6.9	1.9	8.8	6.6 6.7	5.4 ✓ Am ☆ +80°
150+70.2	153	1	50.1	+70 11	4.6	—			5.3	1.2	6.5	4.1 4.4	3.8 ✓
152+80.6	64	1	51.8	+80 36	6.1	—			6.4	2.0	8.4	6.2 6.3	4.9 ✓
153+80.7	65	1	52.6	+80 46	6.7	—			6.9	2.0	8.9	6.7 6.8	5.4 ✓
135+80.6	57	1	34.9	+80 39	7.5	—			7.2	2.0	9.2	7.0 7.1	5.7 ✓
148+60.8	400	1	48.4	+60 50	7.5	.			6.8	.8	7.6	5.4 5.5	5.3 ✓
157+70.8	163	1	56.7	+70 52	7.2	—			7.0	1.2	8.2	6.0 6.1	5.5 ✓
148+60.9	398	1	48.3	+60 59	6.6	.			6.3	.8	7.1	4.9 5.0	4.8 ✓
145+71.0	111	1	45.3	+71 0	7.4	—			7.1	1.2	8.3	6.4 6.2	5.6 ✓
133+60.7	312	1	33.1	+60 41	6.3	.			6.9 ✓	.8	7.7	5.5 5.6	5.4 ✓
129+60.3	296 ✓	1	29.4	+60 20	7.2 ✓	.			7.0 6.8	.8	7.8	5.6 5.7	5.5 ✓
251+80.8	97	2	49.6	+80 54	5.5	—			6.0	2.0	8.0	5.8 5.9	4.5 ✓
346+80.3	125	3	46.0	+80 18	4.9	—			6.3	2.0	8.3	6.1 6.2	4.5 ✓
0 52−81.1	30	0	52.5	+81 11	8.3	—			7.3 7.7	2.0	9.3 9.7	7.6 7.6	6.2 ✓
151+71.7	117	1	51.2	+71 42	4.0	—			4.9	1.3	6.2	4.0 4.1	3.4 ✓
229+61.9	448	2	28.8	+61 58	7.0	.			6.8	.8	7.6	5.4 5.5	5.3 ✓
224+72.2	140	2	24.4	+72 10	5.0	—			6.4 6.6	1.3	7.7 7.9	5.6 5.7	4.9 ✓ 5.1
127+72.3	86	1	27.0	+72 17	5.2	—			6.5 6.7	1.3	7.8 8.0	5.6 5.7	5.0 5.2 ✓
156+82.8	51	1	55.1	+82 58	7.0	—			7.0 7.3	2.2	9.2 9.5	7.3 7.4	5.5 5.8 ✓
144+62.9	320	1	44.1	+62 57	3.3				4.8	.9	5.7	3.5 3.6	3.3 ✓
042+82.9	20	0	41.6	+82 55	6.5	—			5.7	2.3	8.0	5.8 5.9	4.2 ✓
137+63.1	238	1	37.3	+63 8	6.1	—			6.9	.9	7.8	7.6 7.7	5.4 ✓
150+73.2	108	1	50.5	+73 8	6.2	—			6.2	1.3	7.5	5.3 5.4	4.7 ✓
20+73.4	121	2	0.1	+73 20	6.5	—			6.9 7.1	1.4	8.3 8.5	6.11 6.3 6.0	5.4 ✓ 5.6
28+63.3	316	2	7.9	+63 16	7.0	—			7.4	.9	8.3	6 6.0	5.9 ✓
214+73.1	139	2	14.2	+73 3	6.9	.			7.0	1.3	8.3	6.1 6.2	5.5 ✓

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Plate 173.

T	H	Type	No. Lines	K	Focus	Other Lines. No. Remarks
8.0	10.9	I	3	N	1	—
7.7	13.8	I	5	N	2	—
7.8	17.5	I	4 5	N	2	—
7.7	20.7	I	5 6	N	1	—
7.3	19.7	I	6	K=H	1	—
7.4	18.3	I	4 8	K=1.1H N	3	—
7.3	16.9	I	3 4	K=H N	1	—
6.8	17.6	I	5	K=1.1H N	2	—
7.5	8.9	II?	3 2	K=H	2	—
6.8	x9.6	I	7	N	3	—
6.5	x8.1	I	6	N	3	—
6.3	13.1	III	bc 45 4 2	K=H	2	Reen.
6.5	17.2	I	5 6	N	2	—
5.5	17.4	I	6	K=.2H N	2	—
5.1	11.8	I	3 7	K=H N	1	—
5.0	9.5	I	3 4	K=H N	1	—
5.0	15.3	I	3	N	1	—
4.5	17.0	III	3 2	K=H	2	—
4.0	18.2	I	4 4	K=H N	1	—
III? 5.7, 6.1.	4.1	18.7	III	bc 46 4 2	K=H	13 Bright Lines.
	3.6	22.1	I	3 4	K=H N	1 —
	4.1	14.6	I I	4 4	N N	1 1 — —
	3.5	15.2	I	3 4	K=H N	1 —
	3.8	11.4	I?	3 4	K=H N	1 —
	2.6	13.3	I	7	K=H	2 —
	1.7	9.6	I	5	N	1 —
	1.7	10.5	I	3 5	N?	1 —
	1.5	12.5	I	3	N	3 —

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Mean 15

	No.	R.A.	Dec.	Mag.				Br.				
(3 24+83.1	91	3	24.8	+83	5	7.3	.		7.3	2.3	9.6	7.4 7.4 . 5.8 ✓
2 9+63.6	320	2	9.1	+63	40	7.0	.		6.6	9	7.5	5.3 5.4 . 5.1 ✓
1 52+63.7	274	1	52.3	+63	42	6.0	312	5.5 18 -4 -5	6.4	9	7.3	5.1 5.7 . 4.9 ✓
1 26+73.6	81	1	25.6	+73	33	6.5	.		6.5	1.4	7.1	5.7 5.8 . 5.0 ✓
0 49+83.8	20	0	48.4	+83	49	7.0	—		6.7	2.4	9.1	6.9 7.0 . 5.2 ✓
1 49+63.9	265	1	49.0	+63	55	5.5	—		5.7	9	6.6	4.4 4.5 4.2 ✓
1 53+74.2	95	1	53.8	+74	10	7.5	—		6.8	1.4	8.2	6.0 6.4 5.3 ✓
1 52+64.2	282	1	52.2	+64	12	6.0	—		6.0	9	6.9	4.7 4.8 4.5 ✓
3 58+82.9	113	3	58.5	+82	59	5.0	—		6.6	2.3	8.9	6.7 6.8 5.1 ✓
(3 55+83.5	104	3	55.1	+83	26	5.0	684	5.4 27 +5 +6	5.7	2.4	8.1	5.9 6.0 4.2 ✓
2 56+73.8	168	2	56.3	+73	50	5.2	493	4.7 22 +0 +1	5.5	1.4	6.9	4.7 4.8 4.8 ✓
2 58+84.4	59	2	58.8	+84	23	6.0	—		6.6 6.9	2.5	9.1 9.4	6.9 7.0 7.3 5.1 5.4 ✓
1 53+64.4	285	1	53.8	+64	24	6.5	.		6.4	9	7.3	5.1 5.6 4.9 ✓
1 48+74.8	91	1	48.8	+74	47	6.5	—		6.4	1.5	7.9	5.7 5.8 4.9 ✓
2 31+74.8	117	2	31.4	+74	46	7.2	—		6.9	1.5	8.4	6.2 6.3 5.4 ✓
2 48+74.6	131	2	48.6	+74	34	7.2	—		7.2	1.4	8.6	6.4 6.5 5.7 ✓
2 19+85.2	45	2	14.2	+85	10	8.6	.		7.1	2.7	9.8	7.6 7.7 5.6 ✓
1 52+75.4	86	1	51.8	+75	25	5.0	—		6.4 6.6	1.5	7.9 8.1	5.8 5.9 4.9 5.1 ✓
1 42+75.6	76	1	42.2	+75	30	6.8	—		7.1	1.5	8.6	6.4 6.5 5.6 ✓
0 49+85.5	19	0	49.7	+85	29	5.0	—		5.9 6.1	2.8	8.7 8.9	6.5 6.7 6.8 4.4 4.6 ✓
1 10+75.5	59	1	10.3	+75	28	6.2	—		6.9	1.5	8.4	6.2 6.3 5.4 ✓
2 7+75.7	90 ✓	2	7.1	+75	42	8.7 ✓	.		7.1 7.1	1.5	8.6	6.4 6.5 5.6 ✓
2 3+65.8	239	2	3.2	+65	50	6.0	—		7.0	1.0	8.0	5.8 5.9 5.5 ✓
3 52+85.2	63	3	52.4	+85	10	6.5	—		7.0	2.7	9.7	7.5 7.6 6.5 ✓
(3 20+86.2	51	3	19.5	+86	11	6.0	—		6.4	2.9	9.3	7.1 7.2 4.9 ✓
4 54+85.6	78	4	55.1	+85	32	7.0	.		6.5	2.8	9.3	7.2 7.3 — .
4 41+85.7	74	4	41.0	+85	45	6.0			6.7	2.9	9.6	7.4 7.5 — . ✓
2 17+66.7	213	2	17.2	+66	45	4.7	384	4.6 19 -3 -2	5.5	1.0	6.5	4.3 4.4 — . ✓

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Plate 173.

V	H	Type	No. Lines	K	Focus	Other Lines.
2.0	17.0	I	6	K=H	2	—
2.5	20.3	I	4	N	1	—
2.5	21.5	I I	3 3	X N	1 1	— —

Plate 161

		No. Remark				
21.5	10.8	I	5	N	2	—
21.5	16.9	I	3	N	1	—
20.9	12.8	II a	47 2	K=H	3	Reen.
20.9	21.7	I	7	N	4	—
20.5	16.5	III ?	2	K=H N	1	—
20.3	13.2	I I	4 4	N N	1 1	— —
19.3	9.8	II a	48 2	K=H ?	5	Reen
18.5	8.3	I	3	N	1	—
18.5	10.7	I I	5 6	N N	2 2	— F?
17.9	20.9	I	3	N	1	—
18.0	21.3	I	4	N	1	—
17.2	11.8	I	8	K=.1 H K=.2 H	4	—
16.5	16.2	I	6	N	2	—
15.7	13.0	I	3	N	1	—
15.1	8.3	I	8	N	3	—
15.0	8.8	I	4	N	1	—
III ? 5.9, 6.2.	14.8	14.1	III	lc. 49 2	K=H	2 Reen.
	15.2	20.1	I	3	N	1 —
	14.6	20.8	I	4	N	1 —
	13.8	9.3	I	4	N	1 —
	14.6	22.0	I	4	N	1 —
	13.6	20.2	III	2	K=H	1 —
	13.0	10.0	III	lc. 50	N	K=H 2 Reen.

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	No		R.A.	Dec.	Mag.				Br.			
1 50 +76.6	63	1	50.8	+76 35	5.3	—						
23 44 +85.9	409	23	52.8	+85 54	8.0	.						
	399	23	24.2	+85 37	7.5							
1 31 +66.2	~~145~~	~~1~~	~~30.9~~	~~+66 11~~	~~7.4~~	—						
2 50 +51.8	665	2	50.6	+51 47	5.7	470	5.1	16 −2 −3	6.2	5	6.7	4.8
2 28 +61.9	448	2	28.8	+61 58	7.0	.			7.3	.8	8.1	5.9
2 44 +52.2	641	2	44.0	+52 49	4.2	—			6.0	.5	6.5	4.6
1 51.9 +71.7	117	1	51.2	+71 42	4.0	306	4.1	24 +6 +5	5.2	1.3	6.5	3.5
2 24 +72.2	140	2	24.4	+72 10	5.0	—			7.0 / 7.2	1.3	8.3 / 8.5	5.6 / 5.8
2 44 +72.1	153	2	44.0	+72 5	7.0	.			7.3 7.2	1.3	8.6	5.9
2 54 +52.9	654	2	54.3	+52 56	3.2	—			5.2	.5	5.7	3.8
3 19.5 +72.8	178	3	19.4	+72 50	6.7	.			7.2	1.3	8.5	5.8
	390	2	55.0	+63 30	6.0							
3 5 +73.2	~~179~~	~~3~~	~~5.5~~	~~+73 10~~	~~7.4~~	.			6.5 6.3	1.3	7.8	5.1
2 9 +63.7	320	2	9.1	+63 40	7.0	.			7.0	.9	7.9	5.6
2 7.9 +63.7	315	2	7.7	+63 44	7.0	.			6.9	.9	7.8	5.5
2 56 +73.8	168	2	56.3	+73 50	5.2	—			5.2	1.4	6.6	3.8
2 32.8 +54.5	598	2	32.8	+54 30	6.0	424	5.6	14 −4 −5	6.4	.6	7.0	5.0
3 3.9 +74.7	144	3	3.6	+74 41	7.4	.			7.1	1.4	8.5	5.7
3 7 +65.1	340	3	7.2	+65 6	4.5	516	4.8	16 −2 −3	5.5	.9	6.4	4.1
3 5 +65.1	338	3	4.8	+65 6	6.5	.			7.0	.9	7.9	5.6
2 40 +55.3	714	2	40.2	+55 18	3.5	—			6.4 / 6.7	.6	7.0 / 7.3	5.0 / 5.3
2 19 +54.9	557	2	19.2	+54 53	6.5	.			7.4	.6	8.0	6.0
1 48 +74.8	91	1	48.8	+74 47	6.5	.			6.8	1.5	8.3	5.4
3 3 +65.8	335	3	3.6	+65 50	7.0	.			7.1	1.0	7.1	5.7
2 12 +55.2	598	2	12.3	+55 11	5.7	373	5.2	19 +1 −0	6.5	.6	7.1	5.1
1 52 +75.5	86	1	51.8	+75 25	5.0	—			6.5 / 6.8	1.5	8.0	5.1 / 5.4
2 54.8 +56.2	767	2	54.7	+56 8	5.0	—			6.6 / 6.9	.6	7.2 / 7.5	5.2 / 5.5

Mean 14

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Plate 161.

V	H	Type	No. Lines.	K	Focus	Other Lines.
			Remark:			
12.3	18.6	I	8	~~K=.5 H~~ K=.3 H	4	—
11.7	7.3	II? II	1 2	N K=H	11	— —
11.5	15.6	I	6	K=.2 H	2	—
11.5	19.8	I	6	~~K=H~~ K=.8 H	3	—
10.5	11.7	I	7	K=.5 H	3	—
10.0	13.9	I	~~4~~ 5	N?	1	—
9.4	22.1	I	4	N	1	—
9.0	9.0	I I	4 4	N N	1 1	— —
9.2	14.3	II[a] 51	~~4~~ 2	K=H	1	Reen.
8.4	12.3	I	~~5~~ 6	K=H	1	—
8.0	14.9	I	~~4~~ 5	~~K~~ K=.2 H	2	—
7.7	18.2	I	3	N	1	—
7.1	9.5	I	4	N	1	—
5.5	23.6	I[d] ~~I~~	~~4~~ 5? ~~6~~	~~K~~ K=H? ~~K=H~~	1 ~~2~~	— F?
4.8	22.6	I[d]?	~~4~~ 5	N?	3	—
3.6	8.7	~~I~~ II[a] 52	~~5~~ 2	K=H	2	Reen
3.6	13.1	~~I~~ II[a] 53	~~4~~ 2	K=H	1	Reen
3.3	13.5	I	6	K=.5 H	2	—
3.6	18.1	I	~~5~~ 6	N	2	—
3.5	22.1	I	3	N?	1	—
2.0	21.8	I	1 2	~~N~~ I	4	F?

Plate 258

22.5	15.1	I	~~5~~ 4	K=.1 H.	1	—
22.0	17.1	I	b 54 ~~5~~ 6	N	3	Reen.
21.6	10.2	I	~~3~~ 4	N	1	—
21.5	7.5	I	~~3~~ 5	K=H.	1	—
21.0	12.5	I	4	N	1	—

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Mean 14

	No.		R.A.	Dec.	MAG			Br.					
2 17 +66.7	213	2	17.2	+66	4.7	—		5.2	1.0	6.2	4.4 4.3	3.8 ✓	
3 5 +56.6	800 ✓	3	5.3	+56	8.9 ✓			6.9	7.0	.7	1.6 5.8 5.7	5.5 ✓	
2 32 +67.2	224	2	32.4	+67	6.6	—		6.0	1.0	7.0	5.2 5.1	4.6 ✓	
1 51 +76.6	63	1	50.8	+76	5.3	—		5.7	1.6	7.3	5.8 5.4	4.3 ✓	
3 2 +77.2	115	3	2.2	+77	6.2	—		5.5	1.6	7.1	5.3 5.2	4.1 ✓	
2 41 +54.7	651	2	40.9	+57	6.2			6.5	.7	7.2	5.4 5.3	5.1 ✓	
1 27 +77.3	58	1	27.6	+77	6.5	.		6.9	1.6	8.5	6.7 6.6	5.5 ✓	
3 29 +44.6	133 ✓	3	29.0	+77	7.2 ✓	.		7.0	6.8	1.7	8.7 6.7 6.6	5.6 ✓	
2 39 +68.3	200	2	39.1	+68	6.5	—		6.8		1.1	7.9 6.1 6.0	5.4 ✓	
1 58 +78.3	109	2	58.3	+78	7.0	—		7.0		1.7	8.7 6.9 6.8	5.6 ✓	Dec 109+78
~~460~~	~~3~~	~~58.0~~	~~+78~~	~~9.0~~									
2 36 +69.0	179	2	35.9	+69	6.5	—		6.6		1.1	7.7 5.9 5.8	5.2 ✓	
2 0 +78.5	73	1	59.9 2.0	+78	7.3	.		6.8		1.7	8.5 6.7 6.6	5.4 ✓	
3 6 +69.2	205	3	6.3	+69	6.5	.		~~6.6~~		1.1	7.7 5.9 5.8	5.2 ✓	
1 00 +78.9	34	1	0.0	+78	5.6								
~~1 43.9 +69.7~~	~~122~~	~~1~~	~~43.9~~	~~+69~~	~~8.0~~	—		6.5	6.4	1.2	7.7 5.9 5.8	5.1 ✓	
1 50 +70.2	153	1	50.1	+70	4.6			5.6		1.2	6.8 5.0 4.9	4.2 ✓	
3 45 +80.3	125	3	46.0	+80	4.9	—		5.9		1.9	7.8 6.0 5.9	4.5 ✓	
2 44 +609	591	2	44.5	+60	5.9	—		6.5		.8	7.3 5.5 5.4	5.1 ✓	
2 50 +809	97	2	49.6	+80	5.5	—		6.2		2.0	8.2 6.4 6.3	4.8 ✓	
1 53 +80.6	64	1	51.8	+80	6.1								
~~65~~	~~1~~	~~52.6~~	~~+80~~	~~6.7~~	.			6.1		2.0	8.1 6.3 6.2	4.7 ✓	
1 6 +80.2	36	1	6.2	+80	6.7			6.8		1.9	8.7 6.9 6.8	5.4 ✓	
1 51.8 +71.7	117	1	51.2	+71	4.0	306 4.1	~~27 +8~~	~~5.5~~		1.3	6.8 5.0 4.9	— ✓	
							~~16 13-6~~						
							6 6						
							89/5 7-8/5						

Mean 14.

3 18 +54.9	684	3	19.0	+54	4.8	—		~~6.6~~		.6	7.2 5.4	— ✓	
3 4 +65.1	340	3	7.2	+65	4.5	516 4.8 2.2 +4		6.1		.9	7.0 5.2 5.0	4.7 ✓	
3 36 +55.5	824	3	36.2	+55	6.5	.		6.9		.6	7.5 5.7	5.5 ✓	
3 53 +65.1	391	3	53.1	+65	6.6	—		7.0		.9	7.9 6.1 5.9	5.6 ✓	
3 28.5 +55.9	803	3	28.4	+55	7.0	. ✓		7.2		.6	7.8 6.2 6.0	5.8 ✓	

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Plate 258.

V	H	Type	No. Lines	K	Focus	No. Other Lines	Remarks
20.0	12.8	I	5	N	1	—	
19.4	9.9	I	5	N	1	—	
19.0	12.0	I	~~4~~ 6	~~K=H~~ K	1	—	
18.5	16.2	I	6	K=.5H	2	—	
17.5	8.9	I	5	N	2	—	
17.5	13.2	I	~~4~~ 5	N	1	—	
16.4	11.2	I	5	N	2	—	
16.5	14.3	I	~~4~~ 5	N?	1	—	
16.4	15.2	I	5	N	3	—	
16.2	16.4	I	~~4~~ 4	~~K=H~~ K	1	—	
15.3	15.2	I	5	N	2	—	
15.0	6.4	~~II~~ II a	55	2 ~~K=H~~	3	—	
14.2	15.4	I	4	K=.8H	4	—	
14.1	16.9	I	5	N	1	—	
13.8	13.0	I	4	~~K=H~~ K	1	—	
13.9	14.0	~~II~~	2	~~K=H~~ K	1	—	
13.5	15.7	I	~~4~~ 5	N	2	—	
13.4	8.6	I	5	N	1	—	
12.3	12.0	I	~~4~~ 7	K=H	3	—	
11.7	12.1	I	8	~~K=2H~~ K=.1H ~~K=H~~	3	—	
11.7	10.7	~~III~~ ?	~~4~~ 2	~~K=H~~	1	—	
11.5	10.6	I	4	N	1	—	
11.4	8.4	~~III~~	~~4~~ 1	N	1	—	
11.0	16.6	I	6	~~K=2H~~ K=.5H	2	—	
10.9	12.0	I	9	K=.2H	4	—	
10.1	8.5	III	2	K=H	1	—	
9.7	11.1	I	~~3~~ 4	~~K=H~~ K	1	—	
10.0	14.3	I	4	N	1	—	

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Mean 14

	No.	R. A.	Dec.	Mag.				Br.				
3 26.9 +56.5	826	3	27.0	+56 38	6.5	.		6.8	.6	7.4	5.6	5.4 ✓
3 38 +56.6	846	3	37.8	+56 40	7.0	.		6.7	.7	7.4	5.6	5.3 ✓
3 38 +66.8	284	3	32.3	+66 45	6.2	—		6.4	1.0	7.4	5.6	5.0 ✓
~~3 37 +56.6~~	~~737~~	~~3~~	~~30.2~~	~~+57 8~~	~~8.5~~			6.5	1.6	8.1	6.3	5.1 ✓
3 X +77.2	115	3	2.2	+77 11	6.2	—		6.5	.7	7.2	5.7 5.4	5.1 ✓
~~3 X +X.X~~	~~867~~	~~3~~	~~4.8~~	~~+66 45~~	~~8.5~~			7.2	.7	8.9	7.1	5.8 ✓
3 42 +57.5	752	3	42.0	+57 31	6.0	631	5.8 14.4	6.5	1.1	7.6	5.8	5.1 ✓
3 29 +77.7	133	3	29.0	+77 39	7.2	.		6.7	.7	7.4	5.6	5.3 ✓
3 37 +68.0	286	3	37.5	+68 3	6.5	.		5.9	.7	6.6	4.8 4.6	4.5 ✓
~~3 3X +58.4~~	~~846~~	~~3~~	~~34.0~~	~~+58 23~~	~~8.4~~			7.3	1.7	9.0	7.2	5.9 ✓
3 22 +58.3	619	3	21.9	+58 16	7.0			6.5	.7	7.2	5.4	5.1 ✓
3 18 +58.4	607	3	18.4	+58 22	5.0	553	4.8 18.0	6.4	.7	7.1	5.3	5.0 ✓
~~3 18 +58.8~~	~~608~~	~~3~~	~~18.6~~	~~+58 52~~	~~6.6~~			5.8	.7	6.5	4.7	4.4 ✓ Dm 660 +78°
3 2 +78.3	109	2	58.3	+78 19	7.0	—		6.8	1.1	7.9	6.1	5.4 ✓
3 52 +58.4	690	3	52.4	+58 45	5.0	—		7.0	1.1	8.1	6.3	5.6 ✓
3 17.4 +59.4	660	3	17.4	+59 26	4.5	—		6.9	.7	7.6	5.8	5.5 ✓
~~3 16 +59.5~~	~~658~~	~~3~~	~~16.8~~	~~+59 24~~	~~7.3~~			6.7	.7	7.4	5.6	5.3 ✓
3 6 +69.2	205	3	6.3	+69 12	6.5	.		6.6	1.8	8.4	6.6	5.2 ✓
3 28 +69.4	222	3	28.2	+69 23	7.2	—		5.9	1.9	7.8	6.0	4.5 ✓ Dm 125 +80°
3 23 +59.5	675	3	23.2	+59 33	7.0	—		5.8	1.2	7.0	5.2	4.4 ✓ Dm 257 +70°
3 1.7 +59.7	657	3	16.6	+59 44	6.7	.		6.8 } 7.1 }	2.0	8.8 9.1	7.0 7.3	5.4 } ✓ 5.7 }
4 22 +79.3	150	4	21.7	+79 21	7.0	.		7.0	2.0	9.0	7.2	5.6 ✓
3 47 +80.3	125	3	46.0	+80 18	4.9	—		6.7 } 7.0 }	.8	7.5 7.8	5.7 5.9	5.3 } ✓ 5.6 }
~~3 34.9 +70.5~~	~~257~~	~~3~~	~~34.2~~	~~+70 25~~	~~5.7~~			6.5	2.0	8.5	6.7	5.1 ✓
3 35.0 +70.4	257	3	34.2	+70 25	5.7	—		5.6	1.2	6.8	5.0	4.2 ✓
~~3 32 +60.9~~	~~735~~	~~3~~	~~32.8~~	~~+61 0~~	~~7.3~~			6.5 } 6.8 }	2.0	8.5 8.8	6.7 6.9	5.1 } ✓ 5.4 }
4 3 +80.5	133	4	2.0	+80 28	5.7	—		6.9	1.2	8.1	6.3	5.5 ✓
4 5 +80.6	134	4	4.2	+80 35	7.4	.		7.1	.8	7.9	6.1	5.7 ✓
3 45 +60.7	768	3	44.8	+60 40	5.8	—						
2 50 +80.9	97	2	49.6	+80 54	5.5	—						
3 35 +70.9	259	3	35.1	+70 52	4.3	—						
4 33 +80.9	155	4	33.4	+80 56	5.5	—						
3 40 +71.4	222	3	41.0	+71 22	6.5	—						
3 9.5 +61.5	559	3	9.4	+61 28	6.5	. ✓						

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Plate 258.

V	H	Type	No. Lines	K	Focus	Other Lines.	Remark
10.5	21.3	I	4	N	1	—	
9.4	11.1	I	3	N	1	—	Recorded on p. 36.
9.0	10.1	I	4	N	1	—	
7.6	9.1	I	6	N	3	—	
7.4	10.9	I	6	K=.5H	1	—	
7.4	11.7	II a	56	K=H	3	seen	
6.9	11.9	III ?	2	K=.7H	1	—	
7.0	14.6	I	4	N	1	—	
6.0	12.2	I	6	K=.1H.	3	—	
6.0	20.3	I	I ✓ 4 5 ✓	N N ✓	11	— —	
5.0	17.8	I	4	K=.2H	3	—	
2.9	17.4	I b	57	N	3	seen	
4.0	23.3	I	4	K=.7H	1	—	
2.4	7.8	I	4	N	1	—	

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Mean 14.

	No.	R.A.	Deg.	Mag.			3rr.				
~~3 52 +64.1~~ 1 51 +80.6	64	1 51.8	+80 36	6.1	·		6.9	2.0	8.9	7.1	5.5 ✓
3 40 +61.9	644	3 39.8	+61 53	7.0	·		7.0	.8	7.8	6.0	5.6 ✓ ·
3 45 +62.6	628	3 44.7	+62 38	5.2	639	4.8 18+0	5.8	.8	6.6	4.8 4.6	4.4 ✓ ·
3 37 +62.9	612	3 36.9	+62 51	6.5	—		6.4	.9	7.3	5.5	5.0 ✓ ·
3 33 +62.9	604	3 33.4	+62 53	5.3	—		6.3	.9	7.2	5.4	4.9 ✓ ·
3 57 +82.0	113	3 58.5	+82 59	5.0	—		6.7 } 7.0 }	2.3 }	9.0 9.3	7.7 7.5 }	5.3 } ✓ 5.6 } ·
3 19 +72.8	178	3 19.4	+72 50	6.7	·		6.9	1.3	8.2	6.4	5.5 ✓ ·
3 55 +83.4	104	3 55.1	+83 26	5.0	—		6.1	2.4	8.5	6.7	4.7 ✓ ·
2 39 +73.2	~~102~~ 390 ✓	2 ~~38.9~~ ~53.2	~~+73 32~~ +63 30	~~8.2~~ 6.0 ✓	·		6.8 6.8 ✓	1.3	8.1	6.3	5.4 ✓ ·
2 56 +73.8	168	2 56.3	+73 50	5.2	—		5.9	1.4	7.3	5.5	4.5 ✓ ·
3 7 +65.1	340	3 7.2	+65 6	4.5	516	4.8 20+2	5.9	.9	6.8	5.0 4.8	4.5 ✓ ·
0 42 82. ~~+43.9~~	20	0 41.6	+82 55	6.5	—		6.6	2.3	8.9	7.1	5.2 · ✓
3 53 +65.1	391	3 53.1	+65 6	6.6	· ✓		6.9	.9	7.8	6.0	— ·

$\frac{92}{5}$ $\frac{6-4}{5}$

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Plate 217.

	v	H	Type	Remark.	No. Lines	K	Focus	Other Lines.	
2 30	22.8	13.0	I		5	N	2	—	4
	22.9	16.8	I		6	N	2	—	3
	21.7	12.4	I?	II?	1	N	2	—	4
	22.4	19.9	~~I~~	II a?	2	~~K=H~~	1	Reen.	3
√	21.1	19.3	I	61	5 6	N N	1 1	— —	3
	20.4	9.3	I		~~3~~ 5	N	1	—	4
	20.3	19.1	I		~~6~~ 8	K=.2H N	2	—	3
	19.7	14.5	I		5 6	N	2	—	4
	19.2	18.0	I		3	N	1	—	3
	17.8	12.4	I	d	~~4~~ 5	N?	1	—	4
	17.1	6.7	II?		x 2	K=H ~~N~~	1	—	4
	17.4	19.0	I		7	N	2	—	3
	16.7	13.7	I		8	K=.2H	2	—	4
	16.8	20.7	I		5	N?	1	—	3
	16.0	20.9	I		5	N	1	—	
	16.0	19.0	I		~~4~~ 5	K=H ~~N~~	1	—	3
	15.8	9.1	~~I~~ II?		2	K=H? ~~N~~	2	—	4
	16.4	6.7	I		~~4~~ 6	K=H	1	—	4
	15.4	7.1	I		4	N	1	—	4
	15.0	6.1	I	d	~~4~~ 5	N	1	—	5
	14.6	10.3	I		6	N?	2	—	4
	14.8	14.4	I		3	N	1	—	4
	14.0	7.3	I		~~5~~ 6	N	2	—	4
	14.0	8.4	I		5	N	1	—	4
	14.2	15.9	~~I~~ II a	58	~~4~~ 2	K=H	1	Reen	3
	13.1	13.8	~~I~~ III		~~4~~ 2	K=H	1	—	4
	12.5	16.8	I		6	K=.5H	1	—	3
III? 6.6, 6.9.	12.3	20.3	III		1	N	1	—	3
	12.0	22.0	I		5	N	1	—	3

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Mean 13

	No.	R.A.	Dec.	Mag.					Br.				By
4 4 +49.9	1150	4	7.4	+49 56	4.8	719	4.6	20	6.1	.5	6.6	4.4	1
3 55.9 +49.9	1101	3	55.8	+49 57	4.2	671	4.5	19	5.9	.5	6.4	4.4	1
4 9 +50.6	973	4	9.3	+50 34	6.1	—			6.5	.5	7.0	5.0	5.2 1
3 45.9 +50.3	860	3	45.9	+50 16	5.7	—			6.9	.5	7.4	5.4	5.6 1
3 42.9 +60.4	762	3	42.6	+60 44	7.8	.			6.7	.8	7.7	5.7	5.4 3
4 35 +70.8	322	4	34.4	+70 40	6.3	.			7.0	1.2	8.2	6.2	5.7 3
3 35 +70.9	259	3	35.1	+70 52	4.3	—							
3 47 +51.3	814	3	47.3	+51 8	8.0				6.0	1.2	7.2	5.2	4.7 3
4 4 +61.5	687	4	4.2	+61 29	5.5	705	5.6	18	6.6	.8	7.4	5.4	5.3 2
3 41 +71.4	222	3	41.0	+71 22	6.5	.			7.0	1.2	8.2	6.2	5.7 3
4 17 +72.2	227	4	16.8	+72 13	6.0				7.0	1.3	8.3	6.3	5.7 3
4 28.5 +52.8	865	4	28.5	+52 47	5.4	—			6.8	.5	7.3	5.3	5.5 1
3 44 +62.1	628	3	44.7	+62 38	5.2	639	4.8	20	6.0	.8	6.8	4.6	4.7 2
4 5 +53.7	750	4	5.4	+53 14	5.0	—			6.1	.6	6.7	4.7	4.8 1
3 37 +62.9	612	3	36.9	+62 51	6.5				6.5	.9	7.4	5.4	5.2 2
3 19 +72.9	178	3	19.4	+72 50	6.7	.			6.9	1.3	8.2	6.2	5.6 3
3 47 +53.7	718	3	47.5	+53 34	6.8	—			7.0	.6	7.6	5.4	5.7 1
4 21 +53.6	779	4	20.6	+53 36	6.0	—			6.4	.6	7.0	5.0	5.1 1
4 28.5 +53.2	794	4	28.5	+53 10	5.4	—			6.5	.6	7.1	5.1	5.2 1
4 36 +63.3	536	4	36.6	+63 22	7.0	.			6.9	.9	7.8	5.8	5.6 2
5 0 +73.1	280	5	0.4	+73 6	5.8	918	5.7	22	6.6	1.3	7.9	5.9	5.3 3
4 23 +63.9	515	4	22.9	+63 57	6.3				6.5	.9	7.4	5.4	5.2 2
4 2.9 +54.1	749	4	3.0	+54 8	7.0	.			7.2	.6	7.8	5.8	5.9 1
4 54 +73.8	274	4	54.2	+73 45	5.5	890	5.5	21	6.2	1.4	7.6	5.4	4.9 3
4 46 +73.8	265	4	46.4	+73 49	6.3	864	6.0	20	6.6	1.4	8.0	5.8	5.3 3
3 58 +54.5	740	3	58.0	+54 26	6.0	—			6.8	.6	7.4	5.4	5.6 1
4 7 +64.8	433	4	7.1	+64 47	6.0	—			6.5 / 6.7	.9	7.4 / 7.6	5.4 / 5.6	5.2 / 5.4 2
3 53 +65.1	391	3	53.1	+65 6	6.6	—			6.8	.9	7.7	5.7	5.5 2
3 36 +65.1	369	3	36.2	+65 21	6.5	—			6.8 / 7.0	.9	7.7 / 7.9	5.7 / 5.9	5.5 / 5.7 2
3 36 +55.5	824	3	36.2	+55 28	6.5				6.8	.6	7.4	5.4	5.5 1

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Plate 217.

τ	H	Type	No. Lines for Remarks	K	Focus	Other Lines.
13.3	23.7	I	5	N	2	—
11.7	18.1	I	3	K=H N	1	—
10.7	8.5	I	~~4~~ 3	N	1	—
10.8	11.2	I	5	K=.8 H	1	—
10.9	12.5	I	~~5~~ 6	~~K~~ K=.3H	1	—
10.9	14.5	I	~~4~~ 5	N	1	—
10.0	7.2	~~I~~ II ?	6?	N	3	—
9.7	13.7	I	5	N	1	—
9.0	14.3	I	5	N?	1	—
9.2	14.5	I	5	N	1	—
10.0	19.6	I	4	K=H N	1	—
9.6	21.3	I	5	N	1	—
9.0	20.7	I	~~3~~ 5	K=H N	1	—
9.0	18.7	I	5	N	1	—
9.0	8.4	I	~~4~~ 5	N	1	—
8.7	9.0	~~I~~ II a 59	~~3~~ 2	N	1	Reen.
8.7	11.1	I	5	N	1	—
8.0	11.7	I	~~3~~ 4	N	1	—
8.4	13.9	III	2	K=H	1	—
8.1	20.1	I	5	N	1	—
6.9	18.1	I	~~3~~ 4	N	1	—
7.3	21.2	I	~~5~~ 6	K=.5H N	1	—
6.5	19.5	I	~~5~~ 6	K=.5H N	1	—
6.0	17.2	I?	7	K=H	2	—
6.5	13.7	I a	4	K=H N	1	—
4.7	12.5	I	5	K=.5H N	1	—
3.6	9.2	~~I~~ II a 60	~~4~~ 2	K=H N	1	Reen
3 45 1.9	15.9	I	2	N	1	—

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Mean 13

	No.	R.A.	Dec.	Mag.			Br.				Dp
2 56	+73.9	168	2	56.3	+73 50	5.2	493	47 28	6.1	1.4 7.5 5.5	4.8 ✓ .	3
3 50	+55.7	839	3	49.9	+55 37	7.5	—		7.0	.6 7.6 5.6	5.7 ✓ .	1
4 51	+75.5	208	4	50.5	+75 29	7.3	.		7.9	1.5 9.4 7.4	6.6 ✓ .	3
4 29	+75.7	189	4	29.4	+75 40	6.0			6.6	1.5 8.1 6.1	5.3 ✓ .	3
4 10	+56.1	905	4	10.7	+56 9	6.3	=		6.5	.6 7.1 5.1	5.2 ✓ .	1
4 2	+75.7	173	4	2.4	+75 45	6.8	.		6.8	1.5 8.3 6.3	5.5 ✓ .	3
4 39	+66.1	358	4	39.6	+66 4	5.0	—		5.8	1.0 6.8 4.8	4.5 ✓ .	2
4 5.9	+56.8	899	4	5.5	+56 49	7.3	.		6.8	.7 7.5 5.5	5.5 ✓ .	1
4 3	+57.1	785	4	3.2	+57 6	6.5			6.9	.7 7.6 5.6	5.6 ✓ .	1
4 4	+66.8	316	4	3.7	+66 44	7.4	.					
~~4 3~~	~~+57.1~~	~~785~~	~~4~~	~~3.2~~	~~+57 6~~	~~6.5~~			6.8	1.0 7.8 5.8	5.5 ✓ .	2
3 44	+56.5	857	3	44.2	+56 29	7.0	—		7.1	.6 7.7 5.7	5.8 ✓ .	1
3 37.9	+56.7	846	3	37.8	+56 40	7.0	.		6.8	.7 7.5 5.5	5.5 ✓ .	1
3 32	+66.8	284	3	32.3	+66 45	6.2	—		6.8	1.0 7.8 5.8	5.5 ✓ .	2
3 47	+57.0	760	3	47.1	+57 1	7.0	.		6.9	.7 7.6 5.6	5.6 ✓ .	1
4 5	+76.3	190	4	54.3	+76 17	6.7	.		6.9	1.6 8.5 6.5	5.6 ✓ .	3
4 23	+57.1	887	4	23.0	+57 7	6.8	—		7.0	.7 7.7 5.7	5.7 ✓ .	1
4 15	+57.2	800	4	15.0	+57 15	6.9	.		6.8	.7 7.5 5.5	5.5 ✓ .	1
4 18	+67.3	334	4	18.6	+67 19	7.3	.		7.0	1.0 8.0 6.6	5.7 ✓ .	2
4 5	+57.5	787	4	5.2	+57 29	6.0	—		6.8 7.0	.7 7.5 5.5 .7 7.7 5.7	5.5 ✓ 5.7 .	1
3 42	+57.5	752	3	42.0	+57 31	6.0	631	5.8 16	6.7	.7 7.4 5.4	5.4 ✓ .	1
3 29	+77.7	133	3	29.0	+77 39	7.2	.		7.1	1.7 8.8 6.8	5.8 ✓ .	3
3 2	+77.2	115	3	2.2	+77 11	6.2	—		6.7	1.6 8.3 6.3	5.4 ✓ .	3
3 37	+68.0	286	3	37.5	+68 3	6.5	—		6.9	1.1 8.0 6.0	5.6 ✓ .	2
3 52	+58.8	690	3	52.4	+58 45	5.0	—		6.4	1.7 8.1 6.1	5.1 ✓ .	1
4 6	+58.4	727	4	5.8	+58 25	7.1	—		7.1	1.7 8.8 6.8	5.8 ✓ .	1
4 10	+59.3	793	4	10.6	+59 16	6.5	—		6.8	.7 7.5 5.5	5.5 ✓ .	1
4 59	+79.0	169	4	58.8	+79 3	5.2	—		6.7	1.8 8.1 6.5	5.4 ✓ .	3
3 45	+80.3	125	3	46.0	+80 18	49	650	5.2	6.9	1.9 8.8 6.6	✓ .	3

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October 16, 1886.

Plate 275.

			Type	No. Remark.	Lines	K	Focus	other Lines.
8	45							
–		22.1	15.0	I	~~X~~ 5	N	3	–
		22.0	16.2	I	4	~~N~~ K=.2H	1	–
		19.5	6.7	I	5	N	2	–
		18.8	12.0	I	~~X~~ 5	~~N~~ K=H	1	–
		18.5	7.9	I?	2?	N?	1	–
		17.5	11.6	I	6	N	3	–
		18.0	12.2	I	~~X~~ 3	N	1	–
		17.2	13.[illegible]	I	~~X~~ 4	~~N~~ K=H.	1	–
		16.6	13.[illegible]	~~X~~ II[a] 62	~~X~~ 2	K=H	3	Reen.
√	VI	16.9	19.4	I IV.	~~X~~ 3 4	N K=H	1 1	– –
		16.6	[illegible].5	I	~~X~~ 4	~~N~~ K=H	1	–
		16.0	16.6	I	5	N	1	–
		15.0	12.3	I	4	~~X~~ K=H	1	–
		14.5	12.5	~~III~~ c. 63	5	K=H	3	–
		14.1	9.8	I	~~X~~ 5	~~N~~ K=H	1	–
		13.9	19.4	~~X~~ II[a] 64	~~X~~ 2	~~K~~ K=.8H. ?	2	Reen
		13.7	18.1	III	1	N	1	–
↓		13.5	15.9	I	4	N	1	–
III	6.4, 6.8.	13.0	15.4	III	4	~~N~~ K=H	2	–
		12.7	15.0	I II[b]	4	N?	1	–
		13.4	13.1	~~I~~ ? 65	~~X~~ 2	K=H?	1	Reen.
		13.4	6.6	I	~~X~~ 5	N	1	–
		13.1	6.1	~~I~~ II[a] 66	2	~~K~~ K=K	1	Reen.
		11.5	10.5	I	~~X~~ 7	N	2	–
		11.5	11.3,	~~I~~ III	1	N	1	–
		11.7	23.7	I	4	N	2	–
		11.2	23.4	I	4	N	2	–
		10.5	18.6	I	~~X~~ 5	~~K=H~~ K=.5H	2	–,

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Mean 12

	No.	R.A.	Dec.	Mag.			Br.			
4 39 + 66.1	358	4 39.6	+66 4	5.0	836	4.4 2.1 +2	5.5	1.0	6.5	4.6 / 4.3
4 36 + 56.5	973	4 36.0	+56 30	5.8	—		6.6	.6	7.2	5.3 / 5.4
5 11 + 57.4	819	5 ~~11.0~~ 11.1	+57 24	5.3	953	5.3 19 ± 0	6.5	.7	7.2	5.3 / 5.3
5 8 + 77.8	195	5 7.2	+77 50	7.0	—		6.9	1.7	8.6	6.7 / 5.7
5 7 + 57.9	874	5 7.0	+57 57	6.5			6.6	.7	7.3	5.4 / 5.4
4 54 + 68.8 *	805	4 53.6	+58 49	6.5						
	804	4 53.6	+58 45	6.0	885	5.1 14 - 5	5.8	.7	6.5	4.6 / 4.6
6 + 78.2	187	5 6.1	+78 8	7.0	.		7.1	1.7	8.8	6.9 / 5.9
4 51 + 68.8	361	4 50.6	+68 46	6.5	—		7.2	1.1	8.3	6.4 / 6.0
4 58 + 79.0	169	4 58.8	+79 3	5.2	—		5.8	1.8	7.6	5.7 / 4.6
4 14 + 69.0	258	4 14.7	+69 2	7.0	.		7.2 7.0	1.1	8.3	6.4 / 6.0
4 31 + 59.2	826	4 30.8	+59 14	6.9	—		7.0	.7	7.7	5.8 / 5.8
4 22 + 79.4	150	4 21.7	+79 21	7.0	.		6.8	1.8	8.6	6.7 / 5.6
9 + 79.7	173	5 9.0	+79 43	7.7	—		6.9	1.9	8.8	6.9 / 5.7
4 50 + 60.2	856	4 50.6	+60 13	5.0	—		5.8 / 5.9	.8	6.6 / 6.7	4.7 / 4.6 / 4.7
5 10 + 70.1	351	5 10.6	+70 6	6.7	—		7.1	1.2	8.3	6.4 / 5.9
3 47 + 80.3	125	3 46.0	+80 18	4.9	—		6.0	1.9	7.9	6.0 / 4.8
4 2 + 80.5	133	4 2.0	+80 28	5.7	—		6.7 / 7.0	2.0	8.8 / 9.0	6.8 / 7.1 / 5.5 / 5.8
4 34 + 70.7	322	4 34.4	+70 40	6.3	.	.	6.4	1.2	7.6	5.7 / 5.2
4 33 + 80.7	155	4 33.4	+80 58	5.5	—		6.6 / 6.9	2.0	8.6 / 8.9	6.7 / 7.0 / 5.4 / 5.7
4 41 + 61.2	739	4 40.6	+61 14	6.9			6.8	.8	7.6	5.7 / 5.6
4 49 + 60.8	858	4 48.6	+60 51	7.0	—		6.4	.8	7.2	5.3 / 5.2
6 15 + 79.7	208	6 15.4	+79 41	6.3	1209	6.3 26 + 7	7.0	1.9	8.9	7.0 / 5.8
6 22 + 79.7	212	6 21.4	+79 42	5.5	—		6.6	1.9	8.5	6.6 / 5.7
5 0 + 61.6	766	4 59.8	+61 40	6.7	.		6.3	.8	7.1	5.2 / 5.1
3 + 71.6	299	5 3.8	+71 33	6.8	—		6.8 / 7.1	1.2	8.0 / 8.3	6.1 / 6.4 / 5.6 / 5.9
4 4 + 61.5	687	4 4.2	+61 29	5.5	705	5.6 12 - 7	6.0	.8	6.8	4.9 / 4.8
2 50 + 80.8	97	2 49.6	+80 54	5.5	476	~~5.8~~ 6.0 ~~26 + 7~~ 24 + 5	6.4	2.0	8.4	6.5 / 5.2
4 17 + 72.2	227	4 16.8	+72 13	6.0	—		6.5	1.3	7.8	5.9 / 5.3

* Spectra of both stars superimposed on plate. Mean of brightness is combined light of both.

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Plate 275.

v	H	Type	No. Lines	K	Focus	Other Lines.
10.5	11.4	I	~~3~~ 4	~~N~~ K=H	1	—
10.0	10.6	I	~~3~~ 4	~~N~~ K=H	1	—
9.7	12.8	I	4	N	1	—
9.0	8.8	I	4	N	1	—
9.0	10.4	?	2	~~N~~ K=H	1	—
8.6	12.1	I	6	N	3	—
8.5	16.0	I	~~4~~ 5	N	1	—
8.8	17.5	~~II~~ III ?	~~4~~ 2	K=H	2	—
8.2	11.4	I ?	1	N	1	—
7.5	13.1	I	7	N	3	—
7.5	13.9	I	4	N	1	—
7.4	14.2	I	6	N	2	—
8.0	17.6	I	6	N	3	—
7.4	19.0	I	~~1~~ 7	~~N~~ K=.2H K=H	2	—
6.5	9.0	I	~~2~~ 4	~~N~~ K=H	1	—
6.0	10.0	I	~~2~~ 4	~~N~~ K=H.	1	—
6.4	11.1	I	5	N	1	—
5.5	11.9	I α ?	~~4~~ 4	~~N~~ K=H. ?	1	—
5.3	19.9	III ?	~~2~~ 2	~~N~~ K=H	1	—
5.5	22.3	I ?	~~3~~ 4	~~N~~	1	—
4.0	13.9	I	~~3~~ 4	N	1	—
3.9	14.5	I	5	N	1	—
3.7	16.5	I	5	K=H	1	—
3.3	19.8	I	4	N	1	—
3.5	15.1	I α 66°	2	N ?	1	—
3.1	15.3	I.	~~4~~ 8	N ?	4	—
2.5	7.2	I	4	N	1	—
2.5	13.5	I	~~5~~ 6	N	1	—
2.2	17.8	I ?	4	K=H	2	—

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Mean 121.

	No.	R.A.	Dec.	Mag.					Br.				
4 56+62.3	730	4	56.3	+62	17	7.0	—		6.7	.8	7.5	5.6	5.5
5 0+62.5	734	5	0.1	+62	30	6.7	—		6.6	.8	7.4	5.4	5.4
4 55+72.5	258	4	55.0	+72	33	7.9	.		6.9	1.3	8.2	6.3	5.7
6 13+82.2	177	6	13.8	+82	13	6.7	.		6.5	2.2	8.7	6.8	5.3
5 1+62.9	735	5	1.0	+62	55	7.5	—		6.8	.9	7.7	5.8	5.6
5 0+73.1	280	5	0.4	+73	6	5.8	918	5.7 15 -4	5.9	1.3	7.2	6.1	4.7
4 36+63.4	536	4	36.6	+63	22	7.0							
	~~543~~	4	38.6	+63	15	5.8	831	5.9 18 -1	6.8	.9	7.7	5.8	5.6
3 58+82.9	113	3	58.5	+82	59	5.0	—		6.5 6.8	.8 2.3	6.6 9.1	5.3 7.2	5.3 5.6
4 57+63.4	566	4	57.0	+63	23	7.0	.		7.0	.9	7.9	6.0	5.8
4 54+73.7	274	4	54.2	+73	45	5.5	890	5.5 17 -2	5.8	1.4	7.2	5.3	4.6
5 1+83.7	141	5	0.6	+83	43	7.1	.		7.0	2.4	9.4	7.5	5.8
4 46+73.8	265	4	46.4	+73	49	6.3	864	6.0 17 -2	6.3	1.4	7.7	5.8	5.1
3 55+83.4	104	3	55.1	+83	26	5.0	684	5.4 28 +9	5.8	2.4	8.2	6.3	4.6
4 29+63.9	515	4	22.9	+63	57	6.3	—		6.4	.9	7.3	5.4	5.2
5 24+73.9	298	5	24.4	+73	54	6.8	—		6.8	1.4	8.2	6.3	5.6
5 18+74.3	249	5	18.2	+74	12	7.0	—		6.9	1.4	8.3	6.4	5.7
5 10+74.2	242	5	9.8	+74	10	7.1	.		6.8	1.4	8.2	6.3	5.6
4 55+64.7	500	4	55.7	+64	43	6.9	—		7.1	.9	8.0	6.1	5.9
2 58+84.5	59	2	58.8	+84	23	6.0	—		6.8 7.0	2.5	9.3 9.5	7.4 7.6	5.6 5.8
4 7+64.8	433	4	7.1	+64	47	6.0	—		6.8	.9	7.7	5.8	5.6
4 50+75.5	208	4	50.5	+75	29	7.3	.		7.2	1.5	8.7	6.8	6.0
4 55+85.5	78	4	55.1	+85	32	7.0	.		6.8	2.8	9.6	7.7	5.6
4 29+75.7	189	4	29.4	+75	40	6.0	—		6.6	1.5	8.1	6.2	5.4
4 x+75.7	173	4	2.4	+75	45	6.8	.		6.8	1.5	8.3	6.4	5.6
4 39+85.7	74	4	41.0	+85	45	6.0			7.0	1.8	8.8	6.9	5.8
4 39+66.1	358	4	39.6	+66	4	5.0			5.5	1.0	6.5	4.6	4.3
7 42+84.5	169	7	41.6	+84	28	6.0							
~~4 46+75.6~~	247	5	48.2	+75	34	6.2	.		~~6.8~~	1.5	8.3	~~6.4~~	
4 54+76.3	190	4	54.3	+76	17	6.7	.		~~6.7~~	1.6	8.3	~~6.4~~	
3 19+86.2	51	3	19.5	+86	11	6.0			~~6.5~~	2.9	9.4	~~7.5~~	

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2 15 Plate 341.

V	H	Type	No. Lines.	Remarks	K	Focus	No. Other Lines.	
22.3	21.0	I	5		K=H	1	—	
22.0	18.3	I b	67 5		K=.5H?	1	—	
19.8	10.0	I d?	4 H	Id	N ? N	1 1	—	—
19.3	23.4	I d	4		K=H?	1	—	
19.0	18.5	I	4		N	1	—	
18.6	16.7	I	6		N	2	—	
18.3	22.9	I d	I d 5		K=.4H?	N 1	1 —	—
18.0	23.6	I d	6		K=.4H.	2	—	
17.0	18.5	I	5		N	1	—	
16.5	15.2	I	5		N	1	—	
16.0	15.4	I	4		K=H	1	—	
15.5	13.5	I	4		N	1	—	
15.8	18.8	I	3		N	1	—	
15.6	10.0	I I	2 H		K=H N	1 1	—	—
14.1	12.0	III	1		N	1	—	
13.8	17.6	I	4		N	1	—	
13.6	7.0	I d?	6		K=.8H	2	—	
13.0	9.5	I	5	K=H		1	—	
13.0	20.1	I	5		N?	2	—	
13.0	21.8	I	4?		N	3	—	
12.4	13.2	I	6		N	1	—	
12.4	17.0	I	6		N	1	—	
12.0	20.0	II a	68		N	1	Perh.	
11.7	20.3	I	4		N	1	V	
12.0	23.3	I	3		N	1	—	
11.4	8.5	I	4		K=H	1	—	
11.1	8.6	I d	4		K=H	1	—	
11.5	9.5	I	4		N	1	—	

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Mean 10

	No.	R.A.	Dec.	Mag.					Bz.				
H 34+70.7	322	4	34.4	+70 40	6.3	—			6.5	1.2	7.7	6.5	5.5
G 0+61.6	766	4	59.8	+61 40	6.7	—			6.7	.8	7.5	6.0	5.7
G 32+52.3	989	4	31.8	+52 23	7.0				6.8 6.7	.5	7.3	5.8	5.8
~~G 61+69.9~~	~~845~~	~~4~~	~~52.2~~	~~+53 2~~	~~8.8~~								
H 17+74.2	227	4	16.8	+72 13	6.0				6.7	1.3	8.0	6.5	5.7
G 3+63.0	872	5	3.1	+53 2	6.5	921	6.2	13 -2	6.9	.6	7.5	6.0	5.9
G 0+73.1	280	5	0.4	+73 6	5.8	918	5.7	17 +2	6.1	1.3	7.4	5.9	5.1
H 15+72.9	224	4	15.0	+72 55	8.4				7.4 7.3	1.3	8.7	7.2	6.4
H 46+63.5	829	4	45.7	+63 30	6.0	—			5.9	.6	6.5	5.0	4.9
H 46+73.8	265	4	46.4	+73 49	6.3	864	6.0	17 +2	6.3	1.4	7.7	6.2	5.3
G 10+74.2	242	5	9.8	+74 10	7.1				6.9	1.4	8.3	6.8	5.9
G 9+74.4	241	5	8.8	+74 24	7.1	—			6.9	1.4	8.3	6.8	5.9
G 21+64.9	534	5	20.6	+64 56	7.7				7.0	.9	7.9	6.4	6.0
H 55+64.7	500	4	55.7	+64 43	6.9				7.1	.9	8.0	6.5	6.1
G 38+65.1	499	5	37.8	+65 6	7.6	—			7.2 7.2	.9	8.1	6.6	6.2
G 28+65.6	485	5	28.0	+65 38	6.0	—			7.0 7.4	1.0	8.0 8.4	6.5 6.9	6.0 6.4
H 5+[illegible]	208	4	50.5	+75 29	7.3				6.9	1.5	8.4	6.9	5.9
G 42.5+55.6	1027	5	42.7	+55 40	5.0	—			6.2	.6	6.8	5.3	5.2
~~G 13+56.2~~	~~989~~	~~5~~	~~11.6~~	~~+56 56~~	~~6.5~~								
G 34+56.0	1058	5	34.3	+56 2	6.1	—			6.5	.6	7.1	5.6	5.5
H 29+75.7	189	4	29.4	+75 40	6.0				6.4	1.5	7.9	6.4	5.4
H 39+66.1	358	4	39.6	+66 4	5.0	836	4.4	20+5	5.4	1.0	6.4	4.9	4.4
G 23+66.6	401	5	22.4	+66 36	7.0				6.6	1.0	7.6	6.1	5.6
H 54+76.3	190	4	54.3	+76 17	6.7				6.0	1.6	7.6	6.1	5.0
H 48+66.6	370	4	48.2	+66 37	7.0	—				0	7.9	6.4	
~~H 26+76.4~~	~~174~~	~~4~~	~~26.0~~	~~+76 19~~	~~6.3~~	~~—~~			6.9	1.6	8.5	[illegible]	5.9
H 26+76.4	174	4	26.0	+76 19	6.3				6.7	1.6	8.3	6.8	5.7
H 3+75.7	173	4	2.4	+75 45	6.8				6.7	1.5	8.2	6.7	5.7
G 38+56.8	1055	5	38.2	+56 52	6.6								
~~H 6+70.1~~	~~787~~	~~4~~	~~5.2~~	~~+57 29~~	~~6.0~~	—			6.8	.7	7.5	6.0	5.8
G 46+67.0	419	5	45.8	+67 2	7.0	—			6.9	1.0	7.9	6.4	5.9
G 35+56.8	1059	5	34.6	+56 51	6.6				7.0	.7	7.7	6.2	6.0

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Plate 341

V	H	Type	Remarks	No. Lines	K	Focus	other Lines.
10.8	15.9	I		6	N	2	—
11.0	17.7	I		3	N	1	—
9.4	15.3	I		7	K=.5H	1	—
9.5	17.0	I		5	N	1	—
8.8	15.4	II a	69	5 2	K=H	1	Reen.
7.9	20.4	I		6	N	3	—
7.8	8.9	I d ?		4	N ? K=H	1	—
7.5	8.5	I d		5	N	1	—
7.0	16.1	II a	70	2	N K=1.2H	3	Reen.
6.0	6.2	I d ?		5	N K=H ?	1	—
5.5	8.0	I d		5	N K=H. ?	1	—
5.0	9.2	I d		5	N ?	1	—
4.8	8.7	II a	71	2	N K=H. ?	1	Reen.
5.0	13.4	I		4	N	1	—
5.7	15.1	I		6	N K=.5H	1	—
5.6	15.4	I		3	N	1	—
5.9	19.4	I		5	N	1	—
4.9	21.0	II ?		2	N K=1.2H ?	2	—
3.0	17.8	III		2	N K=H	1	—
3.3	20.5	III		2	N K=H	1	—
3.0	21.9	II a	72	2	N K=H.	2	F ? Reen.
2.0	18.5	I		4	N	1	—

Plate 165.

18.4	V.3	I			K=H		
17.9	15.9	I		6 5	N	1	—
17.2	8.9	I		6	N	3	—
16.9	11.7	I		8	K=1H ~~K=.2H~~	3	—
17.5	19.6	II a	73	2	K=H	1	Reen

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Mean 10

	No.	R.A.	Dec.	Mag.			Br.				
G 11 + 67.4	879	5	11.0	+67 24	5.3	953 5.3 13 -2	5.9	1.7	6.6	5.1	4.9
459 + 67.3	371	4	59.1	+67 17	7.0	.	7.1	1.0	8.1	6.6	6.1
G 7 + 77.8	195	5	7.2	+77 50	7.0	—	6.2	1.7	7.9	6.4	5.2
G 7 + 57.9	874	5	7.0	+57 57	6.5	937 6.3 9 -6	6.5	.7	7.2	5.7	5.5
G 6 + 78.2	187	5	6.1	+78 8	7.0	—	6.6	1.7	8.3	6.8	5.6
4 54 + 57.7	805	4	53.6	+58 49	6.5	885 5.1 16 +1 *	6.0	.7	6.7	5.2	5.0
	804	4	53.6	+58 45	6.0						
6 11 + 78.3	226	6	10.5	+78 17	7.5		6.4	1.7	8.1	6.6	5.4
G 395 + 58.9	863	5	39.6	+58 54	6.5		6.5	1.7	8.2	6.7	5.5
~~6 11 + 78.3~~	~~226~~	~~6~~	~~10.5~~	~~+78 17~~	~~7.5~~	—					
4 59 + 79.0	169	4	58.8	+79 3	5.2	—	5.5	1.8	7.3	5.8	4.5
6 3 + 69.4	371	6	2.8	+69 22	4.7	—	5.9	1.1	7.0	5.5	4.9
G 42.0 + 59.9	920	5	42.0	+59 50	5.7		6.0	.8	6.8	5.3	5.0
~~4 9 + 60.4~~	~~800~~	~~4~~	~~9.2~~	~~+60 24~~	~~5.7~~	—					
6 15 + 79.7	208	6	15.4	+79 41	6.3		6.3	1.9	8.2	6.7	5.3
6 21 + 79.7	212	6	21.4	+79 42	5.5	—	5.6	1.9	7.2	5.7	4.6
G 22 + 70.3	362	5	22.4	+70 16	7.0	.	6.9	1.2	8.1	6.6	5.9
G 9 + 79.7	173	5	9.0	+79 43	7.7	—	6.8	1.9	8.2	6.7	5.3
G 11 + 70.1	351	5	10.6	+70 6	6.7	.	6.8	1.2	8.0	6.5	5.8
4 22 + 79.4	150	4	21.7	+79 21	7.0	.	6.1	1.8	7.9	6.4	5.1
4 60 + 60.2	856	4	50.6	+60 13	5.0	—	6.0	.8	6.8	5.3	5.0
4 34 + 80.9	155	4	33.4	+80 56	5.5	—	5.8 6.3	2.0	7.8 8.3	6.3 6.8	4.8 5.3
4 2 + 80.4	133	4	2.0	+80 28	5.7	—	6.0 6.4	2.0	8.6 8.4	6.5 6.9	5.0 5.4
346 + 80.3	125	3	46.0	+80 18	4.9	—	5.5	1.9	7.4	5.9	4.5
G 0 + 61.6	766	4	59.3	+61 40	6.7	.	~~6.5~~	.8	7.3	5.8	

105/7 10 -10/7

Mean 14

6 36 + 67.7	454	6	35.8	+67 44	5.2	—	6.4	1.1	7.5	~~6.0~~ 5.2	5.0
G 39 + 58.9	863	5	39.6	+58 54	6.5	.	6.9	.7	7.6	6.1 5.3	5.5
6 7 + 59.0	959	6	6.8	+59 3	5.0	1168 4.3 20 -3	5.6	.7	6.3	4.0	4.2
6 3 + 69.4	371	6	2.8	+69 22	4.7	—	5.6	1.1	6.7	4.4	4.2
4 58 + 79.1	169	4	58.8	+79 3	5.2	—	6.5	1.8	8.3	6.8	5.1

* Spectra of both superimposed on plate. Meas. of brightness is combined light of both

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Plate 165.

V	H	Type	No. Lines	K	Focus	other Lines.	Remarks.
16.5	8.3	I	5	N	1	—	
16.2	5.5	I	6	N?	2	—	
16.0	11.6	I	4	K=H	1	—	
16.0	12.1	IIa	74	2	K=H	1	Reen.
16.0	12.6	I	4	N	1	—	
16.0	15.3	I	6	K=.7H	2	—	
14.3	10.5	I	6	K=.4H	1	—	
13.2	5.6	I	6	K=.5H	1	—	
13.4	16.5	I	5	N	1	—	
13.5	21.0	IIIb	75	3	K=H	1	—
11.9	10.2	I	5	N	2	—	
12.0	18.8	I	2	K=H	1	—	
11.5	9.0	pIII	1	N	1	—	
11.3	13.5	I	4	K=.4H	1	—	
10.5	16.9	I	6	K=.2H	1	—	
III 6.4, 6.8.	9.7	10.8	IIIb	76	1	N	1	Reen.
	9.4	21.5	I	6	N	2	—
	8.8	21.9	III	2	K=H	1	—
	8.5	18.0	I	6	K=.5H	1	—
	8.0	18.0	I	3	N	1	—
Not found on plate	7.9	8.3	IIa	2	K=H		Reen.
	7.8	10.2	IIa	2	K=H		Reen.
	7.7	7.9	I	78	5	N	1	—
	6.9	6.5	I	4	N	1	—
	7.7	19.5	I	5	N	1	—
	8.0	21.7	I	6	N	2	—
	8.0	22.2	I	6	N	2	—
	7.5	23.2	I	4	N	1	—
	7.4	19.9	I	5	N	1	—
	6.8	20.0	I	4	N?	1	—
	5.5	10.3	I	6	K=.5H	1	—

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Mean 14

	No.	R.A.	Dec.	Mag.		Rc.				
6 10 + 59.4	964	6 9.2	+59	25	7.0	.	7.1	7	7.8	5.5	5.7 ✓ .
6 38 + 66.0	394	6 38.0	+69	3	5.2		6.0	1.1	7.1	4.8	4.6 ✓ .
6 4 + 69.6	373	6 3.5	+69	36	6.8	—	7.3	1.1	8.4	6.1	5.4 ✓ .
6 21 + 79.7	212	6 21.4	+79	42	5.5	—	6.5	1.9	8.4	6.1	5.1 ✓ .
6 14 + 79.7	208	6 15.4	+79	41	6.3	1209 6.3 25 +2	6.9	1.9	8.8	6.5	5.5 ✓ .
5 42 + 59.8	920	5 42.0	+59	50	5.7	—	6.1	.7	6.8	4.5	4.7 ✓ .
6 12 + 70.6	401	6 11.7	+70	38	6.0	—	6.6	1.2	7.8	5.5	5.2 ✓ .
7 42 + 79.9	265	7 41.9	+79	52	5.8	1477 5.3 25 +2	5.9	1.9	7.8	5.5	4.5 ✓ .
~~5 25 + 81.3~~	~~194~~	~~5 24.6~~	~~+81~~	~~18~~	~~8.0~~		7.4	1.2	8.6	6.3	6.0 ✓ .
5 35 + 71.2	324	5 35.4	+71	15	6.7	.	6.8		8.8	6.3	5.4 ✓ .
4 34 + 80.9	155	4 33.4	+80	56	5.5	—	7.1	2.0	9.1	6.8	5.7 .
6 57 + 81.6	242	6 57.6	+81	30	6.3	.	6.2	2.1	8.3	6.0	4.8 ✓ .
5 27 + 61.8	806	5 27.1	+61	52	6.8	—	7.4	.8	8.2	5.9	6.0 ✓ .
6 23 + 71.8	359	6 23.4	+71	52	6.0	—	7.1	1.3	8.4	6.1	5.7 ✓
							7.4		8.7	6.4	6.0 .
6 13 + 82.3	177	6 13.8	+82	13	6.7	—	6.7	2.2	8.9	6.6	5.3 ✓ .
5 35 + 62.7	784	5 35.4	+62	44	6.5	—	6.5	.8	7.3	5.0	5.1 ✓ .
7 1 + 82.7	201	7 0.3	+82	40	5.5	—	6.6		8.8	6.5	5.2 ✓
							7.0	2.2	9.2	6.9	5.6 .
5 0 + 73.1	280	5 0.4	+73	6	5.8	918 5.7 19 -4	6.3	1.3	7.6	5.3	4.9 ✓
3 58 + 82.9	113	3 58.5	+82	59	5.0	—	6.6		8.9	6.6	5.2 ✓
							6.8	2.3	9.1	6.8	5.4 .
5 1 + 83.7	141	5 0.6	+83	43	7.1	—	6.9	2.4	9.3	7.0	5.5 ✓ .
5 24 + 73.9	298	5 24.4	+73	54	6.8	.	7.0	1.4	8.4	6.1	5.6 ✓ .
~~7 52 + 82.8~~	~~235~~	~~7 50.0~~	~~+82~~	~~52~~	~~6.5~~	—	~~6.5~~	~~2.4~~	~~8.7~~	~~6.6~~	~~5.5~~ ✓
6 19 + 73.8	340	6 19.6	+73	47	6.0	—	6.8	1.4	8.3	6.1	.
7 50 + 82.9	235	7 50.0	+82	52	6.5	.	6.3	2.3	8.6	6.3	4.9 ✓ .
8 19 + 82.7	253	8 19.7	+82	44	7.0	.	6.9	2.2	9.1	6.8	5.5 ✓ .
5 23 + 64.1	536	5 23.2	+64	3	6.7	.	6.5	.9	7.4	5.1	5.1 ✓ .
3 55 + 83.5	104	3 55.1	+83	26	5.0	684 5.4 29+6	5.9	2.4	8.3	6.0	4.5 ✓ .
4 54 + 73.7	274	4 54.2	+73	45	5.5	890 5.5 19 -4	6.0	1.4	7.4	5.1	4.6 ✓ .
4 46 + 73.9	265	4 46.4	+73	49	6.3						
~~4 44 + 74.0~~	~~229~~	~~4 44.0~~	~~+74~~	~~8~~	~~6.1~~	.	6.6	1.4	8.0	5.7	5.2 ✓ .
5 10 + 74.2	242	5 9.8	+74	10	7.1	.	6.8	1.4	8.2	5.9	5.4 ✓ .
5 9 + 74.4	241	5 8.8	+74	24	7.1	.	7.3	1.4	8.7	6.4	5.9 ✓ .
7 42 + 84.5	169	7 41.6	+84	28	6.0	✓ .	6.5	2.5	9.0	6.7	5.1 ✓ .

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Plate 165.

V	H	Type	No. Lines	Remark.	K	Focus	Other Lines.
6.0	20.0	~~I~~ II a	79 ~~3~~ 2		K=H	/	~~eeee~~ —
4.9	14.5	~~I~~ II a	80 ~~4~~ 2		K=H	/	Reen.
4.9	17.6	I	~~5~~ 6		K=.2H	/	—
4.2	18.1	I	4		N?	/	—
3.1	8.3	I	~~3~~ 4		K=H.	/	—
3.0	21.3	I	3.		N?	1.	—
4 15	2.5	19.4	I.	~~5~~ 4		N	/	—

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Mean 14

	No.	R.A.	Dec.	Mag.		Br.				
5 21 +64.9	534	5	20.6	+64	56	7.7	—	7.3	9	8.2	5.9	5.9 ✓
5 47 +65.5	507	5	46.8	+65	30	7.0	—	6.9	1.0	7.9	5.6	5.5 ✓
4 53 +85.5	78	4	55.1	+85	32	7.0	—	6.6	2.8	7.4	7.1	5.2 ✓
4 40 +85.7	74	4	41.0	+85	45	6.0		6.8	2.8	9.6	7.3	5.4 ✓
8 44 +84.7	196	8	44.3	+84	45	6.0	—	6.8	2.6	9.4	7.1	5.4 ✓
4 56 +76.3	190	4	54.3	+76	17	6.7		6.7	1.6	8.3	6.0	5.3 ✓
5 22 +66.6	401	5	22.4	+66	36	7.0	V.	6.9	1.6	7.9	5.6	

$\frac{137}{6}$ $\frac{10-11}{6}$

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Plate 185.

8 15

V	H	Type	No. Remark.	No. Lines	K	Focus	Other Lines.
21.3	9.7	I		5	N	1	—
21.0	11.7	III	b 81	2	K=H V	1	Reen
19.8	9.6	I		6	N	2	—
19.2	15.0	I		5	N? K=.1H?	1	—
17.8	14.9	I		4	A	3	—
17.4	15.8	I		7	N	3	—
17.5	11.2	I		5	K=H X	1	—
17.9	22.0	I		4	N	1	—
17.1	21.8	II a	82	2	K=1.2 H	2	Reen
17.0	14.3	I		5	N?	1	—
16.6	15.7	I		4	K=H? X	1	—
16.5	14.7	I		6	N	1	Reen
16.5	14.2	II a	83	2	K=H	2	Reen
16.0	8.2	I		5	?	3	—
16.0	10.7	I		4	N	1	—
15.9	16.0	III		1	N	1	—
16.0	20.6	I		3	N	1	—
16.1	21.2	I		6	N?	2	—
15.0	22.7	II a	84	2	K=H N	1	Reen
14.7	14.4	I		7	K=.2 H	2	—
14.5	13.0	I?		4	K=H X	1	—
15.2	12.4	I		5	N	1	—
14.1	14.4	I		6	N	3	—
13.8	18.5	I		2	N	1	—
13.0	22.8	III		2	K=H	1	—
12.4	10.6	I		4	K=H X	1	—
12.5	10.9	I?		2	N?	1	—
12.5	11.9	I		6	N	2	—

Not formed on plate 13

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Mean 15

	No.	R.A.	Dec.	Mag.				Bz.				
6 25 + 56.9	1136	6	25.3	+56	59	6.2	1237 5.8 19-5	7.0	.7	7.7	5.6	5.5 ✓
6 39 + 77.2	266	6	38.8	+77	9	4.7	—	6.8 / 7.0	1.6	8.4 / 8.6	6.0 / 6.2	5.3 ✓ / 5.5
6 36 + 67.7	454	6	35.8	+67	44	5.2	1270 4.9 21-3	5.9	1.1	7.0	4.6	4.4 ✓
6 10 + 78.3	226	6	10.5	+78	17	7.5		7.1	1.7	8.8	6.4	5.6 ✓
6 7 + 59.0	959	6	6.8	+59	3	5.0		5.5	.7	6.2	3.8	4.0 ✓
6 3 + 69.4	371	6	2.8	+69	22	4.7	1155 4.7 18-6	5.4	1.1	6.5	4.1	3.9 ✓
6 51 + 78.9	240	6	50.7	+78	59	6.7	—	6.9	1.8	8.7	6.3	5.4 ✓
5 39 + 58.9	863	5	39.6	+58	54	6.5	.	6.8	.7	7.5	5.1	5.3 ✓
4 58 + 79.1	169	4	58.8	+79	3	5.2	—	6.0	1.8	7.8	5.4	4.5 ✓
6 9 + 59.6	964	6	9.2	+59	25	7.0		6.4	.7	7.1	4.7	4.9 ✓
6 4 + 69.6	373	6	3.5	+69	36	6.8	—	6.9	1.1	8.0	5.6	5.4 ✓
6 15 + 79.7	208	6	15.4	+79	41	6.3	1209 6.3 22-2	6.6	1.9	8.5	6.1	5.1 ✓
6 21 + 79.7	212	6	21.4	+79	42	5.5	—	6.2	1.9	8.1	5.7	4.7 ✓
6 34 + 59.6	1015	6	33.4	+59	34	5.0		5.8	.7	6.5	4.1	4.3 ✓
6 23 + 59.8	996	6	23.5	+59	46	7.0	.	6.9	.7	7.6	5.2	5.4 ✓
6 3 + 60.0	938	6	2.7	+60	2	5.8	—	6.7 / 7.0	.8	7.5 / 7.8	5.1 / 5.4	5.2 ✓ / 5.5
5 9 + 79.7	173	5	9.0	+79	43	7.7	.	6.9	1.9	8.8	6.4	5.4 ✓
5 42 + 59.6	920	5	42.0	+59	50	5.7		5.9	.7	6.6	4.2	4.4 ✓
5 22 + 70.3	362	5	22.3	+70	16	7.0	—	6.9	1.2	8.1	5.7	5.4 ✓
6 12 + 70.6	401	6	11.7	+70	38	6.0	—	6.2	1.2	7.4	5.0	4.7 ✓
6 20 + 70.6	406	6	20.4	+70	36	7.2	—	7.4	1.2	8.6	6.2	5.9 ✓
6 17 + 60.2	971	6	17.4	+60	14	7.2	.	6.8	.8	7.6	5.2	5.3 ✓
7 42 + 79.8	265	7	41.9	+79	52	6.8	1477 5.3 22-2	5.6	1.9	7.5	5.1	4.1 ✓
4 34 + 80.9	155	4	33.4	+80	56	5.5	—	6.4 / 6.7	2.0	8.4 / 8.7	6.0 / 6.3	4.9 ✓ / 5.2
6 25 + 61.6	896	6	25.4	+61	36	7.3	—	7.0	.8	7.8	5.4	5.5 ✓
6 24 + 61.6	893	6	24.5	+61	36	6.1		6.9	.8	7.7	5.3	5.4 ✓
6 58 + 81.5	242	6	57.6	+81	30	6.3		6.1	2.1	8.2	5.8	4.6 ✓

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Plate 185.

V	H	Type	No. Remark	Lines	K	Focus	other Lines
11.5	10.3	I		4	N	1	—
11.3	9.2	~~X~~ III		2	~~X~~ K=H	1	—
12.0	12.7	III		~~1~~ 2	~~X~~ K=H	1	—
10.9	10.7	I		~~2~~ 3	N	1	—
11.5	15.2	I		~~7~~ 8	K=.5H	2	—
III? 6.4, 6.6, 7.4	10.1	12.3	III	ab 85	~~X~~ m	K=H	2	Reen.
	10.3	22.3	I		~~5~~ 6	~~X~~ K=H	2	—
	9.0	21.7	I		3	N	1	—
	8.5	9.2	I		5	N	2	—
	8.4	13.7	~~I~~ IIa	86	~~X~~ m	K=H	1	Reen.
	8.2	19.3	I		5	N	2	—
	7.9	21.3	I		~~3~~ 4	~~X~~ K=H	1	—
	8.4	23.2	III		2	K=H	2	—
	7.5	23.0	I		4	N	2	—
	7.8	7.8	Id		4	~~X~~ K=H?	1	—
	7.1	22.1	I		~~2~~ 3	N	1	—
	6.0	11.4	I		6	N	1	—
	4.8	18.7	I		~~4~~ 5	N	1	—
	4.0	19.0	I		~~3~~ 4	N	1	—
	3.8	9.2	I		~~2~~ 3	N	1	—

Plate 166.

	13.3	6.9	I		4	N	1	—
	13.4	16.8	~~I~~ IIa	87	~~2~~ m	K=H ~~X~~	1	Reen
	11.5	9.1	I		4	N	1	—
	12.1	22.9	Id		3	N	1	—
III? 6.5, 6.8	11.2	15.8	III	b 88	~~4~~ 3	K=H	1	F —
	11.1	19.7	I		5	N	1	—

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Mean 15.

	No.	R.A.	Dec.	Mag.				Br.				
6 27 + 62.0	867	6	27.2	+62 4	7.2	.		6.8	.8	7.6	5.2	5.3 ✓
6 46 + 71.9	378	6	46.6	+71 57	7.7	–		7.1 / 7.3	1.3	8.4 / 8.6	6.0 / 6.2	5.6 ✓ / 5.8
6 23 + 71.8	359	6	23.4	+71 52	6.0	–		6.9 / 7.1	1.3	8.2 / 8.4	5.8 / 6.0	5.4 / 5.6 ✓
7 18 + 82.0	213	7	18.8	+82 0	7.5	.		7.1	2.1	9.2	4.8	5.6 ✓
6 13 + 82.2	177	6	13.8	+82 13	6.7	–		6.6	2.2	8.8	6.4	5.1 ✓
7 0 + 82.7	201	7	0.3	+82 40	5.5	–		6.5 / 6.8	2.2	8.7 / 9.0	6.3 / 6.6	5.0 ✓ / 5.3
6 35 + 62.7	784	5	35.4	+62 44	6.5	–		6.5	.8	7.3	4.9	5.0 ✓
4 24 + 83.0	121	4	24.2	+83 2	8.5	.		6.9	2.3	9.2	4.8	5.4 ✓
7 56 + 82.8	235	7	56.0	+82 52	6.5	.		6.3	2.3	8.6	6.2	4.8 ✓
6 20 + 73.8	340	6	19.6	+73 47	6.0	–		6.6	1.4	8.0	5 3.6	5.1 ✓
5 0 + 83.7	141	5	0.6	+83 43	7.1	.		6.7	2.4	9.1	6.7	5.2 ✓
5 24 + 73.5	298	5	24.4	+73 54	6.8	–		6.9	1.4	8.3	5 3.9	5.4 ✓
3 58 + 82.9	113	3	58.5	+82 59	5.0	–		6.5 / 6.8	2.3	8.8 / 9.1	6.4 / 6.7	5.0 ✓ / 5.3
3 55 + 83.5	104	3	55.1	+83 26	5.0	684 5.4 29 +5		5.9	2.4	8.3	5.9	4.4 ✓
8 19 + 82.7	253	8	19.7	+82 44	7.0	–		6.9	2.2	9.1	6.7	5.4 ✓
5 10 + 74.2	242	5	9.8	+74 10	7.1	.		7.0	1.4	8.4	6.0	5.5 ✓
7 42 + 84.5	169	8 7	41.6	+84 28	6.0	.		6.6	2.5	9.1	6.7	5.1 ✓
4 53 + 85.5	78	4	55.1	+85 32	7.0	.		6.8	2.8	9.6	7.2	5.3 ✓
4 40 + 85.7	74	4	41.0	+85 45	6.0	863 6.4 33 +9		6.9	2.8	9.7	7.3	5.4 ✓
8 44 + 84.7	196	8	44.3	+84 45	6.0	1632 6.2 32 +8	196/8 22-18/8	6.8	2.6	9.4	7.0	5.3 ✓

Mean 16

7 11 + 55.5	1192	7	11.0	+55 33	5.5	1378 5.2 22 +1		6.8	.6	7.4	5.6 / 5.8	5.2 ✓
6 36 + 55.8	1122	6	36.1	+55 51	6.0	–		7.3	.6	7.9	5.8	5.7 ✓
7 13 + 66.6	502	7	13.0	+66 37	6.2	1385 6.2 23 +2		7.5	1.0	8.5	6.4 / 6.3	5.9 ✓
6 14 + 56.4	1125	6	14.2	+56 20	6.2			7.4	.6	8.0	5.7	5.8 ✓
6 39 + 77.2	266	6	38.8	+77 9	4.7	–		6.5 / 6.8	1.6	8.1 / 8.4	5.0 / 5.3	4.9 ✓ / 5.2
6 25 + 56.9	1136	6	25.3	+56 59	6.2	1237 5.8 17 -4		6.8	.7	7.5	5.4 / 5.8	6.2 ✓

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Plate 166.

V	H	Type	No. Lines	K	Focus	other Lines
10.5	7.6					
10.5	7.8		Are these stars?		Something the matter with the plate.	
10.5	8.0					
9.9	16.5	I	7	N	3	—
8.7	9.8	I	3	N	1	—
8.6	13.3	I	4	N K=H	1	—
8.9	18.7	I	4	N	1	—
8.0	14.5	III ?	2	K=1.2 H	2	—
7.5	14.7	I	3	N	1	—
7.4	16.0	I	8	N	3	—
6.6	24.3	II	6	K=.2 H	3	—
6.0	15.7	I	5	N K=H	1	—
6.0	17.4	II	6	N	2	—
6.0	17.4	I	6	N	3	—
6.0	18.0	I	5	N	1	—
6.3	22.2	I	5	N?	3	—
5.0	10.4	I	7	N	3	—
4.0	20.4	I d	5	N K=H	1	—
2.5	14.5	I	5	N	1	—

Plate 353.

22.1	14.7	I	4	N? K=H	1	—
21.0	16.5	III	2	N K=H?	1	—
19.6	21.8	I	6	N K=H	2	—
19.5	12.2	I	5	N K=H	1	—
18.9	15.6	I	6	N	1	—
18.7	20.8	I	3	N	1	—
18.2	21.0	I	4	N K=H	1	—
18.0	22.2	II ?	2	N K=H	2	—
17.5	16.9	I	5	N	1	—

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Mean 16

No.	R.A.	Dec.	Mag.								Br.				
6 36 + 67.7	454	6	35.8	+67	44	5.2	1270	4.9	21	±0	5.9	1.1	7.0	4.9	4.3
7 37 + 77.9	303	7	37.0	+77	56	7.0	.				7.2	1.7	8.9	6.8	5.6
7 4 + 78.3	251	7	4.2	+78	19	7.0	—				7.4	1.7	9.1	7.0	5.8
6 10 + 78.3	226	6	10.5	+78	17	7.5	.				7.0	1.7	8.7	6.6	5.4
6 45 + 58.6	982	6	44.7	+58	37	5.0	—				6.3 6.5	.7	7.0 7.2	4.9 5.1	4.7 4.9
6 50 + 78.9	240	6	50.7	+78	59	6.7	.				7.0	1.8	8.8	6.7	5.4
6 38 + 69.0	394	6	38.0	+69	3	5.2	1279	5.1	18	−3	5.8	1.1	6.9	4.8	4.2
6 7 + 59.0	959	6	6.8	+59	3	5.0	—				5.9	.7	6.6	4.5	4.3
6 40 + 59.6	1028	6	40.3	+59	37	6.0	—				6.6	.7	7.3	5.2	5.0
6 34 + 59.6	1015	6	33.4	+59	34	5.0	1261	4.7	18	−3	5.8	.7	6.5	4.5	4.2
6 21 + 79.7	212	6	21.4	+79	42	5.5	1225	5.5	22	+1	5.8	1.9	7.7	5.6	4.2
6 15 + 79.7	208	6	15.4	+79	41	6.3	1209	6.3	24	+3	6.8	1.9	8.7	6.6	5.2
6 3 + 69.4	371	6	2.8	+69	22	4.7					5.9	1.1	7.0	4.9	4.3
7 42 + 79.8	265	7	41.9	+79	52	5.8	1477	5.3	26	+5	6.0	1.9	7.9	5.8	4.4
6 12 + 70.6	401	6	11.7	+70	38	6.0	—				6.9	1.2	8.1	6.0	5.3
6 58 + 81.5	242	6	57.6	+81	30	6.3	1360	5.3	34	+13	6.5	2.2	8.7	6.6	
									23 18	14 10					
									191 9		12 − 10 9				

Means

7 13 + 66.6	502	7	13.0	+66	37	6.2					6.7	1.0	7.7	5.7	5.9
6 38 + 77.2	266	6	38.8	+77	9	4.7	—				6.0 6.5	1.6	7.6 8.1	5.9 6.1	5.2 5.7
6 36 + 67.7	454	6	35.8	+67	44	5.2	—				5.7	1.1	6.8	4.8	4.9
7 37 + 77.9	303	7	37.0	+77	56	7.0	—				6.5	1.7	8.2	6.7	5.7
7 4 + 78.3	251	7	4.2	+78	19	7.0	—				6.7	1.7	8.4	6.4	5.9
6 18 + 78.2	227	6	18.0	+78	7	6.0	1215	5.7	29	+9	6.9	1.7	8.6	6.6	6.1
6 11 + 78.3	226	6	10.5	+78	17	7.5	.				6.7	1.7	8.4	6.4	5.9
6 45 + 58.6	982	6	44.7	+58	37	5.0	—				5.8	.7	6.5	4.5	5.0
6 51 + 78.9	240	6	50.7	+78	59	6.7	—				6.4	1.8	8.2	6.2	5.6

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Plate 353.

v	H	Type	No. Lines	Remarks.	K	Focus	Other Lines.
17.0	21.0	I	6		N	2	—
17.2	10.2	I	6		K=5H N	2	—
15.8	12.2	I	7		N	4	—
15.8	19.3	IIa	89		K=H	2	seen.
15.6	19.9	I	5		K=H N	1	seen
15.2	15.6	I	4		N	1	—
13.2	8.2	I	6		K=H N	1	—
12.6	15.9	I	8		N	3	—
11.7	14.4	I	4		N	1	—
11.3	7.7	IIa	90		K=H	1	seen.
10.8	18.7	I	6		N	2	—
III? 5.4, 5.8, 6.8.	10.4	15.6	III		N	2	—
	9.6	12.1	I		K=1H N	2	—
	9.5	10.6	I		N	1	—
	9.0	10.1	I	dI 3 +	N K=H	11	—
III? 5.1, 5.6.	9.4	6.5	III		N	2	—
	6.7	13.4	I	8	K=.2H N	2	—
	6.4	21.7	I	d? 5	N	1	—
	5.4	10.7	IIa	91	K=H N	1	seen.
	4.1	12.5	I	3	N	1	—
	3.1	19.9	I	6	N	1	—
	2.5	20.0	I	5	N	1	—
	2.9	7.8	I	6	N	2	—

Plate 167.

17.0	18.4	I	6		K=2H	2	—
16.0	13.7	IIa	92		K=H	1	seen.
14.6	9.5	I	5		K=2H	1	—

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Mean 8

	No.	R.A.	Dec.	Mag.					Bc.				
6 38 +69.0	394	6	38.0	+69	3	5.2	1279	5.1	14	-6 -8	5.4	1.1	6.5	7.5 4.3	4.6 ✓
7 30 +59.0	1103	7	30.7	+59	2	5.0	—				5.6	.7	6.3	4.3 4.1	4.8 ✓
7 42 +79.8	265	7	41.9	+79	52	5.8	1477	5.3	14	-6 -8	4.8	1.9	6.7	4.7 4.5	4.0 ✓
6 21 +79.7	212	6	21.4	+79	42	5.5	—				5.2	1.9	7.1	5.1 4.9	4.4 ✓
6 15 +79.7	208	6	15.4	+79	41	6.3	1209	6.3	14	-6 -8	5.8	1.9	7.7	5.7 5.5	5.0 ✓
7 10 +60.2	1048	7	9.6	+60	9	6.5	—				6.5	.8	7.3	5.3 5.2	5.7 ✓
8 35 +80.5	272	8	34.0	+80	34	7.3									
~~7 30 +80.6~~	~~238~~	~~7~~	~~32.1~~	~~+80~~	~~37~~	~~6.6~~	—				6.3	2.0	8.3	6.8 6.1	5.5 ✓
6 58 +81.5	242	6	57.6	+81	30	6.3	.				5.1	2.1	7.2	5.2 5.0	4.3 ✓
7 18 +82.0	213	7	18.8	+82	0	7.5	.				6.3	2.1	8.4	6.4 6.2	6.5 ✓
8 50 +81.4	282	8	49.2	+81	24	6.7	—				5.8	2.1	7.9	5.9 5.7	5.0 ✓
6 14 +82.2	177	6	13.8	+82	13	6.7	.				5.7	2.2	7.9	5.9 5.6	4.9 ✓
7 0 +82.6	201	7	0.3	+82	40	5.5	—				5.4 5.8	2.2	7.6 8.0	5.9 6.0 5.8	4.6 5.0 ✓
7 56 +82.8	235	7	56.0	+82	52	6.5	—				5.3	2.3	7.6	5.6 5.4	4.5 ✓
8 19 +82.7	253	8	19.7	+82	44	7.0	—				5.6	2.2	7.8	5.8 5.6	4.8 ✓
7 30 +62.8	~~950~~ 733	7	~~30.3~~ 33.3	~~+62~~ 63	~~57~~ 10	~~8.2~~ 7.0	.				6.7	7.0	7.6	5.6 5.4	5.9 ✓
9 15 +81.9	302	9	16.0	+81	58	4.3	—				5.2 5.8	2.1	7.3 7.9	5.1 5.7	4.4 5.0 ✓
7 42 +84.5	169	7	41.6	+84	28	6.0	—				5.3	2.5	7.8	5.8 5.6	4.5 ✓
5 1 +83.7	141	5	0.6	+83	43	7.1	.				6.0	2.4	8.4	6.4 6.2	5.2 ✓
8 45 +84.7	196	8	44.3	+84	45	6.0	—				6.0	2.6	8.6	6.6 6.4	5.2 ✓
8 12 +85.5	128	8	12.7	+85	33	7.5	.				6.5	2.8	9.3	7.3 7.1	5.7 ✓
4 55 +85.5	78	4	55.1	+85	32	7.0	.				6.3	2.8	9.1	7.1 6.9	5.5 ✓
~~4 16 +85.5~~	~~75~~	~~4~~	~~16.1~~	~~+85~~	~~32~~	~~8.5~~									
4 39 +85.7	74	4	41.0	+85	45	6.0	863	6.4	~~30~~ +8		~~6.6~~	~~2.8~~	~~9.4~~	~~7.2~~ 7.0	— ✓
10 8 +84.9	234	10	7.8	+84	59	5.0	1816	5.6	29 +9		5.9	2.6	8.5	6.5 ~~7.3~~	5.1 ✓
									130/6 = 100/5					22 24/6 = 18-18/5	
7 30 +59.0	1103	7	30.7	+59	2	5.0	—				✓6.2	.7	6.9	4.7	
7 49 +59.4	1130	7	49.2	+59	27	6.0	—				✓7.1	.7	7.8	5.6	
8 6 +60.0	1124	8	5.8	+60	0	6.0	4				✓6.5	.8	7.3	5.1	

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October 19, 1886.

Plate 167. No. 7.

V	H	Type	Lines	K	Focus	Other Lines.
13.5	13.7	I	4	N	1	—
13.5	16.6	I	3	N	1	—
13.0	10.2	I	~~4~~ 4	K=H N	1	—
11.9	6.8	III	b 93 ~~8~~ 2	~~K=H~~ K=1.2H	3	seen
9.3	15.0	I	4	N	1	—
8.7	17.5	I	4	N	1	—
6.3	17.4	I	3	N	1	—
5.6	7.7	I	~~3~~ 4	K=H P	1	—
3.0	7.4	I	~~4~~ 5	N	1	—
10 15 3.0	10.0	I	~~3~~ 4	K=H N	1	—

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	No.	R.A.	Dec.	Mag.				Bre.				
7 50+60.7	1105	7	49.3	+60	42	6.1	1490	6.0	16-6	6.8	8	7.6	5.4	
~~7 32+80.6~~ 1084	~~836~~	7	37.6	+60	40	6.7	1455	6.4	28+6	7.2	2.0	9.2	7.0	
8 2+60.8	1119	8	3.6	+60	50	6.8	—			7.1	.8	7.9	5.7	
8 17+61.2	1054	8	18.2	+61	11	3.3	—			5.7 / 5.9	8	6.5 / 6.7	4.3 / 4.5	—
7 56+82.9	235	7 8	56.0	+82	52	6.5	.			6.5	2.3	8.8	6.6	
7 33+63.2	733	7	33.3	+63	10	7.0	.			7.2	.9	8.1	5.9	
7 33+64.4	649	7	33.5	+64	23	7.1	.			7.3	.9	8.2	6.0	
10 13+83.3	297	10	13.0	+83	18	5.2	—			6.5	2.3	8.8	6.6	
8 25+65.6	643	8	26.3	+65	31	5.8	1580	5.6	21-1	6.7	1.0	7.7	5.5	—
10 14+84.9	234	10	7.8	+84	59	5.0	V			6.5	2.6	9.1	6.9	—

$\frac{6.5}{3}$ $\frac{6-7}{3}$

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October 20, 1886.

Plate 446.

8 45

V	H	Type	No. Lines	K	Focus	Other Lines.
22.6	9.5	III	94	K=2.0H 3		reseau.
21.5	14.7	I	7	K=1 H. K=H	3	—
18.5	19.9	I	4	K=H	1	—
17.8	10.1	I	7	K=.3 H K=.5 H	2	—
17.4	9.6	I	4	K=H	1	—
17.2	11.1	I	4	K=H.	1	—
16.7	16.1	III	2		1	—
16.2	19.5	I	5	K=H	1	—
16.1	19.8	II[a]	95	2	1	reseau.
16.2	20.9	I	5	K=H	1	—
16.3	23.3	I	4	K=H	1	—
15.5	16.8	I	5	K=H	1	—
15.0	16.6	II[a]?	96	2	1	reseau.
15.0	15.8	I	3	K=H	1	—
15.2	11.8	I	4	K=H	1	—
14.8	11.3	I	6	K=H	2	—
15.8	8.2	I	5	K=H	1	—
15.4	7.9	III	3	K=H	2	F.
14.0	8.3	II[a]	97	2	1	reseau
14.0	9.3	I	6	K=H	2	—
14.0	14.4	I	5	K=H	1	—
14.0	19.2	I	4	K=H	1	—
13.7	21.0	I	5	K=H	1	—
12.9	20.2	I	5	K=H	1	—
13.0	13.7	III	98	2	2	reseau.
12.1	13.4	I	2	K=H	1	—
11.6	13.2	III	2	K=H	1	—
11.5	18.0	I	5	K=H	1	—

III? J 5.6, 6.0, 7.0.

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Mean 6.

	No.	R.A	Dec.	Mag.			Br.				
8 18 + 61.2	1054	8	18.2	+61	11	3.3	—	5.1 5.4	.8	5.9 6.2	4.9 5.2	✓
7 57 + √1.9	1391	7	57.6	+51	55	5.1	—	5.7	.5	6.2	5. 4.2	5.1 ✓
7 33 + 63.2	733	7	33.8	+63	10	7.0	—	6.5	.9	7.4	6.4	5.9 ✓
8 13 + √3.6	1246	8	12.8	+53	40	6.0	—	6.0	.6	6.6	5.6	5.4 ✓
8 30 + 73.8	430	8	30.1	+73	48	7.0	.	6.8	1.4	8.2	7.2	6.2 ✓
8 18 + 73.9	420	8	18.6	+73	56	7.3	—	6.8	1.4	8.2	7.2	6.2 ✓
7 42 + 74.3	338	7	42.8	+74	18	5.2	—	6.3 6.6	1.4	7.7 8.0	6.7 7.0	5.7 ✓ 6.0
7 33 + 64.4	649	7	33.5	+64	23	7.1	.	6.5	.9	7.4	6.4	5.9 ✓
7 39 + √4.5	1177	7	39.7	+54	29	6.3	—	6.5	.6	7.1	6.1	5.9 ✓
7 8 + 74.2	322	7	7.9	+74	7	7.5	.	6.8	1.4	8.2	7.2	6.2 ✓
7 15 + 64.1	633	7	15.1	+64	8	7.7	—	6.8	.9	7.7	6.7	6.2 ✓
7 49 + √4.8	1188	7	49.8	+54	50	6.7	—	6.7	.6	7.3	6.3	6.1 ✓
7 46 + 65.1	606	7	46.9	+65	9	7.1	—	6.5	.9	7.4	6.4	5.9 ✓
7 53 + 65.1	1242	7	53.2	+65	9	7.5	.	6.9	.6	7.5	6.5	6.3 ✓
8 7 + √7.0	1265	8	7.2	+55	1 8	6.7	.	6.6	.6	7.2	6.2	6.0 ✓
8 20 + 7√.2	342	8	19.8	+75	13	6.4	.	5.9	1.5	7.4	6.4	5.3 ✓
8 19 + √1.6	1231	8	19.6	+54	36	7.2	.	6.7	.6	7.3	6.3	6.1 ✓
	~~1283~~	~~8~~	~~20.0~~	~~+55~~	~~26~~	~~7.5~~						
8 27 + 64.8	698	8	27.5	+64	49	4.7	—	5.7 6.0	.9	6.6 6.9	5.6 5.9	5.1 ✓ 5.4
8 26 + 65.5	643	8	26.3	+65	31	5.8	—	6.0	1.0	7.0	6.0	5.4 ✓
8 21 + 65.6	638	8	21.6	+65	38	5.8	1566 5.3 11+1	5.4	1.0	6.4	5.4	4.8 ✓
7 58 + √5.6	1254	7	58.0	+55	41	7.0	—	6.7	.6	7.3	6.3	6.1 ✓
7 41 + √5.5	1228	7	41.0	+55	35	6.5	.	6.1	.6	6.7	5.7	5.5 ✓
7 2 + 7√.3	296	7	2.8	+75	20	7.0	.	6.3	1.5	7.8	6.8	5.7 ✓
7 7 + 7√.9	300	7	7.6	+75	52	7.7	.	6.5	1.5	8.0	7.0	5.9 ✓
8 1 + 76.2	310	8	1.2	+76	11	6.0	—	6.0 6.2	1.6	7.6 7.8	6.6 6.8	5.4 5.6 ✓
8 2 + 66.6	541	8	2.0	+66	37	6.5	.	6.9	1.0	7.9	6.9	6.3 ✓
8 2 + √6.9	1278	8	2.2	+56	53	5.7	—	6.5 6.8	.7	7.2 7.5	6.2 6.5	5.9 ✓ 6.2
7 4√ + √6.9	1253	7	44.7	+56	53	7.0	√.	6.5	.7	7.2	6.2	5.9 ✓

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October 20, 1886.

Plate 446.

	V	H	Type	Remarks	No. lines	K	Focus	Other Lines.
	11.4	23.0	I	6		N	2	—
	10.5	6.9	I	5-6		N	1	—
	10.0	16.3	II a	994	2	K=H	1	reen.
III 5.2, 5.7.	9.6	22.6	III bc	100	2	K=H	2	reen.
	9.2	16.2	I	5-6		K=H	1	—
✓	9.0	15.6	I	I?	3 4	N K=H	1	— —
	9.0	11.5	I	6		K=H	1	—
	9.2	7.4	I	5		N	1	—
	8.7	10.8	I	3		N	1	—
	8.0	19.4	I d?	5		N?	1	—
	7.6	14.0	III b	101	2	K=H	1	reen.
	7.5	10.8	I	4		N	1	—
	7.0	21.3	I	7		N	3	7
	6.5	20.3	I	4		K=H	1	—
	6.5	16.5	I	5		K=H	1	—
	6.0	15.3	I	4		K=H	1	—
	6.9	8.1	I	4		N	1	—
	5.7	15.4	I	8		N?	.5	—
	5.5	12.3	I	7		K=.3 H	1	—
	4.2	5.9	I	4		K=H	1	—
	4.0	7.0	I	4		N?	1	—
	4.0	11.0	I	4		N	1	—
	3.8	12.9	I	5		K=H	1	—
	4.0	16.4	I	6		N	1	—
	3.9	19.3	I	5		K=H	1	—
	4.0	22.9	I	5		K=H	1	—
III? 4.4, 4.8.	3.0	9.4	III bc?	102	2	K=H	4	reen.
	2.2	10.1	I	2		N	1	—

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Mean 6

	No.	R.A.	Dec.	Mag.				Br.				
7 13 + 66.6	502	7	13.0	+66	37	6.2	1385 6.2 8-2	6.0	1.0	7.0	6.0	5.4 ✓
8 36 + 67.2	560	8	35.6	+67	13	6.0	1601 6.0 8-2	5.8	1.0	6.8	5.8	5.2 ✓
7 50.9 + 57.6	1118	7	50.8	+57	40	6.5						
7 37.9 + 77.9	303	7	37.0	+77	56	7.0	—	6.8	1.7	8.5	8.5	6.2 ✓
6 39 + 77.2	266	6	38.8	+77	9	4.7	—	5.7 / 6.0	1.6	7.3 / 7.6	6.3 / 6.6	5.1 / 5.4 ✓
7 36 + 77.9	303	7	37.0	+77	56	7.0	—	6.0	1.7	7.7	6.7	5.4 ✓
7 49 + 68.1	517	7	49.8	+68	4	7.5	.	6.9	1.1	8.0	7.0	6.3 ✓
8 8 + 78.2	1112	8	8.7	+78	11	6.2	—	6.3	.7	7.0	6.4	5.7 ✓
9 0 + 77.6	359	8	59.8	+77	40	6.8	.	6.5	1.7	8.2	7.2	5.9 ✓
8 29 + 78.2	291	8	29.0	+78	12	7.0	.	7.0	1.7	8.7	7.7	6.4 ✓
7 4 + 78.3	251	7	4.2	+78	19	7.0						
	250	7	3.2	+78	31	6.5		6.6	1.8	8.4	7.4	6.0 ✓
7 58 + 68.9	524	7	58.3	+68	54	4.8	—	6.0 / 6.3	1.1	7.1 / 7.4	6.1 / 6.4	5.4 / 5.7 ✓
8 16 + 68.9	470	8	16.6	+69	0	6.7	.	6.7	1.1	7.8	6.8	6.1 ✓
7 31 + 59.0	1103	7	30.7	+59	2	5.0	1441 4.9 12+2	5.4	.7	6.1	5.1	4.8 ✓
6 60 + 78.7	240	6	59.7	+78	59	6.7	.					
	402	6	48.3	+69	6	8.2		6.4	1.8	8.2	7.2	5.8 ✓ Dm. 240 + 78°
7 49 + 59.4	1130	7	49.2	+59	27	6.0	—	6.2	.7	6.9	5.9	5.6 ✓
5.4 + 59.6	1136	7	53.9	+59	40	7.0	—		.7	7.4	6.4	
7 42 + 79.8	265	7	41.7	+79	52	5.8		6.7	1.9	8.6	7.6	6.1 ✓
8 22 + 59.1	1176	8	22.3	+59	4	7.0	.	6.9	.7	7.6	6.6	6.3 ✓
7 42 + 79.8	265	7	41.9	+79	52	5.8		4.6	1.9	6.5	5.5	4.0 ✓
8 6 + 60.0	1124	8	5.8	+60	0	6.0	—	6.2	.8	7.0	6.0	5.6 ✓
9 30 + 79.8	319	9	29.8	+79	48	6.0	—	5.9	1.9	7.8	6.8	5.3 ✓
8 24 + 60.4	1148	8	27.3	+60	26	6.8		6.9	.8	7.7	6.7	6.3 ✓
8 35 + 80.5	272	8	34.0	+80	34	7.3	.	6.6	2.0	8.6	7.6	6.0 ✓
8 4 + 60.8	1119	8	3.6	+60	50	6.8	—	6.5	.8	7.3	6.3	5.9 ✓
7 49 + 60.7	1105	7	49.3	+60	42	6.1	1490 6.0 12+2	6.4	.8	7.2	6.2	5.5 ✓
7 38 + 60.7	1084	7	37.6	+60	40	6.7	—	6.9	.8	7.7	6.7	6.3 ✓
6 N + 79.7	208	6	15.4	+79	41	6.3	—	6.0	1.9	7.9	6.9	5.4 ✓
8 18 + 61.2	1054	8	18.2	+61	11	3.3	—	4.9 / 5.3	.8	5.7 / 6.1	4.7 / 5.1	4.3 / 4.7 ✓
8 55 + 81.4	282	8	49.2	+81	24	6.7	.	6.5	2.1	8.6	7.6	—

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Plate 446.

V	H	Type	No.	Remarks	Iro. Lines	K	Focus	Other Lines.
1.9	18.3	I		3		N	1	—
4.2	22.3	II[a]	103	2		K=H. N	2	Reen.

Plate 458

21.0	15.7	I		5		N	1	—
19.9	11.5	II[a]	104	3		K=1.2H N	2	F. Reen.
20.0	12.6	I[d?]		5		K=H N	1	—
19.0	13.1	III	b.c. 105	2		K=H N	1	Reen.
18.6	23.3	II[a]	106	2		K=H N	1	Reen.
18.0	13.4	I		5		K=5H N	1	—
17.4	12.5	I		4		K=H N	1	—
17.3	19.1	I		4		N	1	—
17.4	19.6	I		4		N	1	—
16.5	14.6	II[a]	107	2		K=H N	1	Reen
15.7	11.2	I		5		N	1	—
15.5	10.4	I		6		K=.8H N	2	—
15.7	13.2	I		2		N	1	—
15.4	19.8	I		8		N	4	F
15.0	23.6	I		6		N	1	F.
14.6	18.2	I		4		K=.1H N	1	—
14.5	15.2	I		4		N	1	—
14.9	7.6	I		5		N	1	—
14.0	7.9	III	b.c. 108	2		K=H	2	Reen.
12.9	14.0	I?		7		K=H	1	—
13.1	20.3	III	b.c. 109	2		K=1.2H ~~K=H~~	5	F? Reen
11.8	13.4	I		4		K=H N	1	—
11.6	12.2	III	b.c. 110	3		K=H	3	F. Bright Lines.
11.5	9.6	II[a]?	111	2		K=H	2	Reen

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Means

	No.	R.A.	Dec.	Mag.		Br.				
6 57 +81.5	242	6 57.6	+81 30	6.3	.	~~5.9~~	~~2.1~~	~~8.0~~		✓ .
6 21 +79.7	212	6 21.4	+79 42	5.5	—	5.6	1.9	7.5	5.0	✓ .
						51/5	5.4/5			

Means 12

8 35 +67.3	560	8 35.6	+67 13	6.0	1601	6.0	15 ~~3~~ 2	6.5	1.0	7.5	5.8	5.3	✓	.
8 57 +67.7	577	8 57.6	+67 44	5.3	—			5.8	1.1	6.9	5.2	4.6	✓	.
9 0 +77.7	359	8 59.8	+77 40	6.8	—			7.0	1.7	8.7	7.0	5.8	✓	.
8 49 +68.2	551	8 49.4	+68 11	5.1	—			6.6 / 7.0	1.1	7.7 / 8.1	6.0 / 6.4	5.4 / 5.8	✓	.
8 8 +58.2	1112	8 8.7	+58 11	6.2	—			6.9	.7	7.6	5.9	5.7	✓	.
8 46 +58.7	1159	8 46.2	+58 46	7.0	—			7.1	.7	7.8	6.1	5.9	✓	.
8 53 +69.0	504	8 53.1	+69 2	7.3	—			7.1	1.1	8.2	6.5	5.9	✓	.
8 16 +68.9	470	8 16.6	+69 0	6.7	.			7.0	1.1	8.1	6.4	5.8	✓	.
8 22 +59.1	1176	8 22.3	+59 4	7.0	.			7.0	.7	7.7	6.0	5.8	✓	.
8 41.8 +59.6	1198	8 41.6	+59 36	6.5	—			6.7	.7	7.4	5.7	5.5	✓	.
8 55 +59.9	1217	8 55.4	+59 55	6.2	1650	6.1	13 ~~5~~ 4	6.7	.7	7.4	5.7	5.5	✓	.
9 30 +79.8	319	9 29.8	+79 48	6.0	—			5.9	1.9	7.8	6.1	4.7	✓	.
8 57 +79.9	300	8 57.6	+79 52	7.3	—			7.0	1.9	8.9	7.2	5.8	✓	.
7 41 +79.9	265	7 41.9	+79 52	5.8	1477	5.3	23 ~~6~~	5.7	1.9	7.6	5.9	4.5	✓	.
8 5.9 +60.0	1124	8 5.8	+60 0	6.0	1530	5.4	18 ~~0~~ 11	6.4	.8	7.2	5.5	5.2	✓	.
8 24 +60.5	1148	8 27.3	+60 26	6.8	—			6.5	.8	7.3	5.6	5.3	✓	.
8 34 +80.6	272	8 34.0	+80 34	7.3	.			6.8	2.0	8.8	7.1	5.6	✓	.
10 1 +79.7	328	10 0.8	+79 39	6.7	.			6.6	1.9	8.5	6.8	5.4	✓	.
9 21 +70.5	565	9 ~~21.6~~ 8.4	+70 29	5.2	—			5.6 / 5.8	1.8	7.4 / 7.6	5.7 / 5.9	4.4 / 4.6	✓	.
8 50 +81.4	282	8 49.2	+81 24	6.7	—			6.2	2.1	8.3	6.6	5.0	✓	.
8 18 +61.2	1054	8 18.2	+61 11	3.3	—			5.3 / 5.6	.8	6.1 / 6.4	4.7 / 4.7	4.1 / 4.4	✓	.
8 49 +71.8	486	8 49.5	+71 52	6.7	—			7.2	1.3	8.5	6.8	6.0	✓	.
~~9 71 +81.9~~	~~502~~	9 16.0	+81 58	4.3				5.5 / 5.9	2.1	7.4 / 8.0	5.9 / 6.3	4.3 / 4.7	✓	.
~~8 49 +71.8~~	~~492~~	~~8 56.8~~	~~+71 57~~	~~6.5~~										
9 3 +62.0	1058	9 2.9	+62 0	5.0	—			6.1	.8	6.9	5.2	4.1	✓	.

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Plate 458.

V	H	Type	No. Lines	K	Focus	Other Lines
	11.2	6.7	I	4	N	1	—
V	10.9	10.1	I I	3 4 5	K=H. K=H?!	1	—
	10.7	14.7	I	7	K=H	2	—
	11.0	22.1	I	6	N	2	—
	10.6	20.3	I	3	N	1	—
	10.1	16.0	I	6	N	1	—
	9.7	17.4	I	6	N	2	—
	9.4	8.8	II a	1 2	K=H	1	Rece
	9.4	12.3	I	3	N	1	—
	9.0	15.0	I	3	N?	1	—
III ? 5.8, 6.0.	9.0	20.9	III bc. 113	3	K=H	1	F? Rece.
	8.4	11.8	I	6	K=.5H	2	—
	8.2	16.7	I	5	N?	1	—
	8.0	16.2	I	4	N	1	—
	7.8	13.4	I	5	K=H	1	—
Peculiar spectrum.	7.5	10.8	I bc. 114	7	K=2H	4	Rece.
	8.0	9.4	I ?	8	K=H	4	—
	8.1	8.3	I	3	N	1	—
	7.5	8.7	I	4	k=H N	1	—
	7.6	6.1	I d	6	N? K=H	5	—
	6.2	14.5	I	7	K=.2H	1	—
	6.5	17.5	I	6	K=.2H	1	—
III ? 5.9, 6.2.	6.0	17.6	III bc. 115	2	K=H	1	Rece.
	5.6	17.7	I	3	N	1	—
	5.1	17.4	I	4	N	1	—
	5.5	14.1	III	3	K=H	1	F
	5.3	9.5	I	5	N	1	—
	5.9	11.0	I	7	K=.3H K=H	3	F?

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	No.	R.A.	Dec.	Mag.		Br.				
10 29 +81.2	349	10	28.9	+81	11	6.2	6.5	2.0	8.7	7.0 . 5.3 ✓
	10 34	9	1.2	+62	14	7.6				
	10 55	9	1.2	+62	15	7.6				
9 1 +62.5	~~1053~~	~~9~~	1.1	+62	32	6.5 —	6.9	6.8 .8	7.7	6.0 . 5.7 ✓
8 41 +62.5	1027	8	41.4	+62	30	5.7 —	6.3	.8	7.1	5.4 . 5.1 ✓
6 58 +81.5	242	6	57.6	+81	30	6.3 .	5.8	2.1	7.9	6.2 . 4.6 ✓
7 18 +82.0	213	7	18.8	+82	0	7.5 .	7.0	2.1	9.1	7.4 . 5.8 ✓
8 19 +82.8	253	8	19.7	+82	44	7.0 .	5.9	2.2	8.1	6.4 . 4.7 ✓
7 55 +82.9	235	7	56.0	+82	52	6.5 .	5.7	2.3	8.0	6.3 . 4.5 ✓
9 21 +72.8	462	9	21.2	+72	50	6.0 —	6.4	1.3	7.7	6.0 . 5.2 ✓
9 19 +83.0	262	9	19.0	+83	0	7.5 .	6.6	2.3	8.9	7.2 . 5.4 ✓
8 35 +83.3	233	8	35.8	+83	17	7.0	6.5	2.3	8.5	6.8 . 5.3 ✓
7 0 +82.7	201	7	0.3	+82	40	5.5 —	6.0 6.4	2.2	8.2 8.6	6.6 6.9 . 4.8 5.2 ✓
9 0 +73.6	452	9	1.2	+73	32	6.0 —	6.2	1.4	7.6	5.9 . 5.0 ✓
8 26 +73.7	428	8	27.0	+73	40	6.5	6.6	1.4	8.0	6.3 . 5.4 ✓
8 30 +73.8	430	8	30.1	+73	48	7.0 .	7.0	1.4	8.4	6.7 . 5.8 ✓
8 46.9 +63.9	812	8	46.9	+63	54	7.2 —	6.9	.9	7.8	6.1 . 5.7 ✓
8 58 +64.1	723	8	58.9	+64	6	5.0 —	5.7	.9	6.6	4.9 . 4.5 ✓
10 13 +83.3	297	10	13.0	+83	18	5.2	5.5	1.4	6.9	5.2 . 4.3 ✓
~~9 17 +73.6~~	~~467~~	~~9~~	~~19.6~~	~~+73~~	~~39~~	~~8.1~~ —				
9 26 +73.4	471	9	25.7	+73	23	7.0 .	7.2	1.4	8.6	6.9 . 6.0 ✓
9 24 +73.7	470	9	24.0	+73	44	6.5 —	6.8	1.4	8.2	6.5 . 5.6 ✓
9 20 +63.6	845	9	20.1	+63	40	3.5	5.3	.9	6.2	4.5 . 4.1 ✓
8 45 +84.8	196	8	44.3	+84	45	6.0 —	6.0	2.6	8.6	6.7 . 4.8 ✓
7 42 +84.5	169	7	41.6	+84	28	6.0 —	5.8	2.5	8.3	6.6 . 4.6 ✓
8 24 +64.8	698	8	27.5	+64	49	4.7 —	6.1 6.5	.9	7.0 7.4	5.3 5.7 . 4.9 5.3 ✓
7 32 +84.8	168	7	33.6	+84	47	7.8 .	6.8	2.6	9.4	7.1 . 5.6 ✓
8 20 +75.3	342	8	19.8	+75	13	6.4 .	6.5	1.5	8.0	6.3 . 5.3 ✓
8 44 +65.2	673	8	44.1	+65	9	6.0 —	6.5 6.9	.9	7.4 7.8	5.7 6.1 . 5.3 5.7 ✓
9 21 +74.9	402	9	21.6	+74	59	7.3 .	6.4	1.5	7.9	6.2 . 5.2 ✓
10 7 +84.9	234	10	7.8	+84	59	5.0 — ✓	5.3	2.6	7.9	6.2 . 4.1 ✓

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V	H	Type	No.	Lines	K	Focus	other Lines.	Remarks.
4.6	17.8	II	?	3	K=H	1	7.	
4.5	18.8	I		6	K=.1H	2	—	
4.0	10.8	I		6	K=.2H	1	—	
3.0	19.5	III		2	K=H	1	—	

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21.0	16.7	II a ?	116	2	K=H	1		Reen.
20.6	17.0	I ?		4	K=1H	1	—	
20.6	19.1	I		7	K=.1H	2	—	
20.6	11.6	II a	117	2	K=1.2H	4		Reen
20.0	11.1	I		6	N	3	—	
19.8	21.6	I		5	K=H	1	—	
19.1	15.5	I		4	N	1	—	
19.6	12.7	II a ?	118	2	K=H	1		Reen
19.5	11.4	III b	119	2	K=H	1		Reen.
Recorded above	19.1	15.5	I	3	N	1	—	
18.5	12.0	I		4	N	1	—	
18.3	15.5	I		7	K=.2H	2	—	
18.0	12.7	II a	120	3	K=.8H	5	7	
17.9	12.3	I ?		6	K=H	1	—	
17.0	17.3	I		9	K=.2H	3	5	
17.1	19.8	I		3	N	1	—	
17.3	20.3	I		4	N	1	—	
III ? 6.6, 6.8.	18.0	9.2	III		2	K=H	1	—
	17.0	6.5	I		3	N	1	—
	16.5	9.5	II a	121	2	K=H	1	Reen.
	16.1	14.9	III		2	K=H	1	—
	16.0	16.8	I		8	K=.2H	3	—
	16.4	20.5	I		2	N	1	—

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Mean 12

	No.	R.A.	Dec.	Mag.				Mean.
8 26 +65.5	643	8	26.3	+65 31	5.8	—		6.7 1.0 7.7 6.0 • 5.5 ✓
8 21 +65.6	638	8	21.6	+65 38	5.8	—		6.4 1.0 7.4 5.7 • 5.2 ✓
9 12 +75.7	377	9	12.6	+75 44	6.2	—		6.4 1.5 7.9 6.2 • 5.2 ✓
8 1 +76.2	310	8	1.2	+76 11	6.0	—		6.5 / 6.8 1.6 {8.1 6.4 / 8.4 6.7} • {5.3 / 5.6} ✓
							69/4 7-6/4	

Mean 12

9 2 +62.0	1058	9	2.9	+62 0	5.0	—		6.6 .8 7.4 5.7 • 5.4 ✓
9 1 +62.2	1054 / 1055	9 / 9	1.2 / 1.2	+62 14 / +62 15	7.6 / 7.6	? / ?		7.1 .8 7.9 6.2 • 5.9 ✓
8 58 +62.2	1365	8	58.6	+62 12	5.0	—		6.0 .5 6.5 4.8 • 4.8 ✓
9 23 +62.3	1401	9	23.1	+62 21	3.0	—		5.5 .5 6.0 4.3 • 4.3 ✓
9 25 +62.7	1402	9	24.9	+62 42	5.0	1715	4.6 18	5.9 .5 6.4 4.6 / 4.7 • 4.7 ✓
8 41 +62.7	1027	8	41.4	+62 30	5.7	—		6.8 .8 7.6 5.9 • 5.6 ✓
9 10 +63.0	1330	9	10.3	+63 4	7.0	.		7.1 .6 7.7 6.0 • 5.9 ✓
9 21 +72.9	462	9	21.2	+72 50	6.0	—		6.5 1.3 7.8 6.1 • 5.3 ✓
9 29 +72.9	466	9	29.5	+72 55	5.3	—		6.5 / 6.9 1.3 {7.8 6.1 / 8.2 6.5} • {5.3 / 5.7} ✓
~~9 24 +73.1~~	~~471~~	~~9~~	~~25.7~~	~~+73 23~~	~~7.0~~			
9 26 +73.4	471	9	25.7	+73 23	7.0	—		7.0 1.4 8.4 6.7 • 5.8 ✓
9 1 +73.5	452	9	1.2	+73 32	6.0	—		6.3 1.4 7.7 6.1 • 5.1 ✓
9 20 +63.7	845	9	20.1	+63 40	3.5	—		5.3 .9 6.2 4.5 • 4.1 ✓
9 24 +73.7	470	9	24.0	+73 44	6.5	—		6.7 1.4 8.1 6.4 • 5.5 ✓
8 59 +64.1	723	8	58.9	+64 6	5.0	—		5.7 .9 6.6 4.9 • 4.5 ✓
8 30 +73.6	430	8	30.1	+73 48	7.0	.		7.1 1.4 8.5 6.8 • 5.9 ✓
8 26 +73.7	428	8	27.0	+73 40	6.5	.		6.9 1.4 8.3 6.6 • 5.7 ✓
9 45 +73.5	478	9	45.3	+73 33	6.3	—		6.8 / 7.1 1.4 {8.2 6.5 / 8.5 6.8} • {5.6 / 5.9} ✓
10 6 +73.8	489	10	5.7	+73 48	6.5	.		6.9 1.4 8.3 6.6 • 5.7 ✓
9 34 +64.3	752 / ~~731~~	9 / ~~9~~	34.7 / ~~33.2~~	+64 19 / ~~+65 38~~	6.8 / ~~6.3~~	—		7.0 .9 7.9 6.2 • 5.8 ✓
9 4 +74.6	395	9	4.8	+74 37	6.5			6.9 / 7.3 1.4 {8.3 6.6 / 8.7 7.0} • {5.7 / 6.1} ✓
9 6 +74.6	1285	9	5.8	+74 38	5.7	—		5.8 .6 6.4 4.7 • 4.6 ✓
8 23 +74.1	370	8	23.5	+74 8	6.4	1575	6.3 20	6.9 1.4 8.3 6.6 • 5.7 ✓

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Plate 441.

V	H	Type	No. lines	K	Focus	Other Lines.	Remarks
15.5	6.2	I	6	N?	3	—	
15.0	8.8	I	4	K=H N	1	—	
15.5	12.7	I	7	N	2	F	
15.5	20.3	I	6	N	2	—	
14.9	11.6	II a 122	3	K=H N	1	Reen	
14.6	20.3	III ?	2	K=H N	1	—	
14.1	20.5	I	4	N	1	—	
14.2	14.6	I	3	N	1	—	
14.0	13.8	I	7	K=2 H	2	—	
14.0	10.0	II a 123	2	K=H N	1	Reen.	
12.6	12.8	I	4	K=H N	1	—	
12.6	8.9	I	4	K=H	1	—	
11.4	5.7	III	2	K=H?	2	—	
10.0	15.1	I	5	N	1	—	
III? 6.1, 6.3.	10.4	17.5	III	2	K=H N	1	—
10.4	21.3	I	6	N	2	—	
9.9	17.0	II a 124	6	K=H	2	—	
9.0	13.0	I	3	N	1	—	
III? 5.8, 6.1.	8.9	18.5	III	2	K=H N	1	—
7.9	17.0	II a 125	2	K=H N	1	Reen.	
7.4	17.6	II a 126	2	K=H N	1	Reen.	
7.5	21.5	I	4	K=H N	1	—	
7.5	23.5	I	3	N	1	—	
5.9	7.5	I	8	K=.2 H N	3	H?	
5.8	9.4	I	5	N	1	—	
6.0	12.2	I	7	K=.4 H ~~K=.2 H~~	1	—	
5.5	16.1	I	3	N	1	—	
5.5	18.9	I	4	N	1	—	

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13z. Mean · 12

	No.	R.A.	Dec.	Mag.						
9 42 +54.7	1331	9	42.2	+54	45	5.0				5.8 6 6.4 4.7 . 4.6
9 38 +55.0	1345	9	33.1	+55	2	6.7	—			6.8 .6 7.4 5.7 . 5.6
9 21 +74.9	402	9	21.6	+74	59	7.3	.			6.3 1.5 7.8 6.1 . 5.1
8 53 +54.8	1272	8	53.4	+54	51	5.8	1644	5.6	14	6.4 .6 7.0 5.5 5.7 . 5.2
9 30 +75.3	389	9	30.1	+75	15	6.8	—			6.9 1.5 8.4 6.7 . 5.7
8 44 +65.1	673	8	44.1	+65	9	6.0	—			6.8 7.0 .9 7.1 6.0 6.2 . 5.6 5.8
8 20 +75.2	342	8	19.8	+75	13	6.4	.			6.5 1.5 8.0 6.3 . 5.3
9 6 +75.5	370	9	6.6	+75	31	7.3	.			7.0 1.5 8.5 6.8 . 6.8
9 12 +74.7	377	9	12.6	+75	44	6.2	—			6.0 1.5 7.8 5.8 . 4.8
9 33 +65.6	731	9	33.2	+65	38	6.3	—			6.8 1.0 7.8 6.1 . 5.6
9 19 +56.4	1388	9	19.4	+56	22	6.6	—			7.0 .6 7.6 5.9 . 5.8
9 39 +66.3	637	9	39.0	+66	16	6.7	—			6.6 1.0 7.6 5.9 . 5.4
10 22 +76.5	393	10	22.6	+76	28	5.0	—			6.0 6.4 1.6 7.6 8.0 5.9 6.3 . 4.8 5.2
9 0 +77.6	359	8	59.8	+77	40	6.8	.			6.4 1.7 8.1 6.4 . 5.2
8 55 +67.4	573	8	55.7	+67	27	5.2	—			6.5 7.0 1.0 7.5 8.0 5.8 6.3 . 5.3 5.8
8 35 +67.2	580	8	35.6	+67	13	6.0	1601	6.0	14	6.4 1.0 7.4 5.8 5.7 . 5.2
8 57 +67.7	577	8	57.6	+67	44	5.3	—			5.8 1.1 6.9 5.2 . 4.6
9 19 +68.2	572	9	18.8	+68	9	6.8	.			7.0 1.1 8.1 6.4 . 5.8
8 49 +68.2	551	8	49.4	+68	11	5.1	—			6.4 6.9 1.1 7.5 8.0 5.8 6.3 . 5.2 5.7
8 39 +78.7	297	8	39.4	+78	42	6.9	—			6.8 1.8 8.6 6.9 . 5.6
8 31 +78.7	293	8	31.4	+78	42	6.5	—			7.0 1.8 8.8 7.1 . 5.8
8 46 +58.8	1159	8	46.2	+58	46	7.0	—			6.9 .7 7.6 5.9 . 5.7
7 36 +77.9	303	7	37.0	+77	36	7.0	.			6.6 1.7 8.3 6.6 . 5.4
9 40 +59.7	1268	9	40.7	+59	42	4.0	—			5.6 .7 6.3 4.6 . 4.4
10 0 +79.6	328	10	0.8	+79	39	6.7	.			6.8 1.9 8.7 7.0 . 5.6
9 30 +79.8	319	9	29.8	+79	48	6.0	—			6.2 1.9 8.1 6.4 . 5.0
8 45 +79.9	294	8	45.4	+79	55	7.0	.			6.9 1.9 8.8 7.1 . 5.7
8 55 +59.9	1217	8	55.4	+59	55	6.2	1650	6.1	15	6.9 .7 7.6 5.9 6.0 . 5.7

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Plate 441.

V	H	Type	Lines	Remarks	K	Focus	Other Lines.
5.7	22.4	I	II a 127	2	K=H	1	seen.
4.6	12.6	III	a 128	3	K=H	2	F? seen.
4.0	16.8	I	6		N.	1	
4.1	21.5	I	5		N	2	
2.5	15.4	I?	b	4	K=H N	1	—
2.2	7.8	I	b	4	K=H N	1	—
11 15	1.6	13.4	III p	129	1	N	1	seen.

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Mean 12.

	No.	R.A.	Dec.	Mag.					Bre.
8.42+59.6	1198	8	41.6	+59	36	6.5	—		6.9 7.7 7.6 5.9 . 5.7 ✓
9.22+70.4	565	9	21.6	+70	29	5.2	—		5.9 7.1 5.4 . 4.4 ✓
8.34+80.5	272	8	34.0	+80	34	7.3	.		6.1 1.2 7.3 5.6 . 4.9 ✓
7 42+79.9	265	7	41.9	+79	52	5.8	1477	5.3	22 +6 +5 ... 6.8 2.0 8.8 7.1 . 5.6 ✓
8 50+81.4	282	8	49.2	+81	24	6.7	—		5.6 1.9 7.5 5.8 . 4.4 ✓
10 28+81.2	349	10	28.9	+81	11	6.2	—		6.5 2.1 8.6 6.9 . ✓
9 16+81.9	302	9	16.0	+81	58	4.3	—		6.7 2.0 8.7 7.0 . ✓
									6.0 8.1 6.4 .
									6.7 2.1 8.5 6.8 .

$\frac{103}{6}$ $\frac{9-8}{6}$

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Plate 495.

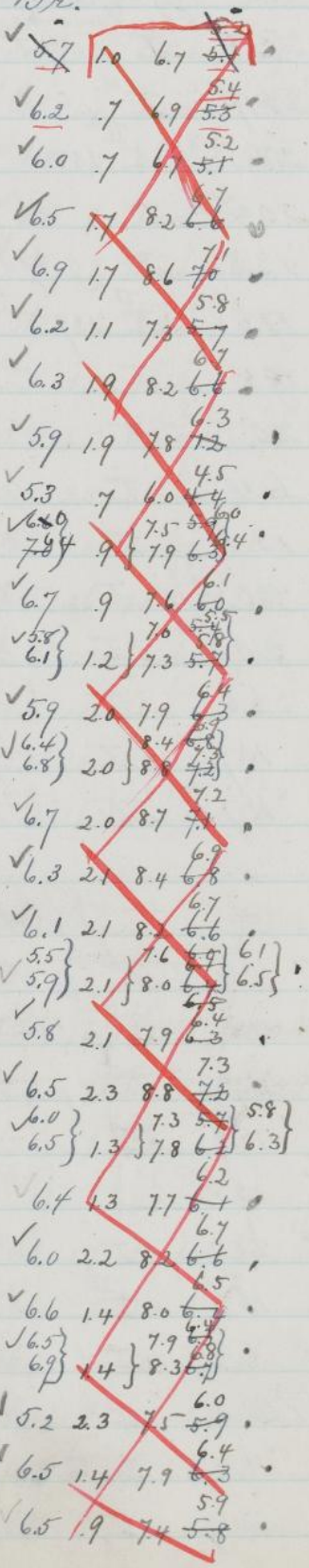
2	30	v	H.	Type	No. Lines	K	Focus	Other Lines. Remarks
	22.8	11.7		I	1306	N	2	—
	21.9	8.9		II a	131	K=H	2	F? seen.
	19.7	7.9		II a	132	K=H	2	seen.
	19.6	20.6		I	4	N	1	—
	19.0	11.1		I	4	N?	1	—
	16.8	12.7		I	7	K=H	2	F?
	16.5	14.1		I	6	K=.5 H	2	—
	16.0	16.9		I	7	K=.7 H. ~~K=.5 H~~	2	—
	16.2	19.6		I	8	K=.8 H	4	F
	15.6	8.9		III	1	N	1	—
	14.8	20.7		I	4	K=H	1	—
	14.4	20.9		III	3	K=H	3	F?
	13.4	12.0		I	8	K=.1 H	2	F.
	13.3	12.6		III	2	K=H	1	—
	13.3	21.1		I	5	K=H	1	—
	12.3	13.5		I	7	K=.8 H	1	F
	12.2	19.4		II a	133	K=H	1	seen
	11.7	17.3		III bc.	134	K=H	2	F? Bright. seen.
	11.0	8.6		I	5	N	2	—
	9.6	16.7		I	3	N	1	—
III? 6.0, 6.3.	9.8	18.9		III	2	K=H	2	—
	9.7	20.1		II a	135	K=H	2	seen.
	9.0	20.3		I	5	K=.1 H	2	—
	8.7	19.3		I	4	N	1	—
	8.7	16.5		III	2	K=H	1	—
	9.2	13.4		II a	136	3 ~~K=H~~ K=1.2 H	4	F? seen.
	8.3	13.6		I	5	K=H	1	—
	8.0	19.4		II a?	137	2 K=H'	1	seen.

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1886phae.proj..829F

	No.	R.A.	Dec.	Mag.				
10 14 +66.3	664	10	13.6	+66	18	5.0	1829	5.0 17/+K
10 21 +56.7	1459	10	21.4	+56	43	4.7	—	
	~~678~~	~~10~~	~~32.0~~	~~+66~~	~~28~~	~~5.2~~		
10 26 +57.8	1277	10	25.8	+57	50	5.0	—	
9 0 +77.7	359	8	59.8	+77	40	6.8	.	
10 30 +78.2	359	10	30.4	+78	11	7.0		
10 9 +69.4	568	10	10.0	+69	29	6.0	—	
10 0 +79.6	328	10	0.8	+79	39	6.7	—	
9 30 +79.8	319	9	29.8	+79	48	6.0	—	
9 40 +59.7	1268	9	40.7	+59	42	4.0	—	
10 32 69.9	586	10	32.6	+69	49	4.7		
~~11 +79.7~~	~~352~~	~~11~~	~~1.3~~	~~+79~~	~~41~~	~~8.0~~	—	
8 45 +79.9	294	8	45.4	+79	55	7.0	—	
9 22 +70.4	565	9	21.6	+70	29	5.2	—	
10 28 +51.2	349	10	28.9	+81	11	6.2	—	
10 20 +81.8	343	10	20.8	+81	14	6.2	—	
8 33 +80.6	272	8	34.0	+80	34	7.3	—	
10 6 +71.8	534	10	6.1	+71	47	6.3		
~~10 12 +81.9~~	~~337~~	~~10~~	~~11.8~~	~~+81~~	~~55~~	~~7.9~~	—	
8 50 +81.4	282	8	49.2	+81	24	6.7	—	
9 15 +81.9	302	9	16.0	+81	58	4.3	—	
11 21 +81.9	373	11	21.4	+81	56	6.2	1982	6.1 18+2 3
9 19 +83.0	262	9	19.0	+83	0	7.5	.	
9 29 +72.9	466	9	29.5	+72	55	5.3	—	
9 21 +72.8	462	9	21.2	+72	50	6.0	—	
8 19 +82.8	253	8	19.7	+82	44	7.0	—	
9 26 +73.4	471	9	25.7	+73	23	7.0	.	
9 45 +73.5	478	9	45.3	+73	33	6.3	—	
10 13 +83.3	297	10 8	13.0	+83	18	5.2	—	
10 6 +73.8	489	10	5.7	+73	48	6.5	—	
9 24 +73.7	470	9	24.0	+73	44	6.5		
~~9 36 +83.9~~	~~661~~	~~9~~	~~36.5~~	~~+83~~	~~56~~	~~7.0~~	.	

Br.



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October 21, 1886.

Plate 495.

V	H	Type	No. Lines	K	Focus	other Lines, Remarks
8.1	21.5	I	5	N	2	—
7.7	22.7	I d	4	N ? K=1.5 H	1	—
7.9	23.5	II a 138	2	K=.5 H	4	F seen.
5.8	10.4	I	5	N	1	—
6.0	13.8	I	10	K=.8 H	4	F
6.0	17.6	II a 139	2	K=H	2	seen.
5.6	19.4	I	5	N	2	—
5.0	20.5	I	5	K=.2 H	2	—
4.5	6.4	I	6	N	4	—
4.2	13.1	I	6	K=.3 H	2	—
4.4	20.4	I	4	N	1	—
4.0	20.2	I	5	K=.5 H	1	—
3.5	6.6	I	6	N	1	—
3.3	11.9	I	8	K=.1 H	3	—
3.0	11.7	III	2	K=H	1	—

Plate 435.

22.5	10.6	I	7	K=.2 H	3	—
22.0	11.1	III b 140	2	K=H	2	F seen
21.5	7.3	I d ?	4	K=H	3	—
20.5	15.9	III	2	K=H.	1	—
19.5	19.5	III	3	K=H	2	F
19.5	20.2	I	5	K=.5 H	1	—
19.2	16.6	II	2	K=H	1	—
19.2	6.3	I	7	K=H	3	—
19.9	22.2	I	4	N	1	—
18.6	10.4	I I	4 6	N K=H	1 1	— F
18.0	12.3	I	5	N	1	—

III ? 6.6, 7.0.

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	No.	R.A.	Dec.	Mag.		Br.
7 56 + 82.9	235	7 56.0	+82	52	6.5	.
9 1 + 73.5	452	9 1.2	+73	32	6.0	
9 20 + 63.7	845	9 20.1	+63	40	3.5	—
10 20 + 64.9 +	789	10 20.4	+64	59	6.2	—
10 8 + 84.9	234	10 7.8	+84	59	5.0	—
8 43 + 84.7	196	8 44.3	+84	45	6.0	—
9 21 + 74.9	402	9 21.6	+74	59	7.3	.
7 41 + 84.4	169	7 41.6	+84	28	6.0	—
12 47 + 84.2	289	12 48.0	+84	12	6.5	
	290	12 48.1	+84	12	5.5	2189 — .
10 7 + 65.8	767	10 7.5	+65	49	5.3	1807 5.7 14 -1 -2
7 33 + 84.8	168	7 33.6	+84	47	7.8	.
9 12 + 75.7	377	9 12.6	+75	44	6.2	—
10 39 + 65.9	803	10 39.1	+65	54	6.5	1890 6.3 13 -2 -3
10 13 + 66.3	664	10 13.6	+66	18	5.0	—
10 22 + 76.5	393	10 22.6	+76	28	5.0	—

$\frac{42}{4}$ $\frac{3-5}{4}$

$\frac{45}{3}$ $\frac{3-3}{3}$

10 13 + 66.3	664	10 13.6	+66	18	5.0	—
10 22 + 76.5	393	10 22.6	+76	28	5.0	—
10 21 + 56.7	1459	10 21.4	+56	43	4.7	—
9 50 + 57.5	1242	9 49.8	+57	30	5.0	—
9 36 + 57.7	1231	9 36.2	+57	47	5.0	—
8 59 + 77.6	359	8 59.8	+77	40	6.8	—
9 47 + 58.1	1224	9 47.1	+58	6	6.2	—
10 25 + 57.8	1277	10 25.3	+57	50	5.0	—
9 26 + 57.6	1224	9 26.3	+57	37	6.8	.
30 782	359	10 38.4 38.5	+78	11	7.0	
10 5 + 68.1	605	10 4.6	+68	24	7.2	.
10 3 + 58.6	1244	10 3.6	+58	42	7.0	

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1886phae.proj..829F

October 21, 1886.

Plate 435.

	V	H	Type	No. Lines	Remarks	K	Focus	other Lines.	
III? 6.2, 6.5	16.5	7.9	III	1	2	K=H	1	—	
	16.5	11.8	I	6	7	K=.5H	2	—	
	16.5	13.3	I	2		N	1	—	
	16.0	13.8	I	4	5	N	2	—	
	16.0	18.2	II a	141	8	K=.8H	5	F.	seen.
	15.4	7.9	III		2	N	1	F	
	14.4	20.3	I	3	4	N	1	F	
	14.2	19.9	III		3	K=H	3	—	
	13.7	11.8	II a	142	4	K=H	1		seen.
	13.5	19.2	I?	2	4	K=H	1	—	
	13.5	21.4	III		2	K=H	1	—	
	13.2	20.9	I	3	4	N	1	—	
	13.1	6.3	II		2	K=H	1	—	
	13.4	6.4	III		2	K=H	1	—	
	13.0	11.7	I	5	6	K=.2H	2	—	
	12.0	12.7	I	4	6	K=.5H	2	—	
	12.0	17.0	III a	143	2	K=H	1		seen.
	11.5	17.0	III	bc. 144	2	K=H	2	F?	seen.
	10.5	8.4	I	4	6	K=H	2	—	
	10.8	16.4	I	3	4	N	1	—	
	9.5	18.1	III	bc. 145	2	K=H	2		seen bright.
	9.5	19.3	II a	146	3	K=H	2		seen.
	9.0	13.3	I	7	8	K=H	4	F.	
III 6.0, 6.4	8.5	15.4	III	b 147	2	K=H	1	—	
	8.5	18.5	I	3	4	K=.5H	1	—	
	8.9	20.2	I	5	6	N	2	—	
	8.0	12.9	II a	148	4	K=H	1		seen.
	7.9	18.4	II a	149	2	K=H	1		seen.

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1990phae.proj. .829F

	No	R.A.	Dec.	Mag.		Brc.				
10 31 + 69.2	583	10 31.5	+69 11	5.5	—	✓6.5 6.9	1.1	7.6 8.0	6.0 6.4	
10 10 + 69.5	568	10 10.0	+69 29	6.0	—	✓6.3	1.1	7.4	5.8	.
10 7 + 79.5	329	10 6.4	+79 30	8.0	.	✓6.9	1.8	8.7	7.1	.
10.00 + 79.7	328	10 0.8	+79 39	6.7						
~~9 58 + 69.4~~	~~561~~	~~9 58.1~~	~~+69 23~~	~~7.0~~	.	✓6.0	1.1	7.1	5.5	.
9 41 + 59.6	1268	9 40.7	+59 42	4.0	—	✓5.4	.7	6.1	4.5	.
10 32 + 69.8	586	10 32.6	+69 49	4.7	—	✓6.0 6.4	1.2	7.2 7.6	5.6 6.0	.
8 45 + 79.9	294	8 45.4	+79 55	7.0	.	✓6.7	1.9	8.6	7.0	.
9 21 + 70.5	565	9 21.6	+70 29	5.2	—	✓5.7 6.0	1.2	6.9 7.2	5.3 5.6	.
10 6 + 60.9	1250	10 6.0	+60 52	6.7	—	✓6.6	.8	7.4	5.8	.
9 25 + 70.9	568	9 25.4	+70 55	7.0	—	✓6.8	1.2	8.0	6.4	.
9 26 + 60.9	1198	9 26.8	+60 51	6.5	—	✓6.8 7.1	.8	7.6 7.9	6.0 6.3	.
8 35 + 80.5	272	8 34.0	+80 34	7.3	.	✓6.3	2.0	8.3	6.7	.
10 29 + 60.9	1274	10 28.9	+60 52	6.7	—	✓6.9	.8	7.7	6.1	.
10 43 + 70.6	634	10 43.6	+70 37	6.0	—	✓6.6 6.9	1.2	7.8 8.1	6.2 6.5	.
10 29 + 81.3	349	10 28.9	+81 11	6.2	—	✓5.8	2.0	7.8	6.2	.
10 6 + 71.8	534	10 6.1	+71 47	6.3	—	✓6.2	1.3	7.5	5.9	.
9 44 + 61.8	1151	9 44.4	+61 48	6.4	—	✓6.8 7.0	.8	7.6 7.8	6.0 6.2	.
9 16 + 81.9	302	9 16.0	+81 58	4.3	—	✓5.5 5.8	2.1	7.6 7.9	6.0 6.3	.
11 22 + 81.9	373	11 21.4	+81 56	6.2	—	✓5.8	2.1	7.9	6.3	.
9 41 + 72.4	473	9 41.2	+72 21	7.1	.	✓6.8	1.3	8.1	6.5	.
9 29 + 72.9	466	9 29.5	+72 55	5.3	—	✓6.0 6.4	1.3	7.3 7.7	5.7 6.1	.
9 21 + 72.8	462	9 21.2	+72 50	6.0	—	✓6.0	1.3	7.3	5.7	.
10.13 + 83.4	277	10 13.0	+83 18	5.2	—	✓4.5	2.3	6.8	5.2	.
9 45 + 73.5	478	9 45.3	+73 33	6.3	—	✓6.5 6.8	1.4	7.9 8.2	6.3 6.6	.
9 26 + 73.4	471	9 25.7	+73 23	7.0	—	✓6.4	1.4	7.8	6.2	.
8 19 + 82.7	253	8 19.7	+82 44	7.0	.	✓5.5	2.2	7.7	6.1	.
10 6 + 73.8	489	10 5.7	+73 48	6.5	—	✓6.5	1.4	7.9	6.3	.
9 24 + 73.7	470	9 24.0	+73 44	6.5	—	✓6.2	1.4	7.6	6.0	.

Dm. 272 + 80

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October 21, 1886.

Plate 435.

V	H	Type	No. Lines	K	Focus	Other Lines. Remarks.
8.0	21.4	I	5	N	3	—
7.9	22.2	I	9	K=H	4	F?
7.8	22.0	I	6	N	2	F.
Recorded on p. 84. 8.0	18.7	II[a]	150	2	K=H	1 Seen.
7.0	18.9	I?	6	K=H	1	F.
6.5	13.9	I I	5	N K=H	1 1	— F?
5.7	13.8	I	6	K=.2 H?	4	F?
5.6	17.5	II[a]	151	2	K=H	3 Seen.
5.5	18.7	I	6	N	2	—
5.4	9.2	I	6	K=.3 H	2	—
4.9	20.4	I	6	N?	3	—
4.1	19.0	II[a]	152	2	K=H	1 seen.
4.0	20.4	I	5	N	1	—
3.8	19.6	I	6	K=.5 H	2	—
4.0	12.0	I	8	K=.2 H	3	—
4.0	6.4	I	6	N	5	—
3.0	10.7	I	8	N	4	F.
2.6	11.1	III	b 153 2	K=H	2	seen.
2.5	12.5	I I	5	K=H N K=H	1 2	— —
3.0	17.7	I	6	K=H	2	—
Recorded above 3.8	19.6	I	5	N	2	—
3.5	4.0 20.4	I	3	N	1	—

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	No.	R.A	Dec.	Mag.				Br.				
7 57 + 82.9	235	7	56.0	+82	52	6.5	.	✓5.4	2.3	7.7	6.1	.
9 20 + 63.7	845	9	20.1	+63	40	3.5	—	✓5.5	.9	6.4	4.8	.
9 1 + 73.6	452	9	1.2	+73	32	6.0	1668 5.8 15-1	✓5.9	1.4	7.3	5.7	.
~~9 24 + 73.4~~	~~470~~	~~9~~	~~24.0~~	~~+73~~	~~44~~	~~6.5~~	—	~~6.2~~	~~1.4~~	~~7.6~~	~~6.0~~	
9 34 + 64.3	752	9	34.7	+64	19	6.8	—	✓6.5	.9	7.4	5.8	.
9 58 + 64.6	770 ✓	9	58.5	+64	39	6.8	. ✓	✓6.9 6.7	.9	7.8	6.2	.
10 7 + 84.9	234	10	7.8	+84	59	5.0	—	✓4.8	2.6	7.4	5.8	.
8 44 + 84.7	196	8	44.3	+84	45	6.0	—	✓5.4	2.6	8.0	6.4	.
9 21 + 74.9	402	9	21.6	+74	59	7.3	.	✓5.8	1.5	7.3	5.7	.
10 20 + 64.9 +	789	10	20.4	+64	59	6.2	—	✓6.3	.9	7.2	5.6	.
7 41 + 84.5	169	7	41.6	+84	28	6.0		✓5.4	2.5	7.9	6.3	.
9 33 + 65.6	731	9	33.2	+65	38	6.3	—	✓6.4	1.0	7.4	5.8	.
9 6 + 75.5	370	9	6.6	+75	31	7.3	.	✓6.5	1.5	8.0	6.4	.
9 12 + 75.7	377	9	12.6	+75	44	6.2	—	✓5.9	1.5	7.4	5.8	.
10 7 + 65.9	787	10	7.5	+65	49	5.8	—	✓6.3	1.0	7.3	5.7	.
12 48 + 84.3	289	12	48.0	+84	12	6.5		✓				
	290	12	48.1	+84	12	5.5	2189 —	5.0	2.5	7.5	5.9	.
10 13 + 66.4	664	10	13.6	+66	18	5.0	1829 5.0 18+2	✓5.8	1.0	6.8	5.2	.
10 22 + 76.5	393	10	22.6	+76	28	5.0	—	✓ 5.9 6.2	1.6	7.5 5.9 / 7.8 6.2		.
57 84.4	161	10	56.2	+86	26							
10 ~~12~~ + ~~75.5~~	~~386~~	~~10~~	~~11.8~~	~~+76~~	~~24~~	~~7.7~~	—	✓ 6.5	1.6	8.1	6.5	.
9 39 + 66.3	637	9	39.0	+66	16	6.7	—	6.5	1.0	7.5	5.9	.

33/2 2-1/2

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January 10, 1887.

Plate 508.

	V	H	Type	No. Lines	Remarks	K	Focus	other Lines	
	20.7	11.1	III	bc 154		K=H	4	F? Reen.	
	17.5	11.9	I?	4		K=H	1	–	
	17.2	19.1	I	3		N	1	–	
	15.1	7.2	I	5		K=H	2	–	
III? 6.7, 7.0.	15.0	13.2	III	1		N	1	–	
	15.9	18.6	I	4		K=H	2	–	
	14.2	14.6	I	5		N	2	–	
	14.0	7.7	I?	3		N?	1	–	
Recorded above	~~14.1~~	~~14.6~~	~~I~~	~~5~~		~~N~~	~~2~~	~~Flare?~~	
	13.9	21.1	I	6		K=H	2	–	
	14.0	23.3	I	4		K=H	1	F.	
III? 6.3, 6.6.	13.0	16.1	III	3		K=H	2	F	
	13.0	16.5	III	2		K=H	3	–	
	13.1	19.8	I	8		N	3	F	
	12.5	14.5	I	3		N	1	–	
	12.4	19.7	III	2		K=H	2	–	
	11.6	11.0	I	11		K=1 H	5	Reen.	
	9.8	10.6	I	4		K=H	1	–	
	10.0	16.0	I	6		N	2	–	
	10.1	18.3	I	6		K=H	2	–	
	9.5	15.4	I? I.?	3		K=H N	11	–	
	9.0	13.6	III	2		K=H	1	–	
	7.5	6.0	I?	5		K=H	2	–	
	7.6	10.3	I	5		N	1	–	
	6.5	15.7	III	3		K=H	1	F	
	6.5	18.0	I	5		N?	2	F	
	6.7	19.4	I	4		K=H	2	–	
	5.5	20.6	I	6		K=H	2	–	

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Mean 11

	No.	R.A.	Dec.	Mag.			13r.				
10 54+62.5	1161	10 54.8	+62 31	2.0	—		5.2 5.7	.8	6.0 4.4 6.5 4.9		4.1 4.6 ✓
10 52+64.2	824	10 51.9	+64 12	6.8	—		6.9	.9	7.8	6.2	5.8 ✓
10 24+54.3	1381	10 24.6	+54 14	6.8	.		7.0	.6	7.6	6.0	5.9 ✓
11 14+65.1	828	11 14.2	+65 8	6.0	—		6.7	.9	7.6	6.0	5.6 ✓
10 47+65.3	808	10 46.8	+65 19	7.5	—		6.8 7.1	.9	7.7 8.0	6.1 6.4	5.7 6.0 ✓
10 20+64.9+	789	10 20.4	+64 59	6.2	—		6.8	.9	7.7	6.1	5.7 ✓
10 40+65.9	803	10 39.1	+65 54	6.5	1890 6.3 15-1		6.8	1.0	7.8	6.2	5.7 ✓
11 4+65.6	1446	11 4.3	+65 41	6.7			7.0	.6	7.6	6.0	5.9 ✓
~~10 39+65.9~~	~~803~~	~~10 39.1~~	~~+65 54~~	~~6.5~~							
10 7+65.8	767	10 7.5	+65 49	5.8	—		6.7	1.0	7.7	6.1	5.6 ✓
9 30+75.3	389	9 30.1	+75 15	6.8	—		7.0	1.5	8.5	6.9	5.9 ✓
10 32+66.5	678	10 32.0	+66 28	5.2	—		6.6 6.9	1.0	7.6 7.9	6.0 6.3	5.5 5.8 ✓
10 22+76.5	393	10 22.6	+76 28	5.0	—		6.3 6.5	1.6	7.9 8.1	6.3 6.5	5.2 5.4 ✓
10 13+66.3	664	10 13.6	+66 18	5.0	1829 5.0 22+6		6.2	1.0	7.2	5.6	5.1
10 39+76.8	402	10 39.8	+76 46	7.0	.		6.9	1.6	8.5	6.9	5.8 ✓
10 21+55.7	1459 10 21.4 +56° 43 4.7 ~~1394 10 20.5 +55 34 7.4~~				—		6.3	.6	6.9	5.3	5.2 ✓
10 53+57.2	1302	10 53.1	+57 10	2.3	—		4.8	.7	5.5	3.9	3.7 ✓
11 0+67.9+	632	11 0.4	+68 0	6.5	—		6.8	1.1	7.9	6.3	5.7 ✓
10 34+57.9	1286	10 34.6	+57 57	5.8	1881 5.7 15-1		6.5	.7	7.2	5.6	5.4 ✓
10 25+57.8	1277	10 25.8	+57 50	5.0	—		6.5	.7	7.2	5.6	5.4 ✓
10 35+68.2	~~3.59 10 30.4 +78 11 7.0~~ ~~617 10 35.0 +68 10 6.2~~ ✓				—		7.0 7.2	1.1	8.1	6.5	5.9 ✓
10 48+78.6	367	10 48.2	+78 33	6.2	—		6.8 7.1	1.8	8.6 8.9	7.0 7.3	5.4 6.0 ✓
12 6+78.4	442	12 5.4	+78 26	5.1	—		5.8	1.7	7.5	5.9	4.7 ✓
11 3+69.1	602	11 3.0	+69 2	6.2	1945 6.6 13-3		6.8	1.1	7.9	6.3	5.7 ✓
10 32+69.8	586	10 32.6	+69 49	4.7	—		6.7 7.0	1.2	7.9 8.2	6.3 6.6	5.6 ✓ 5.9
10 0+79.6	328	10 0.8	+79 39	6.7			6.8	1.9	8.7	7.1	5.7 ✓
10 10+69.4	568	10 10.0	+69 29	6.0	—		6.7	1.1	7.8	6.2	5.6 ✓
9 30+79.8	319	9 29.8	+79 48	6.0	— ✓		6.6	1.9	8.5	6.9	5.5 ✓

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Plate 508.

v	H	Type	No. lines	K	Focus	Other lines. Remarks
5.0	7.2	III	1	N	2	—
3.6	15.3	I	~~6~~	~~K=.2H~~	2	—

Plate 500.

20.5	12.6	III	lc 155 ~~5~~ 2	K=1.2H ~~K=H~~	5	—
17.3	13.3	I	~~4~~	~~K=H~~	1	—
17.1	20.6	~~II~~ a. 156	~~2~~	K=H ~~N~~	1	Reen.
15.6	9.4	I	~~3~~	N	1	—
15.0	8.7	I	~~5~~	N	2	—
15.0	14.7	III	1	N	1	—
15.5	20.1	I	~~5~~	K=H ~~N~~	2	—
14.0	9.2	~~II~~ ?	2	K=H ~~N~~	1	—
14.0	16.1	I	~~5~~	N?	2	—
13.7	22.6	I	~~5~~	K=H ~~N~~	2	—
III ? 6.6, 6.9	13.0	17.5	III	~~3~~ 2	K=H ~~N~~	1	—
13.0	17.9	III lc 157	~~4~~ 3	K=1.2H ~~K=H~~ ?	2	F
13.0	21.2	I	5	N	3	—
12.3	21.2	~~II~~ a 158	~~2~~	K=H	2	F reen ~~line~~
12.2	15.9	I	3	N	1	—
11.6	12.5	I	~~10~~ 11	N?	5	F reen.
10.2	19.8	I ?	5	K=H	2	F ~~line~~ ?
10.0	17.5	I	6	N	2	—
9.7	12.1	I	~~5~~ 6	K=H	2	F reen
9.6	5.5	~~II~~ III	2	K=H ~~N~~	1	—
9.5	7.1	I	4	N	1	—
7.8	7.3	I	3	N	1	—
7.5	7.4	I	~~5~~ 6	K=H ~~N~~	2	—
7.5	11.8	I	~~4~~ 5	~~K=H~~	1	—

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Mean. 11

	No.	R.A.	Dec.	Mag.				Br.				
11 22+70.2	665	11 22.8	+70	9	3.3	—		6.4 / 6.8	1.2	7.6 6.0 / 8.0 6.4	#	5.3 ✓ / 5.7
10 29+81.2	349	10 28.9	+81	11	6.2	—		6.6	2.0	8.6 7.0	•	5.5 ✓
							65/4 6-5/4					
10 54+62.6	1161	10 54.8	+62	31	2.0	—		✓ 5.0 / 5.5	.8	5.8 4.1 / 6.3 4.6	•	
10 52+64.2	824	10 51.9	+64	12	6.8	—		✓ 7.8	.9	7.9 6.2	•	
10 24+54.3	1381	10 24.6	+54	14	6.8	—		✓ 7.0	.6	7.6 5.9	•	
11 3+54.9	1426	11 3.1	+54	56	7.0	.		✓ 7.2	.6	7.8 6.1	•	
11 14+65.2	828	11 14.2	+65	8	6.0	1966 5.9 16 -1		✓ 6.6	.9	7.5 5.8	•	
10 45+55.3	1418	10 44.8	+55	21	5.7	—		✓ 6.9 / 7.3	.6	7.5 5.8 / 7.9 6.2	•	
10 20+65.0	789	10 20.4	+64	59	6.2	—		✓ 6.9	.9	7.8 6.1	•	
11 4+55.6	1446	11 4.3	+55	41	6.7	—		✓ 7.2	.6	7.8 6.1	•	
10 39+65.9	803	10 39.1	+65	54	6.5			✓ 6.7	1.0	7.7 6.0	•	
10 7+65.8	767	10 7.5	+65	49	5.8	—		✓ 6.6	1.0	7.6 5.9	•	
10 32+66.5	678	10 32.0	+66	28	5.2	—		✓ 6.8 / 7.1	1.0	7.8 6.1 / 8.1 6.4	•	
10 22+76.4	393	10 22.6	+76	28	5.0	—		✓ 6.4 / 6.6	1.6	8.0 6.3 / 8.2 6.5	•	
10 13+66.3	664	10 13.6	+66	18	5.0	1829 5.0 20+3		✓ 6.0	1.0	7.0 5.3	•	
10 21+56.7	1459	10 21.4 (24.4)	+56	43	4.7	—		✓ 6.5	.7	7.2 5.5	•	
10 39+76.7	402	10 39.8	+76	46	7.0	.		✓ 7.1	1.6	8.7 7.0	•	
10 53+57.2	1302	10 53.1	+57	10	2.3			✓ 4.4	.7	5.1 3.4	•	
10 25+57.8	1277	10 25.8	+57	50	5.0	—		✓ 6.5	.7	7.2 5.5	•	
10 34+57.9	1286	10 34.6	+57	57	5.8	1881 5.7 15 -2		✓ 6.5	.7	7.2 5.5	•	
11 0+68.0	632	11 0.4	+68	0	6.5	—		✓ 6.7	1.1	7.8 6.1	•	
11 34+67.6	714	11 34.4	+67	33	5.3	—		✓ 7.0 / 7.3	1.0	8.0 6.3 / 8.3 6.6	•	
11 13+57.8	1316	11 13.5	+57	52	6.5	.		✓ 6.9	.7	7.6 5.9	•	
12 5+78.3	411	12 5.0	+78	15	7.3	.		✓ 7.0	1.7	8.7 7.0	•	
12 6+78.4	412	12 5.1	+78	26	5.1	—		✓ 6.0	1.7	7.7 6.0	•	
11 3+69.1	602	11 3.0	+69	2	6.2	— ✓		✓ 6.9	1.1	8.0 6.3	•	

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Plate 510.

V	H	Type	No. Lines	Remarks.	K	Focus	Other Lines
6.3	17.2	III	2		K=H	1	—
6.4	19.3	I	5		K=.5H	1	—
6.5	21.2	I	4		N?	1	—
III? 5.8, 6.2.	5.0	8.6	III[bc]	159	2	K=H	2	Reen.
	4.9	7.8	III		2	K=H	1	—
	5.5	22.0	I		4	K=H	1	—
	3.5	16.6	I		5	N	1	—
	1.9	12.9	?		1	N	1	—

Plate 509.

20.8	9.7	p III[a?]	160		2	K=H	2	Reen
21.0	19.7	I	I		4 H	K=H	1 1	— —
18.1	7.0	I			4	N	2	—
17.7	5.6	I[d]			4	N?	1	—
17.0	6.4	I			5	K=H	2	—
16.8	19.0	I			10 11	N?	5	Freen.
16.5	16.6	p II[a]	161		2	K=H	1	Reen
16.5	10.9	I?			3	N	1	—
14.9	14.4	II p			3	K=H	2	—
15.0	21.0	I II[a]	162		2	K=H	1	Reen.
13.5	9.4	I			3	N	1	—
13.9	13.2	I			4	K=.1H	3	F
12.5	8.2	p III			2	K=H	1	—
12.1	4.9	I			4	K=H	1	—
11.5	12.2	I			4	K=H	1	—
12.0	15.1	I	I?		3 3	N N	1 1	— —
10.3	12.4	I			11	K=.2H	5	Freen.
10.5	14.9	I ?			4	K=H	2	—

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	No.	R.A.	Dec.	Mag.						Brt.				
10 32 +69.8	586	10 32.6	+69 49	4.7	—					6.8 / 7.1	1.2	8.0 6.3 / 8.3 6.6		
10 0 +79.6	328	10 0.8	+79 39	6.7	—					6.9	1.9	8.8	7.1	
10 10 +69.5	568	10 10.0	+69 29	6.0						6.7	1.1	7.8	6.1	
11 22 +70.2	665	11 22.8	+70 9	3.3	—					6.5 / 6.9	1.2	7.7 6.0 / 8.1 6.4		
11 27 +70.2	670	11 27.6	+70 8	5.2	—					6.9 / 7.2	1.2	8.1 6.4 / 8.4 6.7		
9 30 +79.7	319	9 29.8	+79 48	6.0	—					6.6	1.9	8.5	6.5	
10 29 +81.2	349	10 28.9	+81 11	6.2	.					6.9	2.0	8.9	7.2	
11 21 +81.9	373	11 21.4	+81 56	6.2						~~6.7~~	2.1	8.8	~~7.1~~	
12 17 +52.4	1626	~~12 17.0~~	~~+52~~	5.2	—					6.9 / 7.1	.5	7.4 5.4 / 7.6 5.4		5.2 / 5.4
11 43 +52.2	~~1590~~ 1198	~~11 43.2~~ 11 39.3	~~+52~~ +62	~~7.3~~ 6.5	—					7.0	7.0 .5	7.5	5.3	5.3
12 35 +63.5	1026	12 35.2	+63 32	6.5	.2159	6.0	17-5			6.8	.9	7.7	5.5	5.1
12 41 +63.5	1034	12 41.1	+63 34	6.0						6.9	.9	7.8	5.6	5.2
13 0 +73.8	583	13 0.3	+73 48	6.0	—					6.9	1.4	8.3	6.1	5.2
11 46 +54.5	1475	11 46.2	+54 30	2.5	2036	2.3	26+4			4.3	.6	4.9	2.7	2.6
11 45 +74.6	476	11 45.8	+74 34	6.7	—					7.3	1.4	8.7	6.5	5.6
12 18 +64.6	896	12 18.3	+64 37	6.0	2107	6.3	21-1			7.5	.9	8.4	6.2	5.8
12 2 +75.4	469	12 2.7	+75 28	6.7	—					6.8	1.5	8.3	6.1	6.1
11 7 +75.2	438	11 7.5	+75 8	7.4	—					7.0	1.5	8.5	6.3	5.3
12 19 +55.9	1533	12 19.6	+55 58	7.0	.					7.2	.6	7.8	5.6	5.5
12 12 +75.9	470	12 12.3	+75 59	5.8	—					6.0	1.5	7.5	5.3	4.3
12 54 +76.3	473	12 54.5	+76 15	6.0	—					7.0 / 7.3	1.6	8.6 6.4 / 8.9 6.7		5.3 / 5.6
12 24 +66.7	763	12 24.4	+66 42	6.5	.					7.0	1.0	8.0	5.8	5.3
12 13 +67.3	742	12 13.5	+67 12	6.8	—					7.1	1.6	8.1	5.9	5.4
11 57 +67.1	439 ~~730~~	11 56.5 ~~11 57.2~~	+76 ~~+67~~	7.7 ~~7.5~~	.					7.2 7.1	1.0	8.2	6.0	5.5
12 8 +57.8	1363	12 8.2	+57 50	3.3	—					4.8	.7	5.5	3.3	3.1
11 57 +77.7	461	11 57.9	+77 43	5.8	—					6.6	1.7	8.3	6.1	4.9

$\frac{51}{3}$ $\frac{3-3}{3}$

Mean. 17

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Plate 509.

T	H	Type	No. lines	Remarks	K	Focus	Other Lines.
III? 6.6, 6.8.	10.5	19.6	III		2	K=H ~~K=H~~	1	—
	9.3	14.2	I		4	N	2	—
	9.0	14.1	I		~~6~~ 7	K=.5H	3	—
	8.7	9.5	I		2	N	1	—
	9.0	19.5	I		3	N	1	—
	8.0	22.0	I		5	N	1	—
	7.4	8.9	I		~~5~~ 7	K=.8H ~~K=H~~	2	F?
	5.7	11.8	I		3	N	1	—
	5.4	6.9	p III.		2	K=H N	1	—
	5.5	20.3	p III		~~3~~ 2	K=H	2	F?
III 5.8, 6.1.	5.3	21.1	III b	163	2	K=H N	2	peen
	4.7	10.2	I b	164	~~8~~ 9	N	4	—
	4.0	13.9	I		~~3~~ 4	K=H N	1	—
	4.0	15.8	I		~~4~~ 5	K=H N	1	—
	2.8	11.6	I		~~4~~ 5	K=.5H N	1	—
	2.5	21.5	I		3	N?	1	—

Plate 516

22.5	12.5	I		~~9~~ 10	N	5	F peen.
21.4	10.6	I		~~5~~ 6	K=H N	2	F
20.0	23.0	I		~~5~~ 7	N	4	—
17.6	18.9	I		5	N	2	F, P
15.0	10.4	I		4	N	2	—
15.6	16.5	I		6	N	4	—
14.0	13.9	I		~~5~~ 6	K=H N	2	F
10.0	8.9	I		4	N	2	—
9.1	14.2	I		~~4~~ 5	K=.5H N	2	—
9.3	15.5	I		~~6~~ 7	K=.5H	2	—

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Mean 17

	No.	R.A.	Dec.	Mag.					Br.				
11 34 +67.5	714	11	34.4	+67	33	5.3	—		6.9 / 7.2	1.0	7.9 / 8.2	5.7 / 6.0	5.2 / 5.5
12 5 +78.3	411	12	5.0	+78	15	7.3	.		6.8	1.7	8.5	6.3	5.1
12 5 +78.4	412	12	5.4	+78	26	5.1	—		5.8	1.7	7.5	5.3	4.1
13 9 +77.9	506	13	9.4	+77	58	7.6	.		7.4	1.7	9.1	6.9	5.7
11 12 +78.2	385	11	12.8	+78	11	6.8	.		7.4	1.7	9.1	6.9	5.7
11 32 +58.8	1331	11	32.5	+58	46	6.3	.		6.9	.7	7.6	5.4	5.2
12 23 +59.2	1444	12	23.2	+59	12	5.7	—		6.6	.7	7.3	5.1	4.9
12 33 +80.0	389	12	32.8	+80	1	6.7	.		7.2	1.9	9.1	6.9	5.5
13 25 +79.4	422	13	25.8	+79	23	6.0	—		6.6 / 6.8	1.8	8.4 / 8.6	6.2 / 6.4	4.9 / 5.1
11 27 +70.1	670	11	27.6	+70	8	5.2	—		6.8 / 7.1	1.2	8.0 / 8.3	5.8 / 6.1	5.1 / 5.4
11 22 +70.1	665	11	22.8	+70	9	3.3	—		6.5 / 6.8	1.2	7.7 / 8.0	5.5 / 5.8	4.8 / 5.1
12 27 +70.6	703	12	27.2	+70	35	3.3	2135	3.8 24 +2	5.0	1.2	6.2	4.0	3.3
12 9 +80.9	380 / 381	12	9.8 / 9.8	+80	56 / 58	8.4 / 8.3	—		7.0	2.0	9.0	6.8	5.3
11 53 +71.0	598	11	53.3	+71	2	6.5	—		7.0	1.2	8.2	6.0	5.3
12 40 +81.4	402	12	40.8	+81	25	6.3	—		6.9	2.1	9.0	6.8	5.2
10 30 +81.2	349	10	28.9	+81	11	6.2							
~~8 37 +81.2~~	~~274~~	~~8~~	~~36.4~~	~~+81~~	~~20~~	~~8.6~~			~~6.9~~	2.0	8.9	~~6.7~~	Dm 349 +81°

88/4 6-6/4

12 47 +56.8	1627	12	47.7	+56	44	2.0	2191	1.8 ~~3 +6~~	~~7.2~~	.7	4.9	~~2.6~~ ~~2.4~~	
12 54 +57.1	1408	12	54.5	+57	8	5.0	—		6.5	.7	7.2	5.9 ~~5.7~~	
12 8 +57.8	1363	12	8.2	+57	50	3.3	2077	3.4 28 +5 +3	5.5	.7	6.2	3.9 ~~3.7~~	
12 23 +59.2	1444	12	23.2	+59	12	5.7	2122	5.6 17 -6 -8	6.6	.7	7.3	5.0 ~~4.8~~	
12 56 +60.5	1439	12	56.7	+60	31	6.5	.		6.8	.8	7.6	5.3 ~~5.1~~	
12 27 +70.6	703	12	27.2	+70	35	3.3	2135	3.8 24 +1	5.0	1.2	6.2	3.9 ~~3.7~~	
12 42 +61.1	1320	12	42.4	+61	6	6.0	—		6.8	.8	7.6	5.3 ~~5.1~~	
13 4 +62.9	1056	13	4.2	+63	1	6.4	.		6.8	.9	7.7	5.4 ~~5.2~~	
12 41 +63.6	1034	12	41.1	+63	34	6.0	—		6.5	.9	7.4	5.1 ~~4.9~~	
12 35 +63.5	1026	12	35.2	+63	32	6.5	—		6.6	.9	7.4	5.1 ~~4.9~~	

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Plate 546.

v	H	Type	No. Lines	K	Focus	other lines.
		Remarks				
7.5	10.9	I	4	K=H	1	—
4.0	12.4	I	6?	K=.8H	2	—
2.9	17.5	I	2	N	1	—

Plate 536.

22.2	12.2	III	2	K=H	1	—
21.5	8.7	I	3	N	1	—
20.5	9.2	I	6	N	2	—
20.0	18.2	I	6	N	2	—
19.4	14.1	I	4	K=H	2	—
19.2	15.9	I	6	N?	2	—
19.0	10.6	I	6	K=.1H	3	—
18.6	17.2	I	6	K=.8H	2	—
18.4	23.2	I	5	K=H	2	—
18.0	16.6	I	5	K=H	1	—
18.2	14.3	I?	4	K=H	1	—
18.0	7.2	I I	3 3	N N	1 1	— —
17.0	6.4	I	6	N	3	—
17.3	19.7	II a 165 I?	2	K=H	2	seen.
16.0	23.4	I	4	N	2	—
15.5	6.0	I	8	N	5	Freen.
15.9	8.6	I	5	N	3	—
15.2	8.6	I	7	K=.2 H	3	—
III 6.0, 6.3, 7.1	15.0	8.9	III	2	K=H	3	—
III? 6.4, 6.7.	15.5	10.4	III	2	K=H	3	—
	15.1	11.0	I	8	K=.1H	3	—
	15.8	12.0	I? I	2 3	N N	1 1	— —
	15.5	14.1	II a 166 I	2	K=H	2	seen

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	No.	R.A.	Dec.	Mag.						Br.				
12 56 +64.4	927	12 56.1	+64	24	6.0	—				6.8	.9	7.7	5.4 5.3	.
12 49 +66.3	778	12 49.7	+66	14	5.0	—				6.4	1.0	7.4	5.1 4.9	.
12 24 +66.7	763	12 24.4	+66	42	6.5	.				7.1	1.0	8.1	5.8 5.6	.
														Mean 10
13 33 +71.9	659	13 33.7	+71	59	5.8	—				7.0 7.3	1.3	8.3 8.6	6.9 6.2	6.0 6.3
13 45 +62.2	1318	13 45.0	+62	12	6.0	2348	6.1	17	+3 +1	7.0	.8	7.8	6.4 6.2	6.0
13 38 +52.8	1733	13 38.3	+52	46	6.2	2325	5.9	12	-2 -4	6.6	.5	7.1	5.7 5.5	5.6
13 45 +63.0	1056	13 45.2	+63	1	6.4	.				6.8	.9	7.7	6.3	5.8
13 21 +53.5	1622	13 21.2	+53	30	6.3	—				6.9	.6	7.5	6.1	5.9
13 9 +73.6	587	13 9.4	+73	34	6.8					6.7	1.4	8.1	6.7	5.7
13 34 +53.7	1640	13 33.9	+53	39	5.8	—				6.4	.6	7.0	5.6	5.4
13 0 +73.8	583	13 0.3	+73	48	6.0	—				6.5	1.4	7.9	6.5	5.5
12 41 +63.6	1034	12 41.1	+63	34	6.0	—				6.7	.9	7.6	6.2	5.7
13 4 +74.1	521	13 3.8	+74	7	7.7	—				7.0	1.4	8.4	7.0	6.0
13 21 +64.0	949	13 21.0	+64	0	6.5	—				7.0	.9	7.9	6.5	6.0
13 46 +54.0	1663	13 45.6	+54	53 60	7.5	.				7.1	7.2	.6	7.8	6.4 6.2
13 48.5 +54.4	1630	13 48.5	+54	26	6.0	2362	5.5	14	±0 -2	6.3	.6	6.9	5.5 5.3	5.3
12 56 +64.3	927	12 56.1	+64	24	6.0	—				6.8	.9	7.7	6.3	5.8
12 50 +54.9	1556	12 49.9	+54	53	6.2	2198	5.7	16	+2 ±0	6.7	.6	7.3	5.9 5.7	5.7
14 1 +65.1	978	14 0.4	+65	4	3.4	2381	3.6	15	+1	4.2	.9	5.1	3.4 3.5	3.2
13 41 +55.1	1634	13 41.2	+55	10	6.5	2337	5.6	12	-2 -4	6.2	.6	6.8	5.4 5.2	5.2
14 5 +75.3	529	14 5.8	+75	17	6.7	—				6.4	1.5	7.9	6.5	5.4
13 48 +65.4	963	13 47.2	+65	27	4.8	—				6.4 6.8	1.0	7.4 7.8	6.0 6.4	5.4 5.8
13 35 +55.3	1625	13 35.3	+55	24	5.5	—				6.5 6.8	.6	7.1 7.4	5.7 6.0	5.5 5.8
13 37 +65.6	953	13 37.0	+65	34	6.0	—				6.2	1.0	7.2	5.8	5.2
13 40 +75.3	516	13 39.7	+75	22	8.0					7.2	7.5	1.5	8.0	6.6 6.5
13 22 +65.5	936 5	13 22.8	+65	29	6.7					6.6	1.0	7.6	6.2	5.6
	936 6	13 22.7	+65	28	6.7	?	—							

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V	H	Type	No. Lines	K	Focus	other Lines
15.0	14.9	I	10	~~K=.5H~~ K=.4H	4	Fresn.
15.1	15.3	I	11	N	5	Fresn.
14.2	10.9	I	5	N?	2	–
14.2	12.3	I	6	N	3	–
13.5	11.0	I	4	K=H	1	–
13.6	17.4	p III	x 2	p K=H	2	–
14.2	23.4	x II II II a	x 2 2	x K=H	1 1	– Fi?
13.8	23.9	x II a 167	x 2	K=H	1	seen.
13.5	20.6	I	x 8	~~K=H~~ K=.8H	3	F line?
13.3	22.5	I	6	N	3	–
13.5	11.1	I ? I ?	3 4	N ? K=H	1 1	– –
13.2	13.0	I	4	K=H	1	–
12.9	13.1	p II	+ 2	K=H	1	–
13.0	9.2	II a 168	3 2	K=H	1	seen.
12.5	6.4	III b 169	x 2	~~K=H~~ K=1.2H	3	seen. Bright.
12.5	23.6	I	7	N	5	F seen
11.8	21.6	x II a 170	x 2	K=H	3	seen.
11.5	19.4	III	x 3	K=H	1	F
11.2	12.3	I	7	~~K=H~~ K=.8H	2	–
10.5	9.5	I ~~I~~	3	N ~~K=1+~~	1 1	– –
10.5	10.7	I	7	~~K=8H?~~ K=.5H	2	–
10.5	15.4	I	4	N	1	–
9.5	9.3	III b. 171	x 2	p K=1.2H	2	seen.
9.5	22.9	III a 172	x 2	x K=H	1	seen.
8.9	12.2	III bc. 173	x 2	K=H	2	seen.
8.8	21.9	I	4	N	2	–
8.5	21.7	I.	7 8	K=.2H	3	F
8.1	16.0	I	4	N	2	–

III? 5.7, 6.0

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Mean 10

	No.	R.A.	DEC.	MAG				BN.					
13 19 +55.7	1603	13 19.4	+55	44	5.0	—		5.5	.6	6.1	4.7	4.5	✓
13 18 +55.7	1598	13 18.1	+55	41	2.0	2264 2265	2.4 (2.6 +12 +10)	4.4	.6	5.0	3.8 3.4	3.4	✓
13 38 +66.0	816	13 37.6	+66	1	7.5			6.5	1.0	7.5	6.1	5.5	✓
13 28.8 +56.1	1667	13 28.6	+56	6	6.0	2298	5.5 9 -5 -7	5.8	.6	6.4	5.0 4.8	4.8	✓
13 48 +76.3	502	13 48.0	+76	17	7.0	—		7.1	1.6	8.7	7.3	6.1	✓
12 54 +76.3	473	12 54.5	+76	15	6.0	—		6.7 7.0	1.6	8.3 7.6	6.9 6.2	5.7 6.05	✓
12 49 +55.8	1564	12 49.3	+55	45	7.7	—		7.0 7.0	.6	7.6	6.2	6.0	✓
12 3 +75.5	469	12 2.7	+75	28	6.7	—		6.8	1.5	8.3	6.9	5.8	✓
12 50 +66.2	778	12 49.7	+66	14	5.0	—		6.0	1.0	7.0	5.6	5.0	✓
12 12 +75.9	470	12 12.3	+75	59	5.8	2084	5.4 19 +5 +3	5.8	1.5	7.3	5.9 5.7	4.8	✓
13 45 +76.3	500	13 12 45.9	+76	17	7.5			7.1 7.3	1.6	8.9	7.5	6.3	✓
13 32 +76.6	492	13 31.9	+76	31	7.0	—		7.0	1.6	8.6	7.2	6.0	✓
13 31 +76.8	1 479	13 30.5	+76	49	6.7	—		7.1	1.6	8.7	7.3	6.1	✓
13 40 +56.7	1683	13 39.9	+56	38	7.0	—		7.1	.6	7.6	6.2	6.0	✓
14 28 +76.4	527	14 27.8	+76	21	5.0	—		5.7 6.1	1.6	7.3 7.7	5.9 6.3	4.7 5.1	✓
12 47 +56.8	1627	12 47.7	+56	44	2.0	2191	1.8 (29 +15 +15)	4.0	.7	4.7	3.3 3.1	3.0	✓
12 54.5 +57.2	1408	12 54.5	+57	8	5.0	—		6.4	.7	7.1	5.7	5.4	✓
12 54 +67.4	773	12 54.4	+67	23	5.8	—		6.8 7.0	1.0	7.8 8.0	6.4 6.6	5.8 6.0	✓
13 40 +77.6	519	13 39.3	+77	34	6.2	—		6.5	1.7	8.2	6.8	5.5	✓
14 5 +77.7	529	14 5.4	+77	40	7.8	.		~~6.7~~ 7.0	1.7	8.7	7.3	6.0	✓
13 35 +57.9	1456	13 35.1	+57	56	6.1	—		6.5	.7	7.2	5.8	5.5	✓
13 9 +77.9	506	13 9.4	+77	58	7.6	.		6.9	1.7	8.6	7.2	5.9	✓
14 10 +78.3	478	14 9.5	+78	14	5.0	—		6.2 6.5	1.7	7.9 8.2	6.5 6.8	5.2 5.5	✓
11 57 +77.8	461	11 57.9	+77	43	5.8	—		6.8 7.1	1.7	8.5 8.8	7.1 7.4	5.8 6.1	✓
13 42 +78.8	466	13 42.1	+78	47	5.8	—		6.5 6.8	1.8	8.3 8.6	6.9 7.2	5.5 5.8	✓
12 5 +78.2	411	12 5.0	+78	15	7.3	.		6.8	1.7	8.5	7.1	5.8	✓
12 6 +78.4	412	12 5.4	+78	26	5.1	—		5.5	1.7	7.2	~~6~~ 5.8	4.5	✓
13 11.5 +69.2	694	13 11.7	+69	10	6.0	2250	6.1 10 -4 -6	6.0	1.1	7.1	5.7 ~~5.5~~	5.0	✓

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Plate 536.

V	H	Type	No. Lines	a Remarks	K	Focus	other Lines.
8.0	11.0	~~II~~	~~3~~ 2	b 174	~~K=H~~	1	Reen.
7.8	13.8	~~III~~	~~5~~ 2	175	K=H	2	Reen.
7.7	8.1	I	5		N	1	—
7.1	7.9	I I	4 4		N K=H	1 1	— —
7.0	11.6	~~III~~	~~3~~ 2		~~K=H~~	1	—
5.2	13.9	I	~~8~~ 9		~~K=1 H~~	3	—
6.0	18.4	I?	3		K=H	1	—
5.2	20.4	I	5		N	1	—
4.6	12.6	I	4		~~K=H~~	1	—
4.5	10.0	I	4		N	1	—
4.0	15.0	~~III~~	2		K=H ?	1	—
3.9	18.2	~~II~~	~~3~~ 2	a? 176	~~K=H~~	1	Reen.
3.8	19.8	I	4		K=H	1	—
4.3	23.2	I	~~X~~ 10		N	4	F
3.5	17.2	I	~~8~~ 7		~~K=.5 H~~ K=H	2	—
2.4	7.1	I	4		K=H	1	—
3.5	23.7	~~II~~	~~3~~ 7	a 177	~~K=H~~ N	1	Reen.

Plate 550.

9.6	10.9	~~II~~	~~3~~ 2		K=H	1	—
7.5	15.1	I	6		N	3	—
6.3	14.3	I	~~8~~ 9		K=.1 H	3	—
III? 5.4, 5.7, 6.8	6.1	7.7	III	br. 178	3	K=1.2 H?	2	F Reen.
	5.7	13.7	I		3	N	1	—

Plate 555.

21.0	20.9	II a	179	~~5~~ 3	K=H	2	F Reen.
20.9	8.5	I		~~9~~ 10	K=.5 H?	5	F Reen.
21.8	23.7	I		~~8~~ 7	K=H	2	—
20.8	24.5	I		~~8~~ 6	K=H	3	—

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Mean 10

	NO.	R.A.	DEC.	MAG.				Br.	
13 58 +79.1	433	13 55.4	+79 6	7.7	–			7.0 4.6 8.6 7.2	6.0
13 25 +79.4	422	13 25.8	+79 23	6.0	–			6.1 6.4 1.8 7.9 8.2 6.5 6.8	5.1 5.4
13 45.5 +59.2	1533	13 45.5	+59 15	6.5	2350	6.3	12 -2/4	6.8 .7 7.5 6.1 5.9	5.8
13 58 +69.4	733	13 58.7	+69 23	6.3	.			6.7 7.0 1.1 8.1 6.7	6.0
13 50 +79.8	431	13 50.6	+79 43	6.6	–			6.8 7.1 1.9 7.7 9.0 6.3 7.6	5.8 6.1
13 23 +60.7	1461	13 23.1	+60 43	5.3	–			5.8 .8 6.6 5.2	4.8
12 33 +80.0	389	12 32.8	+80 1	6.7	–			7.0 1.9 8.9 7.5	6.0
12 57 +60.6	1439	12 56.7	+60 31	6.5	.			6.8 .8 7.6 6.2	5.8
31 70	747	13 31.2	+70 51	7.0					
~~13 43 +69.9~~	~~421~~	~~13 42.6~~	~~+69 58~~	~~7.1~~	–			7.1 2.0 9.1 7.7	6.1
13 39 +60.9	1485	13 38.9	+60 53	6.5	.			7.3 .8 8.1 6.7	6.3
13 11 +81.3	416	13 11.2	+81 14	6.3	–			6.5 6.8 2.0 8.5 8.8 7.1 7.4	5.5 5.8
12 30 +81.0	400	12 29.7	+81 3	6.8	–			6.9 2.0 8.9 7.5	5.9
12 10 +80.9	380 381	12 9.8	+80 56	8.4 8.3 ?	–			6.7 2.0 8.7 7.3	5.7
12 27 +70.8	703	12 27.2	+70 35	3.3	2135	3.8	15 +1	4.1 1.2 5.3 3.9 3.7	3.1
12 40.3 +81.4	402	12 40.8	+81 25	6.3	–			6.2 2.1 8.3 6.9	6.2
14 58 +81.3	495	14 57.2	+81 20	6.8	–			~~7.0~~ 2.1 9.1 ~~7.7~~	
12 42 +61.1	1320	12 42.4	+61 6	6.0	–			6.9 .8 7.7 6.3	5.7
								~~20 6 / 8~~ ~~27 29 / 3~~	
								151/11 12-15/11	
15 0 +83.1	431	15 0.4	+83 6	6.0	–			7.0 2.3 9.3 5.7 ~~6.2~~	
12 47 +84.3	289	12 48.0	+84 12	6.5					
	290	12 48.1	+84 12	5.5	2189	5.0	36 ± 0	6.1 2.5 8.6 5.0	
14 0 +65.0	978	14 0.4	+65 4	3.4	–			5.8 .9 6.7 3.1	
14 57 +74.8	595	14 51.2	+74 45	2.1	–			5.7 6.0 1.4 7.1 7.4 3.5 3.8	
14 6 +75.3	529	14 5.8	+75 17	6.7	.			7.3 1.5 8.8 5.2	
								36/1 ± 0/1	

Mean 13

14 20 +52.5	1804	14 20.3	+52 31	4.0	–			6.0 5 6.5 4.8	4.7
15 20 +72.3	679	15 21.0	+72 20	2.8	–			4.4 1.3 5.7 4.0	3.1
14 11 +52.0	1784	14 11.8	+52 2	4.5	–			6.4 5 6.9 5.2	5.1
14 8 +52.5	1783	14 8.3	+52 27	4.5	–			6.2 5 6.7 5.0	4.9

Mistakes entered in catalogue as central measures Br are corrected

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Plate 555.

v	H	Type	Remarks.	No. Lines	K	Focus	Other Lines
18.8	13.3	I		4	K=H	1	–
17.1	16.7	I		6	N	2	–
17.0	11.2	~~II?~~ I?		4	K=H	1	–
16.8	13.3	III	bc. 180	3	K=1.5H	5	Fleeting.
16.0	8.5	I?		4	K=H	1	–
15.5	19.0	I		5	K=.5H	2	–
15.6	23.1	I		10	N	5	Fleeting.
15.0	22.2	I		5	K=H	1	–
13.5	16.2	III	bc. 181	2	K=1.5H	3	Bleeding.
13.3	10.4	I		6	N	1	–
13.4	11.7	III		2	K=H	1	–
10.3	21.2	I		5	N	1	–
11.5	8.2	I		4	N	1	–
10.3	8.5	II?	182	2	K=H	2	Bleeding.
10.0	8.9	III		2	K=H	1	–
9.5	9.4	I		5	K=H	1	–
9.3	19.0	I		3	N	1	–
8.9	7.7	I		8	N?	5	Fleeting.
7.1	8.8	I		4	K=H	1	–
6.8	12.9	III		2	K=H	1	–
6.5	21.4	III		2	K=H	1	–
4.7	17.8	I		4	K=H	1	–
4.9	10.4	I		5	N	2	–
3.6	13.4	I		5	K=H	1	–

III? 6.8, 7.0.

Plate 560.

22.4	7.2	I?		5	K=H	2	–
22.6	8.1	I.		6	N	2	–

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Mean 13

	No.	R.A.	Dec.	Mag.			Br.				
14 50 +73.6	646	14	50.2	+73	38	8.0	—		7.3	1.4	8.7 7.0	6.0 ✓
14 53 +54.6	1693	14	33.7	+54	39	5.8	2447 5.6 15-2		6.5	.6	7.1 5.4	5.2 ✓
	~~1725~~	~~14~~	~~55.3~~	~~+54~~	~~27~~	~~7.5~~						
15 6 +74.4	602	15	6.0	+74	26	7.5	—		7.1	1.4	8.5 6.8	5.8 ✓
14 51 +74.8	595	14	51.2	+74	45	2.1	—		4.6 4.9	1.4	6.0 4.3 / 6.3 4.6	3.3 ✓ / 3.6
15 2 +55.1	1730	15	2.2	+55	7	5.5			6.8	.6	7.4 5.7	5.5 ✓
14.6 +75.3	529	14	5.8	+75	17	6.7	—		6.5	1.5	8.0 6.3	5.2 ✓
14 0 +65.0	978	14	0.4	+65	4	3.4	2381 3.6 20+3		4.7	.9	5.6 3.9	3.4 ✓
14 14 +55.5	1678	14	14.1	+55	33	6.5	—		7.0	.6	7.6 5.9	5.7 ✓
14 27 +76.4	527	14	27.8	+76	21	6.0	—		5.8 6.1	1.6	7.4 5.7 / 7.7 6.0	4.5 ✓ / 4.8
15 2 +66.5	887	15	1.8	+66	29	5.8	2528 6.0 17±0		6.7	1.0	7.7 6.0	5.4 ✓
14 55 +66.5	878	14	55.3	+66	31	4.5	—		6.8 7.1	1.0	7.8 6.1 / 8.1 6.4	5.5 ✓ / 5.8
13 39 +77.6	519	13	39.3	+77	34	6.2	.		6.8	1.7	8.5 6.8	5.5 ✓
15 38 +76.9	563	15	37.9	+76	55	7.5	.		7.0	1.6	7.6 5.9	5.7 ✓
15 13 +67.9	876	15	13.0	+67	54	5.2	—		6.0	1.1	7.1 5.4	4.7 ✓
15 35 +77.8	592	15	35.3	+77	51	5.0	—		6.3 6.8	1.7	8.0 6.3 / 8.5 6.8	5.0 ✓ / 5.5
14 17 +68.4	823	15	9.2	+68	20	6.5						
	~~777~~	~~14~~	~~17.1~~	~~+68~~	~~27~~	~~6.8~~	—		6.8	1.1	7.9 6.2	5.5 ✓
	777	14	17.1	+6.8	27	6.8						
14 18 +68.5	~~781~~	~~14~~	~~18.3~~	~~+68~~	~~28~~	~~7.4~~	.		6.9	1.1	8.0 6.3	5.6 ✓
15 49 +78.2	527	15	49.3	+78	13	4.7			4.7	1.7	6.4 4.7	3.4 ✓
15 13 +69.5	789	15	13.8	+69	28	6.5	—		6.8	1.1	7.9 6.2	5.5 ✓
14 47 +59.9	1615	14	47.7	+59	53	5.7	—		6.9 7.3	.7	7.6 5.9 / 8.0 6.3	5.6 ✓ / 6.0
13 25 +79.4	422	13	25.8	+79	23	6.0	—		6.4 6.8	1.8	8.2 6.5 / 8.6 6.9	5.1 ✓ / 5.5
14 27 +60.9	1547	14	27.8	+60	51	6.2	—		6.9	.8	7.7 6.0	5.6 ✓
14 58 +60.8	1582	14	58.0	+60	46	6.0	2518 5.8 16-1		6.6	.8	7.4 5.7	5.3 ✓
14 57 +81.3	495	14	57.2	+81	20	6.8	—		6.8	2.1	8.9 7.2	5.5 ✓

68/4 3-3/4

Mean 11

16 22 +76.1	596	16	21.8	+76	5	5.3	—		~~5.8~~	1.5	7.3 ~~5.8~~ 5.5	✓
16 15 +76.3	594	16	15.0	+76	16	6.0	2739 5.5 ~~7.7~~ 1		~~5.8~~	.6	7.4 ~~5.6~~	✓

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Plate 560.

v	H	Type	Remarks	No. Lines	K	Focus	other Lines.
22.8	18.3	I		5	N	1	-
22.6	20.7	III	b 1832	2	N	2	Reen
21.0	9.2	I		6	K=.2H	2	-
20.3	12.9	III	b? 1841	2	K=H	1	Reen.
20.2	16.0	II a	1852	2	K=H	2	Reen.
19.5	11.6	I		10	K=.2H	5	F
19.4	16.7	I		5	K=H	1	—
18.5	21.7	III	b 1861	2	K=H	1	Reen.
18.8	6.1	I		6	N	2	-
16.9	6.3	I		3	N	1	-
17.4	14.3	III	b.c. 1871	2	K=1.2H K=H	4	Reen.
17.1	15.7	I		5	K=.5H	1	-
16.5	7.8	I		7	K=.8H K=H	2	F?
15.1	12.2	II a	1882	2	K=1.5H	1	Reen.
14.4	20.1	I		4	N?	1	—
14.1	13.1	III		2	K=H	1	—
14.0	7.1	I d		3	N	1	—
13.4	16.2	I		5	N	1	—
11.8	13.3	I		4	K=H	1	—
11.5	14.4	I		12	K=.2H?	5	F Reen.
III? 6.2, 6.4.	11.5	15.0	III	b.c. 1891	2	K=H	1	Reen.
11.1	14.7	I		5	N	2	-
10.7	13.5	I		4	K=.5H	1	-
10.7	13.1	IV		4	K=H	1	-
10.4	7.9	III		3	K=1.5H K=H	4	F Reen.
10.0	9.1	I		7	N?	3	—
9.5	10.3	I		4	N	1	—
9.2	12.2	I		4	K=H	1	—

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Mean 11

	No.	R.A.	Dec.	Mag.				Br.				
15 2+66.5	887	15	1.8	+66	29	5.8	2528	6.0	~~18 20~~	~~6.8~~ 1.0	7.8	~~6.0~~
14 28+76.4	527	14	27.8	+76	21	5.0	—	~~6.0~~ 6.4	1.6	7.6 8.0	~~5.8~~ 6.2	
16 8+77.2	616	16	8.5	+77	11	6.0	—	5.9	1.6	7.5	5.7	4.8
15 35+77.8	592	15	35.8	+77	51	5.0	—	6.7 7.0	1.7	8.4 8.7	6.6 6.9	5.6 5.4
15 13+67.9	876	15	13.0	+67	54	5.2	—	6.0	1.1	7.1	5.3	4.9
15 49+78.3	527	15	49.3	+78	13	4.7	—	4.4	1.6	6.0	4.2	3.3
15 9+68.3	823	15	9.2	+68	20	6.5	—	6.6	1.1	7.7	5.9	5.5
14 9+78.3	478	14	9.5	+78	14	5.0	—	6.6 6.9	1.7	8.3 8.6	6.5 6.8	5.5 5.8
16 6+68.2	864	16	6.0	+68	11	6.0	2717	5.4	15-3	5.8	1.1	6.9 5.1
15 53+59.3	1691	15	53.0	+59	20	6.6						
~~16 46+79.2~~	511	16	46.2	+79	11	6.3				6.8	1.8	8.6 6.8
15 21+59.5	1654	15	21.7	+59	28	3.0	—	5.6 6.0	1.7	6.3 6.7	4.5 4.9	4.5 4.9
15 14+69.4	789	15	13.8	+69	28	6.5	—	6.6	1.1	7.7	5.9	5.5
16 33+79.3	498	16	33.9	+79	16	5.5	—	5.5	1.8	7.3	5.5	4.4
15 47+80.4	487	15	47.8	+80	26	6.7	—	6.7	1.9	8.6	6.8	5.6
14 58+60.8	1582	14	58.9	+60	46	6.0		6.5	.8	7.3	5.5	5.4
15 37+80.8	480	15	37.8	+80	56	7.0		6.4 6.7	2.0	8.4 8.7	6.6 6.9	5.3 5.6
~~15 58+81.2~~	~~517~~	~~15~~	~~38.9~~	~~+81~~	~~15~~	~~6.8~~	—					
16 5+70.6	863	16	5.4	+70	39	6.5	.	6.8	1.2	8.0	6.2	5.7
81.3												
14 57+82.3	495	14	57.2	+81	20	6.8	.					
~~14 57+82.3~~	~~438~~	~~14~~	~~55.6~~	~~+82~~	~~9~~	~~8.6~~		6.7	2.1	8.8	7.0	5.6
15 26+62.2	1415	15	26.0	+62.	14	6.5						
~~15 36+82.4~~	~~456~~	~~15~~	~~35.4~~	~~+82~~	~~23~~	~~8.2~~	—	~~6.8~~ 6.2	1.2	8.2	6.4	5.7
15 21+72.4	679	15	21.0	+72	20	2.8	—	4.0	1.3	5.3	3.5	2.9
15 17+72.4	678	15	17.2	+72	20	5.5	—	6.4 6.8	1.3	7.7 8.1	5.9 6.3	5.3 5.7
15 19+62.5	1410	15	19.9	+62	33	6.0	2564	5.7	13-5	6.2	.8	7.0 5.2
15 25+62.8	1414	15	25.1	+62	46	6.7	—	6.7	.8	7.5	5.7	5.6
15 41+82.7	463	15	42.2	+82	44	7.5	—	6.5	2.2	8.7	6.9	5.4
17 0+82.3	498	17	1.0	+82	16	4.0	—	5.0 5.4	2.2	7.2 7.6	5.4 5.8	3.9 4.3
15 44+63.1	1225	15	44.5	+63	3	5.8		5.9	.9	6.8	5.0	4.8
16 29+82.9	485	16	29.1	+82	58	8.0	.	7.0	2.3	9.3	7.5	5.9
15 59+83.4	453	15	58.8	+83	23	7.3	▽	6.9	2.3	9.2	7.4	5.8

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Plate 560.

v	H	Type	No. Lines	K	Focus	other lines.
8.2	19.6	~~X~~ III	~~3~~ 2	K=H	1	—
7.9	6.6	I d?	~~4~~ 5	N	1	—
7.5	12.3	I	~~3~~ 5	~~N~~ K=.5H	1	—
8.0	12.0	~~I~~ IIa 190	~~2~~ 2	~~N~~ K=H	1	Reen.
6.6	18.3	III b.c? 191	~~3~~ 2	~~K=H~~ K=1.5H	5	? Bright. - Reen.
5.5	21.6	I	~~5~~ 7	N	3	F.
4.7	12.7	I	~~4~~ 5	~~N~~ K=.5H	1	—
3.0	7.1	I	~~4~~ 6	K=H	2	—
3.0	8.0	I	~~5~~ 6	N	2	—
3.1	18.2	I	5	N	1	—
2.9	20.6	III b 192	~~3~~ 1	N	1	Reen.

Plate 587.

22.8	17.7	~~I~~ I	2	N	1	—
21.8	14.2	I d?	4	K=H	1	—
21.2	18.2	I	~~5~~ 6	~~N~~ K=.2H	1	—
20.4	6.2	I d?	~~3~~ 4	~~N~~ K=H	1	—
20.2	13.7	I	3	N	1	—
19.0	14.9	I	~~4~~ 8	N K=.1H?	4	—
19.1	21.1	I	5	N	1	—
17.8	16.9	I	6	N?	3	F?
17.5	15.3	I	~~5~~ 6	~~K=H~~ K=.8H	2	—
14.5	7.0	~~I~~ IIa ? 193	~~4~~ 2	~~K=H~~ K=1.5H	2	Reen.
13.8	17.2	I	5	N	1	—
12.5	19.1	III bc 194	~~5~~ 3	~~K=H~~ K=1.2H	5	F. Reen.
11.5	13.3	III bc 195	~~1~~ 2	~~K=H~~ K=1.2H	3	Reen.
9.5	7.4	I	3	N	1	—
9.2	12.0	I	~~3~~ 4	~~N~~ K=H	1	—

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Mean 11

	No.	R.A.	Dec.	Mag.									
13 46+83.5	397	13	46.7	+83	29	6.5	—			6.4 6.6	2.4	8.8 9.0	7.0 7.2	5.3 5.5
16 17+73.7	713	16	17.0	+73	46	6.2	2746	6.0	18±0	6.4	1.4	7.8	6.0	5.3
16 40+84.0	361	16	40.2	+84	0	7.2				6.7	2.5	9.2	7.4	5.6
16 6+84.0	351	16	7.0	+84	2	7.7	—			6.7	2.5	9.2	7.4	5.6
14 51+74.7	595	14	51.2	+74	45	2.1	—			5.5 5.8	1.3	6.8 7.1	5.0 5.3	4.4 4.7
12 47+84.2	289	12	48.0	+84	12	6.5								
	290	12	48.1	+84	12	5.5	2189	5.0	27+9	5.2	2.5	7.7	5.9	4.1
16 5-85.7	269	16	6.6	+85	43	7.5	—			6.4	2.8	9.2	7.4	5.3
16 22+76.1	596	16	21.8	+76	5	5.3	—			5.9	1.5	7.4	5.6	4.8
16 15+76.3	594	16	15.0	+76	16	6.0	2739	5.5	20+2	5.9	1.6	7.5	5.7	4.8
15 2+66.5	887	15	1.8	+66	29	5.8				6.8	1.0	7.8		
	~~217~~	~~14~~	~~58.5~~	~~+66~~	~~33~~	~~6.8~~	2528	6.0	18±0				6.0	5.7
14 28+76.4	527	14	27.8	+76	21	5.0	—			6.3 6.6	1.6	7.9 8.2	6.1 6.4	5.2 5.5
	~~528~~	~~14~~	~~29.5~~	~~+76~~	~~24~~	~~6.3~~								

Mean 17

16 15+76.3	594	16	15.0	+76	16	6.0	2739	5.5	28+4	6.7	1.6	8.3	~~5.9~~ 6.0	—
16 42+77.0	1702	16	42.6	+77	3	5.0	—			6.8	.7	7.5	~~5.1~~ 5.2	5.1
16 8+77.2	616	16	8.5	+77	11	6.0	—			6.7	1.6	8.3	~~5.7~~ 6.0	5.0
17 56+76.9	667	17	55.9	+76	58	5.2				6.8	1.6	8.4	~~6.0~~ 6.1	5.1
16 50+77.7	634	16	49.6	+77	45	6.0	2833	5.9	27+4	6.9	1.7	8.6	~~6.2~~ 6.3	5.2
15 49+78.3	527	15	49.3	+78	13	4.7				5.4	1.7	7.1	~~4.7~~ 4.8	3.7
16 6+68.2	864	16	6.0	+68	11	6.0	2717	5.4	25+2	6.8	1.1	7.9	~~5.5~~ 5.6	5.1
16 28+69.1	850	16	28.3	+69	5	5.2				6.0	1.1	7.1	~~4.7~~ 4.8	4.3
16 34+79.2	498	16	33.9	+79	16	5.5	—			6.4	1.8	8.2	~~5.8~~ 5.9	4.7
18 11+79.9	570	18	10.9	+79	59									
	571	18	11.0	~~+80~~	~~8~~	6.5	—			6.4	1.8	8.2	~~5.8~~ 5.7	4.7
16 30+61.2	1598	16	30.4	+61	8	6.0	2789	6.0	16-8	6.8	.8	7.6	~~5.2~~ 5.3	5.1
16 22+61.8	1591	16	22.1	+61	49	2.5	—			5.5 5.7	.8	6.3 6.5	~~3.9~~ 4.8	3.8 4.0
17 0+82.3	498	17	1.0	+82	16	4.0	—			6.6 6.8	2.2	8.8 9.0	6.4 6.6	4.9 5.1
17 11+63.0	1336	17	11.3	+63	3	5.8	2887	5.5	23+0	6.9	.9	7.8	~~5.4~~ 5.5	5.2
16 59+73.4	751	16	59.2	+73	19	6.0	—			7.0	1.4	8.4	~~6.0~~ 6.1	5.3

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Plate 587.

v	H	Type	No. Lines	K	Focus	other Lines	Remarks
9.0	17.1	I	3	N	1	—	
8.6	20.5	III^a 196	2	K=1.5H K=H	1	seen.	
8.0	14.4	I.	4	K=H	1	—	
8.0	7.6	I	5	K=H	1	—	
6.6	14.8	III	2	K=H	1	—	
5.5	11.6	II^a 197	3	K=H	2	seen.	
4.6	16.0	I	4	K=H	1	—	
4.1	9.0	I	0 1	K=1.3H	4	—	
4.0	17.0	I?	5	K=H	1	—	
3.5	17.7	I	6	N	1	—	
2.5	11.9	I	8	K=.2H	4	—	

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21.0	10.8	II^a 198	2	K=H	1	seen	
21.0	12.6	III bc. 199	2	K=1.2H K=H	2	seen.	
19.7	16.7	I	4	N	1	—	
19.0	17.6	I	4	K=H	1	—	
17.9	8.6	I	4	K=H	1	—	
16.5	20.0	II^a? 200	2	K=H	1	seen.	
15.3	12.1	I	4	N	2	—	
14.9	16.3	I	4	K=H	1	—	
14.9	19.8	II^a 201	2	K=H	1	seen.	
14.0	17.1	I	10	N	5	seen.	
13.5	8.6	I	3	N	1	—	
12.9	21.5	I	6	K=H	1	seen.	
12.4	22.2	I	6	N	2	—	
11.6	10.5	II^a 202	2	K=1.2H K=H	2	seen.	
11.5	6.3	III	1	N	1	—	

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Mean 17

	No.	R.A.	Dec.	Mag.				Br.					
15 59 +83.4	453	15	58.8	+83	23	7.3	.	7.3	2.3	9.6	7.3 7.2	.	5.6 ✓
15 0 +83.1	431	15	0.4	+83	6	6.0	—	6.7 6.9	2.3	9.0 9.2	6.6 6.8	6.7 6.9	. 5.0 5.2 ✓
16 40 +84.0	361	16	40.2	+84	0	7.2	—	7.1	2.5	9.6	7.3 7.2	.	5.4 ✓
18 43 +83.1	536	18	43.2	+83	4	6.2	—	6.5	2.3	8.8	6.5 6.7	.	4.8 ✓
16 39 +64.8	1145	16	39.9	+64	51	5.2	—	7.0 7.3	.9	7.9 8.2	5.5 5.8	5.6 5.9	. 5.3 5.6 ✓
16 55 +65.3	1157	16	55.2	+65	21	5.3	—	6.7	.9	7.6	5.3 5.2	.	5.0 ✓
16 6 +85.7	269	16	6.6	+85	43	7.5	—	6.9	2. X8	9.7	7.4 7.3	.	5.2 ✓
17 8 +65.8	1170	17	8.4	+65	54	3.0	—	4.8	1.0	5.8	3.5 3.4	.	3.1 ✓
16 22 +76.2	596	16	21.8	+76	5	5.3	—	6.4	1.5	7.9	5.6 5.5	.	4.7 ✓
16 15 +76.3	594	16	15.0	+76	16	6.0	2739 5.5 25 +2	6.4	1.6	8.0	5.7 5.6	.	4.7 ✓
18 18 +86.6	269	18	19.1	+86	36	4.5	—	~~5.0~~	3.0 1	8.1	5.8 ~~5.7~~	.	✓

~~4.4~~ 6 → 116/5 ; ~~8-9~~ 6 → 8-7/5

Mean 18

17 44 +72.3	804	17	44.5	+72	13	4.8	—	6.4	1.3	7.7	5.1	.	4.6 ✓
	805	17	44.6	+72	14	6.2							
17 27 +52.4	2065	17	27.2	+52	24	3.0	—	6.3 6.5	.5	6.8 7.0	4.2 ~~5.4~~	.	4.5 4.7 ✓
17 11 +63.0	1336	17	11.3	+63	3	5.8	2887 5.5 25 -1 +1	7.1	.9	8.0	5.4 ~~5.6~~	.	5.3 ✓
16 59 +73.4	751	16	59.2	+73	19	6.0	—	7.2	1.4	8.6	6.0	.	5.4 ✓
17 41 +53.9	1978	17	41.0	+53	51	5.7	—	7.1	.6	7.7	5.1	.	5.3 ✓
17 2 +54.7	1857	17	2.3	+54	40	4.8	—	6.8	.6	7.4	4.8	.	5.0 ✓
	N1945	17	29.4	+55	16	5.2	2946 4.8 24 +0 -2				~~4.8~~ 4.6		
17 29 +55.3	1944	17	29.3	+55	17	5.2	2945 4.9 23 -1	6.6	.6	7.2	~~4.7~~ 4.8	.	4.8 ✓
17 6 +75.5	613	17	6.3	+75	30	5.8	—	6.9	1.5	8.4	5.8	.	5.1 ✓
16 55 +65.4	1157	16	55.2	+65	21	5.3	—	6.5	.9	7.4	4.8	.	4.7 ✓
17 8 +65.8	1170	17	8.4	+65	54	3.0	2878 3.3 27 +1 +3	5.0	1.0	6.0	3.4 ~~3.6~~	.	3.2 ✓
18 8 +75.7	655	18	8.2	+75	46	6.5	.	7.3	1.5	8.8	6.2	.	5.3 ✓
16 22 +76.1	596	16	21.8	+76	5	5.3	—	6.3	1.5	7.8	5.2	.	4.5 ✓
16 15 +76.3	594	16	15.0	+76	16	6.0	2739 5.5 26 ±0 +2	6.5	1.6	8.1	~~5.7~~ 5.5	.	4.7 ✓
	~~711~~	~~16~~	~~52.~~	~~+72~~	~~22~~	~~8.0~~							
17 56 +76.9	667	17	55.9	+76	58	5.2	—	6.6	1.6	8.2	4.0	.	4.8 ✓
17 51 +56.9	2033	17	51.0	+56	54	3.5	—	6.8 7.1	.7	7.5 7.8	4.9 5.2	.	5.0 5.3 ✓

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Plate 601.

τ	π	Type	No. Lines	K	Focus	Other Lines	Remarks
10.4	22.4	I	6	N	1	—	
10.0	16.3	I	5	N	1	—	
10.0	17.8	IIa 203	2	K=H	1	seen.	
10.0	19.3	I	3	N	1	—	
9.4	12.3	III	2	K=H	1	—	
8.5	13.8	I	4	K=H	1	—	
8.2	11.4	IIa 204	2	K=H	2	seen.	
7.5	23.6	I	7	K=.8H	2	—	
6.6	23.8	I	5	K=2	1	—	
7.0	18.8	I	6	K=.5H	2	—	
5.7	13.8	I	6	K=.2H	1	—	
5.5	10.1	IIa 205	2	K=H	1	seen.	

Plate 617.

22.4	17.3	IIIb 206	2	K=H	1	—	
18.7	9.1	I	5	K=.5H	2	—	
18.5	18.7	IIa ? 207	2	K=H	1	seen.	
16.1	22.4	Id	4	K=H	1	—	
15.5	23.8	I	4	N?	1	—	
15.5	12.4	I	3	N	1	—	
13.6	11.0	I	8	N	4	—	
12.4	15.0	I	4	K=H	1	—	
11.8	17.0	IIa 208	2	K=H	2	seen.	
11.4	18.4	IIIbc 209	2	K=1.5H	2	seen.	
11.0	11.1	IIa 210	2	K=1.2H	3	seen.	
10.0	11.9	I	5	K=.2H	1	—	
8.9	9.0	I	3	N	1	—	
7.7	11.9	IIa 211	2	K=1.2H	1	seen	

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Mean 18

	No.	R.A.	Dec.	Mag.					Br.				
16 8+77.3	616	16	8.5	+77	11	6.0	2724	5.7	26 ±0 +2	6.7	1.6	8.3	5.7 5.9	4.9 ✓
17 3+77.8	641	17	3.1	+77	52	6.5	.			6.8	1.7	8.5	5.9	5.0 ✓
16 49+77.7	634	16	49.6	+77	45	6.0	—			6.8	1.7	8.5	5.9	5.0 ✓
55.9 67.7 16 87+77.7	977	16	55.9	+67	42	6.5	2805	6.2	27 +1 +3	7.2	1.7	8.9	6.3 6.5	5.4 ✓
17 32+68.3	938	17	32.5	+68	13	5.5	—			6.8 7.0	1.1	7.9 8.1	5.3 5.5	5.0 ✓ 5.2
17 24+58.8	1731	17	23.9	+58	48	6.0	2930	6.6	14 −12 −10	7.3	.7	8.0	5.4 5.6	5.5 ✓
17 38+68.8	949	17	37.8	+68	48	4.8	—			6.7	1.1	7.8	5.2	4.9 ✓
17 49+78.3	527	17	49.3	+78	13	4.7	—			5.7	1.7	7.4	4.8	3.9 ✓
16 28+69.1	850	16	28.3	+69	5	5.2	—			6.5	1.1	7.6	5.0	4.7 ✓
16 33+79.3	498	16	33.9	+79	16	5.5	—			6.5	1.8	8.3	5.7	4.7 ✓
17 24+60.2	1754	17	23.8	+60	10	5.5	—			6.5	.8	7.3	4.7	4.7 ✓
18 12+79.9	570			79 60										
	571	18	11.0	+80	8	6.5	—			6.4	1.9	8.3	5.7	4.6 ✓

155/6 2-3/6

17 51+56.9	2033	17	51.0	+56	54	3.5	—			✓6.5 6.9	.7	7.2 7.6	4.8 5.2	.
18 22+58.7	1809	18	21.8	+58	45	4.8	—			✓6.1	.7	6.8	4.4	.
17 38+68.8	949	17	37.8	+68	48	4.8	—			✓6.6	1.1	7.7	5.3	.
16 33+79.3	498	16	33.9	+79	16	5.5	—			✓6.7	1.8	8.5	6.1	.
17 24+60.2	1754	17	23.8	+60	10	5.5				✓6.6	.8	7.4	5.0	.
18 9+60.4	1813	18	9.4	+60	22	6.2	.			✓6.9	.8	7.7	5.3	.
18 22+71.3	889	18	23.0	+71	14	4.7	3120	4.2	19 −5	✓4.9	1.2	6.1	3.7	.
17 57+72.0	818	17	57.7	+72	0	6.0	—			✓6.7	1.3	8.0	5.6	.
17 44+72.3	804	17	44.5	+72	13	4.8	—			✓5.7	1.3	7.0	4.6	.
	805	17	44.6	+72	14	6.2				✓5.5 5.8	2.2	7.7 8.0	5.3 5.6	.
17 0+82.3	498	17	1.0	+82	16	4.0	—							
18 23+72.7	839	18	23.7	+72	40	3.8	—			✓5.0	1.3	6.3	3.9	.
18 42+83.1	536	18	43.2	+83	4	6.2	—			✓6.6	2.3	8.9	6.5	.
19 33+83.3	552	19	33.4	+83	10	6.0	3378	6.3	30+6	✓7.0	2.3	9.3	6.9 6.6	.
18 13+64.3	1252	18	13.1	+64	20	5.0	— ✓			✓6.0	.9	6.9	4.5	.

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Plate 617.

V	H	Type	No. Lines	Remarks	K	Focus	other Lines
5.0	8.1	I	4		N?	1	—
3.1	13.9	I	~~8~~ 10		K=.2H	3	F
2.4	13.8	I	4		N	1	—

Plate 628.

	23.0	17.5	I	~~6~~ 7		N	3	—
	22.0	16.0	I	5		N	1	—
	21.3	15.7	I	~~4~~ 5		N	1	—
	21.5	21.3	II a	212	~~4~~ 2	K=H	1	Reen
	20.8	17.2	II a	213	~~6~~ 2	K=H	5	F? Reen
	20.7	23.2	I?	4		K=H?	2	—
	20.5	14.0	I	2		N	1	—
	19.4	8.5	I	4		N	1	—
III ? 6.5, 6.9.	19.5	9.2	III b	214	~~4~~ 2	~~N~~ K=H	1	Reen.
	18.3	13.5	III	2		~~N~~ K=H	1	—
	17.1	20.7	II a	215	~~5~~ 2	K=H	2	—
	15.6	13.3	I	~~5~~ 7		~~N~~ K=.1 H	3	Reen.
	15.5	15.0	I	7		N	3	—
	15.5	15.7	I	5		N?	1	—
III ? 6.5, 6.8.	15.1	17.8	III	~~3~~ 4		~~N~~ K=H	~~1~~ 2	~~F~~ F
	14.8	12.5	I	~~5~~ 6		N	2	—
	14.5	6.5	I	~~5~~ 6		N	3	—
	14.2	8.8	I	~~4~~ 5		~~N~~ K=.5H	1	—
	14.2	18.7	I	4		~~N~~ K=H	1	—
	13.2	10.7	I	~~6~~ 7		K=.8 H	3	F?
Peculiar spectrum.	12.4	17.7	II bc	216	~~4~~ 2	K=H	2	Reen.
	11.8	19.7	II a	217	~~6~~ 2	~~K=H~~ K=1.2H	3	Reen
	11.0	8.5	III bc	218	~~4~~ 2	~~K=1.2H?~~ K=1.4 H	3	Reen.

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	No.	R.A.	Dec.	Mag.					Pr.				
18 √0 + 75.3	682	18	51.0	+75	16	5.8			6.8	1.5	8.3	5.9	
18 18 + 86.6	269	18	19.1	+86	36	4.5	–		4.8	3.1	7.9	5.5	
18 22 + 86.9	272	18	24.4	+86	59	6.0	.		6.9	3.2	10.1	7.7	
									49/2	6.5/2			
									Mean 16				
18 22 + 71.3	889	18	23.0	+71	14	4.7	3120	4.2	23+2	6.3	1.2	6.5	4.4
18 36 + √2.0	2263	18	36.6	+52	4	5.7	3155	5.8	18 −8 (2)	7.1	.5	7.6	5.5
18 36 + 62.4	1637	18	36.3	+62	24	5.7	3153	5.5	20 +0	6.7	.8	7.5	5.4
17 √7 + 72.0	818	17	57.7	+72	0	6.0	.	–		6.9	1.3	8.2	6.1
18 23 + 72.7	839	18	23.7	+72	40	3.8	–			5.3	1.3	6.6	4.5
17 44 + 72.3	1804	17	44.5	+72	13	4.8	–			6.0	1.3	7.3	5.2
	805	17	40.6	+72	14	6.2							
18 43 + √2.8	2280	18	43.5	+52	49	6.3	3187	5.8	18 −8 (2)	7.1	.5	7.6	5.5
19 2 + √3.2	2178	19	1.7	+53	12	5.4	3268	5.4	21 +1	6.9	.6	7.5	5.4
19 18 + 73.1	857	19	18.3	+73	5	4.4	–			6.5	1.3	7.8	5.7
										6.9		8.2	6.1
18 49 + 73.9	835	18	49.4	+73	54	5.3	–			6.8	1.4	7.2	5.1
										7.0		8.4	6.3
18 13 + 64.4	1252	18	13.1	+64	20	5.0	–			6.5	.9	7.4	5.3
18 √1 + 75.3	682	18	51.0	+75	16	5.8	–			5.7	1.5	7.2	5.1
18 40 + √5.4	2107	18	39.8	+55	24	5.3	3166	5.2	13 −7 (−8)	5.9	.6	6.5	4.4
18 36 + 65.4	1283	18	35.7	+65	21	6.0				6.9	.9	7.8	5.7
										6.6		7.6	5.5
18 25 + 65.5	1271	18	25.6	+65	28	5.0	–			6.9	1.0	7.9	5.7
18 √8 + 75.6	683	18	58.4	+75	35	6.5	.			6.5	1.5	8.0	5.9
19 20 + 65.5	1345	19	19.9	+65	26	5.3	3345	4.6	23 +3 (+2)	5.9	1.0	6.9	4.8
19 9 + 65.7	1326	19	9.2	+65	44	6.9	–			6.9	1.0	7.9	5.8
18 8 + 75.7	655	18	8.2	+75	46	6.5	–			7.0	1.5	8.5	6.4
19 14 + 76.4	717	19	14.4	+76	19	5.5	–			6.0	1.6	7.6	5.5
18 30 + √6.9	2113	18	30.1	+56	56	5.4	–			6.3	.7	7.0	4.9
17 √6 + 76.9	667	17	55.9	+76	58	5.2	–			5.9	1.6	7.5	5.4
										5.6		6.6	4.5
19 12 + 67.4	1129	19	12.5	+67	24	3.4	–			5.8	1.0	6.8	4.7

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Plate 628.

r	H	Type	No. Lines	K	Focus	other lines.
11.0	14.3	I ?	Remarks 4	~~X~~ K=H	1	—
11.0	13.5	I	3	N ?	1	—
11.4	15.1	III b	219 ~~2~~ 1	N	1	Reen.
8.6	18.8	I	5	N	1	—
8.6	19.7	I	7	K=.2 H	3	—
7.8	12.6	III	~~3~~ 2	K=H ?	1	—
7.5	11.3	I	4	N	1	—
7.0	10.1	I	~~5~~ 6	N	2	—
6.6	13.3	I b	220 ~~3~~ 4	~~X~~ K=H	1	Reen
6.1	17.3	~~X~~ II a	2215 2	K=H	2	Reen.
4.0	12.1	III b	2222 1	N	1	Reen.
3.6	17.7	I	8 9	N	4	—

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Mean 16

	No.	R.A.	Dec.	Mag.					Yr.				
18 44+77.5	702	18	44.5	+77	32	7.0	–		7.1	1.7	8.8	6.7	5.5 ✓
18 47+67.6	1096	18	47.0	+67	38	7.0			7.3	1.0	8.3	6.2	5.7 ✓
18 37+77.5	699	18	36.8	+77	25	6.5	–		6.7		8.4	6.3	5.1 ✓
									7.0	1.7	8.7	6.6	5.45
18 18+68.7	989	18	17.9	+68	40	6.8	.		7.0	1.1	8.1	6.0	5.4 ✓
18 22+58.7	1809	18	21.8	+58	45	48	–		6.0	.7	6.7	4.6	4.4 ✓
18 49+59.2	1925	18	49.8	+59	13	4.3	–		6.5		7.2	5.1	4.9 ✓
									6.8	.7	7.5	5.4	5.2
18 59+69.3	1018	18	59.8	+69	19	6.3	.		6.8	1.1	7.9	5.8	5.2 ✓
19 30+79.3	628	19	30.4	+79	18	6.3	3371	5.9	6.6	1.8	8.4	6.3 6.1	5.0 ✓
18 55+79.8	604	18	55.8	+79	46	6.5	–		6.7	1.9	8.6	6.5	5.1 ✓
18 11+79.9	571	18	11.0	+79	60	6.5	–		6.1	1.9	8.0	5.9	4.5 ✓
									6.8		8.0	5.9	5.2 ✓
18 56+71.1	915	18	56.2	+71	6	5.3	–		7.1	1.2	8.3	6.2	5.5
18 22+71.3	889	18	23.0	+71	14	4.7	3120	4.2	5.5	1.2	6.7	4.6	3.9 ✓

$\frac{163}{8}$ $\frac{14-11}{8}$

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Plate 68.

ν	H.	Type	Remarks.	No. Lines	K	Focus	other Lines.
22.6	14.6	I		2	N	1	—
20.9	15.4	III	b.c. 223	2	K=1.5H ~~K=H~~	3	F? seen.
20.5	8.1	I		7	N	3	F
17.5	9.6	I		5	K=.5H N	1	—
17.1	13.0	I		5	K=.2H N	1	F
17.0	11.7	III	b 224	2	K=H N	1	seen
15.8	9.0	III	b 225	2	K=1.2H ~~K=H~~	3	seen
15.0	19.9	II a ?	226	4	K=H	2	seen.
13.0	7.9	III		2	K=H N	1	—
13.5	17.8	III		2	N	1	—
12.1	23.1	I		6	N	3	—
10.6	7.6	I		6	K=H	2	—
9.8	14.1	III	b 227	2	K=1.2H ? N	1	seen
9.5	13.1	I		4	N ?	1	—
9.5	16.1	I		5	K=.2H N	2	—
9.5	22.2	II a	228	2	K=1.2H ~~K=H~~	3	F, seen.
8.9	9.0	I		4	N	1	—
8.5	14.4	I		3	N ?	1	—
8.5	22.4	III		3	K=H N	2	F
7.0	10.9	I		4	N	1	—
7.8	18.1	III		2	K=H N	1	—
5.0	13.9	I		7	K=.2H	3	—
5.1	17.5	I		6	N	2	—
4.6	16.5	I		4	K=H N	1	—
3.4	14.5	I		6	K=H	1	—
2.5	4.1	I		5	N	2	—
2.5	15.6	I		10	K=.2H	4	F
1.8	15.3	I		2	N	1	—

III ? 6.5, 5.8.

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Mean 18

	No.	R.A.	Dec.	Mag.								
19 14 +76.3	717	19	14.4	+76	19	5.5						4.0
19 12+67.4	1129	19	12.5	+67	24	3.4	–					4.3
20 13+77.3	764	20	13.8	+77	16	4.8	3545	4.4	26	+2 −2		3.6
19 44+68.9	1079	19	44.5	+68	60	6.2	–					5.2
19 30+79.3	628	19	30.4	+79	18	6.3	–					5.0
19 32+69.4	1053	19	32.6	+69	25	5.0	–					5.1
19 48+69.9	1070	19	48.6	+69	53	3.8	–					4.2
18 10+79.9	571 / 570	18	10.9	+79	59	6.5	–					4.7
20 38+80.9	659	20	37.2	+80	56	5.8	–					5.4
18 56+71.1	915	18	56.2	+71	6	5.3	–					5.5
18 22+71.3	889	18	23.0	+71	14	4.7	3120	4.2	22	−2 −6		3.4
20 53+81.9	718	20	52.8	+81	59	6.0	–					4.5
19 18+73.1	857	19	18.3	+73	5	4.4	–					5.2
19 33+83.2	552	19	33.4	+83	10	6.0						5.1
18 43+83.1	536	18	43.2	+83	4	6.2	–					4.9
18 23+72.7	839	18	23.7	+72	40	3.8	–					3.6
20 42+83.1	585	20	43.2	+83	7	6.2	.					5.0
19 11 +83.7	547	19	10.4	+83	42	6.5						5.1
17 0 +82.3	498	17	1.0	+82	16	4.0	–					4.6
20 20+84.3	451	20	20.0	+84	14	7.0	.					5.2
18 49+73.9	835	18	49.4	+73	54	5.3	–					5.6
19 19+65.4	1345	19	19.9	+65	26	5.3	–					4.4
18 51+75.3	682	18	51.0	+75	16	5.8	3211	5.6	24	±6 −4		4.7
18 59+75.6	683	18	58.4	+75	35	6.5	–					5.2
19 14+76.3	717	19	14.4	+76	19	5.5	–					4.7
22 22+85.3	383	22	24.2	+85	23	5.0	3968	5.4	38	+14 +10		
18 17+86.1	269	18	19.1	+86	36	4.5	–					
18 24+86.9	272	18	24.4	+86	59	6.0	✓					

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Plate 42

V	H	Type	Remarks	No. Lines	K	Focus	Other Lines.
22.0	14.7	I		4	~~K~~ K=H ?	2	–
20.5	8.8	I		6 ~~4~~	~~K~~ K=.5H	3	–
19.7	15.8	I		6 ~~4~~ 5	~~K~~ K=.2H	1	–
19.0	14.4	I		~~4~~	N	1	–
17.0	10.4	I		7 ~~5~~	~~K~~ K=.2H	3	F ?
17.2	15.1	~~I~~ III		~~2~~	~~K~~ K=H	1	–
16.0	11.0	I		6 ~~4~~	N	2	F
14.6	23.4	I		6	N ?	3	F seen.
14.3	23.6	I		4	N	2	–
14.0	22.5	I		~~4~~ 5	N	1	–
14.5	13.8	I		~~5~~ 4	N	1	–
14.4	14.6	I?		~~2~~ 3	N	1	–
Recorded above	~~14.0~~	~~20.5~~	~~I~~	~~4~~	~~N~~	~~2~~	~~–~~
14.0	12.4	I	a 229	8	K=.2 H	4	F ?
13.3	11.7	II		2	~~K~~ K=H	1	seen
13.5	8.8	I		3	N	1	–
13.5	17.1	I		~~5~~ 6	N	1	–
13.0	20.3	I		~~4~~ 7	K=.1H	3	F seen
11.4	13.4	I		~~8~~ 11	~~K~~ K=.2H	5	F seen.
11.9	17.8	I	b 230	~~7~~ 8	N	3	F ? seen
III ? 6.2, 6.6	11.4	14.6	III	b 231	2	~~K~~ K=H	2 – seen
	11.7	21.2	~~II~~ I ?		2	~~K~~ K=H	1 –
	10.0	7.6	I		~~3~~ 4	N ?	2 –
	10.5	24.1	III	b.c. 232	~~1~~ 2	~~K~~ K=1.5H	3. seen
	10.0	17.5	I ?		~~3~~ 5	~~K~~ K=H	1 F
	9.3	17.0	III ?	III ?	2 2	~~K~~ K=H ~~K=H~~	1 – –
	8.2	17.8	I		6	~~N~~ K=.5H	2 –
	7.5	14.5	I		~~4~~ 7	K=.2H	1 –

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	No.	R.A.	Dec.	Mag.			Br.				
19 51 +52.1	2572	19	51.9	+52	4	5.5	–		✓ 6.4	.5	6.9 5.3
20 27 +62.5	1821	20	27.2	+62	31	4.0	–		✓ 5.9	.8	6.7 5.1
19 56.7 +63.2	1584	19	56.7	+63	9	6.5	–		✓ 6.8	.9	7.7 6.1
20 3 +63.4	1593	20	2.9	+63	29	6.5	.		✓ 6.8	.9	7.7 6.1
20 33 +74.5	872	20	33.4	+74	26	5.5	–		✓ 6.0	1.4	7.4 5.8
20 0 +64.4	1405	19	59.9	+64	25	5.0	–		✓ 7.0 / 7.3	.9	7.9 6.3 / 8.2 6.6
20 15 +54.9	2329	20	14.8	+54	57	6.0	3556	5.7 13_3	✓ 6.4	.6	7.0 5.4
19 20 +65.5	1345	19	19.9	+65	26	5.3			✓ 5.7	1.0	6.7 5.1
18 51 +75.3	682	18	51.0	+75	16	5.8	3211	5.6 21 +5	✓ 6.2	1.5	7.7 6.1
18 58 +75.6	683	18	58.4	+75	35	6.5	.		✓ 6.6	1.5	8.1 6.5
20 5.8 +65.9	1433	20	5.8	+65	53	7.0	.		✓ 7.0	1.0	8.0 6.4
20 2 +55.9	2324	20	2.0	+55	55	6.5			✓ 7.0	.6	7.6 6.0
~~18 58 +75.6~~	~~683~~	~~18~~	~~58.4~~	~~+75~~	~~35~~	~~6.5~~					1.5
20 10 +56.1	2376	20	10.0	+56	8	4.5	–		✓ 5.3	.6	5.9 4.3
20 16 +66.4	1281	20	16.1	+66	23	6.2	–		✓ 6.9	1.0	7.9 6.3
20 23 +56.2	2421	20	22.9	+56	10	6.6	.		✓ 7.0	.6	7.6 6.0
19 53 +56.3	2331	19	53.2	+56	18	6.3	.		✓ 6.7	.6	7.3 5.7
19 14 +76.4	717	19	14.4	+76	19	5.5					
~~19 11 +55.7~~	~~2291~~	~~19~~	~~10.7~~	~~+56~~	~~41~~	~~6.3~~	–		✓ 5.6	.7	6.3 4.7
20 13 +77.3	764	20	13.8	+77	16	4.8	–		✓ 4.7	1.6	6.3 4.7
19 50.3 +57.2	2084	19	50.3	+57	8	5.4	3455	5.1 15_1	✓ 5.9	.7	6.6 5.0
20 3 +67.5	1222	20	2.2	+67	27	5.1	–		✓ 6.3 / 6.6	1.0	7.3 5.7 / 7.6 6.0
19 41 +76.8	712	19	3.9	+76	50	6.5	–		✓ 6.9	1.6	8.5 6.9
20 8 +77.6	800	21	8.4	+77	32	6.1			✓ 6.3	1.7	8.0 6.4
19 12.5 +67.4	1129	19	12.5	+67	24	3.4	–		✓ 5.4 / 5.7	1.0	6.4 4.8 / 6.7 5.1
19 46.6 +68.1	1082	19	46.6	+68	4	6.4	–		✓ 6.5	1.1	7.6 6.0
19 53 +58.5	2013	19	53.2	+58	28	5.1			6.7 ✓ 6.7 / 7.0	.7	7.4 5.8 / 7.7 6.1
~~19 48 +58.5~~	~~1994~~	~~19~~	~~48.3~~	~~+58~~	~~37~~	~~8.5~~	–				
19 44.5 +68.9	1079	19	44.5	+68	60	6.2	–		✓ 6.4	1.1	7.5 5.9
19 51 +59.3	2137	19	51.0	+59	19	5.8	–	✓	✓ 6.6	.7	7.3 5.7

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Plate 742.

V	H	Type	No. Remarks.	No. Lines	K	Focus	other lines.
7.5	17.6	I		6	K=.2H	2	—
7.3	19.8	III b	233	2	N	2	seen
6.5	17.0	III b,c	234	4	K=1.2H	3	seen
6.0	12.9	I?		4	K=H	1	—
6.0	20.5	I d?		3	N?	1	—
2.5	11.1	I		4	N	1	—

Plate 693.

	22.0	10.4	I		5	N	1	—
	22.5	16.0	I?		3	N K=H	1	—
	21.8	17.1	I		8	K=.2H	2	—
	20.5	8.2	I		7	K=.2H	3	—
	20.4	13.9	II a?	235	3	K=H	1	seen
	19.5	15.3	I		5	N	2	—
III 6.5, 6.9	19.5	20.5	III b	236	3	K=H	2	seen
	19.0	13.9	I		6	K=.5H	1	—
	17.4	8.9	I		3	N	1	—
	17.0	10.0	I		9	K=.3H	3	—
	16.0	10.3	I		6	K=.5H	1	—
	15.1	9.0	I		3	N	1	—
II	14.5	7.2	I		6	N	1	—
	14.5	22.9	I		8	K=.2H	3	—
	14.3	23.2	I		7	K=.1H?	2	—
	14.0	22.1	I		5	N	1	—
	14.1	13.3	I		4	N	1	—
	14.1	14.0	II a?	237	2	K=H	1	seen
	13.7	11.8	I		8	K=.3H	4	—
	13.5	16.5	I		4	N	1	—

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		No.	R.A.	Dec.	Mag.				Br.				
19	30 +79.3	628	19	30.4	+79	18	6.3	–	6.3	1.8	8.1	6.5	.
19	33 +69.4	1053	19	32.6	+69	25	5.0	–	6.3 6.5	1.1	7.4 7.6	5.8 6.0	.
19	48 +69.9	1070	19	48.6	+69	53	38	–	5.7 6.0	1.2	6.9 7.2	5.3 5.6	.
20	22 +80.1	650	20	22.6	+80	4	6.8	–	6.5	1.9	8.4	6.8	.
19	38 +60.2	1991	19	38.0	+60	10	6.5		6.6	.8	7.4	5.8	.
20	17 +61.8	2000	20	17.2	+61	48	5.8	3563 5.6	6.5	.8	7.3	~~5.7~~	.
								~~17 +1~~	~~4~~ 4	~~6.4~~ 4			
									49 3	5.4 3			Mean 12
20	17 +61.8	2000	~~20~~ 17	17.2	+61	48	5.8	3563 5.6	22 +4	6.9	9 7.8	6.0	5.7 ✓ Dm 2000 +61°
19	56 +51.8	2734	19	56.0	+51	45	7.3			7.1	~~7.0~~ .3	~~7.5~~ 5.7	.
19	519 +52.1	2572	19	51.9	+52	4	5.5	–		6.5	.5 7.0	5.2	5.3 .
20	27 +62.5	1821	20	27.2	+62	31	4.0	–		5.8	8 6.6	4.8	4.6 .
20	2.5 +52.7	2623	20	2.4	+52	44	5.9	–		7.1	.5 7.6	5.8	5.9 .
19	56 +63.2	1584	19	56.7	+63	9	6.5	.		6.8	.9 7.7	5.9	5.6 .
19	33 +65.2	1369	19	33.1	+65	13	7.5	–		6.6 7.0	.9 7.5 7.9	5.7 6.1	5.4 5.8 .
20	3 +63.5	1593	20	29	+63	29	6.5	–		6.8	.9 7.7	5.9	5.6 .
20	19 +54.5	2341	20	19.3	+54	12	6.7	.		7.2	.6 7.8	6.0	6.0 .
20	38 +74.5	871	20	33.4	+74	26	5.5	–		5.8	1.4 7.2	5.4	4.6 .
20	14.8 +54.9	2329	20	14.8	+54	57	6.0	–		6.6	.6 7.2	5.4	5.4 .
20	26 +65.2	1466	20	26.2	+65	16	6.3	.		6.9	.9 7.8	6.0	5.7 .
	26 +55.6	2411	20	~~25.8~~ 26	+55	35	6.0						
20	~~36.5 +75.3~~	~~764~~	20	~~36.5~~	~~+75~~	~~21~~	~~6.0~~	~~3702 6.3 20 +2~~		6.8	1.5 8.3	6.5	5.6 .
19	199 +65.4	1345	19	19.9	+65	26	5.3	–		5.5	1.0 6.5	4.7	4.3 .
18	51 +75.3	682	18	51.0	+75	16	~~5.8~~	–		6.3	1.5 7.8	6.0	5.1 .
18	58 +75.5	683	18	58.4	+75	35	6.5	.		6.7	1.5 8.2	6.4	5.5 .
20	5 +65.9	1433	20	5.8	+65	53	7.0	.		7.0	1.0 8.0	6.2	5.8 .
20	2 +55.9	2324	20	2.0	+55	55	6.5	–		7.0	.6 7.6	5.8	5.8 .
20	10 +56.2	2376	20	10.0	+56	8	4.5	–		5.6	.6 6.2	4.4	4.4 .
19	53 +56.3	2331	19	53.2	+56	18	6.3	3469 6.1 14 -4		6.9	.6 7.5	5.7	5.7 .

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Plate 693.

V	H	Type	No. Lines	K	Focus	Other Lines.	Remarks	
13.0	19.8	I	6	K=H	3	F		19
13.4	8.2	I	5 ~~4~~	K=.5H ~~N~~	1	—		
13.0	6.1	I d	~~3~~ 5	K=.5H? ~~?~~	1	—		20
11.8	17.2	I	8 ~~6~~	N	3	—		19
11.8	20.8	~~I~~ II a 238	~~4~~ 2	K=H ~~?~~	1	seen		19
11.7	13.0	I	10 ~~9~~	N	5	F seen		20
11.1	14.1	III bc 239	~~3~~ 2	K=H ~~N~~	1	seen		20
10.5	23.6	III b:c 240	~~6~~ 2	~~K=2.0H~~ K=2.5H	3	seen		19
10.0	7.1	I	6 ~~5~~	N	2	—		21
9.9	17.0	I	4	K=H	1	—		19
8.0	17.3	I	6 ~~4~~	K=.2H	2	—		19
7.5	17.2	I	8 ~~6~~	K=.2H	2	—		19
7.5	16.9	I	5	N	1	—		19
8.0	10.5	I?	3	N	1	—		20
7.0	19.3	III b 241	2 ~~1~~	K=H	2	seen		19
6.4	16.4	III b:c 242	~~4~~ 2	K=1.2H ~~K=H~~	3	Bright. seen		19
6.0	20.1	I	4	K=H ~~N~~	1	—		18
6.0	12.5	I	5 ~~4~~	K=.2H ~~N~~	1	—		20
4.0	18.1	I	4	N	1	—		21

Plate 770. Not an E. plate.

17.9	11.8	I	3	N	1	—	
17.5	15.3	I	4	K=H	1	—	
17.0	18.4	I	4	N	1	—	
15.0	13.7	I	4	N	1	—	
6.4	14.2	I	7	K=.2H	3	—	
5.3	11.7	I	3	N	1	—	
4.6	20.8	I	6	N	3	—	

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Mean 12.

			No.	R.A.	Dec.	Mag.					Br.				
19	14	+76.3	717	19	14.4	+76	19	5.5	–		6.0	1.6	6.6 4.8	4.8
20	23	+56.2	2421	20	22.9	+56	10	6.6	–		6.9	.6	7.5 5.7	5.7
20	42	+66.2	1318	20	41.4	+66	8	5.5	–		6.7	1.0	7.7 5.9	5.5
19	50	+57.1	2084	19	50.3	+57	8	5.4	3455	5.1 17-1	6.1	.7	6.8 5.0	4.9
19	4	+76.9	712	19	3.9	+76	50	6.5	–		7.2	1.6	8.8 7.0	6.0
20	13	+77.3	764	20	13.8	+77	16	4.8	3545	4.4 18 ±0	4.6	1.6	6.2 4.4	3.4
20	2	+67.5	1222	20	2.2	+67	27	5.1	–		6.5 / 6.9	1.0	7.5 5.7 / 7.9 6.1	5.3 / 5.7
19	12.5	+67.4	1129	19	12.5	+67	24	3.4	–		5.3 / 5.8	1.0	6.5 4.7 / 6.8 5.0	4.3 / 4.6
21	8	+77.5	800	21	8.4	+77	32	6.1	3733	5.8 21 +3	6.2	1.7	7.9 6.1	5.8
19	46	+68.1	1082	19	46.6	+68	4	6.4	–		7.0	1.1	8.1 6.3	5.8
19	44	+68.9	1079	19	44.5	+68	2	6.2	–		6.5	1.1	7.6 5.8	5.3
19	30	+79.4	628	19	30.4	+79	18	6.3	–		6.4	1.8	8.2 6.4	5.2
19	51	+59.3	2137	19	51.0	+59	19	5.8	3457	6.0 13 – 5	6.6	.7	7.3 5.5	5.4
20	41	+78.9	716	20	41.6	+78	54	6.9			6.7	1.8	8.5 6.7	5.5
19	32	+69.4	1053	19	32.6	+69	25	5.0	–		6.2 / 6.5	1.1	7.3 5.5 / 7.6 5.8	5.0 / 5.3
19	48	+69.9	1070	19	48.6	+69	53	3.8	–		5.1 / 6.0	1.2	6.9 5.1 / 7.2 5.4	4.5 / 4.8
18	55.9	+79.8	604	18	55.8	+79	46	6.5	–		7.0	1.9	8.9 7.1	5.8
20	23	+80.1	650	20	22.6	+80	4	6.8	–		6.9	1.9	8.8 7.0	5.7
21	19	+80.6	690	21	19.2	+80	37	6.3	.		6.8	2.0	8.8 7.0	5.6

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Plate 800.

V	H	Type	Remarks	No. lines	K	Focus	Other lines.
21.0	17.5	I		6	K=.2H2	3	—
16.4	20.9	I		4	N	1	—
18.0	14.4	I		3	N.	1	—
16.0	13.4	I		2	K=H	1	—
15.9	14.9	I		3	N	1	—
15.6	16.0	I?		3	N	1	—
15.6	16.1	I	I	3 4	N	K=H 1 1	— —
15.2	23.4	I		4	N	1	F
15.4	6.6	I		8	N	4	H
14.5	11.4	I		6	K=.5H	1	F
14.0	14.8	III		2	N	1	—
14.0	10.4	I		3	N	1	—
13.5	14.1	III	N. 247	3	K=H	3	Bright Feeble.
12.0	13.4	I		5	K=.2H	2	—
12.0	20.1	I		3	N	1	—
12.1	22.0	I?		3	N	1	—
11.5	6.4	I		9	K=.2H	4	F
11.0	14.4	I		5	K=.6H	3	—
9.8	14.3	I		3	N	1	—
9.0	18.4	I		4	N	1	—
8.1	21.3	I		3	N	1	—
7.5	15.5	I		5	N?	1	—
7.8	19.3	II		1	N	1	—
7.0	15.5	I		6	N	2	—
7.0	6.8	I	II	2	K=H	2	—
4.5	10.5	I		7	N	2	F
3.4	14.4	I		3	N	1	—

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	No.	R.A.	Dec.	Mag.					Mean 18
20 13 +77.3	764	20 13.8	+77	16	4.8	–			5.7 7 4 3.9
19 31 +79.3	628	19 30.4	+79	18	6.3				6.0 1.6 6.3 3.5
~~20 2 +69.5~~	1090	20 1.8	+69	28	8.2	3371	5.9	29	8 8 6.1
20 42 +78.9	716	20 41.6	+78	54	6.9	–			7.0 1.X 8.X 5.8 5.2
20 54 +80.0	672	20 54.1	+80	0	5.3	–			7.4 1.8 9.2 6.4 5.6
20 39 +60.1	2154	20 39.6	+60	4	6.2	3641	6.2	16	6.9 8.8 6.0 5.1
20 32.2 +70.0	1126	20 32.1	+70	3	6.8				7.2 1.9 9.1 6.3 5.4
20 34 +60.2	2142	20 34.8	+60	15	7.0	.			7.0 1.2 8.2 5.4 5.2
19 48.5 +69.9	1070	19 48.6	+69	53	3.8	3447	3.9	38	7.0 6.9 .8 7.7 4.9 5.1
21 27 +69.9	1173	21 26.8	+69	56	3.0	3798	3.4	30	6.5 1.2 7.7 4.9 4.7
21 19 +80.7	690	21 19.2	+80	37	6.3	–			5.2 1.2 6.4 3.6 3.4
20 37 +80.9	659	20 37.2	+80	56	5.8	–			6.7 2.0 8.7 5.9 4.9
21 6 +70.8	1164	21 5.5	+70	51	6.0	3728	6.0	21	6.7 2.0 8.7 5.9 4.9
20 42 +61.3	2050	20 42.4	+61	17	3.7	–			7.0 2.0 9.0 6.2 5.2
20 52 +81.9	718	20 52.8	+81	59	6.0	–			6.9 1.2 8.1 5.3 5.1
20 18 +61.8	2000	20 17.2	+61	48	5.8	3563	5.6	22	5.9 6.7 3.9 4.1
19 18 +80.5	609	19 18.9	+80	30	7.1				6.2 .8 7.0 4.2 4.4
21 15 +61.9	2111	21 15.2	+61	58	3.0	–			6.4 2.1 8.5 5.7 4.6
20 27.8 +62.5	1821	20 27.2	+62	31	4.0	–			7.0 .8 7.8 5.0 5.2
20 45 +83.2	588	20 43.2	+83	7	6.2	.			7.3 2.0 9.3 6.5 5.5
19 32 +83.2	552	19 33.4	+83	10	6.0	3378	6.3	29	5.4 .8 6.2 3.4 3.6
18 44 +83.1	536	18 43.2	+83	4	6.2	.			5.9 .8 6.7 3.9 4.1
33 744	872	20 33.4	+74	26	5.5				6.5 2.3 8.8 6.0 4.7
20 ~~28~~ +84.3	~~451~~	20 20.8	+84	14	7.0				6.4
									6.9 2.3 9.2 6.7 5.1
									6.9 2.3 9.2 6.4 5.1
									7.0 5
									6.8 2.5 8.5 5.7 4.2
19 10 +83.7	547	19 10.4	+83	42	6.5	–			7.4 2.4 9.8 7.0 5.6
20 34 +74.5	872	20 33.4	+74	26	5.5	3614	5.1	33	6.0 5.6 4
21 16 +64.2	1527	21 16.5	+64	17	5.5	–			7.4 1.4 8.4 5.5 5.2
22 24 +85.4	383	22 24.2	+85	23	5.0	3968	5.4	31	7.0 .9 7.9 5.1 5.2
66.1	1318	20 41.4	+66	8	5.5				5.7
20 415 +76.2	~~809~~	~~20 44.0~~	~~+76~~	~~19~~	~~7.1~~				5.8 2.7 8.5 5.7 4.0
									7.0 1.6 8.6 5.8 5.2

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Plate 696.

V	H	Type	Remarks	No.	Lines	K	Foci	Other Lines
22.9	23.0	I		7	N	K=.2H	2	—
22.0	9.4	I		4	N	K=H	1	—
21.5	14.2	II a	248	2	K=H		2	F. seen
20.9	17.4	I		8	N		3	F.
20.1	11.5	I		6	N	K=.2H	1	—
19.1	7.4	I		4	N	K=H	1	—
17.8	14.4	II a	249	2	N	K=H	1	—
17.1	19.3	I		5	N	K=H	1	—
16.5	7.5	I		3	N		1	—
16.1	20.9	I		6	N	K=.3H	2	F.
16.1	15.1	I d		4	N	K=H	1	—
15.5	10.2	III		2	N	K=H	1	—
15.8	13.3	III b	250	2	N	K=H	1	—
15.6	14.8	I		4	N?		1	—
15.6	15.9	I		4	N	K=H	1	—
15.6	16.0	I		5	N?		1	—
15.0	23.4	III b	251	3	N	K=2.0H	3	F. seen
14.1	23.5	I d		4	N	K=H	1	—
15.0	6.6	I		8	N		5.	F. seen
15.0	11.2	I		4	N	K=H	1	—
14.5	14.7	III		1	N		1	—
14.5	12.0	I		5	N	K=H	1.	F.
14.3	11.3	I		8	N	K=.5H	2	—
13.8	10.4	II a	252	2	N	K=H	1	F. seen
14.0	14.4	III		2	N	K=H	1	—
13.3	14.1	III b a	253	3	N	K=1.2H	3	F. 2 Bright seen.
12.0	20.0	I		6	N		2	—
11.9	13.6	I		8	N	K=.2H	3	F.

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Mean 16

	No.	R.A.	Dec.	Mag.				Br					dy
20 10 + 56.1	2376	20	10.0	+56	8	4.5	–	~~6.1~~	6	6.7	~~7.6~~	✓	1
21 24 + 76.5	836	21	23.7	+76	28	6.5	–	7.0	1.6	8.6	6.5	5.4 ✓	3
20 42 + 57.0	2240	20	41.8	+57	4	4.5	–	6.6	.7	7.3	5.2	5.0 ✓	1
20 13 + 77.3	764	20	13.8	+77	16	4.8	3545	4.4	27+6	5.5	1.6	7.1 5.0	3.9 ✓ 3
21 8 + 77.5	800	21	8.4	+77	32	6.1	–	6.5	1.7	8.2	6.1	4.9 ✓	3
21 47 + 77.5	834	21	46.8	+77	34	7.0	–	7.0	1.7	8.7	6.6	5.4 ✓	3
20 42 + 78.9	716	20	41.6	+78	54	6.9	–	6.8	1.8	8.6	6.5	5.2 ✓	3
20 22 + 59.1	2228	20	22.0	+59	8	6.4	–	6.9	.7	7.6	5.5	5.3 ✓	1
21 8 + 59.4	2334	21	8.1	+59	22	6.0	3736	5.5	19-2	6.7	.7	7.4 5.3	5.1 ✓ 1
19 31 + 79.3	628	19	30.4	+79	18	6.3	–	6.4	1.8	8.2	6.1	4.8 ✓	3
20 33 + 79.7	675	20	32.6	+79	43	7.3	–	7.0	1.9	8.9	6.8	5.4 ✓	3
21 29 + 79.9	707	21	29.0	+79	54	6.0	–	6.8 / 7.0	1.9	8.7 / 8.9	6.6 / 6.8	5.2 / 5.4 ✓	3
20 53 + 80.0	672	20	54.1	+80	0	5.3	–	6.7 / 7.0	1.9	8.6 / 8.9	6.5 / 6.8	5.1 / 5.4 ✓	3
20 39 + 60.1	2154	20	39.6	+60	4	6.2		6.9	.8	7.7	5.6	5.3 ✓	1
20 32 + 70.0	1126	20	32.1	+70	3	6.8	–	7.0	1.2	8.2	6.1	5.4 ✓	2
20 22 + 80.1	650	20	22.6	+80	4	6.8		6.8	1.9	8.7	6.6	5.2 ✓	3
19 48 + 69.9	1070	19	48.6	+69	53	3.8	–	5.8 / 6.1	1.2	7.0 / 7.3	4.9 / 5.2	4.2 / 4.5 ✓	2
18 56 + 79.7	604	18	55.8	+79	46	6.5	–	6.9	1.9	8.8	6.7	5.3 ✓	3
21 26 + 69.9	1173	21	26.8	+69	56	3.0•	3798	3.4	23+2	4.5	1.2	5.7	3.6 2.9 ✓ 2
21 18 + 80.2	688	21	18.2	+80	12	6.5	–	7.0	1.9	8.9	6.8	5.4 ✓	3
20 38 + 80.6	660	20	37.7	+80	35	6.1	–	6.8 / 7.1	2.0	8.8 / 9.1	6.7 / 7.0	5.2 / 5.5 ✓	3
21 10 + 80.5	679	21	10.0	+80	36	7.0	–	6.9	2.0	8.9	6.8	5.3 ✓	3
21 19 + 80.6	690	21	19.2	+80	37	6.3	–	6.1	2.0	8.1	6.0	4.5 ✓	3
21 5 + 70.8	1164	21	5.5	+70	51	6.0	–	6.8	1.2	8.0	5.9	5.2 ✓	2
20 37 + 80.9	659	20	37.2	+80	56	5.8	–	6.4 / 6.8	2.0	8.4 / 8.8	6.3 / 6.7	4.8 / 5.2 ✓	3
20 42 + 61.3	2050	20	42.4	+61	17	3.7	–	5.5 / 6.8	.8	6.3 / 6.6	4.2 / 4.5	3.9 / 4.2 ✓	1
20 17 + 61.8	2000	20	17.2	+61	48	5.8	3563	5.6	16-5	6.4	.8	7.2	5.1 4.8 ✓ 1
20 52 + 81.9	718	20	52.8	+81	59	6.0	– ✓	6.6	2.1	7.7	5.6	4.0 ✓	3

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January 12, 1887.

Plate 696

T	H	Type	No. Lines	K	Focus	Other Lines	Remarks.
12.0	22.0	~~I~~ II a	2543	~~K~~ K=H	1	seen	
11.9	22.6	I	3	N	1	–	
11.4	6.4	I?	~~8~~ 9	~~K=.5H~~ K=.2H	5	~~Seen~~ F.	
10.7	17.6	I	~~9~~ 10	~~K=H~~ K=.3H	3	~~F. seen~~	
10.1	20.5	I	~~4~~ 5	N	1	–	
9.6	14.3	I	6	K=.2H ~~N~~	1	–	
8.7	6.4	III	3	K=H ~~N~~	1 f	–	
9.0	18.4	I	~~5~~ 6	K=.5H ~~N~~	1	–	
8.2	22.9	I	3	N	1	–	
8.0	21.3	I	~~6~~ 7	K=.2H ~~N~~	2	–	
7.7	22.2	I	4	K=H ~~N~~	1	–	
7.5	19.3	I	6	K=.5H ~~N~~	1	–	
7.8	15.0	I	~~2~~ 3	N	1	–	
7.5	15.5	I	3	N	1	–	
7.0	15.4	I	~~6~~ 7	K=.2H	3	–	
6.7	6.7	II d?	4	N	1	–	
6.5	7.3	III	1	N	1	–	
5.1	17.5	I	4	N?	1	–	
4.3	10.4	I	~~6~~ 8	N?	3	–	
3.5	14.3	I	~~4~~ 5	~~N~~ K=H?	1	–	

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Mean 16 6h

	No.	R.A.	Dec.	Mag.		Br.					
20 9+61,6	1983	20	9.2	+61	39	5.8	–	6.9	.8	7.7	5.6	. 5.3 ✓	1
20 7+61,6	1975	20	6.6	+61	39	6.8	.	7.1	.8	7.9	5.8	. 5.5 ✓	1
21 15+61,9	2111	21	15.2	+61	58	3.0	–	4.2	.8	5.0	4.9	. 2.6 ✓	1
20 27+62,5	1821	20	27.2	+62	31	4.0	–	5.4	.8	6.2	4.1	. 3.8 ✓	1
19 9+82,2	572	19	9.4	+82	9	6.0	.	6.8	2.2	9.0	6.9	. 5.2 ✓	3
20 42+83,2	588	20	43.2	+83	7	6.2	–	6.1	2.3	8.4	6.3	. 4.5 ✓	3
22 48+82,4	703	22	47.9	+82	23	5.0	–	6.4 / 6.7	2.2	8.6 / 8.9	6.5 / 6.8	. 4.8 / 5.1 ✓	3
19 33+83,2	552	19	33.4	+83	10	6.0	–	6.5	2.3	8.8	6.7	. 4.9 ✓	3
20 3+63,5	1593	20	2.9	+63	~~30~~ 29	6.5	.	6.8	.9	7.7	5.6	. 5.2 ✓	1
18 43+83,1	536	18	43.2	+83	4	6.2	–	6.1	2.3	8.4	6.3	. 4.5 ✓	3
18 28+82,9	540	18	28.6	+82	52	7.5	–	6.9	2.3	9.2	7.1	. 5.3 ✓	3
19 10+83,7	547	19	10.4	+83	42	6.5	–	6.7	2.4	9.1	7.0	. 5.1 ✓	3
20 30+84,1	462	20	30.0	+84	5	7.0	.	7.0	2.5	9.5	7.4	. 5.4 ✓	3
20 20+84,3	451	20	20.0	+84	14	7.0	.	6.8	2.5	9.3	7.2	. 5.2 ✓	3
20 33+74,5	872	20	33.4	+74	26	5.5	–	6.2	1.4	7.6	5.5	. 4.6 ✓	2
21 16+64,2	1527	21	16.5	+64	17	5.5		6.4	9	7.3	5.2	. 5.8 ✓	1
22 56+83,6	640	22	55.4	+83	34	5.0	–	6.3 / 6.7	2.4	8.7 / 9.1	6.6 / 7.0	. 4.7 / 5.1 ✓	3
20 26+65,3	1466	20	26.2	+65	16	6.3		7.2	9	8.1	6.0	. 5.6 ✓	1
22 24+85,3	383	22	24.2	+85	23	5.0		5.5	2.7	8.2	6.1	. 3.9 ✓	3
20 41+66,1	1318	20	41.4	+66	8	5.5	– ✓	6.7	1.0	7.7	5.6	. 5.1 ✓	1

$\frac{85}{4}$ $\frac{8-7}{4}$

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January 13, 1887.

Plate 803.

V	H	Type	No. Lines	K	Focus	other Lines.
		Remarks.				
22.8	11.6	I?	2	K=H	1	–
21.9	16.2	I	10	K=.4 H	5	Fresn.
21.0	13.6	I	4	N	1	–
20.1	9.3	II a 255	2	K=H	1	Resn
19.9	19.5	I	5	N	1	–
19.2	10.3	I	3	N	1	–
19.0	17.5	I	5	N?	1	–
18.5	22.4	I	4	K=H?	1	–
17.3	6.3	I d	6	K=H?	2	–
17.5	15.8	I b 256	7	N	2	–
16.5	21.1	I	7	N	2	–
16.4	14.0	I	5	N	1	–
16.1	8.2	I	4	N	1	–
15.3	7.4	I	5	N	2	–
15.4	9.1	I	3	N	1	–
No star on plate 15.0	7.6	?	2	N	1	–
14.5	8.1	I	3	N	1	–
14.2	15.7	I	5	N	1	–
13.5	6.2	I	6	N?	2	–
13.5	7.9	I	4	N	1	–
13.5	9.8	I	3	N	1	–
13.5	14.0	I	8	N	3	–
13.5	21.3	I	6	N	2	–
13.1	22.9	I	6	K=.2H	2	–
12.7	22.9	I? I?	3 H	N N	1 1	– –
12.7	21.3	I	3	N	1	–
13.0	13.7	I	4	N	1	–
13.0	14.4	I	6	K=.2H	2	–

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Mean 15

	No.	R.A.	Dec.	Mag.									
21 34 + 61.5	2169	21	34.1	+61	25	5.0	–			7.8	5.8 5.7		
21 15 + 61.9	2111	21	15.2	+61	58	3.0	–		5.1 .8	5.9	3.9 3.8		3.6
21 26 + 52.3	2957	21	25.5	+52	19	6.3	3797	5.9	17 -3 -4	7.1 .5	7.6	5.6 5.5	5.6
21 57 + 72.5	1009	21	57.2	+72	28	5.0	–			6.8 1.3	8.1	6.1 6.0	5.3
21 6 + 52.9	2880	21	5.8	+52	58	5.5	3730	5.7	18 -2 -5	6.9 .6	7.5	5.5 5.4	5.4
21 51 + 73.0	1003	21	51.1	+72 60	0	6.5	3876	6.6	18 -2 -5	7.1 1.3	8.4	6.4 6.3	5.6
21 12 + 53.4	2588	21	12.5	+53	23	5.8				7.0 .6	7.6	5.6 5.5	5.5
20 46 + 63.5	1663	20	46.8	+63	30	6.5	–			7.3 .9	8.2	6.2 6.1	5.8
21 59 + 63.9	1802	21	59.6	+63	55	4.5	–			6.4 .9	7.3	5.3 5.2	4.4
21 16 + 64.2	1527	21	16.5	+64	17	5.5	3764	5.3	20 +0 -3	6.4 .9	7.3	5.3 5.2	4.9
20 33 + 74.5	872	20	33.4	+74	26	5.5	3614	5.1	26 +6 +5 +3	6.3 1.4	7.7	5.7 5.6	4.8
21 24 + 54.7	2544	21	24.3	+54	47	6.1	.			7.0 .6	7.6	5.6 5.5	5.5
21 51 + 64.6	1607	21	51.7	+64	39	6.5	.			6.9 .9	7.8	5.8 5.7	5.4
21 47 + 55.1	2639	21	47.1	+55	7	6.0	3870	5.5	18 -2 -5	6.7 .6	7.3	5.3 5.2	5.2
21 48 + 65.1	1664	21	48.0	+65	4	6.6	.			7.0 .9	7.9	5.9 5.8	5.5
[illegible]													
21 53 + 65.5	1691	21	53.5	+65	28	6.5	3882	6.2	17 -3 -4	6.9 1.0	7.9	5.9 5.8	5.4
21 13 + 75.6	778	21	13.4	+75	42	6.8	.			7.0 1.5	8.5	6.5 6.4	5.5
22 29 + 75.5	836	22	29.7	+75	27	5.7				6.5 1.5	8.0	6.0 5.9	5.0
22 16 + 75.8	820	22	16.6	+75	46	6.8	.			6.9 1.5	8.4	6.4 6.3	5.4
21 45 + 66.1	1441	21	45.9	+66	7	6.4	.			7.2 1.0	8.2	6.2 6.1	5.7
21 25 + 66.2	1405	21	25.0	+66	10	5.5	3796	5.4	20 +0 -3	6.4 1.0	7.4	5.4 5.3	4.9
20 58 + 66.1	2524	20	58.2	+66	5	5.8	3711	5.9	14 -6 -7	6.7 .6	7.3	5.3 5.2	5.2
20 42 + 66.2	1318	20	41.4	+66	8	5.5	–			6.7 1.0	7.7	5.7 5.6	5.2
20 13 + 75.8	2515 725	20	52.4 ~~13.2~~	+56 ~~+75~~	19 49	6.0 8.0	.		6.9	6.9 1.5	8.4	6.4 6.3	5.4
20 58 + 56.5	2523 ~~2524~~	20	58.8 ~~58.2~~	+56 ~~+56~~	29 5	6.5 5.8	. ~~3711~~	~~5.9~~		7.2 .6	7.8	5.8 5.7	5.7
21 26 + 66.4	1407	21	26.5	+66	25	6.5	.			7.1 1.0	8.1	6.1 6.0	5.6
21 24 + 76.5	836	21	23.7	+76	28	6.5	–			6.7 1.6	8.3	6.3 6.2	5.2

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January 13, 1887.

Plate 803.

T	Δ	Type	No. Lines Remarks.	K	Focus	other Lines
12.2	11.2	I?	3	N	2	—
10.6	12.0	I	4	N	1	—
10.9	12.6	I	~~4~~ 5	N	1	—
10.7	13.5	I	4	N	1	—
10.8	16.1	I	~~6~~ 8	N	3	—
10.0	8.1	I	~~4~~ 5	N	1	—
9.6	10.1	~~I~~ III	2	~~N~~ K=H	1	—
10.6	17.7	I	~~3~~ 5	~~N~~ K=H	1	—
9.7	15.7	I I	4 4	N K=H	1 1	— —
10.0	14.0	I	~~2~~ 3	N	1	—
9.1	15.4	I	~~3~~ 4	N?	1	—
10.4	22.1	I	~~8~~ 9	N	4	Fecu.
8.8	7.8	I	~~5~~ 7	~~N~~ K=.2H	2	—
8.9	8.1	I	5	N?	1	—
8.1	14.7	I	4	N	1	—
7.8	18.5	~~I~~ IIa 257	~~4~~ 2	~~N~~ K=H	1	—
7.3	18.2	I	4	N	2	—
6.9	10.7	I	~~4~~ 5	N	1	—
6.4	6.7	~~I~~ IIa 258	~~4~~ b 2	K=H	1	—
6.5	13.4	I	~~3~~ 4	N	1	—
6.4	13.8	I bc? 259	~~3~~ 10	N	5	Fecu Bright
6.1	14.1	~~I~~ I?	2	N	1	—
5.9	14.1	III	~~1~~ 2	~~N~~ K=H	1	—
5.0	9.9	I	~~4~~ 5	N?	2	—
4.6	11.7	III b 260	~~1~~ 2	~~N~~ K=H	1	—
4.8	14.9	I	~~6~~ 7	N	1	—
5.3	19.8	I	6	~~N~~ K=.2H	1	—
4.4	17.4	~~I~~ IIa 261	~~4~~ b 2	~~N~~ K=H	1	—

Peculiar spectrum

III? 6.6, 6.9.

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Mean 15

	No.	R.A.	Dec.	Mag.			Br.				
21 34 +56.8	2617	21 34.5	+56	50	6.2		6.8	.7	7.5	5.5 5.4	5.3 ✓
21 46 +77.6	834	21 46.8	+77	34	7.0	.	7.0	1.7	8.7	6.7 6.6	5.5 ✓
21 32 +67.5	1329	21 32.8	+67	34	6.8	.	6.8	1.0	7.8	5.8 5.7	5.3 ✓
21 28 +67.6	1322	21 28.1	+67	39	7.3	.	7.0	1.0	8.0	6.0 5.9	5.5 ✓
21 8 +77.5	800	21 8.4	+77	32	6.1	3733 5.8 22 +2	6.3	1.7	8.0	6.0 5.9	4.8 ✓
22 22 +77.5	860	22 22.4	+77	30	6.8	.	6.9	1.7	8.6	6.6 6.5	5.4 ✓
21 39 +58.1	2316	21 39.1	+58	7	var:	—	7.0 / 7.3	.7	7.7 / 8.0	5.6 5.7 / 5.9 6.0	5.5 / 5.8 ✓
21 6 +67.6	1288	21 5.8	+67	40	7.0	—	7.1	1.1	8.2	6.2 6.1	5.6 ✓
21 16 +67.9	~~1303~~ 742	~~21 15.8~~ 12.2	~~+67~~ +78	~~57~~ 4	~~8.0~~ 7.5	.	7.0 7.2	1.1	8.3	6.3 6.2	5.7 ✓
21 13 +57.9	2309	21 13.4	+58	57 59	6.5	.	7.1	.7	7.8	5.8 5.7	5.6 ✓
21 15 +78.4	744	21 14.8	+78	23	6.8		7.0	1.7	8.7	6.7 6.6	5.5 ✓
20 14 +77.3	764	20 13.8	+77	16	4.8	3545 4.4 25 +5 +4 +2	5.3	1.6	6.9	4.9 4.8	3.8 ✓
22 29 +78.1	801	22 28.6	+78	4	5.7	—	6.5	1.7	8.2	6.2 6.1	5.0 ✓
22 25 +78.0	796	22 25.6	+78	1	6.0		6.7	1.7	8.4	6.4 6.3	5.2 ✓
21 22 +68.9	1214	21 ~~20~~ 21.7	+68	55	7.0	.	7.0	1.1	8.1	6.1 6.0	5.5 ✓
20 42 +78.9	716	20 41.6	+78	54	6.9	—	6.9	1.8	8.7	6.7 6.6	5.4 ✓
21 8 +59.4	2334	21 8.1	+59	22	6.0	3736 5.5 20 +0 ~~+3~~	6.8	.7	7.5	5.5 5.4	5.3 ✓
21 44 +69.5	1198	21 44.4	+69	29	6.7	.	6.9	1.1	8.0	6.0 5.9	5.4 ✓
22 7 +69.4	1228	22 7.4	+69	25	5.9	—	6.8	1.1	7.9	5.9 5.8	5.3 ✓
21 27 +59.8	2395	21 27.0	+59	49	5.7	3801 5.4 21 +1 +1 ~~+2~~	6.8	.7	7.5	5.5 5.4	5.3 ✓
21 26 +69.9	1173	21 26.8	+69	56	3.0	3798 3.4 23 +3 +2 ~~+29~~	*7.5 7.4	5.7 1.2	~~8.6~~ 8.7	3.4 3.6	3.0
21 29 +79.9	707	21 29.0	+79	54	6.0		7.3	1.9	9.2	7.2 7.1	5.8 ✓
20 53 +80.0	672	20 54.1	+80	0	5.3	—	6.8 / 7.0	1.9	8.7 / 8.9	6.6 6.7 / 6.8 6.9	5.3 / 5.5 ✓
21 41 +60.4	2288	21 41.3	+60	26	4.5		6.4	.8	7.2	5.2 5.1	4.9
21 40 +70.6	1193	21 39.8	+70	38	5.0	—	6.7 / 7.0	1.2	7.9 / 8.2	5.8 5.9 / 6.1 6.2	5.2 / 5.5 ✓
21 19 +80.6	690	21 19.2	+80	37	6.3	.	6.5	2.0	8.5	6.5 6.4	5.0 ✓
20 22 +80.1	650	20 22.6	+80	4	6.8	—	6.4	1.9	8.3	6.3 6.2	4.9 ✓
21 5 +70.8	1164	21 5.5	+70	51	6.0	—	6.9	1.2	8.1	6.1 6.0	5.4 ✓

* Wrong star measured.

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January 13, 1887.

Plate 803.

v	Δ	Type	No. Remarks	No. Lines	K	Focus	Other Lines.
3.0	11.8	I		4	N	2	–
2.2	16.3	I		4	K=.6H	5	Green.
1.9	16.8	I		2	N	1	–
2.8	24.0	III b	262	2	K=H?	2	–

Plate 820.

22.9	11.4	I?		4	K=H N	1	–
22.0	15.9	I		11	K=.3H	5	Green.
21.2	14.3	I		4	N?	1	–
21.1	13.3	I		4	K=H	1	–
20.5	9.0	I		4	K=H	2	–
19.9	19.3	I		5	N	1	–
19.5	10.1	I		3	N	1	–
19.0	17.2	I		3	N	1	–
17.5	15.6	I b	263	6	N	2	–
17.3	6.1	I b		5	K=H	2	–
16.5	20.9	I		6	N	3	–
16.3	13.7	I		4	N	1	–
16.1	8.0	I		4	N?	1	–
15.1	7.2	I		5	N	2	–
14.5	7.8	I		4	K=H	1	–
14.5	15.4	I		4	K=H	1	–
13.6	6.0	I		6	K=.2H	2	–
13.5	7.7	I		4	K=H	1	–
13.5	13.8	I		6	N	3	–
13.5	21.1	I		5	N	1	–
13.1	22.6	I		4	N?	1	–
13.0	14.2	I		4	N	1	–
12.3	11.0	I		4	N?	1	–

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1886phae.proj.820F

Mean 15

	No.	R.A.	Dec.	Mag.					Bpr.				
21 34 + 61.4	2169	21 34.1	+61	25	5.0	3819	4.8	27 +7 +6 +4	6.7	.8	7.5	5.5 5.4	5.2 ✓
21 15 + 61.9	2111	21 15.2	+61	58	3.0	–			5.2	.8	6.0	3.4 3.3	. ✓
20 53 + 81.9	718	20 52.8	+81	59	6.0	3683	5.6	30 +9 +4	6.5	2.1	8.6	6.6 6.5	. ✓
20 42 – 61.3	2050	20 42.4	+61	17	3.7	–			6.4 6.6	.8	7.2 7.4	5.1 5.3 5.2 5.4	4.9 5.1 ✓
								365 38 – 55 6 27 27 16			306 15	24 – 18 15	Mean 15
21 34 + 61.4	2169	21 34.1	+61	25	5.0	–			6.5	.8	7.3	5.3 5.2	. ✓
21 15 + 61.9	2111	21 15.2	+61	58	3.0	– 3757.			4.5	.8	5.3	3.3 3.2	3.0 .
21 22 + √2.3	2939	21 22.0	+52	16	5.8				7.2	.5	7.7	5.7 5.6	5.7 ✓ .
21 26 + √2.3	2957	21 25.5	+52	19	6.3	–			7.4	.5	7.9	5.9 5.8	5.9 ✓ .
21 √7 + 72.5	1009	21 57.2	+72	28	5.0	–			6.6	1.3	7.9	5.9 5.8	5.1 ✓ .
21 6 + √2.9	2880	21 5.8	+52	58	5.5	3730	5.7	18 −2 −3	6.9	.6	7.5	5.5 5.4	5.4 ✓ .
21 √0 + 73.0	1003	21 51.1	+72	2 60	6.5	3876	6.6	22 +2	7.5	1.3	8.8	6.8 6.7	6.0 ✓ .
21 12 + √3.4	2588	21 12.5	+53	23	5.8	3748	6.0	19 −1 −2	7.3	.6	7.9	5.9 5.8	5.8 ✓ .
21 16 + 64.2	1527	21 16.5	+64	17	5.5	3764	5.3	19 −1 −2	6.3	.9	7.2	5.2 5.1	4.8 ✓ .
21 59 + 63.9	1802	21 59.6	+63	55	4.5	–			6.0	.9	6.9	4.9 4.8	4.5 ✓ .
20 33 + 74.5	872	20 33.4	+74	26	5.5	3614	5.1	23 +3 +2	6.0	1.4	7.4	5.4 5.3	4.5 ✓ .
21 24 + 54.7	2544	21 24.3	+54	47	6.1	.			7.0	.6	7.6	5.6 5.5	5.5 ✓ .
21 51 + 64.6	1607	21 51.7	+64	39	6.5				7.0	.9	7.9	5.9 5.8	5.5 ✓ .
21 44 + 55.1	2639	21 47.1	+55	7	6.0	3870	5.5	15 −5 −6	6.4	.6	7.0	5.0 4.9	4.9 ✓ .
21 53 + 65.5	1691	21 53.5	+65	28	6.5	–			7.1	1.0	8.1	6.1 6.0	5.6 ✓ .
21 13 + 75.7	778	21 13.4	+75	42	6.8	–			7.3	1.5	8.8	6.8 6.7	5.8 ✓ .
22 29 + 75.5	836	22 29.7	+75	27	5.7	–			6.5	1.5	8.0	6.0 5.9	. 5.0 ✓
22 17 + 75.7	820	22 16.6	+75	46	6.8	–			7.1	1.5	8.6	6.6 6.5	. 5.6 ✓
21 25 + 66.2	1405	21 25.0	+66	10	5.5	3796	5.4	19 −1 −2	6.3	1.0	7.3	5.3 5.2	. 4.8 ✓
20 58 + 56.1	2524	20 58.2	+56	5	5.8	3711	5.9	13 −7 −8	6.6	.6	7.2	5.2 5.1	. 5.1 ✓
20 41 + 66.2	1318	20 41.4	+66	8	5.5				6.5	1.0	7.5	5.5 5.4	. 5.0 ✓
21 24 + 76.5	836	21 23.7	+76	28	6.5	.			6.7	1.6	8.3	6.3 6.2	. 5.2 ✓
21 34 + 56.8	2617	21 34.5	+56	50	6.2	✓			6.6	.7	7.3	5.3 5.2	5.1 ✓

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January 13, 1887.

Plate 720

V	H	Type	Remarks	No. Lines	K	Focus	Other Lines
11.0	15.9	I		5	N	3	–
10.8	12.3	I		4	K=H	1	–
10.6	11.7	I		3	N?	1	–
10.0	7.9	I		4	K=H	1	–
10.5	21.8	I		8	N?	4	–
9.0	7.9	I		5	K=.2H?	1	–
8.9	7.6	I		6	K=.2H?	2	–
7.2	18.0	I		4	N	1	–
7.0	10.4	I		3	N	1	–
6.4	6.4	I		3	N	1	–
6.5	13.1	I		4	N	1	–
6.5	13.6	I		11	N?	5	Green.
6.0	16.8	III		2	K=H	1	–
5.0	9.7	I		6	N	2	–
4.7	11.4	III	b 264	2	K=H	1	–
4.9	14.7	I	b 265	6	K=.2H	1	Green
3.1	11.5	I		6	K=H?	2	–
2.0	11.4	I?		1	N	2	–
2.3	16.1	I	b or 266	3	N	5	Bright Green.
2.0	16.5	I		1	N	1	–
2.8	24.0	III	b 267	3	K=2.0H?	2	Yellow

Peculiar spectrum

Plate 753

23.0	11.7	I?		7	K=H	2	–
23.0	21.4	I		5	K=H	2	–
22.5	18.5	II?		2	K=H	1	–
22.5	9.5	I		3	N	1	–
21.1	15.2	II?	a 268	2	K=H	2	Green

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1886phae.proj.8295

Mean 15

	No.	R.A.	Dec.	Mag.											
21 8 +77.5	800	21 8.4	+77 32	6.1	3733	5.8	21	+1 6.2	1.7	7.9	5.9	5.8	4.7	✓	
21 32 +67.6	1329	21 32.8	+67 34	6.8	–			7.0	1.0	8.0	6.0	5.9	5.5	✓	
21 47 +77.5	834	21 46.8	+77 34	7.0				7.3	1.7	9.0	7.0	6.9	5.8	✓	
22 22 +77.5	860	22 22.4	+77 30	6.8	–			7.1	1.7	8.8	6.8	6.7	5.6	✓	
20 14 +77.3	764	20 13.8	+77 16	4.8				5.2	1.6	6.8	4.8	4.7	3.7	✓	
22 25 +78.0	796	22 25.6	+78 1	6.0	–			6.6	1.7	8.3	6.3	6.2	5.1	✓	
22 29 +78.1	801	22 28.6	+78 4	5.7	–			6.3	1.7	8.0	6.0	5.9	4.8	✓	
21 8 +59.4	2334	21 8.1	+59 22	6.0	3736	5.5	20	+0 6.8	.7	7.5	5.5	5.4	5.3	✓	
21 44 +69.5	1198	21 44.4	+69 29	6.7	.			7.0	1.1	8.1	6.1	6.0	5.5	✓	
22 7 +69.4	1228	22 7.4	+69 25	5.9	3931	5.5	25	+5 6.9	1.1	8.0	6.0	5.9	5.4	✓	
21 27 +59.8	2395	21 27.0	+59 49	5.7	3801	5.4	20	+0 6.7	.7	7.4	5.4	5.3	5.2	✓	
21 26 +69.9	1173	21 26.8	+69 56	3.0				4.7	1.2	5.9	3.9	3.8	3.2	✓	
20 53 +80.0	672	20 54.1	+80 0	5.3	–			6.8 / 7.1	1.9	8.7 / 9.0	6.6 / 6.9	6.7 / 7.0	5.3 / 5.6	✓	
21 41 +60.5	2288	21 41.3	+60 26	4.5	3855	4.5	26	+6 6.3	.8	7.1	5.1	5.0	4.8	✓	
21 40 +70.6	1193	21 39.8	+70 38	5.0	–			6.7 / 7.0	1.2	7.9 / 8.2	5.8 / 6.1	5.7 / 6.2	5.2 / 5.5	✓	
21 19 +80.7	690	21 19.2	+80 37	6.3	–			6.7	2.0	8.7	6.7	6.6	5.2	✓	
21 34 +61.5	2169	21 34.1	+61 25	5.0	–			6.5	.8	7.3	5.3	5.2	5.0	✓	
22 3 +82.2	673	22 3.2	+82 10	7.5				6.5	2.1	8.6	6.6	6.5		✓	
	674	22 3.3	+82 10	8.0											
21 15 +61.9	2111	21 15.2	+61 58	3.0	3757	2.6	29	+8 7.7	.8	8.5	3.5	3.4		✓	
20 52 +81.9	718	20 52.8	+81 59	6.0	3683	5.6	30	+9 6.5	2.1	8.6	6.6	6.5		✓	
20 42 +61.3	2050	20 42.4	+61 17	3.7	–			6.0 / 6.3	.8	6.8 / 7.1	4.7 / 5.0	4.8 / 5.1	4.5 / 4.8	✓	

319/15 − 29/15 = 260/13 − 17/13 = 17 − 17 / 13

Mean 12

22 10 +56.3	2741	22 9.7	+56 19	5.1	–			6.1	1.6	7.7	4.8			✓	
21 25 +66.2	1405	21 25.0	+66 10	5.5	–			6.5	1.0	7.5	5.6			✓	
21 24 +76.5	836	21 23.7	+76 28	6.5	–			6.6	1.6	8.2	6.3			✓	
22 18 +56.5	2765	22 17.7	+56 33	6.7	.			6.9	.6	7.5	5.6			✓	
21 57 +57.3	2441	21 57.2	+57 18	6.4	–			6.5	.7	7.2	5.3		5.3	✓	

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January 13. 1887.

Plate 753.

V	H	Type	No. Lines	Remarks.	K	Focus	Other Lines.
21.0	12.9	III	269 (3)	b	K=H	2	F
20.5	11.8	I	I	4	N	1	—
20.5	15.7	I	4		N	1	—
20.1	8.0	II[a]	270	2	K=H	(3)	seen F
20.5	19.6	I	5		N	1	—
20.1	19.9	I	5		N	2	—
19.5	11.3	I	5		N?	3	—
19.5	11.7	I	5		N	2	—
19.1	12.6	I	3		N?	1	—
19.5	18.7	I	3		N?	1	—
19.3	19.2	I	3		N	1	—
18.7	18.8	I	3		N	1	—
18.5	12.7	II	2		K=H	2	—
17.2	9.2	I	3		N	1	—
17.0	13.0	II[a?]	271		4	N	2 —
17.0	17.1	I	5		N	1	—
17.5	21.2	II[a] ? II[a?]	272	2 2	K=H	1 1	seen seen
16.8	21.7	I	4		K=H	1	—
16.6	7.3	I	4		N	1	—
16.5	9.2	I	5		N	1	—
15.9	20.0	I	9		N	5	4 seen
15.5	8.6	I	4		K=H	1	—
15.3	9.2	I	5	d	K=H	1	—
15.4	14.8	I	4		K=H	1	—
III ? 5.8, 6.0.	14.6	14.4	III	b.c 273	3	K=H	1	? Bright seen
14.5	17.6	I	5	d	K=2H	2	—
14.5	18.3	I	5	4	N?	1	—
15.0	19.0	I	6		N	2	—

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1896phae.proj.820F

Mean 12

	No.	R.A.	Dec.	Mag.			Br				
22 6 +57.5	2475	22 5.8	+57 29	4.1	–		6.2 6.6	7	6.9 7.3	5.0 5.4	5.0 5.4 ✓
22 15 +67.7	1426	22 15.1	+67 42	7.3	.		6.7 6.6	1.1	7.7	5.8	5.4 ✓
21 47 +77.6	834	21 46.8	+77 34	7.0	.		6.7	1.7	8.4	6.5	5.5 ✓
22 24 +57.7	2548	22 23.8	+57 41	Var	–		5.5	.7	6.2	4.3	4.3 ✓
21 33 +67.6	1329	21 32.8	+67 34	6.8	.		6.7	1.0	7.7	5.8	5.5 ✓
21 8 +77.5	800	21 8.4	+77 32	6.1	3733	5.8 21+2	6.2	1.7	7.9	6.0	5.0 ✓
22 28 +78.1	801	22 28.6	+78 4	5.7			6.0	1.7	7.7	5.8	4.8 ✓
22 25 +78.0	796	22 25.6	+78 1	6.0	3986	5.8 21+2	6.2	1.7	7.9	6.0	5.0 ✓
22 7 +58.3	2403	22 7.0	+58 21	6.3			7.1	.7	7.8	5.9	5.9 ✓
21 18 +77.9	811	21 18.4	+77 59	7.0			7.0	1.7	8.7	6.8	5.8 ✓
21 12 +78.1	742	21 12.2	+78 4	7.5	.		7.1	1.7	8.8	6.9	5.9 ✓
21 15 +78.3	744	21 14.8	+78 23	6.8	.		7.0	1.7	8.7	6.8	5.8 ✓
22 6 +58.7	2402	22 6.6	+58 42	5.6	–		6.2	.7	6.9	5.0	5.0 ✓
22 29 +69.2	1262	22 28.9	+69 9	6.0	3995	6.0 17.2	6.6	1.1	7.7	5.8	5.4 ✓
22 7 +69.4	1228	22 7.4	+69 25	5.9			6.3	1.1	7.4	5.5	5.1 ✓
21 44 +69.5	1198	21 44.4	+69 29	6.7	.		6.4	1.1	7.5	5.6	5.2 ✓
21 22 +69.9	1169	21 23.5	+69 51	7.4	–		7.0 6.9	1.2	8.1	6.2	5.7 ✓
20 42 +78.9	716	20 41.6	+78 54	6.9	–		6.5	1.8	8.3	6.4	5.3 ✓
23 14 +79.1	777	23 13.9	+79 6	7.8	.		6.9	1.8	8.7	6.8	5.7 ✓
22 29 +69.6	1263	22 29.2	+69 37	6.2	.		6.5	1.1	7.6	5.7	5.3 ✓
21 26 +69.9	1173	21 26.8	+69 56	3.0	3798	3.4 28+9	* ~~5.0~~	1.2	6.2	4.3	3.8 ✓
23 4 +79.7	769	23 4.6	+79 47	7.5	–		6.5	1.9	8.4	6.5	5.3 ✓
22 59 +79.9+	761	22 58.8	~~+80~~ +79 60	7.2	–		6.5	1.9	8.4	6.5	5.3 ✓
21 18 +80.2	688	21 18.2	+80 12	6.5	–		6.7	1.9	8.6	6.7	5.5 ✓
21 40 +70.6	1193	21 39.8	+70 38	5.0	–		6.3 6.6	1.2	7.5 7.8	5.6 5.9	5.1 5.4 ✓
21 19 +80.6	690	21 19.2	+80 37	6.3	–		6.0	2.0	8.0	6.1	4.8 ✓
21 10 +80.5	679	21 10.0	+80 36	7.0			6.8	2.0	8.8	6.9	5.6 ✓
21 41 +60.5	2288	21 41.3	+60 26	4.5	3855	4.5 20+1	5.7	8	6.5	4.6	4.5 ✓

* Second measure of this star gives 4.2 First measure rejected.

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1886phae.proj..829F

January 13. 1884.

Plate 453.

	τ	H	Type	No. Lines Remarks.	K	Focus	Other Lines.	
	15.0	21.9	I	3	N	1	—	
	14.0	22.5	I	5	N	1	—	
	13.7	20.9	III a	274 3	K=H	1	F—	
	13.3	23.2	I	4	K=H	1	—	
	13.0	20.7	III b	275 2	K=H	1	—	
	13.0	20.6	I	5	N	2	—	
	12.5	18.9	II?	2	K=H	1	—	
III 6.3, 6.5.	12.6	17.3	III b	276 3	K=H	1	F seen	
	12.4	15.8	I	4	K=H	1	—	
	13.4	15.8	I	4	N	1	—	
	13.0	14.2	I	6	N	2	F	
	12.6	13.6	I	4	K=H	1	—	
III? 5.7, 6.0.	12.8	13.2	III b	277 3	K=H	2	F seen	
	13.1	13.1	I	6	N	1	—	
	13.5	12.4	II	2	K=H	1	—	
	13.5	7.4	I	5	N?	1	—	
	12.5	10.1	I	7	N	1	—	
	11.0	11.1	III b. c	278 3	K=H	2	F?	Bright seen.
	10.7	11.4	I	4	K=H	1	—	
	11.1	12.2	I	5	K=.5H?	1	—	
	10.9	12.8	III a	279 2	K=H	1	seen	
	11.0	14.7	II a	280 2	K=H	2	F seen	
	11.5	18.9	I	7	N	3	F—	
	11.0	20.3	I	3	N	1	—	
	10.0	6.4	I	6	K=H	2	—	
	9.5	7.2	I	6	K=H	2	—	
	10.0	9.5	II a	281 2	K=H	2	—	
	10.0	15.6	I	5	N	1	—	

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1886phae.proj..829F

Mean 12

	No.	R.A.	Dec.	Mag.			Br.					
20 32 +79.7	675	20 32.6	+79 43	7.3	3604	7.4 14-5	6.9	1.9	8.8	6.9	• 5.7	✓
20 22 +80.1	650	20 22.6	+80 4	6.8	.		6.5	1.9	8.4	6.5	• 5.3	✓
20 38 +80.6	660	20 37.7	+80 35	6.1	—		6.4 / 6.7	2.0	8.4 / 8.7	6.5 / 6.8	• 5.2 / 5.5	✓
21 5 +70.8	1164	21 5.5	+70 51	6.0	—		6.3	1.2	7.5	5.6	• 5.1	✓
20 38 +80.9	659	20 37.2	+80 58	5.8	—		6.3 / 6.6	2.0	8.3 / 8.6	6.4 / 6.7	5.1 / 5.4	✓
21 34 +61.4	2169	21 34.1	+61 25	5.0	3819	4.8 19±0	5.9	.8	6.7	4.8	4.7	✓
21 41 +61.8	2193	21 41.0	+61 47	6.2	—		6.4	.8	7.2	5.3	5.2	✓
21 41 +71.7	1082	21 41.3	+71 38	5.5	—		6.3 / 6.5	1.3	7.6 / 7.8	5.7 / 5.9	5.1 / 5.3	✓
21 50 +71.8	1096	21 50.2	+71 48	7.0	—		6.9	1.3	8.2	6.3	5.7	✓
21 51 +71.3	1097	21 50.9	+71 18	6.7	.		6.8	1.2	8.0	6.1	5.6	✓
22 1 +61.5	2246	22 0.7	+61 35	6.0	3909	5.2 16-3	6.0	.8	6.8	4.9	• 4.8	✓
22 4 +71.7	1109	22 4.5	+71 40	7.2	—		6.8	1.3	8.1	6.2	• 5.6	✓
22 7 +71.6	1111	22 7.0	+71 38	5.2	—		6.1 / 6.4	1.3	7.4 / 7.7	5.5 / 5.8	• 4.9 / 5.2	✓
22 7 +71.4	1112	22 7.4	+71 24	6.7	.		6.4	1.2	7.6	5.7	• 5.2	✓
22 23 +81.2	775	22 24.1	+81 12	7.0	—		6.8	2.0	8.8	6.9	• 5.6	✓
22 29 +61.0	2314	22 28.7	+61 2	6.5			6.9	.8	7.7	5.8	• 5.7	✓
22 18 +61.7	2291	22 18.1	+61 41	6.5	.		6.4	.8	7.2	5.3	• 5.2	✓
22 49 +82.4	703	22 47.9	+82 23	5.0	—		6.1 / 6.4	2.2	8.3 / 8.6	6.4 / 6.7	• 4.9 / 5.2	✓
22 44 +82.5	700	22 44.1	+82 30	8.0	—		6.8	2.2	9.0	7.1	• 5.6	✓
22 9 +62.4	2053	22 9.3	+62 26	7.0	—		6.5	.8	7.3	5.4	• 5.3	✓
22 10 +72.6	1022	22 10.2	+72 36	6.5	—		6.5 / 6.8	1.3	7.8 / 8.1	5.9 / 6.2	• 5.3 / 5.6	✓
21 57 +72.5	1009	21 57.2	+72 28	5.0	—		6.0	1.3	7.3	5.4	• 4.8	✓
20 53 +81.9	718	20 52.8	+81 59	6.0	3683	5.6 23+4	5.8	2.1	7.9	6.0	• 4.6	✓
20 32 +81.8	706	20 32.0	+81 53	7.4	.		6.8	2.1	8.9	7.0	• 5.6	✓
22 33 +62.8	2102	22 33.5	+62 50	5.3	—		6.4	.9	7.3	5.4	• 5.2	✓
23 50 +82.4	743	23 49.7	+82 23	6.0	—		6.5	2.2	8.7	6.8	• 5.3	✓
22 32 +72.9	1049	22 32.2	+72 54	5.5	—		6.1	1.3	7.4	5.5	• 4.9	✓
21 51 +73.0	1003	21 51.1	+73 0 (72 60)	6.5	3876	6.6 12-7	6.5	1.3	7.8	5.9	• 5.3	✓

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Plate 453.

	T	H	Type	Remarks	Lines	K	Focus	other Lines.
	8.5	10.2	I		5	N	1	—
III ? 5.7, 6.1.	8.6	11.2	III	b? 282	3 2	K=H	2	—
	8.5	13.0	I		5	N	1	—
	8.4	14.4	I		8	K=.5H	3	—
	6.9	16.1	I	b 283	6	N	2	Keen
	7.9	22.4	I	d	4	N	1	Keen
	6.7	23.8	I ?		5	K=H	2	—
	6.5	19.1	I		4	K=.5H	1	—
	5.5	22.8	I		3	N	1	—
	5.5	13.3	I		8	N?	3	—
	5.0	10.5	I		6	N	2	—
	4.4	11.1	I ?		5	K=H ?	1	—
	4.5	12.2	I		4	N	1	—
	3.4	10.3	I		5	N	1	—
	2.9	8.1	III	b 284	3 2	K=H	2	—
	2.6	11.6	I		7	K=.8H	2	—
	3.3	21.4	I		6	N	2	—
	2.8	18.5	I		4	N	1	—
	3.1	15.2	I		4	K=H	1	—

Plate 454.

	23.0	11.8	I		7	K=.5H	1	—
	23.0	21.5	I		5	K=H	1	—
	21.5	15.3	I		3	N	1	—
III 6.6, 6.9.	21.0	13.0	III	bc 285	2	K=H	1	Keen Bright
	20.4	20.0	I		5	N	1	—
	20.5	8.1	II	a 286	2	K=1.2H	2	Keen
	19.8	11.5	I		7	N	2	Faint.

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Mean 12

	NO.	R.A.	DEC.	MAG.			Vis.					
23 13 + 83.5	647	23	12.7	+83	27	8.0	.		6.8	2.4	9.2	7.3	5.6	✓
22 55 + 83.6	640	22	55.4	+83	34	5.0	–		5.9 / 6.3	2.4	8.3 / 8.7	6.4 / 6.8	4.7 / 5.1	✓
22 22 + 83.7	630	22	22.5	+83	46	7.0	.		6.8	2.4	9.2	7.3	5.6	✓
21 59 + 63.9	1802	21	59.6	+63	55	4.5	–		5.8	.9	6.7	4.8	4.6	✓
21 51 + 64.6	1607	21	51.7	+64	39	6.5	.		6.4	.9	7.3	5.4	5.2	✓
19 34 + 83.2	552	19	33.4	+83	10	6.0	3378	6.3 23+4	6.3	2.3	8.6	6.7	5.1	✓
21 16 + 64.2	1527	21	16.5	+64	17	5.5	–		6.1	.9	7.0	5.1	4.9	✓
20 20 + 84.3	451	20	20.0	+84	14	7.0	–		6.2	2.5	8.7	6.8	5.0	✓
19 11 + 83.7	547	19	10.4	+83	42	6.5	.		6.3	2.4	8.7	6.8	5.1	✓
22 25 + 85.3	383	22	24.2	+85	23	5.0			5.4	2.7	8.1	6.2	4.2	✓
22 29 + 75.5	836	22	29.7	+75	27	5.7	3996	5.7 20+1	6.2	1.5	7.7	5.8	5.0	✓
23 25 + 85.6	399	23	24.2	+85	37	7.5	–		6.2	2.8	9.0	7.1	5.0	✓
22 16 + 75.8	820	22	16.6	+75	46	6.8	.		6.8	1.5	8.3	6.4	5.6	✓
23 52 + 85.9	409	23	52.8	+85	54	8.0	.		6.5	2.9	9.4	7.5	5.3	✓
0 50 + 85.5	19	0	49.7	+85	29	5.0	–		6.0 / 6.3	2.8	8.8 / 9.1	6.9 / 7.2	4.5 / 5.1	✓
23 29 + 86.5	344	23	27.8	+86	30	6.0	–		5.8	3.0	8.8	6.9	4.6	✓
21 25 + 66.2	1405	21	25.0	+66	10	5.5	3796	5.4 19±0	6.3	1.0	7.3	5.4	5.1	✓
21 24 + 76.5	836	21	23.7	+76	28	6.5	.		6.5	1.6	8.1	6.2	5.3	✓
21 28 + 86.4	319	21	27.7	+86	26	7.0	–		6.6	3.0	9.6	7.7	5.4	✓

$\frac{25.3}{13}$ $\frac{23-17}{13}$

Mean 16

22 10 + 56.3	2741	22	9.7	+56	19	5.1	–		~~6.5~~	6	7.1	~~7.5~~	✓	
21 25 + 66.2	1405	21	25.0	+66	10	5.5	–		~~6.8~~	1.0	7.8	~~5.2~~	✓	
21 54 + 57.3	2441	21	57.2	+57	18	6.4	3894	5.5 22-4	7.0	.7	7.7	5.1	5.4	✓
22 6 + 57.4	2475	22	5.8	+57	29	4.1	–		6.7 / 7.0	.7	7.4 / 7.7	4.8 / 5.1	5.1 / 5.4	✓
21 8 + 77.5	800	21	8.4	+77	32	6.1	3733	5.8 27+1	6.8	1.7	8.5	5.9	5.2	✓
22 24 + 57.6	2548	22	23.8	+57	41	Var	–		6.6	.7	7.3	4.7	5.0	✓
22 29 + 78.1	801	22	28.6	+78	4	5.7	3992	5.4 29+3	6.6	1.7	8.3	5.7	5.0	✓

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Plate 774.

r	H	Type	No. Remarkes	No. lines	K	Focus	other lines.
18.6	12.8	I		5	N	1	—
17.1	13.1	I		5	K=H	1	—
17.0	17.2	I		4	N	1	—
16.5	9.3	I		4	N	1	—
16.0	20.1	I		11	N	5	Green ?
15.0	19.1	I		7	K=.8H	2	—
III? 6.6, 6.9.							
14.8	14.8	III	b 287	2	K=H	1	—
14.7	17.7	I		6	K=.5H	2	—
13.4	13.2	I		4	K=.5H	1	—
13.0	13.3	III	b 288	2	K=H	1	—
13.0	14.3	I		5	K=H	2	—
12.8	17.3	III	b 289	2	K=H	1	—
13.1	20.8	III		2	K=H	1	—
13.0	20.7	I		4	N	2	—
12.6	10.1	I		4	N	1	—
11.1	11.2	III	b 290	3	K=H	1	Green
11.1	12.3	I		4	N	1	—
11.4	14.8	II a	291	2	K=H	2	Green
11.5	19.0	I		7	K=.2H	2	—
10.0	6.7	I		6	K=.2H	2	—
9.8	7.3	I		3	N	1	—
10.1	9.6	I		5	K=H	2	—
10.0	15.7	I		4	K=H	1	—
9.1	18.9	I		5	K=.5H	2	—
8.8	11.3	III	bc. 292	2	K=H	1	Bright Green
8.5	14.5	I		6	K=.5H	3	—
7.4	9.5	I?		3	N	1	—
7.0	16.2	I		4	N	1	—

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Mean 16

	No.	R.A.	Dec.	Mag.			Pbr.				
22 6 + 58.6	2402	22 6.6	+58 42	5.6	3929	5.3 22-4	6.8	.7	7.5	4.9	5.2 ✓
22 7 + 69.4	1228	22 7.4	+69 25	5.9	–		6.8	1.1	7.9	5.3	5.2 ✓
21 44 + 69.5	1198	21 44.4	+69 29	6.7	.		7.1	1.1	8.2	5.6	5.5 ✓
22 29 + 69.6	1263	22 29.2	+69 37	6.2	.		7.0	1.1	8.1	5.5	5.4 ✓
21 27 + 69.9	1173	21 26.8	+69 56	3.0	3798	3.4 29+3	5.1	1.2	6.3	3.7	3.5 ✓
21 41 + 60.4	2288	21 41.3	+60 26	4.5	–		6.2	.8	7.0	4.4	4.6 ✓
21 40 + 70.6	1193	21 39.8	+70 38	5.0	–		6.5 / 6.8	1.2	7.7 / 8.0	5.1 / 5.4	4.9 / 5.2 ✓
21 19 + 80.6	690	21 19.2	+80 37	6.3	–		6.4	2.0	8.4	5.8	4.8 ✓
22 7 + 71.4	1112	22 7.4	+71 24	6.7	–		6.8	1.2	8.0	5.4	5.2 ✓
22 7 + 71.6	1111	22 7.0	+71 38	5.2	–		6.8 / 7.1	1.3	8.1 / 8.4	5.5 / 5.8	5.2 / 5.5 ✓
22.1 + 61.5	2246	22 0.7	+61 35	6.0	–		6.4	.8	7.2	4.6	4.8 ✓
21 41 + 71.7	1082	21 41.3	+71 38	5.5	–		6.8 / 7.2	1.3	8.1 / 8.5	5.5 / 5.9	5.2 / 5.6 ✓
20 37 + 80.9	659	20 37.2	+80 56	5.8	–		6.8 / 7.2	2.0	8.8 / 9.2	6.2 / 6.6	5.2 / 5.6 ✓
21 34 + 61.5	2169	21 34.1	+61 25	5.0	3819	4.8 25-1	6.5	.8	7.3	4.7	4.9 ✓
22 18 + 61.7	2291	22 18.1	+61 41	6.5	.		7.0	.8	7.8	5.2	5.4 ✓
22 49 + 82.4	703	22 47.9	+82 23	5.0	–		6.5 / 7.0	2.2	8.7 / 9.2	6.1 / 6.6	4.9 / 5.4 ✓
22 9 + 62.4	2053	22 9.3	+62 26	7.0	.		7.0	.8	7.8	5.2	5.4 ✓
21 57 + 72.5	1009	21 57.2	+72 28	5.0	–		6.6	1.3	7.9	5.3	5.0 ✓
20 53 + 81.9	718	20 52.8	+81 59	6.0	–		6.2	2.1	8.3	5.7	4.6 ✓
22 33 + 62.8	2102	22 33.5	+62 50	5.3	–		6.5	.9	7.4	4.8	4.9 ✓
23 50 + 82.4	743	23 49.7	+82 23	6.0	4230	6.3 28+2	6.9	2.2	9.1	6.5	5.3 ✓
22 32 + 72.9	1049	22 32.2	+72 54	5.5	–		6.6	1.3	7.9	5.3	5.0 ✓
21 51 + 73.0	1003	21 51.1	+72 60	6.5	–		7.2	1.3	8.5	5.9	5.6
20 43 + 83.2	588	20 43.2	+83 7	6.2	–		6.5	2.3	8.8	6.2	4.9 ✓
22 56 + 83.6	640	22 55.4	+83 34	5.0	–		6.5 / 6.9	2.4	8.9 / 9.3	6.3 / 6.7	4.4 ✓ / 5.3
21 59 + 63.9	1802	21 59.6	+63 55	4.5	–		6.3	.9	7.2	4.6	4.7 ✓
22 22 + 64.4	1664	22 22.4	+64 23	5.8			7.4	.9	8.3	5.7	5.8 ✓
21 51 + 64.6	1607	21 51.7	+64 39	6.5	–		6.8	.9	7.7	5.1	5.2 ✓

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Plate 794.

V	H	Type	No. Lines	K	Focus	Other lines	Remarks.
6.5	19.2	I	3	N	1	—	
7.1	22.5	I d	4	N	1	—	
6.8	23.9	I?	3	N	1	—	
6.0	6.0	? III	2	K=H	1	—	
5.5	13.4	I	8	N?	3	—	
5.0	10.6	I	6	K=.2 H ~~K=.5 H~~	1	—	
4.5	11.2	I	4	K=H	1	—	
3.5	21.5	I	5	N	1	—	
3.0	8.2	III b 293	1	N	1	Reen	
2.8	11.7	I	6	~~K=H~~ K=.5H	2	—	

Plate 795.

22.5	21.9	III	2	K=H	1	—	
22.0	19.9	III b 294	2	K=H	2	Reen	
22.1	20.0	I I?	5 5	K=H K=H	1 1	— —	
20.0	9.7	I	4	N	1	—	
20.0	15.7	II a 295	2	K=1.2H	3	seen	
20.1	16.2	I	7	K=.2 H	3	—	
20.4	21.1	II a 296	3 2	K=H	3	—	
18.7	10.4	I	6	N?	3	Fl	
18.6	14.1	I	6	N	1	—	
19.0	21.8	I	4	N	1	—	
17.5	23.6	I d?	5	K=H?	3	Reen	
17.0	18.5	II?	3	K=H	2	Fl	
16.1	7.5	I	5	K=H	2	—	
16.5	8.8	I	4	N?	1	—	
16.6	10.3	I	5	K=.2H	2	—	
16.6	11.5	III b c 297	2	K=H	4	seen	

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Mean 16

	No.	R.A.	Dec.	Mag.			Bre				
20 20 +84.3	451	20	20.0	+84	14	7.0	.			7.0	2.5 9.5 6.9	5.4 ✓
19 34 +83.2	552	19	33.4	+83	10	6.0	3378	6.3	29+3	6.9	2.3 9.2 6.6	5.3 ✓
21 16 +64.2	1527	21	16.5	+64	17	5.5				6.6	.9 7.5 4.9	5.0 ✓
23 3 +74.6	1006	23	3.3	+74	36	4.6	–			6.6 / 6.9	1.4 / 8.0 8.3 / 5.4 5.7	5.0 ✓ / 5.3
22 24 +85.4	383	22	24.2	+85	23	5.0				5.4	2.7 8.1 5.5	3.8 ✓
22 29 +75.5	836	22	29.7	+75	27	5.7	–			6.7	1.5 8.2 5.6	5.1 ✓
23 24 +85.6	399	23	24.2	+85	37	7.5	–			7.0	2.8 9.8 7.2	5.4 ✓
21 25 +66.2	1405	21	25.0	+66	10	5.5	3796	5.4	22-4	6.6	1.0 7.6 5.0	5.0 ✓
0 50 +85.5	19	0	49.7	+85	29	5.0	–			6.5 / 6.9	2.8 / 9.3 9.7 / 6.7 7.1	4.9 ✓ / 5.3
23 29 +86.5	344	23	29.8	+86	30	6.0	–			6.5	3.0 9.5 6.9	4.9 ✓

$\frac{233}{9}$ $\frac{12-13}{9}$

Mean 9

22 18 +51.5	3358	22	17.9	+51	30	4.7	–			~~6.6~~ 6.9	.5 7.1 7.4	~~5.8~~ 6.1
22 7 +71.6	1111	22	7.0	+71	38	5.2	–			5.9 / 6.3	1.3 7.2 7.6	5.9 / 6.3 4.0 ✓ / 5.4
22 24 +51.6	3396	22	24.1	+51	40	6.7	–			6.7	.5 7.2 5.9	5.8 ✓
23 1 +62.9	2171	23	1.9	+62	51	6.2	.			6.6	.9 7.5 6.2	5.7 ✓
22 32 +72.9	1049	22	32.2	+72	54	5.5	–			5.7	1.3 7.0 5.7	4.8 ✓
22 33 +62.8	2102	22	33.5	+62	50	5.3	–			5.9	.9 6.8 5.5	5.0 ✓
21 57 +72.5	1009	21	57.2	+72	28	5.0	–			5.9	1.3 7.2 5.9	5.0 ✓
23 9 +73.4	1023	23	9.5	+73	27	6.2				6.0	1.4 7.4 6.1	5.1 ✓
22 42 +53.6	2993	22	42.8	+53	39	6.0	4032	6.0	11 -2/-4	6.5	.6 7.1 5.8 / 5.6	5.6 ✓
21 51 +73.0	1003	21	51.1	+72 / +73	60 / 0	6.5	3876	6.6	15 +2 / +0	6.8	1.3 8.1 6.8 / 6.6	5.9 ✓
21 59 +63.9	1802	21	59.6	+63	55	4.5	–			5.5	.9 6.4 5.1	4.6 ✓
22 22 +64.3	1664	22	22.4	+64	23	5.8	–			6.0	.9 6.9 5.6	5.1 ✓
23 33 +74.5	1032	23	33.1	+74	28	6.5	–			6.2	1.5 7.7 6.4	5.3 ✓
23 23 +74.4	1022	23	23.3	+74	26	7.0	–			6.5	1.4 7.9 6.6	5.6 ✓
23 12 +74.5	1016	23	12.3	+74	31	6.6	–			6.3	1.4 7.7 6.4	5.4 ✓
23 3 +74.6	1006	23	3.3	+74	36	4.6	–			5.5 / 5.8	1.4 6.9 / 7.2 5.6 / 5.9	4.6 ✓ / 4.9

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Plate 795.

V	H	Type	No. Lines Remarks.	K	Focus	other Lines.
16.1	11.7	I	3	N	1	—
15.7	13.8	~~III~~ II?	2	K=H	1	—
15.1	13.8	III	b.c. 298 2	K=1.2H	4	Bright coen.
15.0	15.8	I	7	N	3	Fcoen.?
15.1	17.7	I	3	N	1	—
14.4	13.8	I	4	K=H	1	—
14.1	17.4	I	5	N	2	—
14.4	20.1	I	4	N	1	—
13.5	10.9	~~III~~	2	K=H	1	—
13.0	11.0	III b 299	2	K=H	1	—
13.0	9.8	I	5	N	1	—
12.1	14.6	I	3	N	1	—
12.6	21.0	I?	3	N	1	—
12.8	23.3	I	7	K=.8H?	4	—
13.0	24.2	I	3	N	1	—
11.7	8.4	III	b.c. 300 2	K=2.0H	5	Bright coen.
11.4	7.1	I	2	N	1	—
11.0	8.3	III	3	K=H	1	F
11.4	9.3	I	5	K=H?	1	—
11.3	9.5	I	4	N	1	—
11.0	11.0	I	3	N	1	—
11.0	16.4	I	6	K=.2H?	2	F
10.5	14.4	I	5	N	2	—
10.5	19.1	II.a	301 b 2	K=H	5	Fcoen.
10.1	20.2	I	4	N	1	—
11.5	23.2	I	4	N	1	—
10.4	24.0	III	b.c. 302 2	K=H	3	—
9.9	15.7	I	8	K=.2H	4	F

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Mem 9.

	No.	R.A.	Dec.	Mag.							
23.2 +74.8	1002	23 1.8	+74 48	7.3	.			6.8	1.5 8.3 7.0		5.9 ✓
22 43+55.1	2820	22 43.8	+55 8	5.9	–			6.8 6.0 7.3	.6 7.6 6.3 7.9 6.6		6.1 ✓ 6.4
22 44+65.5	1814	22 44.3	+65 26	38	–			5.2 5.6	1.0 6.2 4.9 6.6 5.3		4.3 ✓ 4.7
22 29+75.5	836	22 29.7	+75 27	5.7	3996	5.7	5 -8 +10	5.7	.5 6.2 4.9 4.7		4.8 ✓
22 30+55.3	2779	22 30.2	+55 19	6.8	.			6.7	.6 7.3 6.0		5.8 ✓
22 44+65.8	1813	22 44.5	+65 46	7.0	–			6.9	1.0 7.9 6.6		6.0 ✓
22 16+75.7	820	22 16.6	+75 46	6.8	.			6.5	1.5 8.0 6.7		5.6 ✓
22 21+55.6	2750	22 21.5	+55 42	6.5	.			6.9	.6 7.5 6.2		6.0 ✓
22 54+56.2	2923	22 54.0	+56 10	6.0	–			6.6 6.9	.6 7.2 5.9 7.5 6.2		5.7 ✓ 6.0
22 57+66.5	1575	22 58.1	+66 27	5.5	–			6.5 6.9	1.0 7.5 6.2 7.9 6.6		5.6 ✓ 6.0
23 4+66.5	1587	23 4.2	+66 28	6.7	.			6.8	1.0 7.8 6.5		5.9 ✓
22 39+76.8	870	22 39.0	+76 51	7.5	.			6.9	1.6 8.5 7.2		6.0 ✓
22 18+56.5	2765	22 17.7	+56 33	6.7				6.5	.6 7.1 5.8		5.6 ✓
22 10+56.3	2741	22 9.7	+56 19	5.1	–			5.5	.6 6.1 4.8 5.9		4.6 ✓
22 6+56.1	2727	22 6.6	+56 7	6.0	3926	5.4	18 +5 -6	6.6	.6 7.2 5.4		5.7 ✓
23 33+76.8	928	23 33.4	+76 50	3.5	–			4.7 5.2	1.6 6.3 5.0 6.8 5.5		3.8 ✓ 4.3
23 15+76.8	934	23 15.0	+76 48	6.9	.			6.7	1.6 8.3 7.0		5.8 ✓
23 12+67.3	1514	23 12.7	+67 19	5.2	–			6.0 6.3	1.0 7.0 5.7 7.3 6.0		5.1 ✓ 5.4
23 26+77.0	909	23 26.2	+77 0	6.8	–			6.6	1.6 8.2 6.9		5.7 ✓
23 25+77.1	908	23 25.2	+77 5	7.0	.			6.7	1.6 8.3 7.0		5.8 ✓
23 12+77.4	896	23 11.9	+77 22	7.3	.			6.9	1.7 8.6 7.3		6.0 ✓
22 22+77.5	860	22 22.4	+77 30	6.8	–			6.3	1.7 8.0 6.7		5.4 ✓
22 42+57.7	2612	22 41.9	+57 43	6.3	.			6.1	.7 6.8 5.5		5.2 ✓
22 23+57.7	2548	22 23.8	+57 41	Var	–			4.7	.7 5.4 4.1		3.8 ✓
21 47+77.5	834	21 46.8	+77 34	7.0	.			6.3	1.7 8.0 6.7		5.4 ✓
21 24+76.4	836	21 23.7	+76 28	6.5	.			6.4	1.6 8.0 6.7		5.5 ✓
22 6+57.5	2475	22 5.8	+57 29	4.1	–			5.8 6.2	1.7 6.5 5.2 6.9 5.6		4.9 ✓ 5.3
22 29+78.1	801	22 28.6	+78 4	5.7	✓			5.2	1.7 6.9 5.6		4.3 ✓

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Plate 795.

v	H	Type	No. Lines	Remarks	K	Found	other Lines
9.9	16.0	I	6		K=.2H	3	—
8.7	8.6	I	4		K=H	1	—
8.6	9.4	I?	6		N	3	Faint.
8.0	9.3	I	3		N	1	—
7.6	11.2	I	5		K=H	1	—
8.0	11.3	I	5		N	1	—
7.6	16.6	I	5		K=H	2	Faint
8.8	24.2	I	4		N	2	—
6.8	20.3	II a	308		K=H	2	Faint
6.8	16.5	I	4		N	2	—
6.9	6.7	I	5		K=.5H	1	—
6.4	7.4	I I	4		N ?	2 2	— —
5.6	9.4	I d?	5		K=H	2	Faint
6.0	12.8	I	5		K=H	1	—
3.6	20.9	I b	304		K=H	2	—
2.5	19.7	III b	305	2	K=H	1	seen
2.5	19.9	I	5		N	1	—

Plate 787.

22.5	19.7	III b ?	306	2	K=H	1	seen
20.1	15.6	II a	307	2	K=H	2	—
20.2	16.1	I	6	2	K=.2H	2	—
20.4	20.9	II a	308	2	K=H	2	seen
18.8	10.2	I	4		N	2	—
18.6	13.9	I ?	3		N	1	—
16.0	7.4	I ?	3		N	1	—
16.5	8.6	I	4		K=H	1	—
16.5	10.2	I	5		N	1	—

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Mean 9

	No.	R.A.	Dec.	Mag.				Bc.				
22 25 +78.0	796	22	25.6	+78	1	6.0	–	5.8	1.7	7.5	6.2	4.9 ✓
23 3 +58.5	2552	23	3.6	+58	34	6.1	–	6.5	.7	7.2	5.9	5.6 ✓
23 0 +58.6	2545	23	0.5	+58	38	5.3		5.7	.7	6.4	5.1	4.8 ✓
23 1 +58.9	2546	23	1.1	+58	58	6.5	.	6.8	.7	7.5	6.2	5.9 ✓
23 14 +79.1	777	23	13.9	+79	6	7.8	–	6.5	1.8	8.3	7.0	5.6 ✓
22 53 +59.0	2615	22	53.2	+59	2	6.5	.	6.6	.7	7.3	6.0	5.7 ✓
22 29 +69.2	1262	22	28.9	+69	9	6.0	–	6.4	1.1	7.5	6.2	5.5 ✓
21 8 +77.5	800	21	8.4	+77	32	6.1	3733 5.8 ~~29~~ 14+3 ~~7.14~~	~~5.7~~ ~~6.0~~	1.7	7.4 ~~8.7~~	6.1 ~~7.2~~	4.8 ✓
22 7 +69.5	1228	22	7.4	+69	25	5.9	–	6.2	1.1	7.3	6.0	5.3 ✓
22 29 +69.6	1263	22	29.2	+69	37	6.2	.	6.2	1.1	7.3	6.0	5.3 ✓
0 1 +78.9	1	0	1.5	+78	55	6.5	–	5.9	1.8	7.7	6.4	5.0 ✓
23 21 +69.6	1332	23	21.1	+69	34	6.2	4150 5.7 14+1	6.0 ~~5.9~~ ✓	1.1	7.1	~~5.6~~ 5.8	5.1 ✓
23 10 +70.1	1311	23	10.0	+70	6	6.0	–	6.0	1.2	7.2	5.9	5.1 ✓
22 59 +79.9 +	761	22	58.8	~~+80~~ 79	60 ~~8~~	7.2	–	6.1	1.9	8.0	6.7	5.2 ✓
21 19 +80.6	690	21	19.2	+80	37	6.3	.	~~6.9~~	2.0	7.9	6.6	5.0 ✓
22 7 +71.6	1111	22	7.0	+71	38	5.2	–	~~5.8~~ 6.2	1.3	7.1 7.5	5.8 6.2	~~7.1~~ ✓
~~785~~ 21 23.6 ~~+81 9 7.8~~												
21 23 +81.4	736	21	24.7	+81	24	7.9	.	~~6.7~~	2.1	8.8	~~7.5~~	✓

~~79~~ 79/6 ~~11~~ 11-10/6

Mean 16.

22 6 +71.6	1111	22	7.0	+71	38	5.2	–	~~6.5~~ 6.7	1.3	7.8 8.2	5.7 6.2	✓
22 32 +72.9	1049	22	32.2	+72	54	5.5	–	6.5	1.3	7.8	5.7	4.9 ✓
22 33 +62.8	2102	22	33.5	+62	50	5.3	–	6.5	.9	7.4	5.3	4.9 ✓
21 57 +72.5	1009	21	57.2	+72	28	5.0	–	6.6	1.3	7.9	5.8	5.0 ✓
23 9 +73.4	1023	23	9.5	+73	27	6.2	4112 5.6 25+4	6.7	1.4	8.1	6.0	5.1 ✓
22 43 +53.6	2993	22	42.8	+53	39	6.0	4032 6.0 17-4	7.1	.6	7.7	5.6	5.5 ✓
23 33 +74.5	1032	23	33.1	+74	28	6.5		6.7	1.4	8.1	6.0	5.1 ✓
23 23 +74.4	1022	23	23.3	+74	26	7.0	–	7.1	1.4	8.5	6.4	5.5 ✓
23 12 +74.5	1016	23	12.3	+74	31	6.6	. ✓	6.7	1.4	8.1	6.0	5.1 ✓

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Plate 787.

V	H	Type	No. Remarks	No. Lines	K	Focus	other Lines.
16.6	11.4	III		4 2	K=H	3	—
17.0	18.4	I	8	4	N	1	—
17.5	23.5	I		5	N	2	F
15.2	13.6	III	b.c. 309	3 2	K=H	3	Bright Rem
15.0	15.7	I		6	K=.2H	2	—
14.2	17.3	I		4	N	1	—
13.0	23.1	I		7	K=.2H	3	—
12.5	20.9	I		4	N	1	—
12.8	9.7	I		3	N	1	—
11.7	8.4	III	b.c. 310	4	K=2.0H K=1.2H	4	F. bright. Rem
11.0	8.2	III?		3	K=H	1	F
11.0	16.3	I		4	K=.8H	1	—
11.5	23.3	I		4	N	1	—
10.7	19.0	IIIa	311	2	K=H	3	Rem
10.5	14.2	I		5	N	1	—
10.4	13.8	IIIa	312	2	K=H	1	Rem
9.9	15.7	I		7	K=.2H K=.5H	3	F?
9.9	16.0	I		7	K=.2H	2	—
8.6	8.5	I		4	K=H	1	—
8.6	9.3	I		7	N	3	F?
10.5	23.9	III	b 313	2	K=H	1	Rem
8.9	24.2	I	a?	4	N	1	—
7.7	11.3	I		3	N	1	—
7.7	16.6	I		4	K=H	1	—
6.8	16.5	I		5	N	1	—
6.8	20.3	I		5	K=H	1	—
8.0	23.4	I?		2	N	2	—
6.8	6.7	I		3	N	1	—

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Mean 16

	No.	R.A.	Dec.	Mag.			Br.				
23 3+74.6	1006	23 3.3	+74 36	4.6	–		3.9	7.3	5.2	4.3	✓
							6.2	1.4	7.6 5.5	4.6	
22 22 +64.3	1664	22 22.4	+64 23	5.8	3974	5.6 21 ±0	6.8	.9	7.7 5.6	5.2	✓
21 59 +63.9	1802	21 59.6	+63 55	4.5	3903	4.4 25+4	6.0	.9	6.9 4.8	4.4	✓
22 44+65.5	1814	22 44.5	+63 26	3.8	–		5.7	6.7	4.6	4.1	✓
							6.0	1.0	7.0 4.9	4.4	
22 29+75.5	836	22 29.7	+75 27	5.7	–		6.1	1.5	7.6 5.5	4.5	✓
22 16 +75.7	820	22 16.6	+75 46	6.8	.		6.9	1.5	8.4 6.3	5.3	✓
22 10 +56.3	2741	22 9.7	+56 19	5.1	–		6.8	.6	7.4 5.3	5.2	✓
22 18 +76.5	2765	22 17.7	+76 33	6.7	.		7.0	.6	7.6 5.5	6.4	✓
23 4+66.5	1587	23 4.2	+66 28	6.7	.		7.2	1.0	8.2 6.1	6.6	✓
23 33+76.6	928	23 33.4	+76 50	3.5	–		4.9	6.5	4.4	3.3	✓
							5.3	1.6	6.9 4.8	3.7	✓
23 13+67.3	1514	23 12.7	+67 19	5.2	–		6.7	7.7	5.6	5.1	
							6.9	1.0	7.9 5.8	5.3	✓
22 22+77.5	860	22 22.4	+77 30	6.8	–		6.8	1.7	8.5 6.4	5.2	✓
21 24 +76.5	836	21 23.7	+76 28	6.5	.		6.9	1.6	8.5 6.4	5.3	✓
22 23+57.7	2548	22 23.8	+57 41	Var	–		5.9	.7	6.6 4.5	4.3	✓
22 41+77.8	871	22 41.5	+77 44	7.2	.		7.0	1.7	8.7 6.6	5.4	✓
22 44+67.8	1468	22 44.1	+67 49	6.5	–		7.0	1.1	8.1 6.0	5.4	✓
22 28+78.1	801	22 28.6	+78 4	5.7	–		5.5	1.7	7.2 5.1	3.9	✓
22 25+78.0	796	22 25.6	+78 1	6.0	–		5.8	1.7	7.5 5.4	4.2	✓
23 3+58.6	2552	23 3.5	+58 34	6.1	–		6.8	.7	7.5 5.4	5.2	✓
23 1 +58.6	2545	23 0.5	+58 38	5.3	4086	5.0 18-3	6.1	.7	6.8 4.7	4.5	✓
22 6+57.5	2475	22 5.8	+57 29	4.1	–		6.2	6.9	4.8	4.6	✓
							6.6	.7	7.3 5.2	5.0	
21 8+77.8	800	21 8.4	+77 32	6.1	.		6.4	1.7	8.1 6.0	4.8	✓
23 14+79.1	777	23 13.9	+79 6	7.8			6.8	1.8	8.6 6.5	5.2	✓
22 29+69.2	1262	22 28.9	+69 9	6.0	–		6.6	1.1	7.7 5.6	5.0	✓
22 29+69.5	1263	22 29.2	+69 37	6.2			6.8	1.2	8.0 5.9	5.2	✓
22 7+69.4	1228	22 7.4	+69 25	5.9	–		6.5	1.1	7.6 5.5	4.9	✓
22 6+58.6	2402	22 6.6	+58 42	5.6			6.4	1.7	8.1 6.0	4.8	✓
0 1+78.9	1	0 1.5	+78 55	6.5	.	✓	6.5	1.8	8.3 6.2	4.9	✓

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Plate 787.

V	H	Type	Remark.	No. Lines	K	Focus	Other Lines
6.4	7.4	I	i	~~4~~ 6	K=.5H ~~K~~ ?	1	—
5.5	9.4	I		~~4~~ 5	K=.8H ~~K~~	1	—
3.6	20.9	I		~~3~~ 4	N?	1	—
2.5	19.8	III	b	314	N.	1	—

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Mean 16.

	No.	R.A.	Dec.	Mag.		Br.				
23 21 +69.6	1322	23	21.1	+69	34	6.2	–	6.5	1.1	7.6	3.5	4.9 ✓
23 10 +70.1	1311	23	10.0	+70	6	6.0	–	6.5	1.2	7.7	3.6	4.9 ✓
19 80.6	690	21	19.2	+80	37	6.3						
~~21 28 +79.9~~	~~707~~	21	29.0	+79	54	6.0		6.6	1.9	8.5	6.4	5.0 ✓
22 7 +71.6	1111	22	7.0	+71	38	5.2	✓	~~6.5~~ 6.8	1.3	~~7.8~~ 8.1	~~3.7~~ ~~6.0~~	

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January 15, 1887.

Plate 928

τ	H	Type	No. Lines	No. Remarks.	K	Focus	Other Lines.
22.4	7.9	I ?	3		N	1	—
22.5	8.7	I	4		N	1	—
22.9	22.5	III b 315	4	2 K=2.0 H K=2.5 H		3	seen
22.5	21.3	I ?	6		N ?	1	—
22.0	11.0	I b 316	5	6	N	2	—
21.2	9.3	I	4	6	N	2	—
22.0	22.4	I ?	I ? 3	4	N K=H	1 1	— —
21.5	22.8	I	4	5	N	1	—
21.1	18.3	I	I 5	6 6	K=1.2 H N	1 1	— —
21.2	19.0	III b 317	2		K=H	1	seen
21.0	19.5	III b 318	2		K=H	1	seen
20.5	15.9	I	3	4	K=H	1	—
20.5	7.4	II	3	2	K=H	1	—
20.4	7.7	II a 319	4	2	K=1.5 H K=H	2	seen.
20.5	12.2	II a ? 320	4	2	K=H	1	seen
20.5	13.5	III bc 321	4	3 2	K=1.2 H	5	Bright seen
20.0	10.8	I	8		N	3	F ?
20.0	13.0	I	4	5	K=.5 H	1	—
20.1	14.2	I	4	6	K=.2 H ?	1	—
20.0	14.3	I	5		N	1	—
19.5	15.8	I	3		N	1	—
19.7	16.3	III bc 322	4	2	K=1.2 H K=H	3	—
20.2	19.5	I	4	4	K=H	1	—
19.4	19.5	I	4	3	N	1	—
19.5	21.2	II a 323	3		K=H	2	nf —
18.9	23.1	I	4		N	1	—
19.0	14.2	I b 324	4	10	N	4	F.
18.5	19.0	I	5		N	1	—

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Means

	No.	R.A.	Dec.	Mag.				Br.				
23 54 +65.6	1985	23	54.6	+65	38	6.9			7.0	1.0	8.0	6.6	6.2 ✓
0 10 +75.3	7	0	10.2	+75	28	7.4	.		~~7.0~~	1.5	8.5	~~7.1~~	. ✓
22 45 +65.4	1814	22	44.5	+65	26	3.8	—		~~6.7~~ 6.0	1.0	6.7 7.0	~~5.3~~ 5.6	. ✓
22 29 +75.5	836	22	29.7	+75	27	5.7			~~5.9~~	1.5	7.4	~~6.0~~	. ✓
23 40 +65.9	1943	23	39.4	+65	58	6.3	4199	6.0 15+1	6.5	1.0	7.5	6.1	. 5.7 ✓
0 8 +76.2	5	0	8.1	+76	9	6.5	35	6.2 16+2	6.2	1.6	7.8	6.4	. 5.4 ✓
22 43 +66.2	1546	22	42.9	+66	8	8.0	.		6.9 7.0	1.0	8.0	6.6	. 6.2 ✓
22 16 +75.7	820	22	16.6	+75	46	6.8	.		6.7	1.5	8.2	6.8	. 5.9 ✓
23 4 +66.5	1587	23	4.2	+66	28	6.7	—		6.6 6.6	1.0	7.6	6.2	. 5.8 ✓
22 58 +66.4	1575	22	58.1	+66	27	5.5	—		7.0 7.3	1.0	8.0 8.3	6.6 6.9	6.2 6.5 ✓
23 4 +76.6	2958	23	3.9	+76	40	7.0	—		6.8 7.1	.7	7.5 7.8	6.1 6.4	6.0 6.3 ✓
23 17 +56.7	2999	23	17.6	+56	44	7.0	—		7.0	.7	7.7	6.3	. 6.2 ✓
23 48 +56.6	3115	23	48.3	+56	38	7.5	—		6.8	7	7.5	6.1	. 6.0 ✓
23 47 +56.7	3111	23	47.2	+56	41	5.0	—		6.6	.7	7.3	5.9	. 5.8 ✓
23 45 +76.8	934	23	45.0	+76	48	6.9	—		6.6	1.6	8.2	6.8	. 5.8 ✓
23 33 +76.8	928	23	33.4	+76	50	3.5	—		4.9 5.2	1.6	6.5 6.8	5.1 5.4	4.1 4.4 ✓
23 41 +66.9	1562	23	41.0	+67	0	5.5	4204	5.1 16+2	5.7	1.0	6.7	5.3	. 4.9 ✓
23 29 +67.0	1542	23	30.0	+67	3	7.2	—		7.0	1.0	8.0	6.6	. 6.2 ✓
23 26 +77.0	909	23	26.2	+77	0	6.8	—		6.6	1.6	8.2	6.8	. 5.8 ✓
23 25 +77.1	908	23	25.2	+77	5	7.0	.		6.7	1.6	8.3	6.9	. 5.9 ✓
23 11 +77.4	896	23	11.9	+77	22	7.3	.		7.0	1.6	8.7	7.3	. 6.2 ✓
23 12 +67.3	1514	23	12.7	+67	19	5.2	—		6.0 6.2	1.0	7.0 7.2	5.6 5.8	5.2 5.4 ✓
22 39 +76.8	870	22	39.0	+76	51	7.5	—		6.5	1.6	8.1	6.7	. 5.7 ✓
22 38 +77.3	868	22	38.4	+77	16	8.1	.		7.0	1.6	8.6	7.2	. 6.2 ✓
22 47 +67.2	1475	22	47.6	+67	12	7.3	—		7.0	1.0	8.0	6.6	. 6.2 ✓
22 50 +77.4	2644	22	50.1	+57	26	7.0	.		6.9	.7	7.6	6.2	. 6.1 ✓
23 23 +57.7	2748	23	23.4	+57	46	5.7	4153	4.8 14±0	5.5	.7	6.2	4.8	. 4.7 ✓
22 41 +77.8	871	22	41.5	+77	44	7.2	. ✓		6.7	1.7	8.4	7.0	. 5.9 ✓

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January 15, 1887.

Plate 928.

v	H	Type	No. lines	Remarks	K	Focus	Other lines.
18.8	21.1	I	6		N	2	—
18.4	21.7	~~I~~ IIa	325 4		K=H	2	Rleen
18.4	6.0	I d	6		K=H	1	—
III? 6.5, 6.7	18.5	9.1	III b.c	326 4		N	2	reen
	17.2	9.2	~~I~~ IIa	327 4		K=H	1	F-keen
	17.5	7.9	I	6		N	1	—
	17.5	15.8	I	5		N	1	—
	17.8	20.2	I	9	K=.2H		3	F
	17.6	20.5	I	8	K=.2H	N	2	—
	17.2	19.3	I	9	K=.5H	~~K=.8H~~	2	—
	17.0	20.2	I l	328 9		N	4	F
	16.5	20.0	I	7		N	2	—
	16.5	21.1	I	3		N	1	—
	16.0	21.1	I	5		N	1	—
	16.0	21.9	I	6		N	1	—
	16.5	23.6	I	3		N	1	—
	15.1	24.0	I d	7		K=H	2	—
~~I~~	16.2	6.4	I I?	3 3		N N	1 1	— —
	16.4	8.8	I	4		N	1	—
	16.1	10.9	I	8	K=.5 H	~~K=.8 H~~	3	F?
	16.3	11.7	I b	329 5		N	1	—
	16.1	12.0	I	4	K=H		1	—
	16.5	14.7	I	5		N?	1	—
	16.2	15.5	I	8	K=.2H		2	F
	15.7	16.0	III b	330 2	K=H		1	—
~~I~~	15.0	20.1	~~I~~ I	3 H		N	K=H	1 1	— —
	14.8	20.8	I b	331 6		N?	4	—
	14.2	23.8	I l	332 6		N	3	—

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Means of

	No.	R.A.	Dec.	Mag.				Br.				
22 22+77.5	860	22	22.4	+77	30	6.8	.	6.4	1.7	8.1	6.7	5.6
22 44+67.8	1468	22	44.1	+67	49	6.5	–	6.6	1.1	7.7	6.3	5.8
0 40+77.2	27	0	40.5	+77	10	6.7	–	6.5	1.6	8.1	6.7	5.7
23 40+57.8	2804	23	40.0	+57	50	5.3	–	6.4 / 6.7	7.1 / .7	7.4	5.7 / 6.0	5.6 / 5.9
23 42+58.1	2653	23	42.1	+58	10	6.8	–	6.8	.7	7.5	6.1	6.0
23 58+68.1	1426	23	57.8	+68	4	7.0	.	6.9	1.1	8.0	6.6	6.1
23 11+78.4	825	23	11.4	+78	27	7.5	.	6.8	1.7	8.5	7.1	6.0
22 28+78.1	801	22	28.6	+78	4	5.7	–	5.4	1.7	7.1	5.7	4.6
22 25+78.0	796	22	25.6	+78	1	6.0	–	5.6	1.7	7.3	5.9	4.8
23 3+58.5	2552	23	3.6	+58	34	6.1	–	6.2	.7	6.9	5.5	5.4
23 0+58.6	2545	23	0.5	+58	38	5.3	4086 5.0 13-1	5.6	.7	6.3	4.9	4.8
23 1+58.9	2546	23	1.1	+58	58	6.5	.	6.5	.7	7.2	5.8	5.7
22 57+58.8	2533	22	56.7	+58	51	7.5	.	7.2	.7	7.9	6.5	6.4
22 56+59.0	2629	22	56.4	+59	4	7.0	.	6.8	.7	7.5	6.1	6.0
22 53+59.0	2615	22	53.2	+59	2	6.5	.	6.7	.7	7.4	6.0	5.9
22 32+68.4	1319	22	32.9	+68	27	7.3	.	7.0	1.1	8.1	6.7	6.2
22 29+69.1	1262	22	28.9	+69	9	6.0	–	6.4	1.1	7.5	6.1	5.6
23 53+68.7	1417	23	53.7	+68	48	8.0	.	7.0 / 7.2	1.1	8.1	6.7	6.2
23 54+68.8	1418	23	53.8	+68	46	7.5	.	7.0	1.1	8.1	6.7	6.2
0 1+78.9	1	0	1.5	+78	55	6.5	–	5.8	1.8	7.6	6.2	5.0
23 38+68.9	1393	23	38.2	+68	56	6.8	.	6.7	1.1	7.8	6.4	5.9
23 50+78.9	851	23	50.1	+78	57	7.8	–	6.9	1.8	8.7	7.3	6.1
23 23+78.9+	835	23	22.5	+78	60	7.5		6.7	1.8	8.5	7.1	5.9
23 14+79.1	777	23	13.9	+79	6	7.8	–	6.3	1.8	8.1	6.7	5.5
23 16+59.3	2710	23	16.1	+59	20	6.0	–	6.9 / 7.3	7.6 / .7	8.0	6.2 / 6.6	6.1 / 6.5
22 50+69.5	1288	22	50.5	+69	31	7.0	.	6.8	1.1	7.9	6.5	6.0
22 57+59.6	2631	22	57.4	+59	40	6.7		6.6	.7	7.3	5.9	5.8
22 29+69.6	1263	22	29.2	+69	37	6.2	.	6.2	1.1	7.3	5.9	5.4

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Plate 928.

v	H	Type	Remarks	No. lines	K	Focus	Other Lines
15.5	7.2	I		5	N	2	—
15.9	9.4	I		7	N	2	—
15.2	9.5	I		8	N	3	—
14.8	7.2	I d		5	N	1	—
14.8	8.6	I I		3 3	N N	1 1	— —
15.8	13.3	I d		5	K=H? N	1	seen.
14.7	12.9	I		3	N	1	—
15.2	14.7	I		9	K=.4 H K=.5H	3	—
14.6	14.9	I		6	K=.2 H	2	—
14.8	16.2	I		8	K=.2H N	2	—
14.0	14.4	I		3	N	1	—
13.8	15.1	I		7	K=.6 H K=.8H	2	—
14.1	16.6	I		8	K=.8 H K=H	4	—
14.4	16.7	I		7	K=.8H K=H	3	—
13.5	16.6	I b	333	4 5	N	2	5?
13.2	17.1	I		4	K=H	1	—
13.0	18.2	I II a	334	2	K=H	2	seen
13.0	19.8	I II a	333 II a	2 2	K=H K=H	1 1	seen seen
12.5	19.1	I I		4 5	N K=H?	1 1	— —
14.5	5.4	I		6	N?	3	—
13.6?	6.5	I		4	N	1	—
13.5	7.2	I		7	K=H	2	—
13.0	6.6	I		7	K=H	3	—
12.4	5.4	I		6	N	3	—
12.1	6.0	I		5	N?	3	—
11.5	7.4	I I		4 4	K=H N	1 1	— —
12.5	9.9	I		4	N	1	—
12.4	13.5	III III		2 2	K=H K=H	1 1	— —

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Mean 8

	No.	R.A.	Dec.	Mag.			Br.	
23 50 +59.2	2795	23 50.3	+59	13	6.7	.	6.5 7.7 7.2 5.8	. 5.7 ✓
23 42 +59.2	2777	23 41.8	+59	10	6.5	.	6.4 .7 7.1 5.7	. 5.6 ✓
0 18 +79.3	10	0 17.9	+79	14	7.0	.	5.9 1.8 7.7 6.3	. 5.1 ✓
0 41 +79.1	19	0 41.6	+79	2	7.7	.	6.8 1.8 8.6 7.2	. 6.0 ✓
23 56 +69.5	1377	23 56.2	+69	30	8.0	.	7.4 7.0 1.1 8.1 6.7	. 6.2 ✓
23 27 +59.3	2745	23 26.9	+59	14	7.0	—	6.9 .7 7.6 6.2	. 6.1 ✓
23 42 +79.8	793	23 41.8	+79	45	8.3	.	7.0 1.9 8.9 7.5	. 6.2 ✓
23 21 +69.6	1332	23 21.1	+69	34	6.2	—	5.7 1.1 6.8 5.4	. 4.9 ✓
23 20 +69.9	1331	23 20.2	+69	53	6.8	—	6.5 1.2 7.7 6.3	. 5.7 ✓
23 5 +79.8	769	23 4.6	+79	47	7.5	—	5.9 1.9 7.8 6.4	. 5.1 ✓
23 26 +80.2	770	23 25.8	+80	12	8.2	.	6.9 1.9 8.8 7.4	. 6.1 ✓
23 20 +60.3	2540	23 19.8	+60	17	7.0	—	6.6 .8 7.4 6.0	. 5.8 ✓
23 10 +70.1	1311	23 10.0	+70	6	6.0	—	5.7 1.2 6.9 5.5	. 4.9 ✓
22 58 +79.9+	761	22 58.8	+80.79	60 Q	7.2	—	5.8 1.9 7.7 6.3	. 5.0 ✓
23 13 +60.3	2521	23 13.7	+60	21	7.0	.	6.6 .8 7.4 6.0	. 5.8 ✓
22 53 +80.5	739	22 53.3	+80	31	7.9	—	6.9 2.0 8.9 7.5	. 6.1 ✓
22 39 +80.6	731	22 39.1	+80	36	6.7	—	6.6 2.0 8.6 7.2	. 5.8 ✓
22 50 +70.5	1283	22 50.2	+70	35	8.1	—	6.7 6.9 1.2 8.1 6.7	. 6.1 ✓
23 3 +60.9	2491	23 3.3	+60	52	8.3	.	7.2 7.2 .8 8.0 6.6	. 6.4 ✓
1 0 +78.9	34	1 0.0	+78	54	5.6		5.3 1.8 7.1 5.7	. 4.5 ✓
23 54 +60.0	2656	23 54.0	+60	2	6.8	.	6.9 .8 7.7 6.3	. 6.1 ✓
0 48 +79.8	24	0 48.6	+79	46	6.5	—	6.1 1.9 8.0 6.6	. 5.3 ✓
23 54 +60.4	2657	23 54.3	+60	24	6.0	—	6.3 .8 7.1 5.7	. 5.5 ✓
23 57 +60.5	2667	23 57.6	+60	31	6.0	4258 6.0 10-4	6.2 .8 7.0 5.6	. 5.4 ✓
1 5 +80.1	36	1 6.2	+80	8	6.7		5.4 1.9 7.3 5.9	. 4.6 ✓
23 50 +61.2	2573	23 50.3	+61	12	7.3	—	7.2 7.2 .8 8.0 6.6	. 6.4 ✓
0 21 +80.5	10	0 21.2	+80	34	7.9	.	6.9 2.0 8.9 7.5	. 6.1 ✓
23 29 +70.9	1327	23 28.7	+70	50	6.0	✓	6.6 6.7 7.0 7.0 1.2 7.9 8.2 6.5 6.8	6.9 6.2 ✓

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Plate 928.

V	H	Type	No. Lines	K	Focus	other Lines.	Remarks
13.5	13.4	I	4	4 K=.5H	1	—	
13.1	13.2	I	5	K=H	1	—	
13.0	15.5	IIa	336 2	2 K=H	1	seen	seen
15.5	16.6	II a	337 2	K=H	1	seen	
11.2	5.6	I	6	N	2	—	
11.0	6.2	I	6	N 2	2	—	
10.4	8.0	I	5	N	1	—	
11.0	8.1	I	6	N	2	—	
11.3	9.5	II ?	2	K=H	1	—	
11.5	9.8	II a	338 3	K=H ?	3	seen	
11.7	12.1	I	6	K=.8 H	2	—	
12.1	12.8	I	4	N	1	—	
12.0	13.9	I	8	K=.4H K=.5H	3	—	
11.5	14.0	I I?	5 5	N N	1 1	— —	
11.6	14.5	II a IIa?	339 2	2 K=H	K=H 1 1	—	seen
11.6	15.4	III b.c	340 2	K=H	2	Bright	seen
12.1	14.7	I	4	N	1	—	
12.0	17.4	I	5	N	2	—	
12.0	23.4	II a	341 3	K=H	2	—	
11.5	19.2	II a	342 3	K=H	1	—	
10.5	10.0	? IIa	343 3	K=H	2		
10.5	10.5	I I	4 5	N K=H	1 1	— —	
10.0	10.3	I I	4 H	N K=H	1 1	— —	
10.0	12.5	I	7	K=.2H	2	—	
9.7	12.9	I	8	K=.2 H	3	—	
10.3	13.4	I	7	K=.8 H H=H	1	—	
9.6	14.0	III b.c	344 3	K=1.2H K=H	3	—	
9.4	14.2	I	7	K=.2H	1	—	

III? 6.4, 6.7.

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Mean δ

	No.	R.A.	Dec.	Mag.		Br.					
23 36 + 80.5	780	23 37.1	+80	30	7.8	–	6.5	2.0	8.5	7.1	5.7 ✓
23 40 + 80.5	784	23 40.6	+80	34	8.0	–	6.8	2.0	8.8	7.4	6.0 ✓
2318 + 60.8	2535	23 18.3	+60	50	neb.	–	7.0 7.0	.8	7.8	6.4	6.2 ✓
23 14 + 59.5	2701	23 14.0	+59	29	6.7	–	6.9	.7	7.6	6.2	6.1 ✓
0 17 + 70.9 +	16	0 17.5	+71	0	6.6	.	6.6	1.2	7.8	6.4	5.8 ✓
23 56 + 61.5	2586	23 56.8	+61	29	5.6		6.5	.8	7.3	5.9	5.7 ✓
0 53 + 81.2	30	0 52.5	+81	11	8.3	.	6.9	2.0	8.9	7.5	6.1 ✓
0 50 + 81.1	25	0 49.6	+81	6	7.5	.	5.8	2.0	7.8	6.4	5.0 ✓
23 54 + 71.5	1246	23 54.3	+71	26	6.9	–	7.2	1.2	8.4	7.0	6.4 ✓
23 41 + 61.4	2533	23 41.8	+61	24	5.9	–	6.2	.8	7.0	5.6	5.4 ✓
23 32 + 61.3	2490	23 32.0	+61	20	6.5	–	6.7	.8	7.5	6.1	5.9 ✓
23 45 + 81.0	838	23 45.4	+81	2	8.0	.	6.9	2.0	8.9	7.5	6.1 ✓
23 26 + 71.2	1208	23 26.4	+71	12	6.8	–	6.4	1.2	7.6	6.2	5.6 ✓
23 24 + 61.5	2462	23 24.2	+61	30	8.2	.	6.8 6.9	.8	7.7	6.3	6.1 ✓
23 23 + 71.5	1203	23 22.3	+71	26	8.0	–	7.1 6.9	1.2	8.1	6.7	6.1 ✓
23 18 + 61.5	2444	23 18.4	+61	29	5.3	–	6.5 6.8	.8	7.3 7.6	5.9 6.2	5.7 6.0 ✓
23 21 + 61.1	2454	23 21.6	+61	7	7.9	.	7.0	.8	7.8	6.4	6.2 ✓
23 10 + 61.2	2413	23 10.3	+61	10	6.5	.	6.5	.8	7.3	5.9	5.7 ✓
22 46 + 60.9	2450	22 45.7	+60	56	6.0	–	6.4	.8	7.2	5.8	5.6 ✓
22 24 + 81.2	775	22 24.1	+81	12	7.0	–	6.5	2.0	8.5	7.1	5.7 ✓
0 28 + 81.7	13	0 29.0	+81	42	6.5	–	5.9	2.0	7.9	6.5	5.1 ✓
23 39 + 61.9	2519	23 39.0	+61	52	7.7		6.7 6.8	.8	7.6	6.2	6.0 ✓
23 50 + 72.1	1127	23 50.2	+72	3	7.8	.	7.1 6.9	1.3	8.2	6.8	6.1 ✓
23 56 + 82.2	748	23 55.4	+82	10	7.0	–	6.0	2.2	8.2	6.8	5.2 ✓
23 50 + 82.4	743	23 49.7	+82	23	6.0	–	5.5	2.2	7.7	6.3	4.7 ✓
23 28 + 72.1	1109	23 28.0	+72	8	7.5	–	6.8	1.3	8.1	6.7	6.0 ✓
22 47 + 82.4	703	22 47.9	+82	23	5.0	–	5.5 5.8	2.2	7.7 8.0	6.3 6.6	4.7 5.0 ✓
22 43 + 82.5	700	22 44.1	+82	30	8.0	✓	6.5	2.2	8.7	7.3	5.7 ✓

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Plate 928.

V	H	Type	No. Lines	K	Focus	Other Lines	Remarks
10.4	18.4	I	I 4 H	K=H	1 1	— —	
10.0	19.3	I	I 6 7 5	K=.5H K=.5H2	1	— —	
9.9	19.7	I	5	N?	2	—	
9.5	19.0	III	2	K=H	1	—	
9.4	19.6	I	I 3 3	N N	1 1	— —	
9.4	20.1	II a	345: 2	K=H	2	Keen	
9.4	7.2	I	4	K=H	1	—	
9.4	9.5	I	6	K=.3H	1	—	
9.3	10.6	I	I 4 5	N N	1 1	— —	
8.6	9.9	I	8	K=.2H	2	—	
8.6	12.0	I	6	K=.5H	2	—	
8.3	10.2	I	4	N	1	—	
8.0	10.5	II	II? 2 2	K=H	1 1	— —	
8.4	10.9	I	5	K=.5H	1	—	
8.1	13.0	III b	346 6 2	K=H	2	Keen	
7.7	12.6	I	I 4 H	N N	1 1	— —	
8.0	9.6	I	I 5 6	N N	2 2	— —	
7.9	10.0	I	8 9	K=.2H	4	—	
8.4	6.8	II	II 2 2	K=H K=H	2 2	— Fl.	
7.0	6.3	I d	6	N	3	—	
7.1	9.1	I	6	N	1	—	
7.1	11.0	I	8	N	2	—	
6.2	10.3	I	5	N	1	—	
6.0	10.2	I?	7	K=H	2	—	
6.4	11.4	II a	347 2	K=H	1	Keen	
6.0	12.5	I	4	K=H	1	—	
5.6	13.2	I	9	K=.4H	3	—	
4.5	13.1	II a	348 2	K=H	1	Keen.	

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Mean 8

	No.	R.A.	Dec.	Mag.					Br.				
22 57 +71.9	1181	22	57.4	+71	56	7.8	–		7.0	7.0	1.3	8.3	6.9 . 6.2 ✓
22 52 +72.1	1076	22	51.6	+72	4	7.5	–		6.6	6.7	1.2	7.9	6.5 . 5.9 ✓
22 9 +81.9	767	22	10.0	+81	57	7.7	.			6.5	2.1	8.6	7.2 . 5.7 ✓
22 53 +72.3	1079	22	53.3	+72	21	6.6	–		6.7	7.0	1.3	8.0 8.3	6.6 6.9 . 5.9 ✓ 6.2
23 0 +62.4	2170	23	0.3	+62	26	7.3	.		7.2	7.0	.8	7.8	6.4 . 6.2 ✓
22 3 +82.2	673	22	3.2	+82	10	7.5	–			6.1	2.2	8.3	6.9 . 5.3 ✓
	674	22	3.3	+82	10	8.0							
0 10 +72.2	15	0	10.2	+72	8	7.0	–			6.9	1.3	8.2	6.8 . 6.1 ✓
23 56 +72.4	1136	23	56.0	+72	21	7.0	–			6.6	1.3	7.9	6.5 . 5.8 ✓
23 39 +62.5	2294	23	39.1	+62	30	7.2	.		7.0	7.0	.8	7.8	6.4 . 6.2 ✓
23 54 +72.9	1135	23	54.3	+72	48	6.5	–			6.4	1.3	7.7	6.3 . 5.6 ✓
23 33 +62.9	2268	23	33.1	+62	55	6.7	–			6.5	.9	7.4	6.0 . 5.7 ✓
23 41 +63.0	2055	23	41.1	+63	0	7.8	.			6.9	.9	7.8	6.4 . 6.1 ✓
23 50 +73.0	1067	23	50.4	+73	3	8.0	–		7.4	7.0	1.3	8.3	6.9 . 6.2 ✓
0 24 +82.8	14	0	24.6	+82	50	8.3	–			6.5	2.3	8.8	7.4 . 5.7 ✓
23 33 +73.2	1047	23	33.1	+73	10	5.6	–			6.4 6.6	1.3	7.7 7.9	6.3 6.5 . 5.6 ✓ 5.8
23 35 +73.3	1052	23	35.8	+73	19	8.0	.			6.9	7.0	1.4	8.4 7.0 . 6.2 ✓
23 44 +63.2	2064	23	43.9	+63	11	6.6	.			6.6	6.6	.9	7.5 6.1 . 5.8 ✓
0 42 +82.9	20	0	41.6	+82	55	6.5	–			4.8	2.3	7.1	5.7 . 4.0 ✓
23 56 +62.8	2356	23	56.0	+62	50	6.5				6.5	6.1	3	7.8 6.4 . 5.7 ✓
23 59 +63.4	2107	23	59.0	+63	22	5.4	1	5.5	13_1	5.9	.9	6.8	5.4 . 5.1 ✓
0 1 +73.4	2	0	1.0	+73	26	7.0	.			6.6	1.4	8.0	6.6 . 5.8 ✓
23 48 +73.6	1063	23	47.9	+73	36	7.0	4226	6.6	12_2	6.4	1.4	7.8	6.4 . 5.6 ✓
23 41 +64.1	1861	23	41.7	+64	4	6.5	.			6.6	.9	7.5	6.1 . 5.8 ✓
0 18 +83.8	20	0	18.4	+83	49	7.0	–			5.8	2.4	8.2	6.8 . 5.0 ✓
0 26 +83.8	9	0	26.3	+83	53	7.8	–			6.3	2.4	8.7	7.3 . 5.5 ✓
0 8 +84.2	3	0	7.8	+84	9	8.0	–			6.6	2.5	9.1	7.7 . 5.8 ✓
23 33 +74.5	1032	23	33.1	+74	28	6.5	–			5.8	1.4	7.2	5.8 . 5.0 ✓
23 34 +74.9	1033	23	33.7	+74	55	8.0	+			6.9	1.5	8.4	7.0 . 6.1 ✓

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Plate 928.

v	H	Type	Nebulæ	K	Focus	other lines.
			Remarks.			
4.6	13.8	I		K=H	1	—
3.5	7.6	III b	3492	K=H	1	seen
2.9	8.6	I a		N	1	—
3.0	11.4	III b.c	350	# 2 K=1.2H	3	seen
2.7	13.7	I		K=2H	2	—
2.5	11.0	I b	351	N	3	seen
9.5	22.2	I	I?	H K=H	1 1	— —
9.5	23.0	I		K=H	1	—
8.9	21.3	I	I	5 N	1 1	— —
8.7	19.2	I b.	352	N	3	seen
8.2	15.7	I	I	5 K=H	1	— —
8.0	14.6	I		K=H	1	—
7.6	15.3	I		N?	1	—
7.5	16.3	III b.c.	353	2 K=1.2H K=H	3	seen
7.7	16.4	I		N	3	—
7.4	14.1	I	I	5 K=H K=8H	1	— —
7.5	14.5	I	I	3 24 N K=H	1 1	— —
7.5	17.4	I		K=H	1	—
8.0	19.4	I		?	1	—
8.0	21.9	I II a	354	2 K=2.0H	3	seen
7.8	23.2	I	I	3 3 N N	1 1	— —
6.6	16.1	I		4 N	1	—
6.5	16.4	I		5 N	1	—
6.6	18.0	I		5 N	2	—
6.5	18.0	I		7 N	1	—
7.0	19.9	I		5 K=5H	2	—
7.4	24.5	I		6 N?	3	F.
5.8	14.5	I		8 ?:K=2H	3	—

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Mean 8

	No.	R.A.	Dec.	Mag.				Br.				
23 26 + 64.9	1819	23 25.7	+64 56	6.2	—			6.6	9	7.5	6.1	5.8 ✓
23 55 + 65.3	1987	23 55.2	+65 17	6.3	—			6.7 / 6.9	.9	7.6 / 7.8	6.2 / 6.4	5.9 / 6.1 ✓
~~23 52 + 85.0~~	~~41~~	~~1 50.8~~	~~+85 2~~	~~7.7~~				6.6	2.7	9.3	7.9	5.8 ✓
0 11 + 75.5	7	0 ~~11.9~~ 10.7	+75 28	7.4				5.5 / 5.9	2.8	8.3 / 8.7	6.9 / 7.3	4.7 / 5.1 ✓
~~0 53 + 85.5~~	~~19~~	~~0 49.7~~	~~+85 29~~	~~5.0~~	—							
23 11 + 85.9	409	23 52.8	+85 54	8.0	—			6.4	2.9	9.3	7.9	5.6 ✓
23 40 + 65.9	1943	23 39.4	+65 58	6.3	4199	6.0	13+	~~6.3~~	1.0	7.3	~~5.9~~	✓
22 32 + 72.1	1050	22 32.4	+72 8	7.0	—			7.0 6.9	1.3	8.2	6.8	6.1 ✓
21 24 + 81.4	736	21 24.7	+81 24	7.9	—			7.0	2.1	9.1	7.7	6.2 ✓
22 37 + 72.5	1055	22 37.6	+72 30	7.3	.			6.8 6.8	1.3	8.1	6.7	6.0 ✓
23 2 + 62.8	2171	23 1.9	+62 51	6.2	.			6.2	.9	7.1	5.7	5.4 ✓
23 14 + 73.1	1027	23 14.3	+73 8	7.8	—			6.8 6.9	1.3	8.2	6.8	6.1 ✓
23 22 + 73.3	1035	23 22.0	+73 19	7.5	—			6.7	1.4	8.1	6.7	5.9 ✓
23 13 + 83.5	647	23 12.1	+83 27	8.0				6.4	2.4	8.8	7.4	5.6 ✓
22 55 + 83.5	640	22 55.4	+83 34	5.0	—			5.3 / 5.7	2.4	7.7 / 8.1	6.3 / 6.7	4.5 / 4.9 ✓
23 9 + 73.4	1023	23 9.5	+73 27	6.2	4112	5.6	157+1	5.7	1.4	7.1	5.7	4.9 ✓
23 24 + 63.6	2004	23 24.1	+63 36	6.9	—			6.8 6.9	.9	7.8	6.4	6.1 ✓
23 23 + 73.5	1037	23 23.0	+73 30	8.0	.			7.1 7.2	1.4	8.6	7.2	6.4 ✓
23 9 + 63.5	1955 / ~~1967~~	23 9.4 / ~~23 11.9~~	+63 29 / ~~+63 20~~	7.0 / ~~8.2~~	—			6.6	.9	7.5	6.1	5.8 ✓
22 2 + 82.8	672	22 3.2	+82 48	8.2				6.5	2.3	8.8	7.4	5.7 ✓
22 32 + 72.9	1049	22 32.2	+72 54	5.5	—			5.5	1.3	6.8	5.4	4.7 ✓
22 22 + 72.9	1036	22 22.4	+72 53	8.0	.			7.1 7.1	1.3	8.4	7.0	6.3 ✓
23 15 + 63.9	1974	23 15.0	+63 57	7.0	.			6.9	.9	7.8	6.4	6.1 ✓
22 57 + 84.0	513	22 50.7	+84 0	7.3	.			7.0	2.5	9.5	8.1	6.2 ✓
23 6 + 63.9	1949	23 6.1	+63 56	7.0	.			6.0	.9	6.9	5.5	5.2 ✓
22 22 + 83.7	630	22 22.5	+83 46	7.0	.			6.8	2.4	9.2	7.8	6.0 ✓
21 52 + 83.3	618	21 52.7	+83 22	7.2	—			5.9	2.3	8.2	6.8	5.1 ✓
21 52 + 81.9	718	20 52.8	+81 59	6.0				5.5	2.1	7.6	6.2	4.7 ✓
23 23 + 74.5	1022	23 23.3	+74 26	7.0	—			6.1	1.4	7.5	6.1	5.3 ✓

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Plate 928.

	v	H	Type	Remarks	No. Lines	K	Focus	other Lines.
	5.5	16.0	I		9	K=.2H	3	F?
	5.5	16.2	III	b.c 355	2	K=H	2	—
III ? 5.4, 5.8.	5.5	17.2	III	b.c 356	2	K=H	4	Bright. seen.
	5.6	18.6	I	b 357	6	N	2	—
	5.5	19.5	I		4	N	1	—
	4.9	17.3	I		7	N	2	—
	4.9	17.6	I	I	5	K=.5H ?	1	—
	4.6	18.9	I		5	N	1	—
	4.6	21.0	III		1	N	1	—
	5.2	23.6	I		5	N	3	F
	3.9	14.5	I		6	K=.2H	2	—
	3.5	14.7	I		7	K=H	2	—
	3.0	14.6	I	IIa 358	2	K=H	1	seen
	3.6	17.1	I		10	N	5	F seen.
	3.1	18.6	I		4	K=H	1	—
	2.1	17.6	I		4	N	1	—
	3.0	21.2	I	d.	7	K=H ?	3	—
	3.1	22.4	III	b 359	2	K=H	3	seen

Plate 834.

III ? 5.6, 6.0.	22.0	13.0	III	b.c 360	2	K=1.2H	3	Bright seen
	22.5	8.8	I		6	N	1	—
	21.9	7.3	I	IIa 361	2	K=H	1	seen
	21.5	10.5	I		6	N	2	—
	21.0	16.1	III		3	K=H	2	F.
	20.4	13.9	I	b 362	7	N	3	—
	19.9	9.5	III		2	K=H	1	—
	19.9	20.8	I ?		4	K=H	1	—

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Mean 8

	No.	R.A.	Dec.	Mag.					Type.		
23 12 +74.5	1016	23	12.3	+74	31	6.6	–		6.0 / 6.1 / 6.5 / 5.5 / 5.7	1.4 / 2.6 / 1.4	7.4 6.0 / 8.7 7.3 / 9.1 7.7 / 6.9 5.5 / 7.1 5.7	5.2 / 5.3 / 5.7 / 4.7 / 4.9
22 53 +84.6	517	22	54.2	+84	36	6.5	–					
23 3 +74.6	1006	23	3.3	+74	36	4.6	–					
23 3 +64.4	1764	23	3.4	+64	26	6.8	.		6.5	.9	7.4 6.0	5.7
22 47 +74.4	988	22	46.2	+74	24	7.8	.		6.9	1.4	8.3 6.9	6.1
23 1 +74.8	1002	23	1.8	+74	48	7.3	.		6.4	1.5	7.9 6.5	5.6
22 17 +84.7	505	22	16.2	+84	41	8.0	–		6.9	7.0 2.6	9.6 8.2	6.2
23 2 +64.8	1758	23	2.0	+64	50	6.9	.		6.8	.9	7.7 6.3	6.0
22 34 +74.6	978	22	34.2	+74	37	6.5	–		6.8 / 7.2	1.4	8.2 6.8 / 8.6 7.2	6.0 / 6.4
20 42 +83.2	588	20	43.2	+83	7	6.2	.		5.9	2.3	8.2 6.8	5.1
23 30 +85.4	403	23	29.7	+85	23	7.8	–		6.6	2.7	9.3 7.9	5.8
23 24 +85.6	399	23	24.2	+85	37	7.5	–		6.5	2.8	9.3 7.9	5.7
23 28 +85.7	401	23	27.2	+85	46	8.0	–		6.9	2.8	9.7 8.3	6.1
22 24 +85.4	383	22	24.2	+85	23	5.0	3968	5.4 20+6	4.7	2.7	7.4 6.0	3.9
22 50 +75.5	858	22	50.6	+75	34	7.7	–		7.0	1.5	8.5 7.1	6.2
22 57 +76.1	892	22	57.2	+76	6	7.3	.		~~7.1~~	1.5	8.6 ~~7.2~~	
22 29 +75.5	836	22	29.7	+75	27	5.7	–		5.6	1.5	7.1 5.7	4.8
22 45 +65.4	1814	22	44.5	+65	26	3.8	–		5.5 / 5.7	1.0	6.5 5.1 / 6.7 5.3	4.7 / 4.9
									~~157~~ / 11 = 144 / 10		~~12.8~~ / 11 = 12.8 / 10	

Mean 15

23 33 +76.8	928	23	33.4	+76	50	3.5	–		5.9 / 6.2	1.6	7.5 5.3 / 7.8 5.6	4.4 / 4.7
0 8 +76.2	5	0	8.1	+76	9	6.5	35	6.2 ~~2311~~	~~6.9~~	1.6	8.5 ~~6.3~~	
23 47 +76.6	3111	23	47.2	+76	41	5.0	–		6.9	.7	7.6 5.4	5.4
23 41 +66.9	1562	23	41.0	+67	0	5.5	4204	5.1 24+2	6.5	1.0	7.5 5.3	5.0
23 13 +67.3	1514	23	12.7	+67	19	5.2	–		6.8 / 7.0	1.0	7.8 5.6 / 8.0 5.8	5.3 / 5.5
23 23 +77.7	2748	23	23.4	+77	46	5.7	4153	4.8 23+1	6.4	.7	7.1 4.9	4.9
23 40 +77.8	2804	23	40.0	+77	50	5.3	–		6.9 / 7.2	.7	7.6 5.4 / 7.9 5.7	5.4 / 5.7
22 22 +77.5	860	22	22.4	+77	30	6.8	–	✓	6.9	1.7	8.6 6.4	5.4

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Plate 834.

T	H	Type	No. lines	Remarks	K	Focus	other Lines.
18.9	7.6	I?	4		N	1	—
19.0	19.9	I	7		K=2H	2	—
19.0	20.2	I	6		K=2H	2	F
18.6	19.1	I	5		K=.8H	1	—
18.5	19.9	I	b 363 6		N	3	—
17.6	10.6	I	5		K=.8H	2	—
17.5	15.1	I?	5		K=H	1	—
17.6	19.7	III	2		K=H	1	—
17.2	9.1	I	5		N	1	—
16.9	7.0	I?	2		N	1	—
16.5	9.2	I	4		N	1	—
16.8	14.4	I	8		K=.8H	2	F
16.5	23.7	I	6		K=H	1	—
16.0	14.6	II a ?	364 2		K=H	1	Reen
16.2	15.9	I	4		N	1	—
15.9	16.4	I	5		K=.8H	1	—
15.5	16.3	I	6		K=.8H	2	—
16.0	20.5	I	2		N	1	—
15.6	23.4	I	5		N	1	—
14.4	6.2	II a	365 2		K=H	1	Reen
13.5	5.7	I	3		N	1	—
13.5	13.6	I	5		K=.8H	1	—
12.1	5.9	I	3		N	1	—
12.2	7.7	PI	4		K=H	1	—
12.9	9.5	PI	4		K=H	1	—
13.0	15.1	III b	366 2		K=H	1	Reen
13.6	17.1	PI	2		N	1	—
12.0	24.0	I	6		N?	2	F

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Mean 15

	No.	R.A.	Dec.	Mag.			Bn.				
23 57 + 68.1	1426	23	57.8	+68	4	7.0	.	7.1	1.1	8.2	6.0	5.6
22 29 + 78.1	801	22	28.6	+78	4	5.7	–	6.3	1.7	8.0	5.8	4.5
22 26 + 78.0	796	22	25.6	+78	1	6.0	–	6.5	1.7	8.2	6.0	5.0
23 3 + 58.5	2552	23	3.6	+58	34	6.1	–	6.7	.7	7.4	5.2	5.2
23 1 + 58.6	2545	23	0.8	+58	38	5.3	4086 5.0 19-3	6.2	.7	6.9	4.7	4.7
0 2 + 78.9	1	0	1.5	+78	55	6.5	–	6.7	1.8	8.5	6.3	5.2
23 14 + 79.1	777	23	13.9	+79	6	7.8	–	6.9	.8	7.7	5.5	5.4
23 1 + 58.9	2546	23	1.1	+58	58	6.5	–	6.8 7.0	.7	7.5 7.7	5.3 5.5	5.3 5.5
23 42 + 59.2	2777	23	41.8	+59	10	6.5	.	6.8	.7	7.5	5.3	5.3
23 50 + 59.3	2795	23	50.3	+59	13	6.7		7.0	.7	7.7	5.5	5.5
0 18 + 79.3	10	0	17.9	+79	14	7.0	.	6.7	1.8	8.5	6.3	5.2
23 21 + 69.6	1332	23	21.1	+69	34	6.2	–	6.5	1.1	7.6	5.4	5.0
22 29 + 69.2	1262	22	28.9	+69	9	6.0	–	7.0	1.1	8.1	5.9	5.5
23 20 + 69.9	1331	23	20.2	+69	53	6.8	–	6.9	1.2	8.1	5.9	5.4
23 5 + 79.8	769	23	4.6	+79	47	7.5	.	6.8	1.9	8.7	6.5	5.3
22 58 + 79.9 +	761	22	58.8	+79 60	2	7.2	–	6.8	1.9	8.7	6.5	5.3
23 10 + 70.1	1311	23	10.0	+70	6	6.0	–	6.5	1.2	7.7	5.5	5.0
22 57 + 59.6	2631	22	57.4	+59	40	6.7	.	7.2	.7	7.9	5.7	5.7
22 29 + 69.6	1263	22	29.2	+69	37	6.2	.	6.9	1.1	8.0	5.8	5.4
23 54 + 60.4	2657	23	54.3	+60	24	6.0	–	6.9	.8	7.7	5.5	5.4
1 5 + 80.1	36	1	6.2	+80	8	6.7	.	6.7	1.9	8.6	6.4	5.2
23 26 + 71.2	1208	23	26.4	+71	12	6.8	–	6.8	1.2	8.0	5.8	5.3
23 56 + 61.5	2586	23	56.8	+61	29	5.6	4253 6.1 18-4	7.1	.8	7.9	5.7	5.6
0 50 + 81.1	25	0	49.6	+81	6	7.5	–	6.7	2.0	8.7	6.5	5.2
23 41 + 61.4	2533	23	41.8	+61	24	5.9	–	6.7	.8	7.5	5.3	5.2
23 18 + 61.5	2444	23	18.4	+61	29	5.3	–	6.9 7.3	.8	7.7 8.1	5.5 5.9	5.4 5.8
23 10 + 61.2	2413	23	10.3	+61	10	6.5	.	7.1	.8	7.9	5.7	5.6
21 19 + 80.6	690	21	19.2	+80	37	6.3	Y	6.6	2.0	8.6	6.4	5.1

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Plate 834.

V	H	Type	No. Lines Remarks	K	Focus	Other Lines.
11.5	12.1	I	4	N	1	—
11.0	12.6	I	5	K=.5H	2	—
11.0	16.7	III	b.c 3674 2	K=H	2	seen
10.0	9.5	I	5	K=.8H	1	—
10.0	11.7	I	3	N	1	—
10.6	16.9	I	4	N	1	—
10.0	18.8	I	5	N	1	—
9.5	6.4	I	2	N	1	—
9.1	9.3	I	4	K=H	1	—
9.1	9.6	~~III~~ I	7	K=.2H ~~K=.8H~~	2	—
9.5	12.7	III	2	K=H	1	—
9.0	15.0	I	4	K=H	1	—
9.0	16.1	I	7	N	2	—
8.8	15.9	III	b.c 3683	K=H	2	Bright seen
9.4	21.6	II a	3695 2	K=H	2	F. seen
8.8	17.1	II ?	2	K=H	1	—
8.5	6.0	I	5	N	1	—
8.5	8.7	I	3	N	1	—
8.5	10.6	I	4	N	1	—
8.0	17.6	I	3	N	1	—
7.5	9.9	I	4	N	1	—
7.0	12.8	I	7	K=.5H ~~K=.8H~~	2	—
7.0	14.1	I	5	N	1	—
6.9	15.6	I	6	N ?	2	—
6.8	16.8	III	b.c 3702 2	K=H	3	Bright seen
7.0	18.3	I	5	N	1	—
6.5	23.3	I d	5	K=H	1	—
6.2	17.0	I ?	6	K=.5H	1	—

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Means 15

	No.	R.A.	Dec.	Mag.			Br.				
23 56 +82.2	748	23 55.4	+82	10	7.0	.	6.9	2.2	9.1	6.9	. 5.4
23 50 +82.5	743	23 49.7	+82	23	6.0	—	6.6	2.2	8.8	6.6	. 5.1
22 48 +82.4	703	22 47.9	+82	23	5.0	—	6.4 / 6.7	2.2	8.6 / 8.9	6.4 / 6.7	. 4.9 / 5.2
23 54 +72.9	1135	23 54.3	+72	48	6.5	—	6.9	1.3	8.2	6.0	. 5.4
23 32 +62.9	2268	23 33.1	+62	55	6.7	.	6.9	.9	7.8	5.6	. 5.4
22 44 +82.5	700	22 44.1	+82	30	8.0	.	6.8	2.2	9.0	6.8	. 5.3
23 1 +62.9	2171	23 1.9	+62	51	6.2	.	6.7	.9	7.6	5.4	. 5.2
23 56 +62.8	2356	23 56.0	+62	50	6.5	.	7.1	.9	8.0	5.8	. 5.6
23 44 +63.2	2064	23 43.9	+63	11	6.6	—	7.0	.9	7.9	5.7	. 5.5
0 42 +82.9	20	0 41.6	+82	55	6.5	—	6.1	2.3	8.4	6.2	. 4.6
23 33 +73.2	1047	23 33.1	+73	10	5.6	—	6.7 / 7.0	1.3	8.6 / 8.3	5.8 / 6.1	. 5.2 / 5.5
23 13 +83.4	647	23 12.7	+83	27	8.0	—	6.9	2.4	9.3	7.1	. 5.4
23 9 +73.5	1023	23 9.8	+73	27	6.2	4112 5.6 22 ±0	6.4	1.4	7.8	5.6	. 4.9
22 56 +83.5	640	22 55.4	+83	34	6.0	—	6.3 / 6.6	2.4	8.7 / 9.0	6.5 / 6.8	. 4.8 / 5.1
22 32 +72.9	1049	22 32.2	+72	54	5.5	—	7.1	1.3	8.4	6.2	. 5.6
23 9 +63.5	1955	23 9.4	+63	29	7.0	—	7.0	.9	7.9	5.7	. 5.5
23 58 +63.4	2107	23 59.0	+63	22	5.4	1 5.5 21-X	6.7	.9	7.6	5.3	. 5.2
0 1 +73.4	2	0 1.0	+73	26	7.0	.	7.1	1.4	8.5	6.3	. 5.6
23 48 +73.6	1063	23 47.9	+73	36	7.0	4226 6.6 16.6	6.8	1.4	8.2	6.0	. 5.3
22 21 +83.7	630	22 22.5	+83	46	7.0	.	6.9	2.4	9.3	7.1	. 5.4
0 50 +83.8	20	0 48.4	+83	49	7.0	.	6.8	2.4	9.2	7.0	. 5.3
23 33 +74.5	1032	23 33.1	+74	28	6.5	—	6.5	1.4	7.9	5.7	. 5.0
23 23 +74.4	1022	23 23.3	+74	26	7.0	.	6.8	1.4	8.2	6.0	. 5.3
23 12 +74.5	1016	23 12.3	+74	31	6.6		6.6	1.4	8.0	5.8	. 5.1
23.3 +74.6	1006	23 3.3	+74	36	4.6	—	6.4 / 6.6	1.4	7.8 / 8.0	5.6 / 5.8	. 4.9 / 5.1
23.3 +64.4	1764	23 3.4	+64	26	6.8	.	6.9	.9	7.8	5.6	. 5.4
20 42 +83.2	588	20 43.2	+83	7	6.2	—	6.5	2.3	8.8	6.6	. 5.0
23 1 +74.8	1002	23 1.8	+74	48	7.3	— ✓	6.8	1.5	8.3	6.1	. 5.3

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January 15, 1887.

Date 834.

V	H	Type	Remarks	No. Nebulæ	K	Focus	Other Lines
6.0	13.5	I		4	K=H	1	—
5.1	14.1	I		5	K=.8H	1	—
5.0	16.8	I		8	N	3	F
4.8	14.4	I		5	K=H	1	—
4.4	11.1	III	b 371	2	K=H	1	neen
4.0	13.4	I		5	K=H	1	—
4.5	22.1	III	b 372	3	K=H	3	F
4.4	20.9	I		7	K=H	2	—
3.4	22.3	I		4	N	1	—
2.8	17.9	I		4	K=H	1	—
3.0	14.3	I		8	K=.8H	2	F
2.4	13.0	III	b.c. 373	3	K=1.2H	3	neen.
3.0	8.8	I		5	N	1	—
1.7	10.5	I?		1	N	1	—
3.5	10.7	I		4	K=H	1	—

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Means 15.

	No.	R. A.	Dec.	Mag.			Bc.				
23 26 + 64.9	1819	23 25.7	+64 56	6.2	–		7.0	.9	7.9	5.7	5.5
23 30 + 85.4	403	23 29.7	+85 23	7.8	–		6.7	2.7	9.4	7.2	5.2
22 25 + 85.4	383	22 24.2	+85 23	5.0	3968	5.4 28+6	5.5	2.7	8.2	6.0	4.0
23 23 + 85.6	399	23 24.2	+85 37	7.5	–		6.6	2.8	9.4	7.2	5.1
0 50 + 85.5	19	0 49.7	+85 29	5.0	–		6.1 / 6.5	2.8	8.9 / 9.3	6.7 / 7.1	4.6 / 5.0
23 55 + 85.9	409	23 52.8	+85 54	8.0	–		6.7	2.9	9.6	7.4	5.2
22 44 + 65.5	1814	22 44.5	+65 26	3.8	–		6.3 / 6.5	1.0	7.3 / 7.5	5.1 / 5.3	4.8 / 5.0
22 29 + 75.5	836	22 29.7	+75 27	5.7	–		6.6	1.5	8.1	5.9	5.1
22 17 + 75.8	820	22 16.6	+75 46	6.8	.		6.9	1.5	8.4	6.2	5.4
23 4 + 66.5	1587	23 4.2	+66 28	6.7	–		7.1	1.0	8.1	5.9	5.6
23 30 + 86.5	344	23 27.8	+86 30	6.0	–		6.5	3.0	9.5	7.3	5.0
23 33 + 76.8	928	23 33.4	+76 50	3.5	–		6.2 / 6.4	1.6	7.8 / 8.0	5.6 / 5.8	
0 8 + 76.2	5	0 8.1	+76 9	6.5	35	6.2 23+1	6.9	1.6	8.5	6.3	5.4
23 41 + 66.9	1562	23 41.5	+67 0	5.5			6.7	1.0	7.7	5.5	
23 40 + 65.9	1943	23 39.4	+65 58	6.3	+		7.1	1.0	8.1	5.9	5.6

$\frac{\cancel{47}}{10}$ $\frac{\cancel{17}\ 15}{10}$

$\frac{194}{9}$ $\frac{10-5}{9}$ 14

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January 16, 1887.

Plate 738.

9.15 a.m.	v	H	Type	No. Lines	Remarks	K	Focus	other Lines.
	22.9	6.9	~~I~~ II	2		N K=H	1	—
✓	22.6	10.8	~~I~~ II? IIa?	2	373a	2 N K=H	1 1	— seen
	22.6	12.3	~~I~~ II a	374		K=H	2	seen.
	22.6	12.9	I			N	1	—
	22.3	10.4	I			N?	3	F
	20.6	8.2	I			K=.3 H ~~H=.8 H~~	5	F.
✓	19.8	12.3	I I	3	H	N K=H N	1 1	— —
✓	19.5	11.7	I I	4	5	N N	1 1	— —
	19.5	8.4	I			N	2	—
III?, 6.6, 6.9. ✓	18.9	10.2	III III	2	2	N K=H	1 1	— —
	17.5	9.0	I	4		N K=H	2	—
	17.0	7.2	I			N K=H	1	—
✓	16.7	5.9	~~I~~ III III?	1	2	N K=H	1 1	— —
✓	16.8	9.1	I I	4	H	N? N	1 1	— —
	16.9	9.9	I	11		K=.2 H	5	F
	16.0	10.3	I	8		K=.2 H	3	F?
✓	15.9	8.5	I I	4	H	N N	1 1	— —
	15.6	9.0	I	7		K=.2 H	2	—
✓	14.9	12.9	III III	2	2	N K=H	1 1	— —
	14.5	7.3	I	8		N?	3	—
✓	13.8	6.0	I I?	5	5	N N	1 1	— —
	13.9	11.8	I	10		~~K=.5 H~~ K=.2 H	5	F seen.
✓	13.8	6.9	I I?	3	H	N K=H	1 1	— —
	13.5	8.2	I	6		N	2	—
	13.4	11.2	II	3		K=H	2	F
	13.1	9.5	I	6		K=H	1	—
	13.1	6.1	I	9		K=H	3	—
✓	12.1	12.1	I I	4	H	N K=H	1	— —

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Many

	No.	R.A.	Dec.	Mag.								
20 31 + 61.2	2028	20	31.2	+61	16	7.3	—					
20 ~~17~~ + 61.8	~~2813 1996~~ 2000	20	~~12.2 17.2~~ 17.2	~~+61 +61~~ +61	~~41 33~~ 48	~~8.2~~ 5.8	—					
20 9 + 61.6	1983	20	9.2	+61	39	5.8	—					
20 7 + 61.6	1975	20	6.6	+61	39	6.8	.					
20 16 + 61.8	2000	20	17.2	+61	48	5.8						
20 27 + 62.5	1821	20	27.2	+62	31	4.0	—					
20 10 + 63.1	1605	20	9.6	+63	6	7.8	—					
20 10 + 53.3	2368	20	9.8	+53	13	6.6	.					
20 21 + 53.1	2397	20	20.6	+53	5	6.2	.					
20 19 + 63.5	1618	20	19.2	+63	32	5.9	—					
20 19 + 54.2	2341	20	19.3	+54	12	6.7	—					
20 52 + 74.1	890	20	52.8	+74	6	7.3	—					
20 29 + 54.3	2374	20	29.5	+54	18	7.0	—					
20 19 + 54.5	2339	20	18.8	+54	28	7.3						
20 33 + 74.5	~~5742~~	20	33.4	+74	26	5.5	—					
20 14 + 54.9	2329	20	14.8	+54	57	6.0	—					
20 21 + 54.9	2344	20	21.0	+54	58	6.9	.					
20 26 + 65.3	1466	20	26.2	+65	16	6.3	—					
20 6 + 55.5	2336	20	6.0	+55	36	6.5	—					
20 26 + 55.6	2411	20	25.8	+55	35	6.0						
20 40.9 + 65.8	1499	20	40.9	+65	48	7.0						
~~21 8.4 +75 47 8.2~~	774						.					
20 10 + 56.1	2376	20	10.0	+56	8	4.5	—					
20 28 + 56.3	2444	20	28.2	+56	17	6.3	3598	6.3	13			
20 23 + 56.2	2421	20	22.9	+56	10	6.6	.					
20 16 + 66.4	1281	20	16.1	+66	23	6.2	—					
20 41 + 76.3	809	20	41.0	+76	19	7.1	—					
20 41 + 66.1	1318	20	41.4	+66	8	5.5	—					
20 9 + 56.9	2375	20	9.1	+56	57	7.4	⊥					

Br.					
7.0	.8	7.8	~~6.4~~ ~~6.6~~		
7.1	.8	7.9	~~6.5~~ ~~6.7~~		
6.3	.8	7.1	~~5.7~~ ~~5.7~~		
6.5	.8	7.3	~~5.9~~ ~~6.1~~		
6.3	.8	7.1	~~5.7~~ ~~5.7~~	5.6	
4.8	.8	5.6	~~4.2~~ ~~4.4~~	4.1	
6.8 6.8	.9	7.5	~~6.1~~ ~~6.3~~	6.1	
6.8 6.8	.6	7.4	~~6.0~~ ~~6.2~~	6.1	
6.6	.6	7.2	~~5.8~~ ~~6.0~~	5.9	
6.7 {6.6} 7.0 {7.0}	.9	{7.5} {7.9}	~~6.3~~ ~~6.7~~	{6.1} {6.5}	{5.9} {6.3}
6.5	.6	7.1	~~5.7~~ ~~5.9~~	5.8	
6.5	1.4	7.9	~~6.5~~ ~~6.7~~	5.8	
7.0 {6.9} 7.3 {7.3}	.6	{7.5} {7.9}	~~6.3~~ ~~6.7~~	{6.1} {6.5}	{6.2} {6.6}
6.9 6.9	.6	7.5	~~6.1~~ ~~6.3~~	6.2	
5.9	1.4	7.3	~~5.9~~ ~~6.1~~	5.2	
6.9	.6	7.5	~~6.1~~ ~~6.3~~	6.2	
6.7 6.1	.6	6.7	~~5.3~~ ~~5.5~~	5.4	
~~6.3~~	.9	7.2	~~5.8~~ ~~6.0~~	5.6	
6.6 {6.6} 6.8 {6.9}	.6	{7.2} {7.5}	{~~5.8~~ ~~6.0~~} {~~6.3~~ 6.1}	{5.9} {6.2}	
5.8	.6	6.4	~~5.0~~ ~~5.2~~	5.1	
~~6.3~~ 6.6	1.5	8.1	~~6.7~~ ~~6.9~~	5.9	
4.8	.6	5.4	~~4.0~~ ~~4.2~~	4.1	
+1 ~~7.0~~ 7.0	.6	7.6	~~6.4~~ ~~7.0~~	6.3	
6.2	.6	6.8	~~5.4~~ 5.6	5.5	
5.9	1.0	6.9	~~5.5~~ ~~5.7~~	5.2	
6.5	1.6	8.1	~~6.7~~ ~~6.9~~	5.8	
5.7	1.0	6.7	~~5.3~~ ~~5.5~~	5.0	
6.9 6.9	.7	7.6	~~6.2~~ ~~6.4~~	6.2	

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Plate 438.

	v	H	Type	No. Lines (Remarks)	K	Focus	Other Lines
	11.7	12.8	I	~~10~~ 2	N	5	F seen.
√ √	11.6	7.5	I I	~~3~~ 5 5	N N	1 1	— —
	11.5	7.3	I	~~3~~ 4	N	1	—
√ √	11.4	12.9	II II a? 374 a	3 3	K=H K=H	1 2	— F seen
√ √	10.5	12.5	I I?	~~4~~ 6 5	~~N~~ K=.8H K=H	2 2	— —
√ √	10.5	12.6	?I I?	~~4~~ 5 4	~~N~~ K=H K=H	1 1	— —
	10.1	7.1	I	~~4~~ 8	~~N~~ K=.2H?	3	F seen
	9.0	6.9	I	~~3~~ 5	N	1	—
	8.9	6.2	I	~~4~~ 5	N	2	—
	8.2	6.8	I	~~4~~ 5	N	2	—
	8.0	10.3	I	~~4~~ 7	N?	3	—
	8.0	10.5	I	~~3~~ 6	~~N~~ K=H	1	—
	7.7	8.8	I	~~3~~ 6	~~N~~ K=.5H	2	—
√ √	6.7	8.8	I I	~~3~~ 4 5	~~N~~ K=H K=H	1 1	— —
	6.5	11.4	I	~~4~~ 5	N	2	—
√ √	6.6	12.1	I I?	~~3~~ 4 4	N N	1 1	— —
	6.0	12.3	I	~~4~~ 8	N	3	F
√ √ √	6.0	12.5	I I	~~4~~ 4 5	~~N~~ K=H K=H	1 1	— —
III? 6.7. 7.0. √ √	5.9	11.8	III III	~~4~~ 2 2	~~N~~ K=H K=H	1 1	— —
	6.0	8.9	I	~~3~~ 6	N	2	—
	5.8	9.6	III b.c 375	3	K=H	2	Bright F seen
√ √	5.5	11.3	~~I~~ II II a? 375 a	2 2	~~N~~ K=H K=H	1 1	— seen
~~√~~	4.8	7.7	I ~~I~~	4 5	N. ~~N~~	1 1	— —
	4.9	11.2	III	3	K=H	2	F
	4.3	8.6	I	~~4~~ 6	~~N~~ K=H	2	—
	4.2	11.3	III b.c 376	3	K=H	2	Bright, F seen.
	4.1	11.4	III	3	K=H	1	F.
	4.0	7.9:	I	~~4~~ 6	N?	3	—

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Means

	No.	R.A.	Dec.	Mag.											
20 13 +77.2	764	20	13.8	+77	16	4.8	3545	4.4	15	4.3	1.6	5.9	4.5 4.7 5.3	3.6	✓
20 36 +66.9	1311	20	35.6	+66	60	7.4	.	6.8	6.7	1.0	7.7	6.3 6.5		6.0	✓
21 2 +76.8	824	21	2.4	+76	51	8.2	.		6.7	1.6	8.3	6.9 7.1		6.0	✓
20 13 +77.4	762 764	20 20	13.0 13.8	+77 +77	25 16	7.7 4.8	—	6.4	6.5	1.6	8.1	6.7 6.9		5.8	✓
20 10 +67.8	1235	20	10.3	+67	50	6.9	—	6.2	6.4	1.1	7.5	6.1 6.3		5.7	✓
20 10 +67.9	1233	20	9.6	+67	52	7.7	—	6.8	6.8	1.1	7.9	6.5 6.7		6.1	✓
21 8 +77.5	800	21	8.4	+77	32	6.1	—		5.4	1.7	7.1	5.7 5.9		4.7	✓
21 12 +78.0	742	21	12.2	+78	4	7.5	.		6.4	1.7	8.1	6.7 6.9		5.7	✓
21 18 +77.9	811	21	18.4	+77	59	7.0	.		6.3	1.7	8.0	6.6 6.8		5.6	✓
21 14 +78.4	744	21	14.8	+78	23	6.8	.		6.3	1.7	8.0	6.6 6.8		5.6	✓
20 42 +78.9	716	20	41.6	+78	54	6.9			5.8	1.8	7.6	6.2 6.4		5.1	✓
20 22 +69.1	1099	20	21.8	+69	3	7.7	—		6.6	1.1	7.7	6.3 6.5		5.9	✓
20 22 +79.2	2228	20	22.4	+79	8	6.4	—		6.4	.7	7.1	5.7 5.9		5.7	✓
20 23 +79.7	2234	20	22.8	+79	42	7.3	—		7.0	7.0	.7	7.7 6.3 6.5		6.3	✓
20 32 +79.7	675	20	32.6	+79	43	7.3	.		6.3	1.9	8.2	6.8 7.0		5.6	✓
20 9 +79.7	2195	20	9.3	+79	43	7.4	.		7.0	7.0	.7	7.7 6.3 6.5		6.3	✓
20 22 +80.1	650	20	22.6	+80	4	6.8	.		5.8	1.9	7.7	6.3 6.5		5.1	✓
20 20 +80.0	648	20	20.3	+80	0	7.8	—		6.8	6.8	1.9	8.7 7.3 7.5		6.1	✓
20 11 +60.2	2099	20	10.8	+60	13	6.0	—		6.9 7.3	6.8 7.2	.9	7.7 8.1	6.5 6.9 6.3 6.7	6.5	✓
20 32 +70.0	1126	20	32.1	+70	3	6.8	.		6.3	1.2	7.5	6.1 6.3		5.6	✓
20 55 +80.0	672	20	54.1	+80	0	5.3	—		5.9 6.3	1.9	7.8 8.2	6.2 7.0	6.4 6.8	5.2 5.6	✓
20 18 +70.3	1115	20	18.3	+70	19	7.5	—		6.8	6.7	1.2	7.9	6.5 6.7 6.5	6.0	✓
21 17 +80.2	688	21	18.2	+80	12	6.5									
20 38 +70.1	1136	20	38.5	+70	46	7.8	.		6.8	6.5	1.2	7.7	6.3 6.5	5.8	✓
20 38 +80.6	660 347	20 20	37.7 35.9	+80 +85	35 48	6.1 8.0	—		6.1 6.5	2.0	8.1 8.5	6.9 7.3	6.7 7.1	5.4 5.8	✓
21 10 +80.6	679	21	10.0	+80	36	7.0	—		6.4	2.0	8.4	7.0 7.2		5.7	✓
20 38 +80.9	659	20	37.2	+80	56	5.8	—		5.6 6.0	2.0	7.6 8.0	6.4 6.8	6.2 6.6	4.9 5.3	✓
20 37 +80.9	657 660	20	37.8	+80	56	7.5 6.1	—		6.5 6.8	2.0	8.5 8.8	7.3 7.6	7.1 7.4	5.8 6.1	✓
21 19 +80.6	690	21	19.2	+80	37	6.3			5.5	2.0	7.5	6.1 6.3		4.8	✓

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January 16, 1887.

Plate 738.

r	M	Type	No.	Remarks.	K	Focus	Other Lines
2.9	12.3	~~I~~ II?	377		K=H	2	Seen
2.9	12.9	I	5		N	2	—
2.5	10.6	I	6		K=.2H	3	—
2.6	12.0	II a	378		K=H	1	Seen
1.9	10.6	I?	1		N	3	—
22.8	13.8	III	379		K=H	1	seen
22.9	18.3	X?	2		K=H	1	—
22.5	16.1	I	6		N	2	—
21.9	17.2	I	10		K=.2H	3	F seen
21.1	13.5	I I	5	5	N N	1 1	— —
III? 6.4, 6.7.	20.6	18.6	III b	380	K=H	2	seen.
	20.5	13.9	II?	2	K=H	2	—
	19.8	15.3	I	10	K=.2H	2.	F
	19.5	18.9	I	4	N	1	—
	19.4	13.4	I I	4	H N N	1 1	— —
	19.1	13.9	I	7	N	2	F
III 5.5, 5.9.	19.4	20.5	III b.c	381	K=H	3	Bright seen
	19.0	20.0	I I	3	5 N K=H	1 1	— —
	19.0	19.0	I	5	K=H	1	—
	18.2	20.4	I	3	N	1	—
	17.5	14.4	III	3	K=H	1	F
III? 6.3, 6.5.	17.2	14.6	III b.c	382	K=H	2	—
	17.1	22.4	II a	383	K=H	1	Seen
	17.0	23.6	I	6	K=H	2	—
	16.8	24.1	II	3	K=H	2	F
	16.5	13.3	I? I	4 4	K=H K=H	1 1	— —
	16.5	21.8	II	6	K=H	2	—
	16.0	17.5	I I	5 5	K=.8H K=H	1 1	— —

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Means ?

	No.	R.A.	Dec.	Mag.		Br.					
20 9+61.0	1983	20 9.2	+61 39	5.8	—	6.4	.8	7.2	5.8 / 6.0	.	5.7 ✓
20 7+61.1	1975	20 6.6	+61 39	6.8	.	6.5	.8	7.3	5.9 / 6.7	.	5.8 ✓
20 17+61.8	2000	20 17.2	+61 48	5.8	—	~~5.8~~	.8	6.6	~~5.2~~ / ~~5.4~~	.	✓
20 32+81.9	706	20 32.0	+81 53	7.4	—	~~6.5~~	2.1	8.6	7.2 / 7.4	.	✓
20 53+81.9	718	20 52.8	+81 59	6.0		~~5.6~~	2.1	7.7	6.3 / 6.5	.	✓
20 3+61.6	1970	20 3.2	+61 34	5.0	—	~~6.6~~ 6.4	.8	7.4 7.7	6.2 / 6.5	6.0 / 6.3	✓
19 35+71.3	964 / ~~2497~~	19 35.8 / ~~19 39.6~~	+71 17 / ~~+58 13~~	6.7 / ~~7.1~~	—	~~6.5~~	1.2	7.7	6.3 / 6.5	.	✓
19 55+51.6	2728	19 55.4	+51 40	6.5	3480 6.0 ~~7.4~~	~~6.3~~	.5	~~6.8~~	~~5.6~~ / ~~5.4~~	.	✓
19 52+52.0	2592	19 51.9	+52 4	5.5	—	5.7	.5	6.2	4.8 / 5.0		5.0 ✓
20 6+72.5	934	20 6.2	+72 21	7.5	.	6.8 6.7	1.3	8.0	6.6 / 6.8		6.0 ✓
19 47+72.6	2547	19 47.0	+52 37	5.3	—	6.6 / 6.9	.5	7.1 7.4	5.9 / 6.2	5.7 / 6.0	5.9 / 6.2 ✓
20.2+72.7	2623	20 2.4	+52 44	5.9	—	6.1	.5	6.6	5.2 / 5.4		5.4 ✓
19 56+63.2	1584	19 56.7	+63 9	6.5	—	6.1	.9	7.0	5.6 / 5.8		5.4 ✓
19 29+78.0	863	19 29.5	+73 3	7.5	.	6.8	1.3	8.1	6.7 / 6.9		6.1 ✓
20 5+63.3	1597	20 4.9	+63 17	7.5	.	6.8 6.9	.9	7.8	6.4 / 6.6		6.2 ✓
20 3+63.5	1593	20 2.9	+63 29	6.5	.	6.2	.9	7.1	5.7 / 5.9		5.5 ✓
19 18+73.1	857	19 18.3	+73 5	4.4	—	5.8 / 6.2	1.3	7.1 7.5	5.7 / 5.9 / 6.3	5.7 / 6.1	5.1 / 5.5 ✓
19 21.7+73.3	860	19 21.7	+73 17	7.5							
~~19 36+63.1~~	~~1544~~	~~19 36.2~~	~~+63 24~~	~~6.0~~	.	~~6.5~~ 6.5	.9	7.4	6.0 / 6.2		5.8 ✓
19 4+53.4	2303	19 4.5	+53 24	7.1	—	6.8	.6	7.4	6.0 / 6.2		6.1 ✓
19 18+73.5	856	19 18.0	+73 35	7.8	.	7.1	1.4	8.5	7.1 / 7.3		6.4 ✓
20 1+64.3	1407 / ~~1405~~	20 0.8 / ~~19 59.9~~	+64 13 / ~~+64 25~~	6.5 / ~~5.0~~	—	6.4 / 6.7	.8	7.2 7.5	6.0 / 6.3	5.8 / 6.1	5.7 / 6.0 ✓
20 0+64.2	1405 / ~~1407~~	19 59.9 / ~~20 0.8~~	+64 25 / ~~+64 13~~	5.0 / ~~6.5~~	—	6.3 / 6.7	.9	7.2 7.6	7.0 / 7.4	6.8 / 6.2	5.6 / 6.0 ✓
19 2+73.9	845	19 2.2	+73 55	6.8	—	6.5	1.4	7.9	6.5 / 6.7		5.8 ✓
19 18+64.2	1344	19 18.7	+64 8	6.5	—	6.2	.9	7.1	5.7 / 5.9		5.5 ✓
18 49+73.9	835	18 49.4	+73 54	5.3	—	6.1	1.4	7.5	6.1 / 6.3		5.4 ✓
20 6+64.8	1415	20 5.9	+64 46	7.2	—	7.0 7.0	.9	7.9	6.5 / 6.7		6.3 ✓
19 35+54.6	2193	19 35.4	+54 38	5.8	—	6.2	.6	6.8	5.4 / 5.6		5.5 ✓
19 46+65.0	1400	19 46.0	+65 2	8.2	— ✓	6.6 6.5	.9	7.4	6.0 / 6.2		5.8 ✓

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Plate 738.

	V	H	Type	Hydrog. Remarks.	K	Focus	Other lines
	15.3	20.2	p II a	3842	K=H	1	Rem
∫ √	14.8	15.2	p I ? I	4 H	K=H K=H	1 1	— —
∫ √	14.8	21.2	I I	4 H	N K=H	1 1	— —
	14.5	22.9	I.	9	N	5	Freem.
	14.2	23.1	I	9	N	4	Freem.
	14.6	13.4	I	6	N	2	—
√	14.1	14.1	~~I~~ II a ~~II a~~	385 ~~2~~ 8	K=H ~~K=H~~	2 2	~~Freem~~
	14.2	23.8	I	4	N	1	—
	13.7	23.8	I	5	N	1	—
	14.0	22.0	I	6	N.	2	—
∫ √	13.5	16.2	I ? I	4 H	N K=H	1 1	— —
	13.5	16.6	I	8	K=.2H	2	—
∫ √	13.5	18.8	I. I	3 H	N K=H	1 1	— —
	13.0	19.8	I	9	K=H N	5	Freem.
∫ √	13.0	20.9	I ? I	2 H	N K=H	1 1	— —
∫ √	12.6	14.7	I I	4 H	N ? K=H	1 1	— —
∫ √	12.6	19.0	~~I~~ ~~II a~~ II a? I I	~~3~~ 2 4	~~K=H~~ K=H N	1 1	~~Allen~~ —
v	12.5	20.0	p II a	386 2	K=H	1	Allen
	12.5	23.8	I	7	K=H N	1	—
∫ √	12.1	22.1	p II	386a II a 2 2	K=H K=H	1 1	— Seen
∫ √	12.0	14.9	I I	4 H	K=H ? K=H	1 1	— —
	11.9	14.3	I	8	N	4	—
	11.6	20.8	I II a	387 2	K=H	2	—
	11.5	23.6	I	6	K=.2H	2	—
	11.4	13.4	I	4	N ?	1	—
III ? 5.4 5.7	11.4	14.1	III	l.c. 388 2	K=H	2	Bright Rem.
∫ √	11.5	15.0	I I	5 H	N N	1 1	— —
∫ √	11.4	15.8	I I.	5 5	K=H K=H	1 1	— —

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Means

	No.	R. A.	Dec.	Mag.										
												B-v.		
19 33+65.2	1369	19	33.1	+65	13	7.5	–				6.9	19	7.8	6.4 6.6	6.2 ✓
19 58+55.6	2307	19	58.2	+55	36	8.1	–				6.9	6.9	.6	7.5 6.1 6.3	6.2 ✓
19 37+55.5	2241	19	37.1	+55	26	7.0	.				6.8	6.9	.6	7.5 6.1 6.3	6.2 ✓
19 20+65.5	1345	19	19.9	+65	26	5.3	3345	4.6	12	+6	4.8	1.0	5.8	4.4 4.6	4.1 ✓
18 51+75.3	682	18	51.0	+75	16	5.8	3211	5.6	12	+6	5.3	1.5	6.8	5.4 5.6 6.2	4.6 ✓
20 6+65.8	1433	20	5.8	+65	53	7.0	.				6.4	1.0	7.4	6.0 6.2	5.7 ✓
20 22+55.9	2324	20	21.7	+55	55	6.5									
~~20 +76.0~~	771	20	3.6	+76	4	6.0	–				6.8	6.4	1.5	7.9 6.5 6.7	5.7 ✓
19 27+55.8	2213	19	27.5	+55	50	6.3	.				6.5	.6	7.1	5.7 5.9	5.8 ✓
18 46+75.2	678	18	46.0	+75	9	7.5	.				6.3	1.5	7.8	6.4 6.6	5.6 ✓
~~19 27+55.8~~	~~2215~~	~~19~~	~~28.2~~	~~+55~~	~~25~~	~~6.3~~									
18 58+75.6	683	18	58.4	+75	35	6.5	.				5.9	1.5	7.4	6.0 6.2	5.2 ✓
19 51+66.3	1253	19	51.8	+66	19	7.0	.				6.7	6.8	1.0	7.8 6.4 6.6	6.1 ✓
19 53+56.3	2331	19	53.2	+56	18	6.3	–				6.1	.6	6.7	5.3 5.5	5.4 ✓
19 38+66.1	1225	19	38.9	+66	8	7.9	.				6.9	6.9	2.0	8.9 7.5 7.7	6.2 ✓
19 14+76.4	717	19	14.4	+76	19	5.5	–				4.8	1.6	6.4	5.0 5.2	4.1 ✓
19 38+56.4	2283	19	37.6	+56	23	7.8					7.0	7.2	.6	7.8 6.4 6.6	6.5 ✓
19 59+56.6	2344	19	59.8	+56	41	7.2					6.7	6.3	.7	7.0 5.6 5.8	5.6 ✓
19 44+56.7	~~2303~~	~~19~~	~~44.5~~	~~+56~~	~~45~~	~~7.5~~									
	2304	19	44.5	+56	33	7.0	.				6.7	6.9	.6	7.5 6.1 6.3	6.2 ✓
19 41+56.6	2291	19	40.7	+56	41	6.3	–				6.8	6.6	.7	7.3 5.9 6.1	5.9 ✓
19 27+56.3	2250	19	27.3	+56	20	6.9	–				6.4	.6	7.0	5.6 5.8	5.7 ✓
19 33+56.6	2272	19	33.0	+56	40	6.5	–				6.7	6.6	.7	7.3 5.9 6.1	5.9 ✓
19 58+67.1	1216	19	58.3	+67	4	7.4	–				6.7	6.7	1.0	7.7 6.3 6.5	6.0 ✓
19 50+57.1	2084	19	50.3	+57	8	5.4	3455	5.1	10	+4	5.4			7.6 4.9 5.1	4.7 ✓
19 4+76.8	712	19	3.9	+76	50	6.5	–				6.1	1.6	7.7	6.3 6.5	5.4 ✓
19 14+66.9	1179	19	13.8	+66	52	7.5	–				6.4	1.0	7.4	6.0 6.2	5.7 ✓
20 5+57.4	2144	20	4.7	+57	23	7.2					6.6	.7	7.3	5.9 6.1	5.9 ✓
20 2+67.5	1222	20	2.2	+67	27	5.1	–				5.7 / 6.0	1.0	6.7 / 7.0	5.5 5.8 / 5.3 5.6	5.6 / 5.3 ✓
19 59+57.3	2115	19	58.7	+57	15	7.7	.				6.8	6.8	.7	7.5 6.1 6.3	6.1 ✓
19 56+57.4	2106	19	56.0	+57	25	7.5	√–				6.8	6.6	.7	7.2 5.8 6.0	5.8 ✓

dm 678+75

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Plate 438.

V	H	Type	Remarks	No.	Lines	K	Focus	other lines.
✓	✓	10.0	14.6	I	I	3 4	K=H	K=H 1 1	— —
✓	✓	10.0	14.9	I	I	3 4 5	K=H	K=H 1	— —
✓	✓	10.4	16.7	III	III	2 2	K=H	K=H 1 1	— —
		10.1	16.9		II[a]	389 3 2		K=H 1	Rden
		10.0	17.0		I	7		K=H 2	—
		10.1	17.8		I	4		K=H 1	—
		10.5	19.9		II	2		K=H 2	—
		10.5	23.6		II	b.c. ? 390 3		K=2H 5	Green.
		9.8	22.4		II[a]	391 2	K=H	2	Green
		9.6	23.3		III	b 392 2	K=H	2	Green
III ? 6.3, 6.6.		9.2	16.4		III	b.c 393 2	K=H	2	Green
✓	✓	8.3	14.5	I	I	4 6	N	K=2H 1 2	— —
✓	✓	8.0	15.2	I	I	4 5	K=H	K=H 1 1	— —
		7.8	13.5		III	? 2		K=H 1	—
		8.2	17.2		I	7		K=2H 3	—
		8.0	18.3		I	3		N. 1	—
		7.5	16.9		I	8		K=2H 2	—
		7.5	17.1		I	9		K=2H 3	Green.
V		7.3	19.3		III	b? 393[a] 3		K=H 3	—
✓	✓	6.0	14.1	I	I	3 8	N	N 1 1	— —
		6.4	14.6		III	2	K=H	1	—
		6.5	16.4		III	b.c. 394 3	K=1.2H	5	Green.
✓	✓	6.0	18.7	I	I	3 4 4	K=H	K=H 1 1	— —
		6.0	20.0		I	6	K=H	2	—
✓		5.8	21.9	I	I	3	N.	K=H 1 1	— —
		5.5	20.1		I	5	K=.5H	1	—
✓	✓	4.8	15.1	I	I	2 8	N	N 1 1	— —
		5.0	17.7		I	5	K=.5H	1	—

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Means

	No.	R.A.	Dec.	Mag.		Br.					
19 √9 + 68.0	1097	19 59.7	+68 4	7.5	—	6.8	6.9	1.1	8.0	6.6 6.8	6.2 ✓
19 √8 + 68.0	1096	19 58.2	+68 2	7.5	—	6.7	6.9	1.1	8.0	6.6 6.8	6.2 ✓
19 √3 + √7.8	2092	19 52.5	+57 52	6.3	—	6.5 6.7	6.5 6.8	.7	7.2 7.5	6.0 6.3 {5.8 6.1}	5.8 6.1 ✓
19 36 + 77.9	734	19 36.2	+77 57	7.0	—		6.3	1.7	8.6	6.6 6.8	5.6 ✓
19 46 + 68.1	1082	19 46.6	+68 4	6.4	—		6.3	1.1	7.4	6.0 6.2	5.6 ✓
19 27 + 77.8	728	19 27.5	+77 53	7.8	—		6.6	1.7	8.3	6.9 7.1	5.9 ✓
19 40 + √7.6	2057	19 40.4	+57 40	6.2	—		6.5	.7	7.2	5.8 6.0	5.8 ✓
19 12 + 67.4	1129	19 12.5	+67 24	3.4	—		4.9	1.0	5.9	4.5 4.7	4.2 ✓
18 44 + 77.6	702	18 44.5	+77 32	7.0	—		6.4	1.7	8.1	6.7 6.9	5.7 ✓
18 37 + 77.5	699	18 36.8	+77 25	6.5	—	6.0 6.3	6.3	1.7	7.7 8.0	6.5 6.8 {6.3 6.6}	5.3 ✓ 5.6
19 53 + √8.5	2013	19 53.2	+58 28	5.1	—	6.3 6.6	6.6	.7	7.0 7.3	5.8 6.1 {5.6 5.9}	5.6 ✓ 5.9
19 √9 + 68.9 +	1086	19 59.7	+69 0	7.8	.	6.4	6.5	1.1	7.6	6.2 6.4	5.8 ✓
~~19 √2 + 79.2~~	~~648~~	~~19 54.1~~	~~+79 5~~	~~7.0~~	~~R~~						
	645	19 51.7	+79 10	7.5	—	6.5	6.5	1.8	8.3	6.9 7.1	5.8 ✓
20 10 + 79.3	660	20 9.8	+79 16	6.5	—	6.4 6.6	6.6	1.8	8.2 8.4	7.0 7.2 {6.8 7.0}	5.7 5.9 ✓
19 45 + 68.9	1079	19 44.5	+68 2	6.2	—		5.7	1.1	6.8	5.4 5.6	5.0 ✓
19 46 + √9.0	2121	19 45.7	+59 3	6.5	.		6.8	.7	7.5	6.1 6.3	6.1 ✓
19 √1 + √9.3	2137	19 51.0	+59 19	5.8	—		6.0	.7	6.7	5.3 5.5	5.3 ✓
19 30 + 79.3	628	19 30.4	+79 18	6.3	—		5.1	1.8	6.9	5.5 5.7	4.4 ✓
19 32 + 69.4	1053	19 32.6	+69 25	5.0	—		{5.2 5.4	1.1	6.3 6.5}	4.9 5.3	4.5 ✓ 4.7
20 2 + 70.0	1102	20 1.9	+70 3	8.1	—	7.1	7.0	1.2	8.2	6.8 7.0	6.3 ✓
19 √8 + 69.9	1084	19 59.1	+69 58	6.5	—		6.4 6.6	1.1	7.5 7.7	6.3 6.5 {6.1 6.3}	5.7 5.9 ✓
19 48 + 69.9	1070	19 48.6	+69 53	3.8	—		5.0 5.3	1.2	6.2 6.5	5.0 5.3 {4.8 5.1}	4.3 4.6 ✓
19 3√ + 69.9	1057	19 35.0	+69 56	8.2	—	6.9	7.0	1.2	8.2	6.8 7.0	6.3 ✓
18 √6 + 79.8	604	18 55.8	+79 46	6.5	—		5.9	1.9	7.8	6.0 6.2	5.2 ✓
18 37.7 + 79 42	591	18 37.7	+79 42	7.8							
~~19 30 + 79.~~	~~2060~~	~~19 30.9~~	~~+79 51~~	~~6.2~~	.	~~6.8~~	6.4	.7	7.1	5.7 5.9	5.7 ✓
19 38 + 60.2	1991	19 38.0	+60 10	6.5	—		6.5	.8	7.3	5.9 6.1	5.8 ✓
19 √8 + 60.6	2070	19 58.0	+60 41	7.5		7.2	7.2	.8	8.0	6.6 6.8	6.5 ✓
19 19 + 80.5	609	19 18.9	+80 30	7.1	√ —		6.4	2.0	8.4	7.0 7.2	5.7 ✓

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Plate 738.

V	H	Type	No. Lines	K	Focus	other Lines.
5.0	17.8	I III	1	N	1	—
4.5	17.5	II[a] 395	2	K=H N	1	seen
4.2	18.5	I	4	K=H N	1	—
4.5	19.0	III III	2 2	K=H N K=2.0 H	1 1	— —
4.0	23.5	II[a] 396	2	N	13	seen
3.5	18.3	I	4	K=H N	1	—
III? 6.4, 6.8.	3.0	13.7 III[b]	397 2	K=H N	1	seen
11.8 a.m	2.7	16.6 I	4	K=.5 H N	1	—

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Mean 7.

	No.	R.A.	Dec.	Mag.							
19 18 +80,5	607	19	17.7	+80	28	7.2	–		Bm.		
19 48 +60,8	2026	19	48.1	+60	50	6.1	–		6.9 / 7.1	2.0	8.9 / 9.1	7.7 / 7.9	(7.5) / 7.7	6.2 / 6.4 ✓
19 8 +80,7	603	19	7.7	+80	42	8.2	–		6.9	.8	7.7	6.3 / 6.5		6.2 ✓
19 32 +70,7	1073	19	32.1	+70	41	6.3	–		7.0	2.0	9.0	7.6 / 7.8		6.3 ✓
18 11 +79.9	571	18	11.0	~~+80~~ 79	60	6.5	–		6.6 / 7.0	1.2	7.8 / 8.2	6.6 / 7.0	6.4 / 6.8	5.9 / 6.3 ✓
19 36 +71.3	964	19	35.8	+71	17	6.7	–		5.3	1.9	7.2	5.8 / 6.6		4.6 ✓
20 3 +61,5	1970	20	3.2	+61	34	5.0	–		6.4	1.2	7.6	6.2 / 6.4		5.7 ✓
19 28 +81,6	660	19	28.3	+81	39	8.0	–	✓	6.5 / 6.8	.8	7.3 / 7.6	6.7 / 6.4	5.9 / 6.2	5.18 / 6.10 ✓
									6.7	2.1	8.8	7.4 / 7.6		6.0 ✓

$\frac{62}{5}$ $\frac{42}{5}$ $\frac{47}{5}$ $\frac{41-21}{5}$

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January 16, 1887.

Plate 770.

v	H	Type	No. Lines Remarks.	K	Focus	other lines
21.9	17.4	I	4	K=H 2	1	—
20.8	8.4	I	7	K=.2 H	2	—
19.8	15.5	I	2	N	1	—
19.5	20.7	III b P 243	2	N	1	—
17.0	10.1	I	6	K=.2 H	2	—
16.1	10.6	I	5	K=.5 H	1	—
14.6	7.5	I	5	N	1	—
14.5	23.6	I	6	K=.1 H?	2	—
14.4	23.2	I	5	N	2	—
14.0	12.0	I	8	K=.3 H	3	—
14.0	22.1	I	4	N	1	—
13.5	16.7	I	3	N	1	—
13.2	11.4	I	3	N	1	—
13.3	6.3	I	4	K=H	1	—
13.0	19.9	I	8	K=H	2	F P
11.8	13.0	I	10	K=.1 H	4	F
12.0	17.4	I	I.b 243a 7	N	2	2 Seen
11.5	14.2	III b P 244	2	N	1	—
10.5	23.8	III b.c 245	5 2 2	K=2.5 H	3	F Seen
10.1	7.2	I	5	N	1	—
8.1	10.5	I	3	N	1	—
8.4	17.4	I	5	K=.2 H	1	—
7.6	17.1	I	3	N	1	—
7.5	17.3	I	6	K=.2 H	2	—
7.4	19.4	III	3	K=H	1	F
6.6	16.6	III b.c 246	3 2	K=1.2 H	3	Bright Seen
6.0	20.1	I	4	K=4	1	—
6.0	12.5	I	5	K=.2 H?	1	—

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Mean 16

	No.	R.A.	Dec.	Mag.			Br.				
19 52 +52.1	2572	19	51.9	+52	4	5.5	–		6.9	.5	7.4	5.2	5.3
20 27+62.5	1821	20	27.2	+62	31	4.0	–		6.5	.8	7.3	5.1	4.9
19 56+63.1	1584	19	56.7	+63	9	6.5	.		7.3	.9	8.2	6.0	5.7
19 18+73.1	857	19	18.3	+73	5	4.4	—		6.8 / 7.1	1.3	8.1 / 8.4	5.9 / 6.2	5.2 / 5.5
20 33+74.4	872	20	33.4	+74	26	5.5	—		6.5	1.4	7.9	5.7	4.9
20 15+54.9	2329	20	14.8	+54	57	6.0	–		7.0	.6	7.6	5.4	5.4
26 + 55.6	2411	20	25.8	+55	35	6.0							
20 56+74.4	~~764~~	~~20~~	~~56.5~~	~~+75~~	~~21~~	~~6.0~~	3702 6.3 21-1		6.9	1.5	8.4	6.2	5.3
19 20+65.5	1345	19	19.9	+66	26	5.3	–		5.8	1.0	6.8	4.6	4.2
18 51+75.3	682	18	51.0	+75	16	5.8	3211 5.6 23+1		6.4	1.5	7.9	5.7	4.8
20 10+56.1	2376	20	10.0	+56	8	4.5	—		5.9	.6	6.5	4.3	4.3
18 58+75.6	683	18	58.4	+75	35	6.5	.		7.0	1.5	8.5	6.3	5.4
19 53+56.3	2331	19	53.2	+56	18	6.3	3469 6.1 19-3		7.4	.6	8.0	5.8	5.8
20 16+66.4	1281	20	16.1	+66	23	6.2	3559 6.2 23+1		7.5	1.0	8.5	6.3	5.9
20 41+66.2	1318	20	41.4	+66	8	5.5	–		6.9	1.0	7.9	5.7	5.3
19 14+76.3	717	19	14.4	+76	19	5.5	—		6.2	1.6	7.8	5.6	4.6
20 13+77.3	764	20	13.8	+77	16	4.8	–		4.7	1.6	6.3	4.1	3.1
19 50.5 +57.1	2084	19	50.63	+57	8	5.4							
~~20 [illegible] +67.1~~	~~1200~~	~~19~~	~~48.6~~	~~+67~~	~~7~~	~~7.4~~							
	~~841~~	~~19~~	~~50.2~~	~~+74~~	~~56~~	~~8.8~~	?		6.0 6.4	+0 1.0	7.4	5.2	4.8
20 2+67.4	1222	20	2.2	+67	27	5.1	—		7.0 / 7.3	1.0	8.6 / 8.3	5.8 / 6.1	5.4 / 5.7
19 12+67.4	1129	19	12.5	+67	24	3.4	—		5.7 / 6.0	1.0	6.7 / 7.0	4.5 / 4.8	4.4 / 4.4
21 8+77.5	800	21	8.4	+77	32	6.1	3733 5.8 27+5		6.8	1.7	8.5	6.3	5.2
20 42+78.9	716	20	41.6	+78	54	6.9	.		7.1	1.8	8.9	6.7	5.5
19 44+68.9	1079	19	44.5	+68	60	6.2	–		6.7	1.1	7.8	5.6	5.1
19 51+59.3	2137	19	51.0	+59	19	5.8	3457 6.0 16-6		6.9	.7	7.6	5.4	5.3
19 30+79.3	628	19	30.4	+79	18	6.3	—		6.5	1.8	8.3	6.1	4.9
19 32+69.4	1053	19	32.6	+69	25	5.0	—		6.6 / 6.8	1.1	7.7 / 7.9	5.5 / 5.7	5.0 / 5.2
19 48+69.9	1070	19	48.6	+69	53	3.8	—		6.0 / 6.3	1.2	6.2 / 7.5	4.0 / 5.3	4.4 / 4.7
19 38+60.2	1991	19	38.0	+60	10	6.5	–		7.1	.8	7.9	5.7	5.5
20 22+80.1	650	20	22.6	+80	4	6.8	–		6.9	1.9	8.8	6.6	5.3

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Plate 470.

V	H	Type	No. Lines	K	Focus	other Lines.
5.9	9.8	III	1	N	1	—
4.4	11.6	III	2	N	1	—
4.0	8.1	I d?	4	N	1	—
2.5	10.6	I	5	K=.5H?	1	—

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Mean 16

	No.	R.A.	Dec.	Mag.		
20 53 +80,0	672	20	54.1	+80	0	5.3	–
20 37 +80,9	659	20	37.2	+80	56	5.8	–
21 19 +80,6	690	21	19.2	+80	37	6.3	.
20 17 +61,8	2000	20	17.2	+61	48	5.8	+

Br.

7.0 } 1.9 } 8.9 6.7 } . 5.4 ✓
7.3 } 9.2 7.0 } 5.7 }

6.8 } 2.0 } 8.8 6.6 } . 5.2 ✓
7.1 } 9.1 6.9 } 5.5 }

6.9 2.0 8.9 6.7 . 5.3 ✓

~~6.8~~ .8 77 ~~5.5~~ .

$\frac{129}{6}$. $\frac{7-10}{6}$

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