KG
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976	1 0	50 – 60
974	0 0	45 – 55
ν 960	0 46	45 – 55
↓ 955	4 40	25 – 35
↓ 1000	1 40	50 – 60

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Index.

Letter	Plate	Page.	Letter	Plate	Page.	Letter	Plate	Page.
* E.	1333	4.						
"	1395	6.						
"	1450	14						
"	1384	26						
"	1519	40						
"	1478	48						
"	1520	50						
"	1521	66						
"	1570	70						
"	1584	72						
"	1576	84						
"	1564	98						
Pole Plate								
I	2242	116						

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June 2, 1887.

Plate 1333.

τ	H	Type	No. Lines	K	Focus	Other Lines.
5.9	14.5	I	6	K=.2H	1	—
5.0	14.8	I	9	K=.2H	3	—
5.4	14.8	I	4	K=H	1	—
5.1	17.3	III	2	K=H	1	—
5.5	18.4	I?	4	K=H	1	—
5.9	19.5	I	8	K=.5H	3	F.
4.6	8.4	I?	4	K=H	1	—
4.4	10.9	IIa? 1230	3	K=H	3	F. perm.
4.2	14.4	b 1231	2	K=H	1	—
4.4	18.6	II	2	K=H	1	—
3.5	6.9	d?	5	K=H	1	—
3.9	8.1	I	5	K=.8H	1	—
3.4	N.3	I	6	K=.2H	1	—
3.5	16.9	III III	1, 2	N	K=H 1, 1	— —
3.5	17.0	d? Id:3	H	N	K=H 1	perm.
3.6	19.4	I	5	N	1	—
3.4	20.6	III	2	K=H	1	—
2.7	16.1	III	2	K=H	1	—
2.4	22.7	II	2	K=H	1	—

11 15

12.49

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Mean 1

No.	R. A.	Dec.	Mag	No H.P. Major.	Gr. Br.	Br.		
17 28 +79.4	540	17 28.8	+ 79° 27′	7.3	–	√ 6.0	6.1	1.8 7.9
17 24 +60.2	1734	17 23.8	+ 60 10	5.5	–	√ 5.4	5.5	.8 6.3
17 25 +79.7	536	17 24.7	+ 79 41	8.0	–	√ 6.9	7.0	1.9 8.9
16 57 +79.7	517	16 57.1	+ 79 44	6.8	–	√ 6.5 6.9	6.6 7.0	1.9 8.5 8.9
16 44 +79.4	508	16 44.6	+ 79 30	7.8	–	√ 6.7	6.8	1.8 8.6
16 34 +79.3	498	16 33.9	+ 79 16	5.5	–	√ 4.7	4.8	1.8 6.6
alter.	18	36	+ 79					
18 38 +79.6	~~541~~	~~18 37.7~~	~~+ 79~~	~~42~~	~~7.8~~ –	√ 6.4	6.5	1.9 8.4
	570	18 10.9	+ 79	59	6.5 ?			
18 11 +79.9	571	18 11.0	+ 79	60	6.5 ?	√ 4.6	4.7	1.9 6.6
17 31 +80.3	544	17 30.7	+ 80	15	6.2 –	√ 6.2 6.7	6.3 6.8	1.9 8.2 8.7
16 41 +80.1	519	16 40.8	+ 80	3	7.0 –	√ 6.4	6.5	1.9 8.4
18 56 +79.5	604	18 55.8	+ 79	46	6.5 –	√ 5.7	5.8	1.9 7.7
17 51 +60.4	1788	17 50.7	+ 60	26	6.5 –	√ 6.4	6.5	.8 7.3
17 20 +79.9	925	17 20.7	+ 79	36	7.0 –	√ 6.3	6.4	1.2 7.6
17 15 +60.9	1743	17 14.8	+ 60	14	6.3 –	√ 6.7 7.0	6.8 7.1	.8 7.6 7.9 6.9 7.2
17 14 +60.9	1742	17 14.4	+ 60	32	6.7 .	6.7 √ 6.6	6.7	.8 7.5
16 56 +79.7	906	16 55.8	+ 79	41	7.0 .	√ 6.0	6.1	1.2 7.3
16 59 +60.9	1728	16 59.5	+ 60	31	6.5 –	√ 6.8 7.0	6.9 7.1	.8 7.7 7.9
17 9 +81.0	568	17 8.6	+ 81	4	7.3 –	√ 6.2 6.4	6.3 6.5	8.3 2.0 8.5
15 47 +80.4	487	15 47.8	+ 80	26	6.7 v –	√	~~X~~	~~2.0~~ •

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Dark plate. Very hard to measure

Amt. of Fog. due to moon & clouds 5.3

Amt. of Fog. due to Sheffield 7.0

June 6, 1887.

Plate 1395.

	T	H	Type	No. Lines	K	Focus	Other Lines.	
11	H0	22.9	8.2	I	5	N	2	1
		21.2	6.8	I d?	6	K=H	3	f.
		21.0	7.8	II a 12323		K=H	2	f.
		21.2	14.7	I	4	K=H	1	—
?		21.2	15.8	II a 12333		K=H	3	f. pecc.
		21.4	18.4	III b.c. 12343		K=H	3	f.
		20.6	8.2	II?	2	?	2	—
		20	11.5	III b 12352		K=H	2	—
		20.0	12.1	III	2	K=H	1	—
		20.0	22.2	I	2	K=H	1	—
?		19.1	6.8	I?	5	K=H	1	pecc.
		19.7	10.7	II a 14202		K=H	1	—
		19.7	22.3	III	1	N	1	—
		18.6	15.5	III	2	K=H	1	—
		18.0	17.8	I	4	K=H	1	—
		18.4	20.7	III b 14212		K=H	2	—
		18.6	21.3	I	6	N	2	f.
		18.5	22.8	II a 14222		K=H	2	—
		17.8	10.4	I	5	N	3	—
		17.8	12.5	I ?	3	N	1	—
		17.8	12.8	III	2	K=H	1	—
		17.2	13.1	II a 14232		K=H	1	—
		17.8	15.1	II	2	K=H	1	—
		17.7	17.4	I ?	6	K=H	1	—
?		17.4	19.6	II a 14242		K=H	3	pecc.
		17.5	23.3	I ?	2	K=H	1	—
		17.5	23.6	III	2	K=H	1	—
		17.8	24.1	II	2	K=H	1	—

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Means 5

	No.	R.A.	Dec.	Mag.			Cor. Bx.	Bx.			
18 58+75.6	683	18 58.4	+73	35	6.5	.					
19 14+76.3	717	19 14.4	+76	19	5.5	—	4.5	5.3	1.6	6.9	5.6
18 30+76.9	2113	18 30.1	+56	56	5.4	—	5.5	6.0	0.7	6.7	5.4
18 5+66.9	1077	18 5.3	+66	56	6.5	—	6.4	6.9	0.9	7.8	6.5
17 56+76.9	627	17 55.9	+76	38	5.2	—	4.8	5.3	1.6	6.9	5.6
17 51+56.9	2033	17 51.2	+56	54	3.5	—	5.0 / 5.4	5.5 / 5.9	1.7	6.2 / 6.6	4.9 / 3.3
19 4+76.9	712	19 3.9	+76	50	6.3	—	5.9	6.4	1.6	8.0	6.7
18 37+77.4	694	18 36.8	+77	23	6.3	—	5.4 / 6.0	6.2 / 6.5	1.7	7.9 / 8.2	6.6 / 6.9
18 31+77.5	696	18 31.3	+77	28	7.7	—	6.1 / 6.4	6.6 / 6.9	1.7	8.3 / 8.6	7.0 / 7.3
16 59+77.0	639	16 58.7	+77	4	7.2	—	6.1	6.6	1.6	8.2	6.9
18 47+67.6	1096	18 47.0	+67	38	7.0	—	6.2	6.7	1.9	8.6	7.3
18 44+77.5	702 / ~~1014~~	18 44.5 / ~~18 25.4~~	+77 / ~~+67~~	32 / ~~26~~	7.0 / ~~6.5~~	—	5.7	6.2	1.7	7.9	6.6
17 25+67.5	1014	17 25.4	+67	26	6.3	—	6.0 / 6.3	6.5 / 6.8	1.0	7.5 / 7.8	6.2 / 6.3
17 58+78.3	616	17 58.4	+78	20	6.5	—	5.8 / 6.3	6.3 / 6.8	1.7	8.0 / 8.5	6.7 / 7.2
18 0+58.6	1781	18 0.4	+58	38	6.5	—	6.1	6.6	0.7	7.3	6.0
17 32+68.2	938	17 32.5	+68	13	5.5	—	5.3 / 5.7	5.8 / 6.2	1.1	6.9 / 7.3	5.6 / 6.0
17 4+77.9	641	17 3.1	+77	32	6.5	.	5.2	5.7	1.7	7.4	6.1
16 49+77.7	634	16 49.6	+77	45	6.0	—	5.1	5.6	1.7	7.3	6.0
18 22+58.7	1809	18 21.8	+58	48	4.8	3116 4.8 1.3 0	4.9	5.4	0.7	6.1	4.8
18 18+68.7	989	18 17.9	+68	40	6.8	.	5.8	6.3	1.1	7.4	6.1
18 16+68.7	984	18 16.2	+68	42	6.0	—	6.0 / 6.3	6.5 / 6.8	1.1	7.6 / 7.9	6.3 / 6.6
18 24+78.9	632	18 24.8	+78	59	7.7	—	6.0	6.5	1.8	8.3	7.0
18 3+78.6	621	18 2.9	+78	41	7.4	—	6.0	6.5	1.8	8.3	7.0
17 50+68.7	963	17 50.3	+68	43	7.4	—	6.1	6.6	1.1	7.7	6.4
17 38+68.8	949	17 37.8	+68	48	4.8	—	4.7	5.2	1.1	6.3	5.0
16 42+78.0	562	16 42.0	+78	2	6.8	—	5.9	6.4	1.7	8.1	6.8
16 39+77.9	628	16 39.9	+77	58	7.8	—	6.1	6.6	1.7	8.3	7.0
16 36+77.7	627	16 36.9	+77	43	6.5	—	6.0	6.5	1.7	8.2	6.9

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June 6, 1887.

Plate 1395.

		No!	Type	Lines	K	Focus	Lines.	Other
16.0	12.1		I	4	K=H	1		—
16.8	12.3		~~III~~ I	3	K=H	1		F
17.0	14.1		III	1	N	1		—
16.5	15.5		~~II~~ I a?	1425 2	K=H	1		—
16.6	16.5		III	2	K=H	1		—
16.1	18.2		I	5	N	2		—
15.2	7.2		I	7	N	3		F,
15.2	10.5		~~II~~ I a?	1426 6,	K=H	2		F,
? 15.4	14.5		~~II~~ a	1427 3	K=H	3		F, peee.
15.6	19.4		~~III~~ I	2	K=H	1		—
15.6	22.1		III	2	K=H	1		—
15.0	23.2		I	7	N	3		F,
14.5	13.7		I	5	N	1		—
14.5	17.8		~~III~~ I b?	1428 2	K=H	2		—
14.2	18.2		I	3	N	1		—
14.9	20.9		III	2	K=H	1		—
13.3	9.0		~~II~~ I ?	5	N	1		—
13.6	13.0		~~II~~ I ?	5	N	1		—
13.8	22.0		II	2	K=H	1		—
12.2	6.6		~~III~~ I b?	1429 2	K=H	2		—
12.8	12.0		I	9	N	4		F,
12.3	13.9		~~II~~ I a	1430 2	K=H	1		—
12.6	19.2		III	2	K=H	1		—
11.2	6.9		~~II~~ I a	1431 2	K=H	1		—
11.3	15.8		~~II~~ I a	1432 2	K=H	2		peee.
10.0	17.5		I	4	N	2		—
10.4	10.6		I	5	N	2		—
10.0	12.0		~~II~~ I a	1433 3	K=1,2 H	4		F,

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Mean .5

	No.	R.A.	Dec.	Mag.				Cor. Br.	Br.			
1900	Weltzien											
18 33.2 +79 34	18,532	18 37.0	+79 30	7.8				Not found on Chart	6.2			Bonn spot
18 34 +79.1	587	18 33.5	+79 7	7.0	–			✓5.4	5.9		7.7	6.4
								5.9	6.4	1.8	8.2	6.9
18 14 +79.1	576	18 14.1	+79 5	8.2	–			✓6.3	6.8		8.6	7.3
								6.6	7.1	1.8	8.9	7.6
17 59 +79.4	564	17 58.6	+79 21	7.5	–			✓5.8	6.3	1.8	8.1	6.8
17 47 +79.3	556	17 47.1	+79 16	7.3	–			✓5.9	6.4	1.8	8.2	6.9
17 28 +79.4	540	17 28.8	+79 27	7.3	•			✓5.7	6.2	1.8	8.0	6.7
19 30 +79.3	628	19 30.4	+79 18	6.3	3371	5.9	13 0	✓4.9	5.4	1.8	7.2	5.9
18 56 +79.7	604	18 55.8	+79 46	6.3	–			✓5.2	5.7	1.9	7.6	6.3
18 11 +79.9	570	18 10.9	+79 59	6.5	? –			✓4.3	4.8	1.9	6.7	5.4
	571	18 11.0	+79 60	6.8								
17 38 +69.7	933	17 38.8	+69 39	6.3	–			✓6.0	6.5		7.7	6.4
								6.1	6.6	1.2	7.8	6.3
16 46 +79.7	511	16 46.2	+79 11	6.3	–			✓5.8	6.3		8.1	6.8
								6.1	6.6	1.8	8.4	7.1
16 35 +79.3	498	16 33.9	+79 16	5.5	2792	5.5	14 +1	✓4.6	5.1	1.8	6.9	5.6
18 9 +60.4	1813	18 9.4	+60 22	6.2	•			✓6.0	6.5	1.8	8.3	7.0
17 31 +80.3	544	17 30.7	+80 15	6.2	–			✓5.5	6.0		7.9	6.6
								5.9	6.4	1.9	8.3	7.0
17 51 +60.4	1787	17 50.7	+60 26	6.3	•			✓6.2	6.7	1.8	8.3	7.2
16 57 +79.7	517	16 57.1	+79 44	6.8	–			✓6.0	6.5		8.4	7.1
								6.3	6.8	1.9	8.7	7.4
19 19 +80.5	609	19 18.9	+80 30	7.1	•			✓5.8	6.3	2.0	8.3	7.0
18 16 +70.8	985	18 16.1	+70 46	7.2	•			✓6.1	6.6	1.2	7.8	6.3
16 41 +80.1	519	16 40.8	+80 5	7.0	–			✓5.6	6.1	1.9	8.0	6.7
18 56 +71.1	915	18 56.2	+71 6	5.3	–			✓5.2	5.7		6.9	5.6
								5.6	6.1	1.2	7.3	6.0
18 22 +71.3	889	18 23.0	+71 14	4.7	3120	4.2	11 –2	✓3.6	4.0	1.2	5.3	4.0
	6.19	18 19.7	+81 26	8.5								
18 19 +81.4	~~621~~	~~18 23.6~~	~~+81 25~~	~~8.7~~	–			✓5.7	6.2	2.1	8.3	7.0
17 9 +81.0	568	17 8.6	+81 4	7.3	–			✓5.5	6.0		8.0	7.0
								5.9	6.4	2.0	8.4	7.1
18 55 +71.6	914	18 55.1	+71 35	7.8	–			✓6.0	6.5	1.3	7.8	6.5
17 58 +72.0	818	17 57.7	+72 0	6.0	–			✓5.2	5.7	1.3	7.0	5.7
18 36 +62.4	1634	18 36.3	+62 24	5.7	3153	5.5	14 +1	✓5.6	6.1	0.8	6.9	5.6
19 10 +82.2	572	19 9.4	+82 9	6.0	3279	6.9	10 –3	✓5.2	5.7	2.2	7.9	6.6
18 23 +72.7	839	18 23.7	+72 40	3.8	–			✓3.7	4.2	1.3	5.5	4.2

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June 6, 1887.

Plate 1395.

	K	H	Type	Lines	K	Focus	Lines.	Other
?	10,8	17,8	II	a 1434	2	K=H	4	prem.
	10,0	18,5	III		2	K=H	1	—
	10,3	19,1	III	h.c.? 1435	2	K=1,2H?	3	Bright prem?
	10,9	22,0	II	a 1436	2	K=H	2	—
	9,6	10,3	I	I ?	2	K=H	1	—
	9,0	12,6	I		7	K=.2H	2	—
	9,5	13,5	I		5	N	1	—
	9,0	21,3	II	?	2	K=H	1	—
	8,0	9,8	I		5	N1	2	—
	8,4	16,4	II		2	K=H	1	—
	8,2	20,6	I		3	N	1	—
	7,0	8,7	III		1	N	1	—
	7,5	11,4	I		6	K=.5H	2	—
	7,2	23,4	I	I ?	4	K=H	1	—
?	6,8	13,0	II	a 1437	2	K=H	2	prem.
	6,1	13,7	II		2	K=H	1	—
	6,2	16,0	II	a? 1438	2	K=H	1	—
	6,6	19,3	I		11	K=H	1	—
	6,7	21,9	I		3	N1	1	—
	5,9	6,2	I	?	4	K=H	2	—
?	5,8	20,8	I	I	5	K=H	1	prem.
	4,8	8,0	II		2	K=H	1	—
	4,2	8,3	I	I ?	4	K=H	1	—
	4,9	8,6	I		3	N	1	—
	4,2	9,0	I		5	N	2	—
	4,3	10,5	III		2	K=H	1	—
	4,4	21,8	II		2	K=H	1	—
	3,4	8,2	I		4	N1	1	—

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Mean. 5

	No.	R. A.	Dec.	Mag.			Corr. Bx.	Bx.				
17 44 +72,2	804	17	44.5	+72	13	4.8	–	✓	4.2	4.6	4.7	1.3	6.0	4.7
	805	17	44.6	+72	14	6.2		✓	6.0		6.5		7.8	6.5
17 40 +72,5	800	17	39.9	+72	32	6.0	–		6.3		6.8	1.3	8.1	6.8
17 1 +82,3	498	17	1.0	+82	16	4.0	–	✓	4.4		4.9		7.1	5.8
									4.7		5.2	2.2	7.4	6.1
17 33 +61,9	1678	17	33.3	+61	59	6.0	–	✓	5.7		6.2	0.8	7.0	5.7
19 17 +82,5	578	19	16.6	+82	28	7.7	–	✓	6.0		6.5	2.2	8.7	7.4
18 42 +83,1	536	18	43.2	+83	4	6.2	–	✓	4.9		5.4	2.3	7.7	6.4
18 29 +82,9	540	18	28.6	+82	52	7.3	•	✓	5.4		5.9	2.3	8.2	6.9
16 23 +82,4	481	16	24.0	+82	26	8.3	–	✓	6.2		6.7	2.2	8.9	7.6
19 35 +83,2	553	19	33.4	+83	10	6.0	3378 6.3 17+4	✓	5.2		5.7	2.3	8.0	6.7
17 39 +83,4	512	17	39.0	+83	26	7.3	–	✓	6.0		6.5	2.4	8.9	7.6
16 29 +82,9	485	16	29.1	+82	58	8.0	•	✓	6.0		6.5	2.3	8.8	7.3
18 49 +73,9	835	18	49.4	+73	54	5.3	–	✓	5.4		5.9		7.3	6.0
									5.8		6.3	1.4	7.7	6.4
19 12 +83,7	547	19	10.4	+83	42	6.3	–	✓	5.1		5.6	2.4	8.0	6.7
15 42 +82,7	463	15	42.2	+82	44	7.3	–	✓	5.5		6.0	2.2	8.2	6.9
18 13 +64,3	1252	18	13.1	+64	20	5.0	–	✓	5.3		5.8	0.9	6.7	5.4
18 34 +84,6	412	18	32.8	+84	35	7.3	–	✓	5.6		6.1	2.6	8.7	7.4
17 56 +74,6	740	17	55.7	+74	36	6.8	–	✓	6.1		6.6	1.4	8.0	6.7
16 40 +84,0	361	16	40.2	+84	1	7.2	–	✓	5.3		5.8	2.5	8.3	7.0
15 59 +83,4	453	15	58.8	+83	23	7.3	•	✓	5.5		6.0	2.3	8.3	7.0
20 43 +83,1	588	20	43.2	+83	7	6.2	–	✓	4.8		5.3	2.3	7.6	6.3
16 8 +84,0	351	16	7.0	+84	2	7.7	–	✓	5.4		5.9	2.5	8.4	7.1
20 31 +84,1	462	20	30.0	+84	5	7.0	–	✓	5.8		6.3	2.5	8.8	7.3
18 36 +65,3	1283	18	35.7	+65	21	6.0	–	✓	6.2		6.7	0.9	7.6	6.3
20 20 +84,3	451	20	20.0	+84	14	7.0	•	✓	5.2		5.7	2.5	8.2	6.9
18 51 +75,3	682	18	51.0	+75	16	5.8	3211 5.6 14+1	✓	5.0		5.5	1.5	7.0	5.7
18 26 +65,4	1271	18	25.6	+65	28	5.0	–		5.9		6.4		7.4	6.1
									6.3		6.8	1.0	7.8	6.3
15 36 +84,3	345	15	35.1	+84	22	8.3	–	✓	5.9		6.4	2.5	7.9	6.6
18 58 +75,6	683	18	58.4	+75	35	6.5	•	✓	5.8		6.3	1.5	7.8	6.3

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June 6, 1887.

Plate 1395.

			Type	No. Lines	K	Other Focus	Other Lines.
	3.3	20.2	III	2	K=H	1	—
	3.5	20.2	II @? 1439	2	K=H	1	—
	2.3	14.6	I	7	H	4	?
1	0	2.9	19.2	I	5	K=H	1	—

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No.	R. A.	Dec.	Mag.						
15 50+85.3	263	15	50.2	+85	18	7.2	–		
17 5+75.4	612	17	5.0	+75	25	6.5	–		
18 20+86.6	269	18	19.1	+86	36	4.3	·		
16 6+85.7	269	16	6.6	+85	43	7.5	–		

Mean 5

Obs.	Br.				
5.9	6.4		7.1	7.8	
6.2	6.7	2.7	9.4	8.1	·
5.2	5.7	1.5	7.2	5.9	·
	·	·	·	·	·
5.7	6.2	2.8	9.0	7.7	·

106/8 7.3/8

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Amt. of Fog due to moon & clouds: 7.4

Amt. of Fog due to chemicals: 7.6

June 18, 1887.

Plate 1450.

	V	H	Type	No. Lines	K	Focus	Other Lines.	
	23.0	7.5	I	5	N	1	—	
✓	22.0	11.5	III	? 2 3	K = H, K : H	1	—	F.
	22.1	14.8	II	2	K = H	1	—	
	22.6	22.3	II ?	2	K = H	1	—	
	21.1	6.0	I ?	6	K = H	3	F?	
	21.2	13.8	II ?	2	K = H	1	—	
?	21.2	15.1	II a	1236	K = H	3	F, pecu.	
?	21.4	17.2	III b.c.	1237 3	K = H	3	F. Brdth F. pecu.	
	20.8	6.7	II a	1238 3	K = H	2	F	
?	20.4	7.5	II a	1239 3	K = H	1	F pecu.	
	20.0	10.7	III b	1240 3.	K = H	2	F	
	20.0	11.3	III	2.	K = H	1	—	
	20.1	20.7	III	2	K = H	1	—	
	20.0	21.4	II	2	K = H	1	—	
	19.0	5.9	II ?	2	K = H	1	—	
	19.1	6.3	III	1	N	1	—	
	19.2	7.7	I	4	K = H	1	—	
	19.6	9.9	I	4	K = H	1	—	
	19.2	13.0	III	1	N	1	—	
	19.8	21.3	III ?	2	K = H	1	—	
	19.4	22.5	II	2	N	1	F.	
	18.0	14.8	I	4	K = H	1	—	
	18.6	14.9	III	1	N	1	—	
	18.4	16.6	I	4	N	1	—	
	18.6	19.7	III b	1241 2	K = H	2	F?	
	18.8	20.5	I	6	N	2	—	
?	18.6	22.0	II a	1242 2	K = H	2	pecu.	
	18.1	23.3	III	2	K = H	1	—	

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Means.

	No.	R. A.	Dec.	Mag.	Corr. Br.	Br.			
18 58 +75.6	683	18 58.4	+75	35	6.5				
18 12 +75.5	2080	18 12.2	+56	33	7.0				
18 0 +76.4	2060	18 0.4	+56	25	8.0				
	2061	18 0.4	+56	23	7.2				
16 58+76.6	608	16 57.3	+75	38	6.8				
19 14+76.3	717	19 14.4	+76	19	5.5				
18 5+66.9	1077	18 5.3	+66	56	6.5				
17 56+76.9	667	17 55.9	+76	38	5.2				
17 51+56.9	2033	17 51.0	+56	34	3.5				
18 30+56.9	2113	18 30.1	+56	56	5.4				
19 4+76.9	712	19 3.9	+76	50	6.5				
18 37+77.4	699	18 36.8	+77	25	6.5				
18 31+77.5	696	18 31.3	+77	28	7.7				
17 38+57.4	1791	17 38.2	+57	23	7.0				
16 59+77.0	639	16 58.7	+77	4	7.2				
18 47+67.6	1096	18 47.0	+67	38	7.0				
18 32+57.7	1882	18 32.1	+57	41	7.5				
18 37+67.7	1085	18 37.3	+67	39	7.5				
18 44+77.5	702	18 44.5	+77	32	7.0				
18 10+67.9	1052	18 9.6	+67	58	7.5				
17 25+67.5	1014	17 25.4	+67	26	6.5				
17 31+57.6	1780	17 31.2	+57	40	6.3				
18 0+58.6	1781	18 0.4	+58	38	6.5				
17 58+78.3	616	17 58.4	+78	20	6.5				
17 50+68.3	961	17 49.8	+68	23	7.7				
17 32+68.2	938	17 32.5	+68	13	5.5				
17 4+77.9	641	17 3.1	+77	32	6.5				
16 49+77.7	634	16 49.6	+77	45	6.0				
16 37+77.7	627	16 36.9	+77	43	6.5				

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1887phae.proj..843F

June 18, 1887.

Plate 1450.

T	H	Type	No. lines	K	Focus	Other lines.	
17.8	5.7	II	2	K=H	1	—	
17.2	6.3	II? 1242a / II a 2	2	K=H	K=H 1	1	Less
17.6	9.2	I	7	H	3	F.	
17.8	11.6	I	7	H	2	F.	
17.8	11.9	III	2	K=H	1	—	
17.1	12.4	II?	2	K=H	1	—	
17.1	13.3	I / 4		K=H	1	—	
17.8	14.4	III	2	K=H	1	—	
17.8	16.4	I	6	K=H	1	F.	
17.5	18.7	II a/1243		K=H	3	F. pecu.	
17.8	22.6	III	2	K=H	1	—	
? 17.8	22.8	I / 5		K=H	1	pecu.	
16.0	8.3	III	2	K=H	1	—	
16.0	11.4	I	√	H	√ K=H	1	—
16.8	11.6	III	2	K=H	1	—	
√√ 16.5	12.6	III / III?	2	H	K=H	1	—
? 16.6	14.8	I / 5		K=H	1	pecu.	
16.0	15.4	I? / III		H	H	1	—
16.8	15.8	III	2	K=H	1	—	
16.3	17.5	I	5	K=1.8H	2	—	
16.7	18.0	II	3	K=H	1	F.	
15.1	6.5	I	6	H	3	F.	
15.3	9.8	I	7	K=1.8H	2	F.	
15.4	13.7	II a/1244		K=1.2H	3	F. Bright pecu.	
16.8	18.5	I / 6? 1245		K=H	1	—	
15.0	22.1	III	2	K=H	1	—	
15.8	21.4	III	3	K=H	1	F.	
15.4	24.1	II	3	K=1.4H	3	F.	

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1887phae.proj..843F

Means

	No.	R.A.	Dec.	Mag.				Corr. Br.	Br.				
19 27 +77.9	728	19 27.5	+77	53	7.8	–		✓6.6	7.1	1.7	8.8	7.6	
18 46 +68.5	1019	18 46.5	+68	35	7.8	–		7.0 ✓6.6	7.1	1.1	8.2	7.0	
18 22 +58.7	1809	18 21.8	+58	45	4.8	3116	4.8 12 0	✓4.8	5.3	0.7	6.0	4.8	
18 18 +68.7	989	18 17.9	+68	46	6.8	•		✓5.9	6.4	1.1	7.5	6.3	
18 16 +68.7	984	18 16.2	+68	42	6.0	–		✓6.1	6.6	1.1	7.7	6.5	
								6.4	6.9		8.0	6.8	
18 24 +78.9	632	18 24.8	+78	59	7.7	–		✓6.4	6.9	1.8	8.7	7.5	
18 14 +79.1	5 176	18 14.1	+79	5	8.2	–		✓6.6	7.1	1.8	8.9	7.7	
18 3 +78.6	621	18 2.9	+78	41	7.4	–		✓6.3	6.8	1.8	8.6	7.4	
17 50 +68.7	963	17 50.3	+68	43	7.4	–		✓6.0	6.5	1.1	7.6	6.4	
17 38 +68.8	949	17 37.8	+68	48	4.8	–		✓4.8	5.3	1.1	6.4	5.2	
16 42 +78.0	562	16 42.0	+78	2	6.8	–		✓6.1	6.6	1.7	8.3	7.1	
								6.2	6.7		8.4	7.2	
16 39 +77.9	628	16 39.9	+77	38	7.8	–		✓6.2	6.7	1.7	8.4	7.2	
18 26 +59.4	1899	18 25.7	+59	28 7	6.2	–		✓6.5	7.0	0.7	7.7	6.5	
								6.6	7.1		7.8	6.6	
18 35.7 +79.5	Celtzin 18,532	18 37.0	+79	30	total 7.8	Not found on ✓ chart		6.0	6.5				Bonn 8 107
18 34 +79.1	587	18 33.5	+79	7	7.0	–		✓6.3	6.8	1.8	8.6	7.4	
								6.0	6.5		8.3	7.1	
18 23 +79.3	579	18 23.0	+79	19	8.3	–		7.0 6.7	7.2		9.0	7.8	
								7.3 7.0	7.5	1.8	9.3	8.1	
17 59 +79.4	564	17 58.6	+79	21	7.3	–		✓6.1	6.6	1.8	8.4	7.2	
17 56 +69.6	958	17 56.5	+69	38	6.7			✓6.7	7.2	1.1	8.3	7.1	
17 47 +79.3	556	17 47.1	+79	16	7.3	–		✓6.0	6.5		8.3	7.1	
								6.2	6.7	1.8	8.5	7.3	
17 28 +79.4	540	17 28.8	+79	27	7.3	–		✓5.8	6.3	1.8	8.1	6.9	
17 41 +69.2	939	17 41.3	+69	12	7.0	–		✓6.2	6.7	1.1	7.8	6.6	
19 30 +79.3	628	19 30.4	+79	18	6.3	3371	5.9 16 +4	✓5.2	5.7	1.8	7.5	6.3	
18 56 +79.7	604	18 55.8	+79	46	6.5	–		✓5.4	5.9	1.9	7.8	6.6	
	5 180	18 10.9	+79	59	6.5	?							
18 11 +79.9	581	18 11.0	+79	60	6.5	–		✓4.5	5.0	1.9	6.9	5.7	
17 38 +69.7	933	17 38.0	+69	39	6.5	–		✓6.0	6.5	1.1	7.6	6.4	
16 57 +79.7	517	16 57.1	+79	44	6.8	–		✓6.4	6.9	1.9	8.8	7.6	
								6.7	7.2		9.1	7.9	
16 46 +79.2	511	16 46.2	+79	11	6.3	–		✓6.1	6.6	1.8	8.4	7.2	
								6.5	7.0		8.8	7.6	
16 34 +79.3	498	16 33.9	+79	16	5.5	–		✓4.6	5.1	1.8	6.9	5.7	

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1887phae.proj..843F

June 18, 1887.

Plate 1450.

T	K	Type	lines	K	Focus	lines	Other lines	
14.5	6.4	II	2	2	K=H	K=H	1	— —
14.4	10.1	II a	2	2	K=H	K=H	1	— seen
14.5	12.5	I	7	N	2			F.
14.4	17.1	I	5	K=5H	1			—
14.6	17.1	III b	1246	2	K=H		2	—
14.2	23.7	I	7	N	2			F.
13.5	5.9	II a	1247	2	K=H		1	—
13.6	7.3	III		2	K=H		1	—
13.4	7.3	III		2	K=H		1	—
13.1	8.3	I	3	N	1			—
13.0	9.3	I	4	K=H	1			—
13.6	12.1	I	3	N	1			—
13.8	21.3	II		2	K=H		1	—
12.1	5.7	III b?	1248	3	K=1.2H		2	F. Bright prec.
12.1	8.2	I I	I.2	4	2	K=H	K=H	1 — —
12.7	11.1	I	10	N.			4	F.
12.3	11.3	II a	1249	2	K=H		1	F prec.
12.4	12.7	III	III	1	3	N	K=H	1 — F
12.4	12.9	II ?	II.2	2	K=H	K=H	1	— —
12.4	13.2	II a	1250	2	K=H		1	prec.
12.0	14.4	III		1	N		1	—
12.4	16.1	I I	I	5	K=H	K=H	1	— —
12.8	18.6	III		2	K=H		2	—
12.8	21.0	I	4	N	1			—
11.1	6.1	I	6	K=5 K=1.2H	1			F.
11.6	10.3	II II?	[illegible]	2	K=H		1	—
11.6	12.8	III		2	K=H		1	—
11.0	12.9	II		2	K=H		1	—

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1887phae.proj..843F

Means 5

	No.	R.A.	Dec.	Mag.			Corr. Br.	Br.				
19 33 +79.5	629	19 33.2	+79 29	8.0	–		7.0 ✓	6.7	7.2	1.8	9.0	7.8
18 54 +80.1	591	18 53.4	+80 8	8.5	–		6.9 ✓	6.6	7.1	1.9	9.0	7.8
18 9 +60.4	1813	18 9.4	+60 22	6.2	•			✓ 5.7	6.2	0.8	7.0	5.8
17 51 +60.4	1787	17 50.7	+60 26	6.3	–			✓ 6.0	6.5	0.8	7.3	6.1
17 31 +80.3	544	17 30.7	+80 15	6.2	–			✓ 5.5 / 6.4	6.0 / 6.5	1.9	7.9 / 8.4	6.7 / 7.2
17 24 +60.1	1754	17 23.8	+60 10	5.5	2928 5.8	8		✓ 5.3	5.8	0.8	6.6	5.4
18 36 +60.5	1840	18 36.6	+60 34	6.8	–			✓ 6.4	6.9	0.8	7.7	6.5
18 44 +70.4	1020	18 44.3	+70 26	8.0	–			✓ 6.4 / 6.6	6.9 / 7.1	1.2	8.1 / 8.3	6.9 / 7.1
18 45 +70.6	1023	18 44.8	+70 39	6.3	–			✓ 6.2 / 6.5	6.7 / 7.0	1.2	7.9 / 8.2	6.7 / 7.0
19 19 +80.5	609	19 18.9	+80 30	7.1	•			✓ 5.9	6.4	2.0	8.4	7.2
19 8 +80.7	603	19 7.9	+80 42	8.2	–			✓ 6.2	6.7	2.0	8.7	7.5
18 16 +70.8	985	18 16.1	+70 46	7.2	•			✓ 6.0	6.5	1.2	7.7	6.5
16 41 +80.1	579	16 40.8	+80 5	7.0	–			✓ 5.7	6.2	1.9	8.1	6.9
18 56 +71.1	915	18 56.2	+71 6	5.3	–			✓ 5.3 / 5.6	5.8 / 6.1	1.2	7.0 / 7.3	5.8 / 6.1
19 25 +81.0	655	19 24.0	+81 0	8.3	–		7.1 ✓	6.7	7.2	2.0	9.2	8.0
18 22 +71.3	889	18 23.0	+71 14	4.7	3120 4.2	12		✓ 3.7	4.2	1.2	5.4	4.2
18 21 +71.4	884	18 21.4	+71 27	7.7	–			✓ 6.2	6.7	1.2	7.9	6.7
18 28 +81.4	622	18 26.7	+81 24	7.2	–		7.0 7.3 7.2	6.5 / 6.9	7.0 / 7.4	2.1	9.1 / 9.5	7.9 / 8.3
18 24 +81.4	621	18 23.6	+81 25	8.7	✓ –		7.0	6.7	7.2	2.1	9.3	8.1
18 19 +81.4	619	18 19.4	+81 26	8.5	–			✓ 6.1	6.6	2.1	8.7	7.5
18 2 +71.6	864	18 2.0	+71 37	8.0	–			✓ 6.7 / 7.6	7.2 / 7.5	1.3	8.5 / 8.8	7.3 / 7.6
17 54 +61.4	1710	17 54.2	+61 25	6.8	–		6.8 ✓	6.3	6.8	0.8	7.6	6.4
17 9 +81.0	568	17 8.6	+81 4	7.3	–			✓ 5.8 / 6.1	6.3 / 6.6	2.0	8.3 / 8.6	7.1 / 7.4
17 20 +70.9	925	17 20.7	+70 36	7.0	•			✓ 5.8	6.3	1.2	7.5	6.3
18 55 +71.6	914	18 55.1	+71 35	7.5	–			✓ 6.0	6.5	1.3	7.8	6.6
18 28 +71.6	894	18 28.2	+71 37	7.5	–			✓ 6.4	6.9	1.3	8.2	7.1
18 8 +61.9	1727	18 8.3	+61 31	7.0	–			✓ 6.5 / 6.6	7.0 / 7.1	0.8	7.8 / 7.9	6.6 / 6.7
18 12 +72.1	829	18 11.4	+72 7	7.8	–			✓ 6.5	7.0	1.3	8.3	7.1

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1887phae.proj..843F

June 18, 1887.

Plate 1450.

				Type Lines			Other Focus Lines.
					K		
?	11,3	15.0	II a?	1251 5	K=H	3	F. pecu.
	11,4	22,2	III	2	K=H	1	—
✓	11,1	22,8	III	III ? 2	2 K=H K=H	1	— —
✓	10,4	5,9	II	II 2	2 K=H K=H	1	— —
	10,0	6,4	I	5	?	2	F.
	10,0	7,8	II	2	K=H	1	—
	10,8	8,4	I	4	K=H	1	—
	10,4	10,0	I	5	N	2	—
	10,0	15,8	I	4	K=H	1	—
?	10,8	17,0	II a	12524	K=H	4	F. Bright? pecu.
	10,1	17,6	III b	1253 2	K=H	2	—
	10,8	17,8	I	5	K=1,2H	1	—
?	10,4	18,5	III?	3	K=1,2H	4	F. pecu.
?	10,9	20,9	II a	12542	K=H	2	pecu.
	10,5	22,9	II?	1	N	1	—
	9,4	5,7	III	2	K=H	1	—
	9,6	9,7	I	4	K=H	1	—
	9,9	11,2	II a	12555	K=1,5H	5	F.
	9,0	12,0	I	8	K=1,2H	3	F.
	9,5	12,8	I	5	N	2	—
	9,5	16,1	I	4	?	1	—
	9,1	17,1	II	2	K=H	1	—
	9,5	17,5	II a	1256 2	K=H	1	—
	9,1	20,7	I	4	K=H	1	—
	10,0	23,5	III	2	K=H	1	—
	8,0	9,2	I	6	K=1,2H	2	F.
✓	8,0	13,0	III	III 2	3 K=H K=H	1	— F
	8,4	15,8	II	2	K=H	1	—

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1887phae.proj..843F

Means

	No.	R. A.	Dec.	Mag.		Cor. Br.	Br.				
17 58+72.0	818	17 57.7	+72	6	6.0	–	4.9	5.4	1.3	6.7	3.3
16 19+81.0	542	16 19.4	+81	4	8.5	–	6.6 / 6.8	7.1 / 7.3	2.0	9.1 / 9.3	7.9 / 8.1
16 10+81.0	541	16 10.8	+81	1	7.3	–	7.0 6.6 / 7.2 6.9	7.1 / 7.4	2.0	9.1 / 9.4	7.9 / 8.2
19 59+81.2	687	19 59.4	+81	12	7.7	–	6.5	7.0	2.0	9.0	7.8
18 36+62.3	1637	18 36.3	+62	24	5.7	–	5.5	6.0	0.8	6.8	5.6
18 30+62.4	1629	18 30.0	+62	26	7.0	–	6.5	7.0	0.8	7.8	6.6
19 28+81.6	660	19 28.3	+81	39	8.0	–	6.4	6.9	2.1	9.0	7.8
19 10+82.2	572	19 9.4	+82	9	6.0	3279 6.9 10 –2	5.2	5.7	2.2	7.9	6.7
17 55+62.6	1587 / 1586	17 55.2	+62	38 / 37	7.2 / 7.0	–	6.4	6.9	0.8	7.7	6.5
17 44+72.2	804 / 805	17 44.5 / 44.6	+72	13 / 12	4.8 / 6.2	–	3.9 / 3.8	4.4 / 6.3	1.3	5.7 / 7.6	4.5 / 6.4
17 40+72.5	800	17 39.9	+72	32	6.0	–	6.1	6.6	1.3	7.9	6.7
17 39+72.1	799	17 39.3	+72	8	7.3	–	6.1	6.6	1.3	7.9	6.7
17 1+82.3	498	17 1.0	+82	16	4.0	–	3.5 / 3.7	4.0 / 4.2	2.2	6.2 / 6.4	5.0 / 5.2
17 33+61.9	1688	17 33.3	+61	39	6.0	–	5.5	6.0	0.8	6.8	5.6
16 6+81.2	538	16 8.0	+81	14	8.0	–	6.5	7.0	2.0	9.0	7.8
18 40+62.6	1641	18 39.7	+62	37	6.3	–	6.3 / 6.5	6.8 / 7.0	0.8	7.6 / 7.8	6.4 / 6.6
19 17+82.5	578	19 16.6	+82	28	7.7	–	5.9	6.4	2.2	8.6	7.4
18 23+72.7	839	18 23.7	+72	40	3.8	–		B.	1.3	B.	B.
18 42+83.1	536	18 43.3	+83	4	6.2	–	4.7	5.2	2.3	7.5	6.3
18 29+82.9	540	18 28.6	+82	32	7.5	•	5.5	6.0	2.3	8.3	7.1
17 36+82.9	521	17 35.0	+82	51	8.5	–	6.3	6.8	2.3	9.1	7.9
17 43+73.0	787	17 43.0	+73	2	8.0	–	6.2	6.7	1.3	8.0	6.8
17 47+62.9	1573	17 48.0	+62	49	6.3	–	6.0	6.5	0.9	7.4	6.2
16 23+82.4	481	16 24.0	+82	26	8.5	–	6.2	6.7	2.3	8.9	7.7
15 55+81.3	551	15 54.7	+81	22	7.4	–	6.4 / 6.6	6.9 / 7.1	2.1	9.0 / 9.2	7.8 / 8.0
19 35+83.2	553	19 33.2	+83	10	6.0	–	4.9	5.4	2.3	7.7	6.5
18 28+83.6	530	18 28.1	+83	37	7.8	–	6.9 / 7.2	6.5 / 6.7	2.4	9.4 / 9.6	8.2 / 8.4
17 39+83.4	512	17 39.0	+83	26	7.5	–	6.0	6.5	2.4	8.9	7.7

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June 18, 1887.

Plate 1450.

			No.		Other
	H	Type	lines	K	Focus lines.
8.2	16.7	II	4	K=H	1 —
8.2	20.0	II	4	K=H	1 —
7.0	6.8	II?	2	K=H	1 1 —
7.5	10.8	I	6	K=.2H	2 —
7.0	13.5	III	3	K=H	1 F,
7.5	13.7	III?	2	K=H	1 —
7.0	15.0	II	2	K=H	1 —
? 7.6	15.7	I	4	K=H	1 diff.
7.0	17.4	III	2	K=H	1 —
? 7.6	19.2	II a/1257	2	K=H	1 diff.
7.1	21.1	II	2	K=H	1 —
7.8	21.5	II	2	K=H	1 —
7.8	21.8	II	2	K=H	1 —
7.4	22.8	II a/1258	2	K=H	1 —
7.5	23.2	I	6	K=.5H	2 F,
6.4	6.1	II	2	K=K	1 —
? 6.9	7.9	III b? 1259	3	K=H	2 F. Bright diff.
? 6.7	11.9	II a/1260	2	K=H	3 F, diff.
? 6.1	13.0	II?	6	K=H	1 1 diff.
6.2	15.2	I	6	K=H	1 —
6.6	18.7	I	6	K=.5H	2 F
6.5	19.9	III	2	K=H	1 —
6.8	21.2	I?	4	K=H	1 —
5.8	5.6	I	7	K=H	2 F,
5.5	7.9	III	1	N	1 —
5.0	9.0	II	1	N	1 —
5.0	14.8	III	2	K=K	1 —
5.9	15.6	III	2	K=H	1 —

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1887phae..proj..84F

Means

	No.	R.A.	Dec.	Mag.		Cor Pr.	Br.				
17 45 +73.5	791	17 45.3	+73 31	7.3	–	6.1	6.6	1.4	8.0	6.8	
16 29 +82.9	485	16 29.1	+82 58	8.0	–	5.8	6.3	2.3	8.6	7.4	
20 16 +82.9	608	20 14.6	+82 59	8.5	–	6.4	6.9	2.3	9.2	8.0	
19 12 +83.7	547	19 10.4	+83 42	6.5	–	5.1	5.6	2.4	8.0	6.8	
18 6 +64.2	1245	18 6.0	+64 12	7.0	–	6.4 6.5	6.9 7.0	0.9	7.8 7.9	6.6 6.7	
18 17 +83.9	527	18 15.8	+83 54	7.7	–	6.1 6.2	6.6 6.7	2.4	9.0 9.1	7.8 7.9	
17 58 +64.1	1237	17 58.3	+64 9	7.0	–	6.1	6.6	0.9	7.5	6.3	
17 39 +83.9	511	17 38.6	+83 49	8.3	–	6.2	6.7	2.4	9.1	7.9	
17 40 +74.1	720	17 40.0	+74 5	7.4	–	6.6 6.8	7.1 7.3	1.4	8.5 8.7	7.3 7.5	
17 39 +63.7	1371	17 39.4	+63 45	6.9	–	6.3	6.8	0.9	7.7	6.5	
16 5 +83.2	457	16 4.9	+83 13	8.5	–	6.4	6.9	2.3	9.2	8.0	
17 12 +73.3	759	17 12.0	+73 20	7.8	–	6.5 6.6	7.0 7.1	1.4	8.4 8.5	7.2 7.3	
15 59 +82.8	470 ~~452~~	15 59.6 ~~15 58.1~~	+82 48 ~~+83 43~~	8.2 ~~8.4~~	–	6.4	6.9	2.3	9.3	8.0	
15 42 +82.7	463	15 42.2	+82 44	7.5	–	5.4	5.9	2.2	8.1	6.9	
16 59 +73.3	751	16 59.2	+73 19	6.0	–	5.5	6.0	1.4	7.4	6.2	
19 2 +73.9	845	19 2.2	+73 55	6.8	–	6.2	6.7	1.4	8.1	6.9	
18 49 +73.9	835	18 49.4	+73 54	5.3	–	5.5 5.8	6.0 6.3	1.4	7.4 7.7	6.2 6.5	
18 13 +64.3	1252	18 13.1	+64 20	5.0	–	4.9	5.4	0.9	6.3	~~5.2~~ 5.1	
18 34 +84.6	412	18 32.8	+84 35	7.5	–	5.5	6.0	2.6	8.6	7.4	
17 56 +74.6	740	17 55.7	+74 36	6.8	–	5.8	6.3	1.4	7.7	6.5	
16 40 +84.0	361	16 40.2	+84 0	7.2	–	5.2	5.7	2.5	8.2	7.0	
16 19 +83.5	468	16 18.1	+83 47	8.2	–	6.1 6.3	6.6 6.8	2.4	9.0 9.2	7.8 8.0	
15 59 +83.4	453	15 58.8	+83 23	7.3	–	5.6	6.1	2.3	8.4	7.3	
20 43 +83.1	588	20 43.2	+83 7	6.2	–	5.0	5.5	2.3	7.8	6.6	
18 51 +74.5	792	18 51.0	+74 34	7.5	–	6.6 6.8	7.1 7.3	1.4	8.5 8.7	7.3 7.5	
20 0 +84.4	445	20 0.5	+84 24	8.5	–	6.5	7.0	2.5	9.5	8.3	
17 59 +75.2	647	17 59.2	+75 10	7.0	–	6.2 6.4	6.7 6.9	1.5	8.2 8.4	7.0 7.2	
17 38 +84.7	383	17 37.0	+84 44	7.7	–	6.0 6.2	6.5 6.7	2.6	9.1 9.3	7.9 8.1	

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June 18, 1887.

Plate 1450.

T	H	Type	No. lines	K	Focus	Other lines.
5.4	16.3	I	4	N	1	—
5.6	17.2	~~II~~ I ?	~~I~~ 5	K=H	1	—
5.4	18.9	I	4	K=H	1	—
? 5.9	20.2	II a	1261 3	K=H	2	F, pecu.
4.1	7.3	I	4	K=H	1	—
4.8	7.4	II a	1262	K=H	1	—
4.9	8.0	I	5	K=.2H	2	—
4.1	8.2	I	6	N	3	—
4.4	8.3	~~II~~ I	~~I~~ 5	K=H	1	—
4.2	9.4	III b	1263	K=H	2	F.
4.0	13.7	I	5	K=.5H	1	—
4.0	13.9	I	4	K=H	1	—
4.1	19.3	II	2	K=H	1	—
4.4	21.2	II	2	K=H	1	—
5.1	24.2	II ?	3	K=2.5H	2	F.
3.3	7.4	I	5	N	2	—
3.8	13.6	I	6	K=.2H	2	—
3.0	18.7	I	6	K=.2H	2	—
3.4	19.6	III	2	K=H	1	—
3.5	21.3	I	6	K=H	2	—
3.5	21.5	~~I~~ II	~~II~~ 2	K=H	1	—
3.0	22.3	II ?	2	K=H	1	—
2.3	14.0	I	10	K=.2H	4	F.

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1887phae.proj..842F

Means

	No.	R.A.	Dec.	Mag.		Corr.	Brc.				
17 21+84.9	378	17 21.1	+84 57	8.2	.	5.9	6.4	2.6	9.0	7.8	.
17 48+64.8	1228	17 48.1	+64 48	7.0	–	6.4	6.9	0.9	7.8	6.6	.
17 27+74.8	710	17 26.9	+74 47	7.0	–	6.4	6.9	1.3	8.4	7.2	.
16 8+84.0	351	16 7.0	+84 2	7.7	–	5.3	5.8	2.3	8.3	7.1	.
18 36+65.3	1283	18 38.7	+65 21	6.0	–	5.8	6.3	0.9	7.2	6.0	.
20 31+84.1	462	20 30.0	+84 5	7.0	–	5.9	6.4	2.3	8.9	7.7	.
20 20+84.3	451	20 20.0	+84 14	7.0	–	5.2	5.7	2.3	8.2	7.0	.
18 51+75.3	682	~~18 31.~~ 18 51.0	+ 75 16	5.8	32||1 56 13 +14	4.9	5.4	1.3	6.9	5.7	.
18 31+65.3	1276	18 30.9	+65 20	6.8	–	6.4	6.9	0.9	7.8	6.6	.
	~~1277~~	~~18 31.5~~	~~+65 16~~	~~8.5~~		5.4	5.9		6.9	5.7	
18 26+65.4	1271	18 25.6	+65 28	5.0	–	5.7	6.2	1.0	7.2	6.0	.
18 5+65.7	1240	18 5.0	+65 42	6.8	–	6.0	6.5	1.0	7.5	6.3	.
18 19+85.6	294	18 18.1	+85 40	7.5	–	5.7	6.2	2.8	9.0	7.8	.
16 8+84.9	352	16 7.8	+84 60	8.4	–	6.3	6.8	2.6	9.4	8.2	.
15 36+84.3	345	15 35.1	+84 22	8.3	–	6.2	6.7	2.3	9.2	8.0	.
15 1+83.1	431	15 0.4	+83 6	6.0	–	5.0	5.5	2.3	7.8	6.6	.
18 58+75.6	683	18 58.4	+75 35	6.5	.	5.5	6.0	1.3	7.3	6.3	.
18 8+75.8	655	18 8.2	+75 46	6.5	–	5.9	6.4	1.3	7.9	6.7	.
16 6+85.7	269	16 6.6	+85 43	7.5	–	5.2	5.7	2.8	8.5	7.3	.
15 50+85.3	263	15 50.2	+85 18	7.2	–	5.9	6.4	2.7	9.1	7.9	.
						6.1	6.6		9.3	8.1	
17 6+75.5	613	17 6.3	+75 30	5.8	–	5.5	6.0	1.3	7.3	6.3	.
17 5+75.4	612	17 5.0	+75 25	6.5	–	6.4	6.9	1.3	8.4	7.2	.
16 57+75.6	608	16 57.5	+75 38	6.8	–	6.0	6.5	1.5	8.0	6.8	.
18 20+86.6	269	18 19.1	+86 36	4.5	–						.

$\frac{71}{6}$ $\frac{5-6}{6}$

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1887phae.proj..843f

Amount of fogging due to moon & clouds 5.7
Amount of fogging due to chemicals {8.0 / 6.5

Dark Plate (Jan. 6, 1888)
Very hard to measure.

August 12, 1887.
Plate 1384.

12 40	x	H	Type	No. Lines	K	Focus	Other lines	
✓✓	22.5	8.2	I? I?4	H K=H	K=H	1	1	— —
✓✓	22.4	9.7	II	2 2	K=H	K=H	1	1 — —
✓✓	22.6	11.0	? II?	2 2	K=H	K=H	1	1 — —
	22.9	11.9	III	2	K=H		3	—
✓✓	22.2	13.8	III ?	1 2 N	K=H		1	1 — —
	22.6	17.2	I	9	?		5	F
✓✓	22.2	17.4	II	2 3	K=H	K=H	1	F
	22.0	21.1	II?	2	K=H		1	—
✓✓	21.0	7.9	III	2 2	K=H	K=H	1	1 — —
✓✓	21.2	9.4	II ?	1 2 N	K=H		1	1 — —
✓✓	21.0	9.5	II ?	1 2 N	K=H		1	1 — —
✓✓	21.2	10.0	I? I? x H	H N	K=H		1	1 — —
	21.9	12.2	I	5	K=.5H		2	F
✓✓	21.6	13.9	III	2 2	K=H	K=H	1	1 — —
✓✓	21.0	14.6	III	2 2	K=H	K=H	1	1 — —
✓✓	21.0	14.9	III ?	2 2	K=H	K=H	1	1 — —
	21.1	15.6	I	7	K=.2H		2	F
	21.9	16.3	II	2	K=H		1	—
	21.1	17.9	I	4	K=H		1	—
	21.5	20.4	III	2	K=H		1	—
	21.1	21.9	II	2	K=H		1	—
✓✓	20.9	8.8	III ?	2 2	K=H	K=H	1	1 — —
✓✓	20.9	9.6	? II ?	2 2	K=H	K=H	1	1 — —
✓✓	20.8	9.9	? IIa.	1263a 2 3	K=H	K=H	1	1 F Lem
✓✓	20.1	9.7	III	2 2	K=H	K=H	1	1 — —
✓✓	20.7	10.8	I? I? H	H N	K=H		1	1 —
	20.1	14.6	III	1	N		1	—
✓✓	20.9	14.8	III	2	K=H		1	—

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1887phae.proj..843F

Mean 6

	No.	R.A.	Dec.	Magn.			Gr. Br.	Br.			
19 19+71.1	945	19 18.9	+71 4	6.8	–	3	6.8 6.8				
19 11+71.2	934	19 10.2	+71 15	8.5	–	3	7.1 6.4	7.0	1.2	8.2	7.2
19 3+71.3	923	19 3.0	+71 18	8.3	–	3	7.1 7.0				
18 56+71.1	915	18 56.2	+71 6	8.3	–	3					
18 44+71.5	906	18 44.4	+71 30	8.3	–	3	7.2 6.5 / 7.5 6.8	7.1 / 7.4	1.2	9.3 / 9.6	8.3 / 8.6
18 23+71.3	889	18 23.0	+71 14	4.7	–	3					
18 21.4+71.4	884	18 21.9	+71 27	7.7							
~~18 31+71.6~~	~~2404~~	~~18 31.2~~	~~+71 41~~	~~6.9~~	~~–~~	~~3~~	6.8 6.9	6.5	0.5	7.0	6.0
18 19+71.5	2365	18 18.8	+71 28	6.8	–	1	6.4	7.0	0.5	7.5	6.5
19 23+71.8	949	19 22.7	+71 50	7.5	–	3	6.8 6.3 / 7.0 6.6	6.9 / 7.2	1.3	8.2 / 8.5	7.2 / 7.5
19 2+61.9	1808	19 1.9	+61 53	7.0	–	2	7.0 6.4	7.0	0.8	7.8	6.8
19 12+72.0	936	19 11.9	+71 60	7.5	–	3	7.0 6.4	7.0	1.3	8.3	7.3
19 9+71.9	932	19 9.2	+71 51	7.2	–	3	6.8 6.1 / ~~6.3~~	6.7 / ~~6.9~~	1.3	8.0 / ~~8.2~~	7.0 / ~~7.2~~
18 55+71.6	914	18 55.1	+71 33	7.5	–	3	5.9	6.5	1.3	7.8	6.8
18 42+61.8	1771	18 42.9	+61 48	7.9	–	2	7.0 6.4 / 7.2 6.6	7.0 / 7.2	0.8	7.8 / 8.0	6.8 / 7.0
~~18 39+72.2~~	~~8558~~ / ~~8547~~	~~18 39.5~~ / ~~18 38.8~~	~~+72 8~~ / ~~+72 18~~	~~8.5~~ / ~~6.5~~	~~–~~	~~3~~	7.5 6.4 / 6.7	7.0 / 7.3	1.3	8.3 / 8.6	7.3 / 7.6
18 38+72.1	855	18 37.8	+72 9	7.0	–	3	6.8 6.2 / 7.1 6.5	6.8 / 7.1	1.3	8.1 / 8.4	7.1 / 7.4
18 36+72.0	2263	18 36.6	+72 4	6.5	–	1	5.8	6.4	0.5	6.9	5.9
18 28+71.6	894	18 28.2	+71 37	7.5	–	3	6.1	6.7	1.3	8.0	7.0
18 28+72.0	2232	18 28.9	+72 1	6.5	–	1	6.0	6.6	0.5	7.1	6.1
18 2+71.6	864	18 2.0	+71 37	8.0	–	3	6.2 6.4	6.8 / 7.0	1.3	8.1 / 8.3	7.1 / 7.3
18 9+61.9	1724	18 8.3	+61 51	7.0	–	2	6.4	7.0	0.8	7.8	6.8
18 9+72.0	2226	18 8.7	+72 3	6.3	–	1	7.2 6.4 / 7.4 6.6	7.0 / 7.2	0.5	7.5 / 7.7	6.5 / 6.7
~~18 12+71.9~~	~~938~~ / ~~936~~	~~19 12.4~~ / ~~19 11.9~~	~~+71 52~~ / ~~+71 60~~	~~8.3~~ / ~~7.5~~	~~–~~	~~3~~	~~6.8~~ / ~~7.0~~ 6.1	6.7	1.3	8.0	7.0
19 10+72.0	877	19 10.1	+72 28	8.0	–	3	6.7	6.1	6.7	1.3	8.0	7.0
19 1+62.5	1674	19 1.2	+62 29	6.7	–	2	7.3 6.3 / 7.3 6.5	6.9 / 7.1	0.8	7.7 / 7.9	6.7 / 6.9
18 56+62.4	1669	18 55.9	+62 12	6.1	–	2	6.7 6.1 / ~~6.4~~	6.7 / ~~7.0~~	0.8	7.5 / ~~7.8~~	6.5 / ~~6.8~~
18 40+62.6	1641	18 39.7	+62 37	6.3	–	2	5.9 6.2	6.5 / 6.8	0.8	7.3 / 7.6	6.3 / 6.6
~~18 28+72.2~~	~~8554~~	~~18 28.5~~	~~+72 15~~	~~6.5~~	~~–~~	~~3~~	6.8 6.1 / 7.0 6.4	6.7 / 7.0	1.3	8.0 / 8.3	7.0 / 7.3

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1887phae.proj..843F

August 15, 1887.

Plate 1384.

											Other Lines.
					No.	Type	Lines	K	Focus	Lines.	
12	40		20.7	N.0	III.	2	3	2	K=H	K=H	1 1 F —
			20.6	N.3	—		8		N	3	1
			20.9	N.8	II	?	2	2	K=H	K=H	1 1 — —
			20.4	16.8	—		2		K=H	1	—
		?	20.0	16.9	a	1264	2	3	K=H		F, 1 pcu.
			20.8	17.4	—		2		N	2	1
			20.8	18.8	—		1		N	1	—
		?	20.7	20.9	a	1265	3		K=H	3	F, pcu.
		?	20.0	22.8	a	1266	3		K=H	4	F, pcu.
III. ? 6.4, 6.7.			19.7	12.0	b	1267	2		K=H	2	—
			19.1	11.8	—		2	2	K=H	K=H	1 — —
			19.0	13.3	III		1	3	N	K=H	1 1 — F
		?	19.6	13.5	b	1268	6		N	2	F, pcu.
			19.7	14.2	III		2	3	K=H	K=H	1 1 — F
			19.0	14.7	III		1	3	N	K=H	1 1 — F
			19.4	15.3	I	I	1	H	H	N	K=H 1 1 — —
			19.1	23.4	—		3		K=H	2	F
			19.8	23.7	II	?	1		N	1	—
			18.9	6.5	II	?	2	2	K=H	K=H	1 1 — —
			18.4	7.4	—		2		K=H	1	—
			18.7	8.1	—		6		N	3	F
		?	18.2	8.6	a	1269	2		K=H	2	F, pcu.
		?	18.7	9.0	b.c.	1270	3		K=H	3	F, Brightpcu.
			18.7	10.7	I		3	4	N	K=H	1 1 — —
			18.6	15.1	III		2	2	K=H	K=H	1 1 — —
			18.0	15.7	I		4	H	K=H	K=H	1 1 — —
			18.6	20.3	—		6		N	1	F
			18.2	21.5	—		2		K=H	1	—

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1887phae.proj..842F

Mean 6

	No	RA	Dec	Magn					Pr.	Br.				
18 37 +72.3	852	18 37.9	+72 16	6.8	–	3			6.9	6.3	6.9	8.2	7.2	
									7.0	6.4	7.0	8.3	7.3	
18 36 +62.4	1.63 4	18 36.3	+62 24	5.7	3153	2	5.5	12 +2		5.3	5.9	0.8	6.7	5.7
18 35 +72.2	3235	18 35.6	+52 12	6.8	–	1			7.1	6.5	7.1	0.5	7.0	6.0
18 30 +62.4	1629	18 30.0	+62 26	7.0	–	2				6.9	6.9	0.8	7.7	6.7
										7.0	7.0	0.8	7.8	6.8
18 23 +72.7	839	18 23.7	+72 40	3.8	–	3				3.6	4.2	1.3	5.5	4.5
										3.8	4.4		5.7	4.7
18 31 +52.2	2238 1461	18 30.7	+52 15	5.5	–	1				6.0	6.6	0.5	7.1	6.1
										6.3	6.9		7.4	6.4
18 11 +72.1	829	18 11.4	+72 7	7.8	–	3				6.3	6.9	1.3	8.2	7.2
										6.4	7.0		8.3	7.3
17 58 +72.0	818	17 57.7	+72 0	6.0	–	3				5.0	5.6	1.3	6.9	5.9
17 44 +72.2	804	17 44.3	+72 13	4.8	–	3				4.0	4.6	1.3	5.9	4.9
	805	17 44.6	+72 14	6.2						4.2	4.8		6.1	3.1
18 48 +52.8	22944	18 48.4	+52 48	5.5	–	1				5.9	6.5	0.5	7.0	6.0
										6.3	6.9		7.4	6.4
18 18 +72.9	871	18 18.3	+72 38	8.9	–	3			7.1	6.7	7.3	1.3	8.6	7.6
18 45 +63.1	1461	18 45.6	+63 6	7.5	–	2			7.0	6.4	7.0	0.9	7.9	6.9
									7.2	6.6	7.2		8.1	7.1
18 43 11 +52.8	2280	18 43.5	+52 49	6.5	3187	1	5.8	9 –1		5.6	6.2	0.5	6.7	5.7
18 42 +72.8	859	18 42.0	+72 50	8.0	–	3			6.8	6.4	7.0	1.5	8.5	7.5
									7.0	6.7	7.3		8.8	7.8
18 30 +73.1	831	18 38.9	+73 9	7.0	–	3			6.7	6.2	6.8	1.3	8.1	7.1
									6.9	6.4	7.0		8.3	7.3
18 34 +72.9	848	18 34.1	+72 57	7.7	–	3			7.0	6.4	7.0	1.3	8.3	7.1
										6.5	7.1		8.4	7.4
17 40 +72.5	800	17 39.9	+72 32	6.0	–	3				5.6	6.1	1.3	7.4	6.4
										5.7	6.3		7.6	6.6
17 39 +72.1	799	17 39.3	+72 8	7.3	–	3				6.3	6.9	1.3	8.2	7.2
19 15 +62.9	1702	19 15.3	+62 57	6.5	–	2				6.4	7.0	0.9	7.9	6.9
										6.2	6.8	1.3	8.1	7.1
19 29 +73.1	863	19 29.3	+73 3	7.5	–	3				6.3	6.9		8.2	7.2
19 2 +53.2	2178	19 1.7	+53 12	5.4	3268	1	5.4	12 +2		5.4	6.0	0.6	6.6	5.6
19 20 +73.3	860	19 21.7	+73 17	7.5	–	3				5.8	6.4	1.4	7.8	6.8
										4.8	5.4		6.7	5.7
19 19 +73.1	857	19 18.3	+73 5	4.4	–	3				5.2	5.8	1.3	7.1	6.1
19 6 +73.1	848	19 6.4	+73 9	7.7	–	3			6.9	6.3	6.9	1.3	8.2	7.2
18 37 +63.3	1445	18 37.4	+63 24	7.3	–	2			6.6	6.4	7.0	0.9	7.9	6.9
									7.2	6.7	7.3		8.2	7.2
18 34 +63.5	1439	18 34.2	+63 35	8.0	–	2			6.9	6.2	6.6	0.9	7.7	6.7
18 20 +53.2	2079	18 20.7	+53 14	6.5	–	1				5.9	6.5	0.6	7.1	6.1
17 51 +73.2	796	17 50.8	+73 11	7.3	–	3				6.1	6.7	1.3	8.0	7.0
										6.3	6.9		8.2	7.2

* See Mile. Mem. B. 8 p. 109.

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1887phae.proj..843F

August 15, 1887.

Plate 1384.

	ν	H	Type	Lines	K	Focus	Other Lines.
√√	18.4	22.7	II ?	1 2	N	K=H	1 1 — —
	17.7	9.2	a 1271	2	K=H	1	—
	17.4	11.5	I	6	K=H	2	F.
√√	17.5	12.2	III	2 3	K=H	K=H	1 — F
	17.0	12.4	II	1	N	1	—
?	17.6	13.2	l.c. 1273		K=H	2	F. Bright? seen.
	17.9	14.5	I	6	N	2	F.
	17.4	16.5	I	5	K=.5H	1	—
	17.5	22.1	I	3	N	1	—
	17.9	23.2	I	4	K=H	1	—
√√	17.5	23.0	III	? 1 2	N	K=H	1 — —
√√	17.5	23.5	III	2 3	K=H	K=H	1 F —
	16.4	6.1	I	? 3	N	2	—
√√	16.2	6.6	III	2 3	K=H	K=H	1 — F
√√	16.7	8.9	II	2 2	K=H	K=H	1 — —
√√	16.6	12.4	III	? 2 2	K=H	K=H	1 1 — —
	16.2	13.1	III	1	N	1	—
√√	16.0	13.7	III	? 2 2	K=H	K=H	1 1 — —
√√	16.4	14.2	II ?	II ? 2 2	K=H	K=H	1 1 — —
?	16.4	20.3	a 1273	3	K=H	3	F. seen.
	16.5	21.9	III	3	K=H	1	F.
	16.1	22.6	II	2	K=H	1	—
	16.4	23.5	III	3	K=H	1	F.
	16.2	24.0	III	2	K=H	1	—
√√	15.5	7.3	II	? 2 2	K=H	K=H	1 1 — —
√√	15.5	9.2	II a	1273 a ? 2 2	K=H	K=H	1 1 — Seen
√√	15.4	9.6	? II	? 1 2	N	K=H	1 — —
	15.2	11.3	III	3	K=H	2	F.

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1887phae.proj..843F

Mean 6

	No	RA	Dec	Magn.	Diff	Gr. Br.	Br.				
18 13+53	2060	18 12.9	+ 53 14	7.3	- 1	6.7	6.1	6.7	0.6	7.3	6.3
19 18+73.5	856	19 18.0	+ 73 35	7.8	- 3		6.2	6.8	1.4	8.2	7.2
19 2+73.0	845	19 2.2	+ 73 55	6.8	- 3		6.7	6.3	1.4	7.7	6.7
18 56+73.0	843	18 56.7	+ 73 54	7.8	- 3	6.8 7.0	6.2 6.4	6.8 7.0	1.4	8.2 8.4	7.2 7.4
18 47+54.1	2042	18 47.3	+ 54 9	7.5	- 1		6.3	6.9	0.6	7.5	6.5
18 49+73.0	835	18 49.4	+ 73 54	5.3	- 3		4.9 6.2	5.5 5.8	1.4	6.9 7.2	5.9 6.2
18 40+53.7	2126	18 40.4	+ 53 44	6.0	3175 6.1	9 -1	5.8	6.4	0.6	7.0	6.0
18 25+73.9	822	18 25.2	+ 73 57	8.0	- 3		6.0	6.6	1.4	8.0	7.0
17 45+73.5	791	17 43.5	+ 73 31	7.3	- 3		6.0	6.6	1.4	8.0	7.0
17 39+73.2	781	17 39.0	+ 73 8	7.8	- 3		6.1	6.7	1.3	8.0	7.0
18 1+63.6	1402	18 1.5	+ 63 36	8.6	- 2	7.2 7.4	6.4 6.6	7.0 7.2	1.3	8.3 8.5	7.3 7.5
17 59+63.6	1399	17 59.3	+ 63 32	6.8	- 2	7.0 7.3	6.3 6.5	6.9 7.1	0.9	7.8 8.0	6.8 7.0
19 18+64.1	1344	19 18.7	+ 64 8	6.5	2		5.6	6.2	0.9	7.1	6.1
19 32+74.0	831	19 35.2	+ 74 1	6.7	- 3	6.9 7.2	6.3 6.5	6.9 7.1	1.4	8.3 8.5	7.3 7.5
19 21+74.0	816	19 21.4	+ 74 2	8.8	- 3	7.0	6.4	7.0	1.4	8.4	7.4
18 56+74.2	796	18 55.6	+ 74 16	8.3	- 3	6.8 7.0	6.1 6.4	6.7 7.0	1.4	8.1 8.4	7.1 7.4
18 51+74.5	792	18 51.0	+ 74 34	7.5	- 3		5.9 6.2	6.5 6.8	1.4	7.9 8.2	6.9 7.2
18 44+64.6	1289	18 43.9	+ 64 39	7.7	- 2	7.3 7.5	6.4 6.7	7.0 7.3	0.9	7.9 8.2	6.9 7.2
18 42+74.5	789	18 42.3	+ 74 29	8.2	- 3	7.0	6.2 6.4	6.8 7.0	1.4	8.2 8.4	7.2 7.4
18 13+64.3	1252	18 13.1	+ 64 20	5.0	- 2		4.8	5.4	0.9	6.3	5.3
18 6+64.1	1245	18 6.0	+ 64 12	7.0	- 2		6.1 6.3	6.7 6.9	0.9	7.6 7.8	6.6 6.8
17 40+74.1	720	17 40.0	+ 74 5	7.4	- 3		6.2	6.8	1.4	8.2	7.2
17 58+64.1	1237	17 58.3	+ 64 9	7.0	- 2		6.0 6.3	6.6 6.9	0.9	7.5 7.8	6.5 6.8
18 7+54.2	1950	18 7.6	+ 54 15	6.0	- 1		6.1 6.3	6.7 6.9	0.6	7.3 7.5	6.3 6.3
19 2+54.9	2089	19 5.9	+ 54 52	7.8	- 1	7.1	6.4	7.0	0.6	7.6	6.6
19 21+74.7	815	19 20.8	+ 74 39	8.4	- 3	7.1	6.5	7.1	1.4	8.5	7.5
19 18+74.8	812	19 18.0	+ 74 46	8.0	- 3	7.1	6.3	6.9	1.5	8.4	7.4
18 56+63.9	1309	18 55.8	+ 63 4	5.5	- 1		5.6 5.8	6.2 6.4	0.9	7.1 7.3	6.1 6.3

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1887phae.proj..843F

August 15, 1887.

Plate 1384.

					No.					Other	
	τ	H	Type		Lines	K		Focus	Lines.	
	15.0	13.1	I		8	N		4	F	
√	15.1	13.8	I			K=H			F	
√	14.9	14.0	III	III?	3 3	K=H	K=H	1	F	F
√	15.5	15.4	III	III	2 2	K=H	K=H	1	—	—
√	15.8	17.7	III	III	2 3	K=H	K=H	1	—	F
	15.6	20.3	I		6	K=H		2	—	
√	15.6	22.9	III	III	1 3	N	K=H	1	—	F
	14.5	7.3	I		3	N		1	—	
√	14.8	7.4	II	a 1274	2	K=H	K=H	1	—	seen
	14.3	9.5	III		3	K=H		2	F	
	14.1	12.3	I		7	K=2H		2	F	
	14.6	14.6	II		7	N		3	F	
	14.8	15.4	I	?	6	K=H		2	F	
√	14.4	16.2	~~III~~ III	a 1275	1 2	N	K=H	1	—	—
?	14.8	16.4	II		3	K=H		2	F, pec.	
?	14.4	17.5	III		7	K=H		3	F	Bright? diffuse.
	14.6	19.7	III		2	N		2	F	
	14.9	23.2	II		1	N		1	—	
	14.3	23.9	II		1	N		1	—	
	13.9	6.3	I		7	?		4	F	
	13.6	8.6	I		1	N		2	F	
√	13.1	10.4	II	1275a IIa?	2	K=H	K=H	1	—	seen
	13.1	15.1	III		1	N		1	—	
√	13.0	15.7	I	I	3 5	N	K=H	1	—	—
	13.0	17.9	III	?	2	K=H		1	—	
	13.6	18.4	I		6	N		2	~~N~~	
	13.0	19.6	II		2	N		1	F	
	13.4	20.9	II		2	K=H		1	—	
	13.4	21.2	III		1	N		1	—	

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1887phaq.proj..843F

	No	R. A.	Dec.	Mag		Disp		Gen. Br.	Br.	Means			
18 51+75.3	682	18 51.0	+ 75 1	5.8	3211	5.6	3 6-4	4.1	4.7	1.3	6.2	5.2	
18 47+75.1	678	18 46.0	+ 75 9	7.5	—		3	5.9	6.5	1.3	8.0	7.0	
18 42+74.7	2034	18 42.0	+ 74 44	6.0	—		1	6.8 6.1	6.7	0.6	7.3	6.3	
18 36+64.9	1276	18 35.6	+ 64 57	8.2	—		2	6.3 7.5	6.9 7.0		7.5	6.5	
18 24+64.7	1266	18 24.3	+ 64 45	7.5	—		2	6.4 6.8	7.3 6.2	0.9	7.9 8.2	6.9 7.2	
17 56+74.6	740	17 55.7	+ 74 36	6.8	—		3	7.0 6.4	6.8 7.0	0.8	7.6 7.8	6.6 6.8	
17 36+74.3	717	17 36.7	+ 74 19	7.0	—		3	5.4	6.0	1.4	7.4	6.4	
19 36+75.0	829	19 36.7	+ 74 59	8.5	•		3	6.9 6.1	6.7		8.1	7.1	
19 14+65.0	1333	19 13.9	+ 65 1	7.6	—		2	7.1 6.3	6.9	1.4	8.3	7.3	
18 58+75.4	2137	18 57.8	+ 65 27	5.7	—		1	6.9	6.8				
18 58+75.6	683	18 58.4	+ 75 35	6.5	—		3	6.2	6.8	0.9	7.7	6.7	
18 40+75.4	2107	18 39.8	+ 75 24	5.3	3166	5.2	1 7-3	5.9 6.1	6.5 6.7		7.1	6.1	
18 36+65.3	1283	18 35.7	+ 65 21	6.0	—		2	5.0	5.6	1.3	7.1	6.1	
18 26+75.4	667	18 26.2	+ 75 28	8.4	—		3	4.7	5.3	0.6	5.9	4.9	
18 31+65.3	1246	18 30.9	+ 65 20	6.8	—		2	5.3	5.9	0.9	6.8	5.8	
18 26+65.5	1271	18 25.6	+ 65 28	5.0	—		2	6.3 6.4	6.9 7.0	1.3	8.4 8.3	7.4 7.5	
17 59+75.2	647	17 59.2	+ 75 10	7.0	—		3	5.8	6.4	0.9	7.3	6.3	
17 32+74.6	713	17 32.6	+ 74 36	7.7	—		3	5.1 5.4	5.7 6.0	1.0	6.7 7.0	5.7 6.0	
17 27+74.8	710	17 26.9	+ 74 47	7.0	—		3	5.4 5.7	6.0 6.3	1.3	7.3 7.8	6.3 6.8	
19 20+65.4	1345	19 19.9	+ 65 26	5.3	—		2	6.2	6.8	1.4	8.2	7.2	
19 9+65.7	1326	19 9.2	+ 65 44	6.9	•		2	5.9	6.5	1.3	8.0	7.0	
19 14+75.9	690	19 14.4	+ 75 5	8.0	—		3	4.6	5.2	1.0	6.2	5.2	
18 35+76.1	694	18 35.0	+ 76 6	7.8	—		3	5.4	6.0	1.0	7.0	6.0	
18 34+66.2	1112	18 33.8	+ 66 14	7.2	•		2	6.4	7.0	1.3	8.3	7.3	
18 11+76.1	678	18 11.8	+ 76 6	7.2	—		3	6.3 6.6	6.9 7.2	1.5	8.4 8.7	7.4 7.7	
18 8+75.7	655	18 8.2	+ 75 46	6.5	•		3	6.1	6.7	1.0	7.7	6.7	
17 58+76.0	668	17 57.8	+ 76 1	7.5	—		3	5.9 6.0	6.5 6.6	1.5	8.0 8.1	7.0 7.1	
17 47+75.6	640	17 47.7	+ 75 35	7.0	—		3	5.3	5.9	1.5	7.4	6.4	
18 7+65.9	1243	18 6.8	+ 65 2	7.3	—		2	5.7	6.3	1.5	7.8	6.8	
								6.4 6.7	7.0 7.3	1.5	8.5 8.8	7.3 7.8	
								6.4 6.7	7.0 7.3	1.0	8.0 8.3	7.0 7.3	

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1887phae.proj..843F

August 15, 1887.

Plate 138 H.

				No. lines	K	Focus	Other lines.
	13,5	21,7	I	5	N	1	—
√ √	12,5	9,3	II	2	K=H	K=H 1	—
√ √	12,0	9,4	III	2	K=H	K=H 1	—
√ √	12,2	9,5	II a? 1275 b	2	K=H	K=H 1	— seen
	12,5	10,4	I	7	K=½H	3	F.
√ √	12,2	19,7	III?	2	K=H	K=H 1	— —
	11,8	6,6	III	3	K=H	2	F.
√ √	11,0	7,5	III. 2	2	N	K=H 1	— —
	11,2	7,9	I	½	N	1	—
√ √	11,9	10,2	II a? 1275 c	2	N	K=H 1	— seen
	11,6	11,8	II	2	K=H	2	—
√ √	11,5	14,8	~~III?~~	~~2~~	K=H	~~K=H~~ 1	— —
√ √	11,4	15,2	~~I~~	3	N	~~K=H~~ 1	— —
?	11,6	17,2	II?	3	K=H	3	F, Bright pair.
?	11,1	19,4	II a? 1276	2	K=H	4	F? Bright pair.
	11,1	21,2	~~III~~	2	K=H	1	—
	10,0	6,1	III	2	K=H	2	—
√ √	10,0	6,6	III?	2	N	K=H 1	— —
?	10,4	8,3	III b.c.? 1277	2	K=1.2H	H	Bright? pair.
√ √	10,1	10,7	III	1	2 N	K=H 1	— —
√ √	10,8	11,5	III	1	2 N	K=H 1	— —
√ √	10,0	12,7	III?	2	K=H	K=H 1	— —
	10,2	13,2	I	½	N	1	—
?	10,4	14,1	II a 1278	2	K=H	2	Reen.
?	10,6	14,9	III	3	K=H	2	F, seen.
	10,1	15,0	I	4	N	1	—
	10,5	15,5	III	2	K=H	1	—
√ √	10,1	15,9	III?	2	K=H	K=H 1	— —

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1887phae.proj..843E

No	R.A.	Dec	Mag		Dyn	Means Cor.	Means Br.			
18 5+65.7	1240	18 [5.0]	+ 65 [42]	6.8	•	2	✓ 5.9	6.5	1.0	7.5	6.5 •
19 27+76.3	733 [3]	19 [26.4]	+ 76 [11]	[8.0] 6.3	–	3	7.8 ✓ 6.3	6.9	1.6	8.5	7.5 •
19 24+76.5	732	19 24.2	+ 76 31	7.3	–	3	6.9 6.2 / 7.2 6.4	6.8 / 7.0	1.6	8.4 / 8.6	7.4 / 7.6 •
19 23+76.4	731	19 23.0	+ 76 20	7.6	–	3	6.6 6.0	6.6	1.6	8.2	7.2 •
19 14+76.3	717	19 14.4	+ 76 19	5.5	–	3	✓ 4.4	5.0	1.6	6.6	5.6 •
18 14+66.4	1089	18 13.8	+ 66 2 [6]	7.8	–	2	7.8 6.5 / 7.5 6.7	7.1 / 7.3	1.0	8.1 / 8.3	7.1 / 7.3 •
19 9+66.6	2209	19 8.9	+ 66 3 [8]	5.5	–	1	✓ 5.4 / 5.7	6.0 / 6.3	0.6	6.6 / 6.9	5.6 / 5.9 •
19 16+66.9	1184	19 16.2	+ 66 3 3	8.2	–	2	7.0 6.4 / 7.2 6.7	7.0 / 7.3	1.0	8.0 / 8.3	7.0 / 7.3 •
19 14+66.9	1179	19 13.8	+ 66 3 2	7.5	•	2	✓ 5.9	6.5	1.0	7.5	6.5 •
19 18+76.6	722	19 17.8	+ 76 3 8	8.3	–	3	6.8 6.2	6.8	1.6	8.4	7.4 •
	712	19 3.9	+ 76 3 0	6.5	–	3	✓ 5.2	5.8	1.6	7.4	6.4 •
	710	18 58.0	+ 76 3 7	5.4							
18 39+66.0	1087	18 38.6	+ 67 1	8.0	–	2	7.3 6.4 / 7.5 6.6	7.0 / 7.2	1.0	8.0 / 8.2	7.0 / 7.2 •
17 34 + 7[illegible].0	697	18 33.9	+ 77 2	8.5							
	11[illegible]	18 36.4	+ 66 4 7	7.4	•	3	6.7 ✓ 5.8	6.4	1.0	7.4	6.4 •
18 30+66.9	2113	18 30.1	+ 66 5 6	5.4	–	1	✓ 5.0	5.6	0.7	6.3	5.3 •
17 56+76.9	667	17 55.9	+ 76 3 8	5.2	–	3	✓ 4.5	5.1	1.6	6.7	5.7 •
18 5+66.9	1077	18 5.3	+ 66 5 6	6.5	–	2	✓ 5.9 / 6.2	6.5 / 6.8	1.0	7.5 / 7.8	6.5 / 6.8 •
19 11+57.4	1968	19 11.4	+ 57 2 7	5.3	–	1	✓ 5.8 / 6.1	6.4 / 6.7	0.7	7.1 / 7.4	6.1 / 6.4 •
19 9+57.3	1961	19 9.6	+ 57 2 4	7.2	–	1	7.8 6.4 / 7.5 6.7	7.0 / 7.3	0.7	7.7 / 8.0	6.7 / 7.0 •
19 12+67.4	1129	19 12.5	+ 67 2 4	3.4	–	2	✓ 4.4 / 4.7	5.0 / 5.3	1.0	6.0 / 6.3	5.0 / 5.3 •
18 54+57.6	1928 [2]	18 54.3	+ 57 2 3	8.8	–	1	6.4 6.1 / 6.7 6.4	6.4 / 6.7	0.7	7.4 / 7.7	6.4 / 6.7 •
18 57+57.3	1918	18 51.3	+ 57 1 7	6.3	–	1	7.0 6.4 / 7.3 6.8	7.0 / 7.4	0.7	7.7 / 8.1	6.7 / 7.1 •
18 47+56.6	1907	18 47.0	+ 57 4 0	8.1	–	1	7.3 6.5 / 7.5 6.9	7.1 / 7.5	0.7	7.8 / 8.2	6.8 / 7.2 •
18 47+67.6	1096	18 47.0	+ 67 3 [8]	7.0	•	2	✓ 5.9	6.5	1.0	7.5	6.5 •
18 44+77.5	702	18 44.3	+ 77 3 2	7.0	–	3	✓ 5.4	6.0	1.7	7.7	6.7 •
18 37+77.4	699	18 36.8	+ 77 2 5	6.5	–	3	✓ 5.1 / 5.5	5.7 / 6.1	1.7	7.4 / 7.8	6.4 / 6.8 •
18 37+67.5	1085	18 37.3	+ 67 3 9	7.5	•	2	✓ 6.1	6.7	1.0	7.7	6.7 •
18 31+77.5	696	18 31.3	+ 77 2 8	7.7	–	3	✓ 5.9 / 6.2	6.5 / 6.8	1.7	8.2 / 8.5	7.2 / 7.5 •
18 32+67.5	1079	18 32.7	+ 67 3 9	6.5	–	2	6.8 6.3 / 7.1 6.7	6.9 / 7.3	1.0	7.9 / 8.3	6.9 / 7.3 •

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1887phae.proj..843F

August 15, 1887.

Plate 1384.

				Type	No. lines	K	Focus	lines.	Other		
	10,0	16,6		II	2	K=H	1	—			
✓	10,1	17,2		III	2	2	K=H	K=H	1	1	— —
✓	10,3	17,6		II a 1278a	2	2	K=H	K=H	1	1	— seen
✓	10,6	18,3		III	1	2	N	K=H	1	1	— —
✓	10,5	18,4		a? 1279 II a?	2	2	K=H	K=H	1	1	— seen seen
	10,9	19,5		II	2		K=H		1		—
✓	10,2	20,6		III	2	2	K=H	K=H	1		— —
	9,1	9,6		II	1		N		1		—
	9,0	10,3		I	✓		N		1		F
	9,3	10,6		I	✓		N		1		—
	9,1	20,2		II	2		K=H		1		—
✓	9,7	21,1		III	2	3	K=H	K=H	1	1	— F
✓	9,0	22,9		III	2	2	K=H	K=H	1	1	— —
	8,9	8,7		II	2		K=H		1		—
✓	8,3	11,4		II a? 1279a II a?	2	2	K=H	K=H	1	1	— seen
✓	8,1	12,7		II ? II ?	2	2	K=H	K=H	1	1	— —
	8,0	18,5		I	✓		N		2		F
	8,5	18,7		III	3		K=H		2		F
	8,0	18,8		III	3		K=H		2		F
	8,0	19,2		I	1		N		4		F
	7,0	12,2		III	3		K=H		2		F
✓	7,9	12,7	I? I?	II	4	H	K=H	K=H	1	1	— —
	7,3	15,1		III	2		K=H		1		—
	7,5	16,0		II	3		K=H		1		F
	7,9	18,2		II	2		K=H		1		—
	7,1	23,5		I	4		K=H		1		—
	7,8	23,7		II ?	2		K=H		1		—
	7,6	24,4		I	✓		N		2		—

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1887phae.proj..843F

No	R.A.	Dec	Mag		Exp	Remb. Ser. Br.	Br.			
18 32+77.7	1882	18 32.1	+ 77 41	7.5-	—	1	6.3	6.9	0.7	7.6	6.6
18 15+77.6	681	18 14.1	+ 77 33	7.5-	—	3	6.8 6.1 7.0 6.4	6.4 7.0	1.7	8.4 8.7	7.4 7.7
18 10+77.5	679	18 11.1	+ 77 28	8.1	—	3	7.0 6.4	7.0	1.7	8.7	7.7
18 20+67.3	1066	18 20.0	+ 67 20	7.0	—	2	7.2 6.4 7.4 6.8	7.0 7.4	1.0	8.0 8.4	7.0 7.4
18 26+77.3	1873	18 25.6	+ 77 18	7.5-	—	1	7.2 6.4	7.0	1.7	8.7	7.7
17 55+77.1	670	17 54.8	+ 77 3	7.5-	—	3	6.2	6.8	1.6	8.4	7.4
18 8+67.4	1051	18 8.1	+ 67 22	7.5-	—	2	7.3 6.5 7.5 6.9	7.1 7.5	1.0	8.1 8.5	7.1 7.5
19 27+77.9	728	19 27.3	+ 77 53	7.8	—	3	6.1	6.7	1.7	8.4	7.4
19 3+68.1	1040	19 3.4	+ 68 6	7.0	—	2	6.0	6.6	1.1	7.7	6.7
18 55+58.0	1849	18 55.1	+ 58 1	6.6	—	1	5.9	6.5	0.7	7.2	6.2
18 9+67.9	1052	18 9.6	+ 67 58	7.5-	—	2	6.4	7.0	1.1	8.1	7.1
17 38+77.4	666	17 38.8	+ 77 26	7.8	—	3	6.9 6.1 7.1 6.3 7.2 6.3 7.3 6.5	6.7 6.9 7.1	1.7	8.4 8.6 8.8	7.4 7.6 7.8
17 21+77.5	654	17 21.2	+ 77 30	7.5-	—	3					
19 36+77.0	734	19 36.2	+ 77 5-7	7.0	—	3	5.6	6.2	1.7	7.9	6.9
18 52+58.5	1844	18 53.2	+ 58 32	7.8	—	1	7.0 6.5 6.8	7.1 7.4	0.7	7.8 8.1	6.8 7.1
18 59+78.6	660	18 58.2	+ 78 39	7.5-	—	3	6.8 5.9	6.8 6.5	1.8	8.3	7.3
18 12+68.6	989	18 17.2	+ 68 40	6.8	•	2	5.6	6.2	1.1	7.3	6.3
17 58+78.3	616	17 58.4	+ 78 20	6.6-	—	3	5.5 5.9	6.1 6.5	1.7	7.8 8.2	6.8 7.2
18 16+68.6	984	18 16.2	+ 68 42	6.0	—	2	5.8 6.1	6.4 6.7	1.1	7.3 7.8	6.3 6.8
18 22+58.8	1809	18 21.8	+ 58 45-	4.5	3116	4.8	4.7	5.3	0.7	6.0	5.0
18 49+59.2	1925-	18 49.1	+ 59 13	4.3	—	1	5.4 5.8	6.0 6.4	0.7	6.7 7.1	5.7 6.1
18 59+78.8	661	18 58.8	+ 78 46	7.5-	—	3	6.5 5.8	6.4	1.8	8.2	7.2
18 33+79.1	584	18 33.8	+ 79 7	7.0	—	3	5.6 5.9	6.2 6.5	1.8	8.0 8.3	7.0 7.3
18 24+78.9	632	18 24.8	+ 78 59	7.7	—	3	5.8	6.4	1.8	8.2	7.2
18 3+78.6	621	18 2.9	+ 78 41	7.4	—	3	5.7	6.3	1.8	8.1	7.1
17 50+68.7	963	17 50.3	+ 68 43	7.4	—	2	6.0	6.6	1.1	7.7	6.7
17 50+68.3	961	17 49.8	+ 68 23	7.1	—	2	6.2	6.8	1.1	7.9	6.9
17 3+77.9	641	17 3.1	+ 77 52	6.5							
	5-80	17 4.4	+ 78 19	7.0	•	3	5.0	5.6	1.7	7.3	6.3

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1887phae.proj..843F

August 15, 1887.

Plate 1384.

r	H	Type	No. lines	K	Focus	Other lines.
6.0	7.9	I	3	H	N	K=H 1 1 — —
6.4	9.9	I	7	?	3	?
6.7	11.0	I	7		N 2	?
6.4	12.0	I?	4		N 1	—
6.0	13.1	I	8		K=√H 2	?
6.5	14.9	II	2		K=H 1	—
6.5	18.1	III	1		N 1	—
6.5	18.3	III	III? 2	2	K=H K=H 1	— —
6.5	19.4	I?	4		K=H 1	—
5.3	6.4	III	2		K=H 1	—
5.7	11.6	II?	2		K=H 1	—
? 5.5	17.1	III a? 12880	3		K=H 3	?, pec.
5.7	21.0	I	6		K=H 2	?
5.0	21.2	II	2		K=H 1	—
5.6	22.1	III	2		K=H 1	—
4.4	10.4	I	√		N 1	—
4.1	11.4	I	3		N 1	—
4.3	11.4	III	2		K=H 1	—
4.2	13.7	III	1		N 1	—
4.6	13.8	III	1		N 1	—
4.4	15.4	II	2		K=H 1	—
4.1	20.3	III	2		K=H 2	—
4.2	22.1	I?	3		N 1	—
4.0	23.4	III	2		K=H 1	—
3.4	6.0	I	3		N 2	—
3.3	11.9	III b 12881	3		K=H 2	?
3.7	13.9	III	III 2	2	K=H K=H 1	— —
3.0	17.3	I	8		N	√ ?

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1887phae.proj..843F

	No	R.A.	Dec.	Mag		Exp	Mean 6 Br.	Br.			
19 54+79.1	648	19 54.1	+79 35	7.0	.	3	6.8 6.0	6.6	1.8	8.4	7.4 .
19 30+79.3	628	19 30.2	+79 18	6.3	–	3	4.9	5.5	1.8	7.3	6.3 .
19 0+69.3	1018	18 59.8	+69 19	6.3	.	2	5.5	6.1	1.1	7.2	6.2 .
18 50+79.4	1926	18 50.0	+79 30	7.3	.	1	6.2	6.8	0.7	7.5	6.5 .
18 56+79.2	604	18 55.8	+79 46	6.5	–	3	5.1	5.7	1.9	7.6	6.6 .
	Olbers.	18	+79	7.5							
18 38+79.7	~~1891~~	~~18 34.7~~	~~+79 42~~	~~7.5~~	–	3	5.4	6.0	1.9	7.9	6.9 .
18 26+59.5	1899	18 25.7	+59 27	6.2	–	1	6.4 6.7	7.0 7.3	0.7	7.7 8.0	6.7 7.0 .
17 58.+79.4	564	18 58.6	+79 21	7.5			~~6.2~~ 5.5	6.1		7.2	6.2
	~~973~~	~~18 14.9~~	~~+69 39~~	~~8.0~~	–	3	~~6.7~~ 5.8	6.4	1.1	7.5	6.3 .
17 47+79.3	556	17 47.1	+79 16	7.3	–	3	5.4	6.0	1.8	7.8	6.8 .
	660	20 98	+79 16	6.5	–	3	5.6 5.9	6.2 6.5	1.8	8.0 8.3	7.0 7.3 .
20 11+79.2	~~1008~~	~~20 11.4~~	~~+79 58~~	~~8.0~~							
18 51+59.9	1929	18 51.7	+59 50	7.0	–	1	6.3	6.9	0.7	7.6	6.6 .
	570	18 10.9	+79 59	6.5			4.4	5.0		6.9	5.9
18 11+79.1	571	18 11.0	+79 60	6.5	–	3	4.6	5.2	1.9	7.1	6.1 .
17 28+79.4	~~540~~	17 28.8	+79 27	7.3	–	3	5.7	6.3	1.8	8.1	7.1 .
17 24+79.6	536	17 24.7	+79 41	8.0	–	3	6.2	6.8	1.9	8.7	7.7 .
17 56+69.6	538	17 56.3	+69 38	6.7	–	2	6.3 6.7	6.9 7.3	1.1	8.0 8.4	7.0 7.4 .
18 56+63.4	1864	18 56.7	+63 28	6.6	.	1	6.0	6.6	0.8	7.4	6.4 .
19 19+89.5	609	19 18.9	+89 30	7.1	.	3	5.6	6.2	2.0	8.2	7.1 .
19 17+80.4	604	19 17.7	+80 28	7.2	–	3	5.9 6.2	6.5 6.8	2.0	8.5 8.8	7.5 7.8 .
18 45+70.6	1023	18 44.8	+70 39	6.3	–	2	6.4 6.8	7.0 7.4	1.2	8.2 8.6	7.2 7.6 .
18 45+70.4	1020	18 44.3	+70 26	8.0	–	2	6.3 6.7	6.9 7.3	1.2	8.1 8.5	7.1 7.5 .
18 36+60.5	~~1840~~	18 36.6	+60 34	6.8	–	1	6.3	6.9	0.8	7.7	6.7
17 31+80.2	544	17 30.7	+80 15	6.2	–	3	5.1 5.7	5.7 6.3	1.9	7.6 8.2	6.6 7.2 .
18 9+60.4	1813	18 9.4	+60 22	6.2		1	5.6	6.2	0.8	7.0	6.0 .
16 57+79.7	517	16 57.1	+79 44	6.8	–	3	6.0 6.4	6.6 7.0	1.9	8.5 8.9	7.5 7.9 .
20 23+80.1	~~6450~~	20 22.6	+80 4	6.8	.	3	5.0	5.6	1.9	7.5	6.5 .
18 56+71.1	913	18 56.2	+71 6	5.3	–	2	5.1 5.5	5.7 6.1	1.2	6.9 7.3	5.9 6.3 .
18 42+60.9	1845	18 42.6	+60 54	6.0	–	1	6.9 7.2 6.3 6.7	6.9 7.3	0.8	7.7 8.1	6.7 7.1 .
18 23+71.3	889	18 23.1	+71 14	4.4		2	3.6	4.2	1.2	5.4	4.4 .

9120 4.2 1.2 + 2

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1887phae.proj..843f

August 15, 1887.

Plate 1384.

F	H	Type	No. Lines	K	Focus	Other Lines.
13.8	18.4	II?	2	2K=H	K=H 1	— —
2.3	12.2	II	2	K=H	1	—
2.6	16.1	II	1	N	1	—
2.6	17.5	II	2	K=H	1	—

Amt. of Fog due to moonlight & clouds 7.5

Amt. of Fog. due to chemicals 7.6

Plate 1519

9.30	21.4	6.1	II?	2	K=H	1	—
	21.9	15.7	I	7	K=H	2	F
	21.2	18.3	III	2	K=H	1	—
	20.8	16.9	II	2	K=H	1	—
	19.9	7.1	I	6	N	2	F
III? 6.5, 6.8.	19.0	7.1	III b	1282	K=H	1	—
	19.5	9.2	I	8	N	4	F
	19.0	14.5	I?	I? 3	4 N	K=H 1	1 — —
?	19.8	16.6	III b.c.	1283	K=1.2H	4	F Bright? (Focus!)
	19.6	17.6	III	2	K=H	1	—
	19.1	18.9	II?	1	N	1	—
	19.3	19.7	III	2	K=H	1	—
	19.0	24.3	II	2	K=H	2	F Focus
	18.1	10.2	II	2	K=H	1	—
	18.1	18.3	III?	2	K=H	1	—
	18.9	21.4	III	2	K=H	1	—
	18.1	21.9	I?	4	K=H	1	—
	16.4	8.7	III	2	K=H	1	—
	16.5	10.8	I	7	K=2H	2	F
	16.1	14.1	I	7	K=2H	2	F
	16.0	19.4	III	2	K=H	1	—
	15.6	7.4	II	4	N	2	—
2 20	15.6	7.5	I	4	N	1	—

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	No	R.A. 1900	Dec	Mag		Diff		Obs.	Obs.	Mean 6 Obs.		
18 24+60.4	1827	18 24.1	+60 23	8.2	–	1	6.7	6.0	6.6	0.8	7.4	6.4
18 55+71.6	914	18 55.1	+71 35	7.5	–	2						
18 19+81.4	619	18 19.4	+81 26	8.5	–	3		6.0	6.6	2.1	8.7	7.7
18 21+71.5	884	18 21.4	+71 27	7.7	–	2		6.9	6.5	1.2	7.7	6.7
						79/8		8-9/8				

Mean 9

19 53+56.3	2331	19 53.2	+56 18	6.3	–			6.0	6.9	0.6	7.5	6.0
19 14+76.3	717	19 14.4	+76 19	8.5	–			5.3	6.2	1.6	7.8	6.3
19 2+56.6	2209	19 8.9	+56 38	8.5	–			6.1 / 6.3	7.0 / 7.2	0.6	7.8 / 7.8	6.1 / 6.3
19 4+76.9	712	19 3.9	+76 8	6.5	–			6.0	6.9	1.6	8.5	7.5
19 50+57.1	2084	19 50.3	+57 8	8.4	3453	3.1	16 +1	5.1	6.0	0.7	6.7	5.2
20 2+67.4	1222	20 2.2	+67 27	8.1	–			5.6 / 6.0	6.5 / 6.9	1.0	7.5 / 7.9	6.0 / 6.4
20 14+77.3	764	20 13.8	+77 16	4.8	3545	4.4	21 +6	4.0	4.9	1.6	6.5	5.0
19 23+57.7	1999	19 23.2	+57 44	6.5				7.0 / 6.1	7.0	0.7	7.7	6.2
19 12+67.4	1129	19 12.3	+67 24	3.4	–			4.3 / 4.6 / 6.0 / 6.2	5.2 / 5.5 / 6.9 / 7.1	1.0 / 0.7	6.2 / 6.3 / 7.6 / 7.8	4.7 / 5.0 / 6.1 / 6.3
19 11+57.4	1986	19 11.4	+57 27	8.3	–							
18 44+77.5	702	18 44.5	+77 32	7.0	–			6.2	7.1	1.7	8.8	7.3
18 37+77.4	699	18 36.8	+77 23	6.5	–			6.1 / 6.4	7.0 / 7.3	1.7	8.7 / 9.0	7.2 / 7.3
17 46+76.9	667	17 35.9	+76 58	8.2	–			5.0 / 6.0	5.9 / 6.9	1.6 / 1.0	7.5 / 7.9	6.0 / 6.4
19 46+68.0	1082	19 46.6	+68 4	6.4	–							
19 3+68.1	1040	19 3.1	+68 6	7.0	–			6.2 / 6.4	7.1 / 7.3	1.1	8.2 / 8.4	6.7 / 6.9
18 47+69.6	1096	18 47.0	+69 8	7.0	–			6.3 / 6.6	7.2 / 7.5	1.0	8.2 / 8.5	6.7 / 7.0
18 55+58.0	1549	18 55.1	+58 1	6.6	–			6.1	7.0	0.7	7.7	6.2
19 46+59.0	2121	19 45.7	+59 3	6.5	–			6.3 / 6.6	7.2 / 7.5	0.7	7.9 / 8.2	6.4 / 6.7
19 44+68.9	1079	19 44.3	+68 59	6.2	–			5.5	6.4	1.1	7.5	6.0
19 30+79.3	628	19 30.4	+79 18	6.3	–			4.9	5.8	1.8	7.6	6.1
18 33+79.1	584	18 33.3	+79 7	7.0	–			6.1 / 6.4	7.0 / 7.3	1.8	8.8 / 9.1	7.3 / 7.6
20 42+78.9	716	20 41.6	+78 44	6.9				5.0	5.9	1.8	7.7	6.2
19 51+59.3	2134	19 50.0	+59 19	5.8	3457	6.0	12 –3	5.6	6.5	0.7	7.2	5.7

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1887phae.proj..843F

August 16, 1887.

Plate 1519.

				No.	Type	Lines K	Focus	Other lines.
145	15.6	10.5	III	2	K=H	1	—	
?	15.9	13.0	III b?	1284 2	K=H	3		Bright? pecu.
	15.0	17.2	I	5	K=H	2	—	
	15.9	18.7	I	7	N	2	—	
	15.3	19.0	I?	I.? 4 H	K=H	K=H 1	— —	
	16.0	20.2	III	2	K=H	1	—	
	15.3	22.8	II?	1	N	1	—	
?	15.7	23.1	III k	1285 3	K=H	2	F, pecu.	
	14.2	8.5	III	III.? 2	2K=H	K=H 1	— —	
	14.2	8.7	I	? 4	K=H	1	—	
?	14.7	10.3	III b.c.	1286 3	K=H	3	F. Bright pecu.	
	14.2	10.9	I	4	K=H	1	—	
	14.6	22.3	II	2	K=H	1	—	
	14.3	23.4	III	2	K=H	1	—	
?	13.1	7.1	III b	1287 3	K=H	2	F, pecu.	
	13.8	9.7	I	7	K=2H	2	F	
	13.7	15.1	I	3	N	1	—	
	13.4	16.1	I	I? 4 3	K=H	N 1 1	— —	
	13.0	19.4	III	III? 2 2	K=H	K=H 1 1	— —	
?	13.8	20.9	III a	1288 3	K=H	3	F, pecu.	
	13.4	21.0	II	? 2	K=H	1	—	
	12.7	8.4	III	2	K=H	1	—	
?	12.6	8.8	III b	1289 2	K=H	1	pecu.	
?	12.0	9.1	III b?	1290 3	K=H	2	F, pecu.	
	12.0	9.2	III	1	N	1	—	
	12.1	12.6	III	1	N	1	—	
III.? 6.3, 6.6.	? 12.4	18.9	III b.c.	1291 3	K=H	2	F. Bright pecu.	
	11.9	8.7	I	5	K=2H	2	—	

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	No	R.A.	Dec	Mag		Means Corr.	Bpc.			
20 9 +79.3	660	20 9.8	+ 79 16	6.5	–	√6.2	7.1		8.9	7.4
						6.4	7.3	1.8	9.1	7.6
19 32 +69.4	1083	19 32.6	+ 69 25	5:0	–	√4.9	5.8		6.9	5.4
						5.1	6.0	1.1	7.1	5.6
18 57 +79.7	604	18 53.8	+ 79 46	6.5	–	√5.6	6.5	1.9	8.4	6.9
19 0 +69.3	1018	18 59.8	+ 69 19	6.3	•	√5.7	6.6	1.1	7.7	6.2
18 33.2 +79 30	1900 Celtzen 18,532	18 37.0	+ 79 30	7.8				6.7		
18 32 +78.9	632	18 34.8	+ 78 59	7.7	–	6.2	7.0		8.0	7.3
						√6.3	7.2		9.0	7.5
						6.5	7.4	1.8	9.2	7.7
18 50 +59.4	1926	18 50.0	+ 59 30	7.3	–	√6.0	6.9	0.7	7.6	6.1
18 49 +59.2	1923	18 49.1	+ 59 13	4.3	–	√5.5	6.4		7.1	5.6
						5.8	6.7	0.7	7.4	5.9
19 59 +69.9	1084	19 59.1	+ 69 58	6.5	–	6.3	7.2		8.2	6.9
						6.6	7.5	1.2	8.7	7.2
20 33 +79.7	657	20 32.6	+ 79 43	7.3	–	√6.1	7.0	1.9	8.9	7.4
19 48 +69.9	1070	19 48.6	+ 69 53	3.8	–	√4.3	5.2		6.4	4.9
						4.6	5.5	1.2	6.7	5.2
19 38 +60.2	1991	19 38.0	+ 60 10	6.5	–	√5.9	6.8	0.8	7.6	6.1
18 51 +59.8	1929	18 51.7	+ 59 50	7.0	–	√6.0	6.9	0.7	7.6	6.1
17 47 +79.3	586	17 47.1	+ 79 16	7.3	–	√6.1	7.0		8.8	7.3
						6.3	7.2	1.8	9.0	7.3
20 54 +80.0	672	20 54.1	+ 80 0	5.3	–	√6.4	6.3		8.2	6.7
						5.8	6.7	1.9	8.6	7.1
20 22 +80.1	630	20 22.6	+ 80 4	6.8	–	√4.9	5.8	1.9	7.7	6.2
19 19 +80.5	609	19 18.9	+ 80 30	7.1	•	√6.0	6.9	1.9	8.8	7.3
19 16 +60.7	1926	19 16.2	+ 60 41	7.0	–	√6.1	7.0	0.8	7.8	6.3
18 26 +80.6	577	18 26.1	+ 80 35	8.0	–	6.3	7.2		9.2	7.7
						6.6	7.5	2.0	9.5	8.0
	570	18 10.9	+ 79 59	6.5	–					
18 11 +79.9	571	18 11.0	+ 79 60	6.8	–	√4.4	5.3	1.9	7.2	5.7
18 56 +60.4	1864	18 56.7	+ 60 28	6.6	–	√6.1	7.0	0.8	7.8	5.3
						√6.3	7.2		8.1	6.6
19 48 +60.9	2026	19 48.1	+ 60 30	6.1	–	6.6	7.5	0.9	8.4	6.9
20 38 +80.6	660	20 37.7	+ 80 35	6.1	–	√5.6	6.5		9.3	7.0
						5.8	6.7	2.0	8.7	7.2
20 37 +80.9	659	20 37.2	+ 80 36	6.8	–	√5.0	5.9		7.9	6.4
						5.4	6.3	2.0	8.3	6.8
20 35 +80.9	657	20 35.8	+ 80 56	7.5	–	√6.0	6.9		8.9	7.4
						6.3	7.2	2.0	9.2	7.7
19 06 +71.3	961	19 06.8	+ 71 12	6.7	–	√6.1	7.0	1.2	8.2	6.7
18 56 +71.1	915	18 56.2	+ 71 6	5.3	–	√5.2	6.1		7.3	5.8
						5.6	6.5	1.2	7.7	6.2
21 19 +80.6	690	21 19.2	+ 80 37	6.3	–	√4.8	5.7	2.0	7.7	6.2

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1887phae.proj..843F

August, 16, 1887.

Plate 1519.

V	H	Type	No. Lines	K	Focus	Other lines.
11.5	6.4	I	4	K=H	1	—
11.3	19.0	I	5	K=H	1	—
11.2	19.4	I?	1	N	1	—
11.1	24.2	I	7 8	?	4	F.
10.1	10.0	II	2	K=H	1	—
10.7	10.8	III	III? 2	2	K=H K=H	1 — —
10.5	15.7	I	6	K=.5H	2	F.
9.6	8.7	I	7	K=.2H	3	F
9.9	15.2	I?	4	K=H	1	—
8.9	7.0	III	III	2	2 K=H K=H	1 — —
8.0	7.0	I	5	K=.5H	1	—
8.6	10.1	III	1	N	1	—
8.5	14.2	I	6	K=.2H	2	F.
8.3	14.9	I	4	K=H	1	—
8.8	15.3	III	b.c. 1292	2	K=H	2 Bright lines.
8.6	17.2	I	7	K=.2H	3	—
8.7	18.1	I	4	N	1	—
? 8.5	23.4	III?	12933	K=1.2H	4	F. lines.
7.8	10.1	I	6	K=.2H	2	—
7.5	15.5	I	5	K=.5H	1	—
7.6	21.3	III	2	K=H	1	—
? 7.6	23.8	III	b.2 1294	2	K=H ?	3 lines.
6.7	9.3	III	2	K=H	1	—
6.1	11.4	II	2	K=H	1	—
6.0	12.0	I	5	K=.5H	1	—
6.6	15.5	I	4	N	1	—
6.9	17.6	II	2	K=H	1	—
6.5	18.3	III	1	N	1	—

Peculiar spectrum.

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1887phae.proj..843F

No	Rd.	Wed	Mag					Means Geo.	Bc.	Bz.		
21 9+80.6	649	21 10.0 + 80 36	7.0	–				✓ 5.8	6.7	2.0	8.7	7.2
18 55+91.6	914	18 53.1 + 91 35	7.5	–				✓ 5.9	6.8	1.3	8.1	6.6
18 19+81.4	619	18 19.4 + 81 26	8.5	–				✓ 6.1	7.0	2.1	9.1	7.6
18 22+91.2	889	18 23.0 + 91 14	4.7	–				✓ 3.7	4.6	4.6	1.2	3.8	4.3
20 32+81.9	706	20 32.0 + 81 53	7.4	–				✓ 6.0	6.9	2.1	9.0	7.5
20 19+81.8	699	20 19.0 + 81 46	7.5	–				7.3 6.1 / 7.4 6.3	7.0 / 7.2	2.1	9.1 / 9.3	7.6 / 7.8
19 10+82.7	372	19 9.4 + 82 9	6.0	–				✓ 5.7	6.3	2.2	8.5	7.0
20 53+81.9	718	20 52.8 + 81 59	6.0	–				✓ 3.9	4.8	2.1	6.9	5.4
19 17+82.5	548	19 16.6 + 82 28	7.7	–				✓ 6.1	7.0	2.2	9.2	7.7
20 14+72.4	943	20 14.6 + 72 26	6.8	–				7.3 6.2 / 7.5 6.5	7.1 / 7.4	1.3	8.4 / 8.7	6.9 / 7.2
19 57+63.1	1584	19 56.7 + 63 9	6.3	–				✓ 5.7	6.6	0.9	7.5	6.0
20 39+82.7	614	20 38.2 + 82 41	7.0	–				✓ 5.5 / 6.1	6.7 / 7.0	2.2	8.9 / 9.2	7.4 / 7.7
19 32+83.2	552	19 33.4 + 83 10	6.0	–				✓ 4.9	5.8	2.3	8.1	6.6
19 20+73.3	859	19 21.7 + 73 17	7.5	–				✓ 5.9	6.8	1.4	8.2	6.7
19 18+73.0	857	19 18.3 + 73 3	4.4	–				✓ 5.0 / 5.6	5.9 / 6.5	1.3	7.2 / 7.8	5.7 / 6.3
18 43+83.1	536	18 43.2 + 83 4	6.2	–				✓ 4.6	5.5	2.3	7.8	6.3
18 28+82.9	540	18 28.6 + 82 52	7.5	•				✓ 5.6	6.5	2.3	8.8	7.3
18 24+72.7	839	18 23.7 + 72 40	3.8	–				✓ 3.7	4.4	4.6	1.3	3.9	4.4
20 43+83.1	388	20 43.2 + 83 7	6.2	–				✓ 4.6	5.5	2.3	7.8	6.3
19 12+83.7	544	19 10.4 + 83 42	6.5	–				✓ 5.1	6.0	2.4	8.4	6.9
17 35+82.9	521	17 35.0 + 82 51	8.8	–				✓ 6.3 / 6.6	7.2 / 7.5	2.3	9.3 / 9.8	7.0 / 7.3
17 1+82.3	498	17 1.0 + 82 16	4.0	–				✓ 4.0 / 4.5	4.9 / 5.4	2.2	7.1 / 7.6	5.6 / 6.1
21 2+83.4	596	21 2.8 + 83 23	7.7	–				✓ 6.0 / 6.2	6.9 / 7.1	2.3	9.2 / 9.4	7.7 / 7.9
20 31+84.1	462	20 30.0 + 84 3	7.0	–				✓ 5.8	6.7	2.3	9.2	7.7
20 20+84.2	431	20 20.0 + 84 14	7.0	–				✓ 5.3	6.2	2.3	8.7	7.2
19 19+64.1	1344	19 18.7 + 64 8	6.6	3336	6.2	12	–3	✓ 5.6	6.5	0.9	7.4	5.9
19 2+73.9	845	19 2.2 + 73 55	6.8	–				✓ 6.1	7.0	1.4	8.4	6.9
18 15+83.0	527	18 16.8 + 83 5	7.7	–				✓ 6.1 / 6.3	7.0 / 7.2	2.4	9.4 / 9.6	7.1 / 8.1

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1887phae.proj..843F

August 16, 1887.

Plate IV 19.

	V	H	Type	No. Lines	K	Focus	Other Lines.
?	6.8	19.3	III b	1295 2	K=H	2	perm.
	5.6	6.4	III	1	N	1	—
	5.4	6.6	III	1	N	1	—
	5.3	6.8	III?	2	K=H	1	—
	5.0	11.7	III?	1	N	1	—
	5.4	17.2	~~IV~~ III?	2	K=H	1	—
	4.4	5.4	I	6	K=H	3	—
	4.7	12.9	III	1	N	1	—
	4.1	15.2	I	9	K=1/2H	4	?
	4.1	18.7	I	7	N	3	?
	4.1	19.4	III?	2	K=H	1	—
	4.5	20.3	III	2	K=H	1	—
	3.1	17.3	II?	1	N	1	—
	3.4	17.4	I	5	N	1	—
	3.6	17.7	I	6	K=1/2H	2	—
	3.6	20.0	II?	2	K=H	1	—
	2.4	15.7	I	9	K=1/2H	2	?
2 30	1.6	16.7	I?	3	N	5	?

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No	R.A.	Wed.	Mag					Mean 9 Corr. Br.	Br.			
18 49+73.9	835	18	49.4 + 73	5.4	5.3	–		✓5.3	6.2		7.6	6.1
								5.6	6.5	1.4	7.9	6.4
20 1+64.2	1407	20	0.8 + 64	13	6.5	–		✓6.3	7.2		8.1	6.6
								6.6	7.5	0.9	8.4	6.9
20 0+64.4	1405	19	59.9 + 64	25	5.0	–		✓6.2	7.1		8.1	6.6
								6.5	7.4	1.0	8.4	6.9
21 52+83.3	618	21	52.7 + 83	27	7.2	–		✓5.8	6.7	2.3	9.0	7.5
20 32+84.6	463	20	~~31.0~~ + 84	40	7.2	–		✓5.9	6.8	2.6	9.4	7.9
18 34+84.6	412	18	32.8 + 84	35	7.5	–		✓5.8	6.7	2.6	9.3	7.8
20 33+74.4	872	20	33.4 + 74	26	5.5	–		✓4.4	5.3	1.4	6.7	5.2
								6.3	7.2		8.7	7.2
19 36+75.0	~~831~~ ~~829~~	~~19~~	~~38.~~ + ~~36.7~~ + 74		~~6.9~~	~~8.5~~ –		✓6.6	7.5	1.5	9.0	7.3
19 20+65.4	1345	19	19.2 + 65	26	5.3	–		✓4.1	5.0	0.8	5.8	4.3
18 51+75.3	682	18	51.0 + 75	16	5.8	3211	5.6 14-1	✓4.6	5.5	1.3	7.0	5.3
								6.3	7.2		8.7	7.2
18 46+74.2	678	18	46.0 + 75	9	7.5	–		✓6.6	7.5	1.3	9.0	7.3
								5.8	6.7		7.6	6.1
18 56+65.0	1309	18	56.8 + 65	4	5.5	–		✓6.1	7.0	0.9	7.9	6.4
18 19+85.5	294	18	18.1 + 85	40	7.5	–		✓6.0	6.9	2.8	9.7	8.2
19 9+65.7	1326	19	9.3 + 65	44	6.9	.		✓5.7	6.6	1.0	7.6	6.1
18 58+75.5	683	18	58.4 + 75	33	6.5	–		✓5.4	6.3	1.3	7.8	6.3
17 21+84.2	378	17	21.1 + 84	57	8.2	–		✓6.0	6.9	2.6	9.3	8.0
19 14+76.3	714	19	14.4 + 76	19	5.5	–		✓	.	.	.	.
18 20+86.6	269	18	19.7 + 86	36	4.5			✓	.	.	.	.
						✓	$\frac{75}{5}$	$\frac{7-7}{5}$				

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Ant. of Fog due to moon & clouds 7.7

Ant. of Fog. due to chemicals 7.8

August 28, 1887.

Plate 1478.

			T	H	Type	No. Lines	K	Focus	Other Lines.	
12	0	?	22.0	11.6	III b 1296	3	K=H	3	F. Bright	
		?	20.9	17.6	II a 1297	2	K=H	1	Perm	
			19.8	15.2	I	9	K=.2H	3	F.	
			17.8	22.1	I ?	4	K=H	1	—	
			17.4	20.6	III	2	K=H	1	—	
			16.1	14.2	I	6	N	2	F	
∫	√		15.1	11.9	I II	2 2	K=H	K=H 1	— —	
			16.3	17.7	I ?	1	N	1	—	
			14.9	18.9	I	4	N	1	—	
∫	√		13.9	13.1	I II ?	2 2	K=H	K=H 1	— —	
			13.8	15.8	I	5	N	1	—	
			12.3	6.8	I ?	3	N	1	—	
			12.0	8.5	II ?	2	K=H	1	—	
			12.6	12.4	I	5	K=.5H	2	F.	
			12.6	16.6	I	3	N	1	—	
			12.0	17.4	II ?	2	K=H	1	—	
			12.6	20.1	I	9	K=.2H	3	F	
			11.4	6.9	III	2	K=H	1	—	
∫	√		11.7	12.0	I I ? I H	2	K=H	K=H 1	— —	
		?	10.9	11.5	II a 1298	3	K=H	2	F perm.	
			10.6	16.4	I	8	N	4	F.	
			11.0	23.4	I	6	K=H	2	F	
			9.6	10.6	I	5	N	2	F	
III 6.7, 7.0.		?	9.8	19.9	III b 1299	3	K=H	1	F? perm.	
			7.1	13.6	III	2	K=H	1	—	
			6.8	16.6	I	3	N	1	—	
			5.0	12.6	III	2	K=H	1	—	
			5.0	12.9	II a 1300	2	K=H	1	—	

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Mean 12 (

	No	R.A.	Wed	Mag			Corr. Bx.	Bx.			
20 42 +61.3	2050	20 42.4	+61 17	3.7	–		√ 4.8 / 5.1	6.0 / 6.3	0.8	6.8 / 7.1	5.0 / 5.3
20 17 +61.8	2000	20 17.2	+61 48	5.8	–		√ 5.6	6.8	0.8	7.6	5.8
20 27 +62.5	1821	20 27.2	+62 31	4.0	–		√ 4.2	5.4	0.8	6.2	4.4
19 57 +63.1	1854	19 56.7	+63 9	6.5	–		√ 5.9	7.1	0.9	8.0	6.2
20 3 +63.4	1893	20 3.9	+63 29	6.5	–		√ 6.0 / 6.3	7.2 / 7.5	0.9	8.1 / 8.4	6.3 / 6.6
20 33 +74.4	8702	20 33.4	+74 26	5.5	3614	5.1 2 4 +6	√ 4.9	6.1	1.4	7.3	5.7
20 39 +74.7	2408	20 39.6	+74 46	6.7	–	7.0	√ 5.9	7.1	0.6	7.7	5.9
20 19 +74.2	2341	20 19.3	+74 12	6.7	–		√ 5.8	7.0	0.6	7.6	5.8
20 15 +74.9	2029	20 14.8	+74 57	6.0	3336	3.7 1 4 –4	√ 5.3	6.5	0.6	7.1	5.3
20 35 +75.4	2444	20 35.2	+75 30	6.5	–	6.9	√ 5.8	7.0	0.6	7.6	5.8
20 26 +75.6	2417	20 25.8	+75 35	6.0	3370	3.9 10 –8	√ 5.1	6.3	0.6	6.9	5.1
20 52 +76.1	2824	20 38.2	+76 5	5.8			√ 5.0	6.2	0.6	6.8	5.0
20 52 +76.2	2515	20 52.4	+76 19	6.0	–		√ 5.4	6.6	0.6	7.2	5.4
20 41 +66.1	1318	20 41.4	+66 8	5.5	–		√ 5.1	6.3	1.0	7.3	5.3
~~20 23 +76.2~~	~~2422~~	~~20~~	~~22.9 +76~~	~~9 8.8~~			√ 5.5	6.7	0.6	7.3	5.5
20 16 +66.4	1281	20 16.1	+66 23	6.2	–		√ 5.9	7.1	1.0	8.1	6.3
20 10 +76.1	2376	20 10.0	+76 8	4.5	–		√ 4.1	5.3	0.6	7.9	4.1
20 58 +76.5	2523	20 58.0 ~~57.4~~	+76 29	6.5	–		√ 5.7	6.9	0.6	7.3	5.7
20 29 +76.6	2477	20 39.6	+76 38	6.7	–	6.8	√ 5.5	6.7	0.6	7.3	5.5
20 42 +77.1	2240	20 41.8	+77 4	4.5	–		√ 4.8	6.0	0.7	6.7	4.9
20 18 +77.2	764	20 18.8	+77 16	4.8	3343	4.4 1 8 0	√ 3.4	4.6	1.6	6.2	4.4
19 42 +76.3	7187	19 14.4	+76 19	5.5	–		√ 5.1	6.3	1.6	7.9	6.1
21 8 +77.5	8080	21 8.4	+77 32	6.1	3733	3.8 2 2 +4	√ 5.1	6.3	1.7	8.0	6.2
20 22 +67.4	1223	20 2.2	+67 27	5.1	–		√ 5.2 / 5.9	6.4 / 7.1	1.0	7.4 / 8.1	5.6 / 6.3
20 41 +78.9	716	20 41.6	+78 54	6.9	–		√ 6.0 / 6.3	7.2 / 7.5	1.8	9.0 / 9.3	7.2 / 7.5
20 22 +52.2	2228	20 22.1	+52 9	6.4			√ 5.5	6.7	0.7	7.4	5.6
20 54 +80.0	6972	20 54.1	+80 0	5.3	–		√ 5.7 / 6.1	6.9 / 7.3	1.9	8.8 / 9.2	7.0 / 7.4
20 37 +50.9	2272	20 37.2	+50 ~~59~~ 60	6.2	–		√ 5.8	7.0	1.8	7.8	6.0

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1887phae.proj..843F

August 26, 1887.

Plate 1478.

V	H	Type	No. Lines	K	Focus	Other Lines	
6.0	15.3	III	2	K=H	1	—	
6.0	20.2	I	5	K=H	1	F.	
4.9	12.3	I?	4	K=H	1	—	
? 4.8	21.7	III b.c.	13013	K=H	2	F. Bright scen.	
3.5	10.7	I	4	K=H	1	—	
3.3	14.2	III	2	K=H	1	—	
? 2.5	11.7	III b.c.	13023,	K=H	3	F. Bright scen	

Amt. of Fog. due to moon & clouds. 7.7 Amt of Fog. due to chemicals 7.8

Plate 1520

22.3	10.3	I	3	K	1	—	
22.4	14.9	I	6	K=.8H	2	—	
21.4	6.1	I	5	K=H	2	F.	
21.2	9.9	I	4	K	1	—	
21.4	10.4	III	1	K	1	—	
21.5	10.6	III	2	K=H	1	—	
? 21.9	12.0	II? a	13032	K=H	1	scen.	
21.9	23.7	I	6	K=.8H	2	F.	
20.6	7.6	III	III 2	2 K=H	K=H 1	—	—
20.6	14.9	II a	13043	K=H	2	F. scen.	
20.0	17.8	I	9	?	4	F.	
19.0	10.3	I?	I 4	K=H	1	—	
19.5	12.0	I	6	K=.2H	3	F	
III? 6.6, 6.9.	19.2	22.3	III b.	13053	K=H	1	F.
	18.3	6.1	II	2	K=H	1	—
	18.1	6.5	III	1	K	1	—
	18.5	7.9	I	4	K=H	1	—
! ?	18.4	11.0	I	3	?	1	scen.
	18.4	11.7	II?	2	K=K	1	—

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1887phae.proj..843F

Means 12

	No	R A	Dec	Mag		Cor. B-V.	B-V.			
20 22 +80.1	65-0	20 22.6	+80 4	6.8	—	√	6.0	7.2	1.9	9.1 7.3
19 31 +79.3	628	19 30.4	+79 18	6.3	—	√	5.3	6.5	1.8	8.3 6.5
20 39 +80.1	2154	20 39.6	+80 4	6.2	—	√	5.4	6.6	0.8	7.4 3.6
19 48 +69.9	10 ~~70~~ 69	19 48.6	+69 63	3.8	—	√	4.6	5.6		7.0 5.2
							4.9	6.1	1.2	7.3 5.5
21 19 +80.6	690	21 19.2	+80 37	6.3	—	√	5.5	6.7	2.0	8.7 6.9
20 37 +80.9	639	20 37.2	+80 56	5.8	—	√	5.5	7.0		9.0 7.2
							6.1	7.3	2.0	9.3 7.5
20 42 +61.3	2080	20 42.4	+61 17	3.7	—	√				

88/5 — 10 − 12/5

Means 9

20 58 +56.1	2534	20 58.2	+56 5	5.8	3711 5.9 13-4	√	5.7	6.6	0.6	7.2	3.3
20 41 +66.1	1318	20 41.4	+66 8	5.5	—	√	5.6	6.5	1.0	7.3	3.8
21 25 +66.2	1403	21 25.0	+66 10	5.5	—	√	5.3	6.2	1.0	7.2	3.5
21 24 +76.5	836	21 23.7	+76 28	6.5		√	5.7	6.6	1.6	8.2	6.3
20 58 +56.5	2323	20 ~~58.0~~ 58.1	+56 29	6.3	—	√	6.1	7.0		7.6	5.9
							6.4	7.3	0.6	7.9	6.2
21 17 +76.4	833	21 17.3	+76 24	6.0	—	√	6.2	7.1		8.7	7.0
							6.6	7.5	1.6	9.1	7.4
20 52 +56.3	2515	20 52.4	+56 19	6.0	—	√	5.8	6.7	0.6	7.3	3.6
20 10 +56.1	2376	20 10.0	+56 X8	4.5	—	√	4.9	5.8	0.6	6.4	4.7
21 19 +66.6	~~1392~~ 1392	21 ~~18.2~~ 19.4	+66 36	7.6	—	7.3	6.3	7.2		8.2	6.3
						7.6	6.6	7.5	1.0	8.5	6.8
20 41 +57.0	2240	20 41.8	+56 4	4.5	—	√	5.1	6.0	0.7	6.7	3.0
20 14 +77.3	764	20 13.8	+77 16	4.8	—	√	3.9	4.8	1.6	6.4	4.7
21 5 +67.7	1286	21 5.8	+67 40	7.0	—	√	6.1	7.0	1.1	8.1	6.4
21 8 +77.5	500	21 8.4	+77 32	6.1	—	√	4.9	5.8	1.7	7.5	3.8
20 2 +67.4	1222	20 2.2	+67 27	5.1	—	√	5.6	6.5		7.5	3.8
							6.1	7.0	1.0	8.0	6.3
21 28 +67.6	1322	21 28.1	+67 39	7.3	—	√	6.2	7.1	1.0	8.1	6.4
21 13 +57.0	2309	21 13.4	+57 59	6.5	—	√	6.1	7.0		7.7	6.0
							6.5	7.4	0.7	8.1	6.4
21 46 +77.5	834	21 46.8	+77 34	7.0	—	√	5.9	6.8	1.7	8.5	6.8
21 18 +77.9	811	21 18.4	+77 39	7.0	—	√	5.8	6.7	1.7	8.4	6.7
21 12 +78.0	742	21 12.2	+78 4	7.5	—	√	6.0	6.9	1.7	8.6	6.9

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1887phae.proj..843F

August 25, 1887.

Plate 1526.

									Other Lines.
					No. Lines	K	Focus		
↓	√	18,2	13,8	I	I	4 5	K=H	K=H	1 — —
		17,6	11,5	?		2 ?			1 —
↓	√	17,7	18,9	III	III	2 2	K=H	K=H	1 — —
?		16,3	7,7	II a?	1306	2	K=H		1 seen.
↓	√	16,3	14,5	III	III?	1 2	N	K=H	1 — —
		16,9	14,8	I	\	3	?		1 —
		16,0	17,7	III		1	N		1 —
		16,4	18,4	III	?	1	N		1 —
		16,3	19,9	I		3	N		1 —
		15,6	8,2	I	?	3	N		2 F.
↓	√	15,3	15,6	II a	1307	2 2	K=H	K=H	1 Seen
~~Table on plate~~		15,2	21,3	I		5	N		2 F.
~~Double on plate~~		14,3	7,1	I	?	9			√ F.
		14,6	10,7	III		3	K=H		2 F.
?		14,1	11,7	II a	1308	2	K=H		1 seen.
?		14,8	13,8	III b.c.	1309	3	K=H		2 F. Bright
		14,6	15,4	I		√	K=√H		1 F.
		14,8	16,0	III		3	K=H		1 F.
		14,6	16,5	I		4	N		2 —
		14,6	16,5	I		3	N		1 —
		14,1	22,1	III		1	N		1 —
		13,9	6,2	III		1	N		1 —
		13,5	6,9	I		5	K=H		1 F.
		13,0	11,0	I		5	K=H		2 F.
		13,4	11,8	I		4	K=2H		3 F.
		13,5	12,5	I		√	K=H		1 F.
?		13,6	15,1	III b.	1310	3	K=H		1 F. seen.
?		13,0	15,2	III b.c?	1311	3	K=H		2 F. Bright

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1887phae.proj..842F

No	Hd	Dec	Mag			Corr. Br.	Br.	Means			
20 46 +78.2	2178	20	45.8 + 78	12	6.8	–	6.8	5.9	6.8	0.7	7.3 – 5.8
21 15 +78.3	744	21	14.8 + 78	23	6.8	–		5.7	6.6	1.7	8.3 6.6
20 19 +68.4	1121	20	19.4 + 68	25	6.0	–	7.8	6.1	7.0	1.1	8.1 6.4
							7.6	6.4	7.3		8.4 6.7
21 22 +68.9	1213	21	21.7 + 68	3-5	7.0	–		5.7	6.6	1.1	7.7 6.0
20 44 +69.2	1127	20	43.6 + 69	13	6.7	–	7.3	6.3	7.2		8.3 6.6
							7.3	6.5	7.4	1.1	8.5 6.8
20 41 +78.9	716	20	41.6 + 78	6-4	6.9	–		5.5	6.4	1.8	8.2 6.3
20 9 +79.3	620	20	9.8 + 79	16	6.5	–		6.1	7.0		8.8 7.1
								6.4	7.3	1.8	9.1 7.4
20 22 +69.0	1099	20	21.8 + 69	23	7.7	–		6.3	7.2		8.3 6.6
								6.5	7.4	1.1	8.5 6.8
20 22 +79.1	2228	20	22.4 + 79	8	6.4			5.8	6.7	0.7	7.4 5.7
21 8 +79.4	2334	21	8.1 + 79	22	6.0			5.2	6.1	0.7	6.8 5.1
20 23 +79.7	615	20	22.7 + 79	43	7.3	–	6.8	5.8	6.7	1.9	8.6 6.9
19 30 +79.3	628	19	30.4 + 79	18	6.3	3371 3.9 26 +9		4.8	5.7	1.8	8.5 6.8
21 27 +69.9	1173	21	26.8 + 69	3.6	3.0	–			7.3	1.2	B. B.
21 29 +79.9	704	21	29.0 + 79	3-4	6.0	–		5.5	6.4		8.3 6.6
								5.8	6.7	1.9	8.6 6.9
21 19 +80.2	688	21	18.2 + 80	12	6.5-	–		5.8	6.7	1.9	8.6 6.9
20 54 +80.0	672	20	54.1 + 80	0	5.3	–		5.3	6.2		8.1 6.4
								5.6	6.5	1.9	8.4 6.7
20 39 +60.1	2154	20	39.6 + 60	4	6.2	–		5.6	6.5	0.8	7.3 5.6
20 37 +59.9	2272	20	37.2 + 59	60	6.2	–		5.8	6.7	0.8	7.5 5.8
20 22 +80.1	6530	20	22.6 + 80	4	6.8			5.0	5.9	1.9	7.8 6.1
20 32 +70.0	1176	20	32.1 + 70	3	6.8			5.6	6.5	1.2	7.7 6.0
19 59 +69.9	1084	19	59.1 + 69	58	6.5-	–		6.2	7.1		8.3 6.6
								6.4	7.3	1.2	8.5 6.8
21 16 +60.0	2224	21	16.7 + 60	4	6.5-	–		6.3	7.2		8.0 6.3
								6.5	7.4	0.8	8.2 6.5
21 29 +70.2	1183	21	29.1 + 70	10	7.2	–		5.9	6.8	1.2	8.0 6.3
21 5 +70.9	1164	21	5.3 + 70	37	6.0	–		5.5	6.4	1.2	7.6 5.9
21 19 +80.6	690	21	19.2 + 80	37	6.3	–		4.8	5.7	2.0	7.7 6.0
21 10 +80.5	679	21	10.0 + 80	36	7.0	–		5.7	6.6	2.0	8.6 6.9
20 37 +80.5	6600	20	37.7 + 80	35	6.1	–		5.6	6.5		8.3 6.8
								5.8	6.7	2.0	8.7 7.0
20 37 +80.9	6599	20	37.2 + 80	36	5.8	–		5.3	6.2		8.2 6.3
								5.6	6.5	2.0	8.5 6.8

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1887phae.proj..843F

August 25, 1887.

Plate 1520.

	τ	π	Type	No. Lines	K	Focus	Other Lines.
	13.0	15.3	III?	1	N	1	—
?	13.9	23.9	III b.c. 1312	3	K=1.5H?	4	F, Bright, scan.
	13.1	23.9	I	3	N	1	—
?	12.4	5.3	III b 1313	3	K=H	2	F, scan.
	12.8	6.0	III	2	K=H	1	—
?	12.4	14.8	III b.c. 1314	3	K=2.0 H?	4	F, Bright, scan.
	12.1	17.4	III?	1	N	1	—
	12.5	21.5	I	3	N	1	—
	11.4	8.7	I	3	N	1	—
	11.0	15.5	II?	2	K=H	1	—
	11.0	20.6	I	6	N	2	F
?	11.1	22.6	II a 1315	3	K=H	1	F, scan.
	10.3	5.5	III	3	K=H	1	F
	10.5	7.1	I	12	K=1.5H	5	F
	10.9	14.1	I	9	K=.2H	3	F
	9.1	9.3	I	5	N	1	—
	9.5	9.4	III?	3	K=H	1	F
∫	9.6	11.6	III III	1 2	N K=H	1 1	— —
	9.9	13.1	III	1	N	1	—
∫	9.8	14.2	II I?	1 4	N K=H	1 1	— —
	9.5	15.0	III	1	N	1	—
	9.8	18.2	I	8	K=.2H	4	F
	9.3	20.9	I	5	K=.2H	2	—
	8.0	13.6	I	3	N	1	—
	8.7	14.7	I	7	K=.2H	2	F
	8.0	18.8	I	7	K=1.5H	2	F
?	7.9	6.9	III b.c. 1316	3	K=H	2	F, scan.
	7.7	7.2	I	1	N	1	—

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1887phae.proj..843F

No	R.A.	Dec	Mag				Means Cor. Br.	Br.			
20 35+80.9	654	20 35.8	+80 56	7.5	—		6.2	7.1	2.0	9.1	7.4
19 48+69.9	1070	19 48.6	+69 53	3.8	—		4.3 4.6	5.2 5.5	1.2	6.4 6.7	4.7 5.0
18 56+79.7	604	18 55.8	+79 46	6.5	•		5.6	6.5	1.9	8.4	6.7
21 40+70.6	1193	21 39.8	+70 38	5.0	—		5.1 5.6	6.0 6.5	1.2	7.2 7.7	6.0
22 27+79.0	739	22 26.3	+79 38	7.5	—		6.3 6.6	7.2 7.5	1.9	9.1 9.4	7.4 7.7
20 42+61.3	2050	20 42.4	+61 17	3.7	—		4.2 4.5	5.1 5.4	0.8	5.9 6.2	4.3
20 31+61.2	2028	20 31.2	+61 16	7.3	—		6.3 6.5	7.2 7.4	0.8	8.0 8.2	6.3 6.5
19 19+80.5	609	19 18.9	+80 30	7.1	•		5.9	6.8	2.0	8.8	7.1
21 20+71.4	1062	21 20.8	+71 27	6.8	•		5.9	6.8	1.2	8.0	6.3
20 32+81.9	706	20 32.0	+81 53	7.4	—		5.8	6.7	2.1	8.8	7.1
20 17+61.8	2000	20 17.2	+61 48	5.8	—	3.5 3.3 3.6 16 1	5.4	6.3	0.9	7.2	5.3
20 9+61.6	1983	20 9.2	+61 39	5.8	—		5.7	6.6	0.8	7.4	5.7
21 41+71.5	1082	21 41.3	+71 38	5.5	—		5.3 5.7	6.2 6.6	1.3	7.5 7.9	5.8 6.2
21 15+61.9	2111	21 15.2	+61 58	3.0	—		3.1	4.0	0.8	4.8	3.1
20 53+81.9	718	20 52.8	+81 59	6.0	—		4.5	5.4	2.1	7.5	5.8
21 6+62.7	1903	21 6.4	+62 42	7.0	•		5.7	6.6	0.8	7.4	5.7
22 4+82.4	673 674	22 3.3 22 3.3	+82 10 +82 10	7.5 8.0	—		5.6 5.7	6.5 6.6	2.2	8.7 8.8	7.6 7.1
21 31+82.3	648	21 30.2	+82 21	8.0	—		7.3 7.5	6.2 6.6	1.1 2.2	9.3 9.7	7.6 8.0
21 9+82.4	636	21 8.4	+82 24	8.5	—		6.3 6.7	7.2 7.6	2.2	9.4 9.8	7.7 8.1
20 52+82.5	627	20 51.5	+82 31	8.6	—		7.5	6.4	7.3	2.2	9.5	7.8
20 38+82.6	614	20 38.2	+82 41	7.0	—		6.0 6.2	6.9 7.1	2.2	9.1 9.3	7.4 7.6
20 27+62.5	1821	20 27.2	+62 31	4.0	—		3.9	4.8	0.8	5.6	3.9
19 9+82.2	572	19 9.4	+82 9	6.0	—		5.5	6.4	2.2	8.6	6.9
21 2+83.4	596	21 2.8	+83 23	7.7	•		5.9	6.8	2.3	9.1	7.4
20 43+83.1	588	20 43.2	+83 7	6.2	—		4.6	5.5	2.3	7.8	6.1
19 34+83.2	582	19 33.4	+83 10	6.0	—		5.0	5.9	2.3	8.2	6.5
22 49+82.4	703	22 47.9	+82 23	5.0	—		4.7 5.2	5.6 6.1	2.2	7.8 8.3	6.1 6.6
22 44+82.5	700	22 44.1	+82 30	8.0	—		6.0	6.9	2.2	9.1	7.4

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1887phae.proj..843F

August 26, 1887.

Plate 1520.

	r	H	Type	No. Lines	K	Focus	Other Lines	
	7.5	10.8	I	3	N	1	—	
	7.9	13.8	II	3	K=H	1	F.	
	7.0	21.7	I	7	K=.2H	2	F.	
	7.3	23.5	I	5	K=H	1	F.	
	6.0	8.6	III	1	N	1	—	
	6.1	9.5	II	3	N	1	—	
	6.6	13.3	II	1	N	1	—	
	6.8	15.4	II a 1317	3	K=H	1	F.	
	6.4	15.9	I	6	K=.8H	2	F.	
	6.1	16.0	I	8	K=.2H	3	F.	
	6.6	19.7	I	5	K=.5H	1	—	
?	5.9	7.4	I b 1318	6	N	2	neen.	
?	5.6	7.7	III b? 1319	3	K=H	2	F, neen.	
	5.4	11.1	III	1	N	1	—	
	6.6	15.3	III	2	K=H	1	—	
	4.2	18.2	I	3	N	1	—	
	3.9	9.0	III	3	K=H	1	F.	
	3.3	10.9	I	8	?	4	F.	
∫ √	3.4	15.1	I I	3 H	N	K=H 1	— —	
12.30	2.7	15.0	I	7	K=.8H	2	F.	

~~Clear 200 plate~~
~~Noted to measure~~

Plate 1521

Ant. Fog due to moon & clouds 7.6

Ant. of Fog due chemicals. 8.0

11.40	22.6	10.9	I	3	N	1	—	
	22.5	12.4	I	8	K=.5H	3	F.	
?	22.9	13.2	II a 1320	3	K=H	1	F, neen.	
	23.0	17.8	II ?	2	K=H	1	—	
	22.0	19.0	I	4	N	1	—	
	22.4	24.9	I	6	N	2	F.	

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1887phae.proj...843F

No	R A	Dec	Mag			Col. Br.	Br.				
21 53 +83.3	618	21 52.7	+ 83 21	7.2	•		5.7	6.6	2.3	8.9	7.2 •
20 47 +63.5	1663	20 46.8	+ 63 30	6.5-	–		5.7	6.6	0.9	7.5	5.8 •
18 43 +83.1	536	18 43.2	+ 83 14	6.2	–		4.8	5.7	2.3	8.0	6.3 •
20 3 +63.4	1593	20 2.9	+ 63 29	6.5-	–		5.8	6.7	0.9	7.6	5.9 •
21 11 +63.8	1708	21 10.8	+ 63 48	6.4	–		6.1 / 6.5	7.0 / 7.4	0.9	7.9 / 8.3	6.2 / 6.6 •
22 22 +83.7	630	22 22.5	+ 83 46	7.0	•		5.6	6.5	2.4	8.9	7.2 •
20 53 +74.1	890	20 52.8	+ 74 6	7.3	–		6.0	6.9	1.4	8.3	6.6 •
20 30 +84.1	462	20 ~~29.9~~ 30.0	+ 84 5	7.0	–		5.7	6.6	2.5	9.1	7.4 •
20 20 +84.3	451	20 20.0	+ 84 14	7.0	–		5.1	6.0	2.3	8.3	6.8 •
20 33 +74.4	872	20 33.4	+ 74 26	5.5	–		4.4	5.3	1.4	6.7	5.0 •
19 11 +83.6	547	19 10.4	+ 83 42	6.5	–		5.3	6.2	2.4	8.6	6.9 •
21 16 +64.2	1527	21 16.8	+ 64 ~~17~~	5.5	3764 5.3 13-4		4.8	5.7	0.9	6.6	4.9 •
22 56 +83.6	640	22 55.4	+ 83 34	6.0	–		4.8 / 5.6	5.7 / 6.5	2.4	8.1 / 8.9	6.4 / 7.2 •
21 10 +74.6	907	21 10.4	+ 74 37	7.0	–		6.2 / 6.6	7.1 / 7.5	1.4	8.5 / 8.9	6.8 / 7.2 •
20 32 +84.6	463	20 ~~34.4~~ 31.0	+ 84 ~~38~~ 40	7.2	–		5.7	6.6	2.6	9.2	7.3 •
20 25 +65.3	1466	20 26.2	+ 65 16	6.3	•		5.8	6.7	0.9	7.6	5.9 •
22 54 +84.6	517	22 54.2	+ 84 36	6.5-	–		6.0 / 6.4	6.9 / 7.3	2.6	9.5 / 9.9	7.8 / 8.2 •
22 23 +85.3	383	22 24.2	+ 85 23	6.0	–		3.6	4.5	2.7	7.2	3.3 •
20 37 +85.8	344	20 35.9	+ 85 48	8.0	•	7.2	6.1	7.0	2.8	9.8	8.1 •
20 41 +66.1	1318	20 41.4	+ 66 8	5.5-	–		5.5	6.4	1.0	7.4	5.7

68/4 9-9/4

Means

22 15 +56.2	2758	22 14.8	+ 56 12	6.7	•	1		✓	.	'	'	' ' •
22 10 +56.3	2741	22 9.7	+ 56 19	5.1	–	1		✓	'	'	'	' ' •
22 7 +56.1	2727	22 6.6	+ 56 7	6.0	–	1		✓	'	'	'	' ' •
21 50 +55.9	2644	21 50.1	+ 55 55	6.2	–	1		✓	.	'	'	' ' •
21 24 +76.5	836	21 23.7	+ 76 28	6.5	•	3	5.9	✓ 6.2	6.7	1.6	8.3	6.9 •
21 25 +66.2	1403	21 25.0	+ 66 10	5.5-	3796 5.4 16+2	2	5.5	✓ 6.0	1.0	7.0	5.6 •	

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1887phae.proj..843F

August 26, 1887.

Plate 1521.

?	T	H	Type	No. Lines	K	Focus	Other Lines.
	21.8	8.2	III	1	N	1	—
?	21.8	10.2	II @	31321 2	K=H	1	perm.
	21.0	10.4	II	3	N	1	—
✓	21.1	16.4	II ?	I ? 3 3	N N	1 1	— —
	22.0	19.8	III	1	N	1	—
	21.1	21.9	III	1	N	1	—
	20.0	12.4	II	✓	?	1	—
Peculiar spectrum.	20.3	13.✓	III b.c.	1322 3	K=H	3	F. Bright perm.
	20.6	15.7	II ?	3	N	2	—
	20.0	16.2	II	3	N	1	—
?	19.6	8.7	II @ ?	13233	K=H	4	F. perm.
	19.4	10.✓	II	4	N	1	—
	19.0	11.9	II	8	K=2H	3	F
?	19.0	12.2	II N	1324 6	N	2	F. perm.
	19.6	20.1	II	3	N	1	—
	19.✓	20.4	II	6	N	2	F
	19.4	21.0	III ?	2	K=H	1	—
	18.8	6.6	III	2	K=H	1	—
	18.4	10.9	II	3	N	1	—
✓	18.0	14.1	II	I ✓	5 ?	K=H	1 1 perm, —
?	18.8	19.1	I II	4	K=H	1	perm.
	18.1	19.3	II	2	K=H	1	—
	18.9	20.✓	III	3	K=H	1	F.
	17.1	7.8	III	1	N	1	—
	17.9	8.9	III	1	N	1	—
?	17.9	13.4	I II ?	5	K=H	2	F perm
	17.✓	15.4	III	1	N	1	—
	17.0	17.1	II	3	N	1	—

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1887phae..proj...843F

No	R.A.	Dec	Mag			Exp		Cor. Br.	Mean Br.			
22 25 + 76.5	2794	22 24.8	+ 76 29	7.1	–	1		✓6.4	6.9	7.3	6.1	•
								6.8	7.3	0.6 7.9	6.3	
22 17 + 76.5	2765	22 17.4	+ 76 33	6.7	–	1		✓6.2	6.7	0.6	7.3	5.9 •
22 39 + 76.9	870	22 ~~39.0~~ 38.10	+ 76 51	7.5	•	3		✓6.6	7.1	1.6	8.7	7.3 •
21 55 + 76.9	2670	21 54.5	+ 76 54	6.7	•	1	7.1	✓6.7	7.2	0.7	7.9	6.3 •
21 17 + 76.4	833	21 17.3	+ 76 24	6.0	–	3		✓6.4	7.2		8.8	7.4 •
								7.0	7.5	1.6	9.1	7.7
21 35 + 76.8	2617	21 34.5	+ 76 50	6.2	–	1		✓6.2	6.7		7.4	6.0 •
								6.4	6.9	0.7	7.6	6.2
22 23 + 77.5	860	22 22.4	+ 77 30	6.8	–	3		✓6.0	6.5	1.7	8.2	6.8 •
22 6 + 77.4	2475	22 5.8	+ 77 29	4.1	–	1		✓5.3	5.8		6.5	5.1
								6.0	6.5	0.7	7.2	5.8 •
21 57 + 77.3	2441	21 57.2	+ 77 18	6.4		1		✓5.8	6.3	0.7	7.0	5.6 •
21 47 + 77.5	834	21 46.8	+ 77 34	7.0	•	3		✓6.2	6.7	1.7	8.4	7.0 •
22 24 + 77.7	2348	22 23.8	+ 77 41	var	–	1		4.7	5.2	0.7	5.9	4.5 •
22 41 + 77.7	871	22 41.3	+ 77 44	7.2	•	3		✓6.3	6.8	1.7	8.5	7.1 •
22 28 + 78.1	801	22 28.6	+ 78 4	6.7	–	3		✓4.8	5.3	1.7	7.0	5.6 •
22 25 + 78.0	796	22 25.6	+ 78 x'	6.0	3986	3.8	3 17+3	✓5.3	5.8	1.7	7.5	6.1 •
21 32 + 67.5	1329	21 32.8	+ 67 34	6.8	•	2		✓6.2	6.7	1.0	7.7	6.3 •
21 8 + 77.5	800	21 8.4	+ 77 32	6.1	3733	3.8	3 17+3	✓5.3	5.8	1.7	7.5	6.1 •
21 25 + 67.6	1322	21 28.1	+ 67 39	7.3	–	2		✓6.5	7.0		8.0	7.6
								6.6	7.1	1.0	8.1	7.7 •
22 44 + 67.8	1468	22 44.1	+ 67 49	6.5	–	2		✓6.1	6.6	1	7.7	6.3
								6.4	6.9	1.8	8.0	6.6 •
22 22 + 68.3	1312	22 22.2	+ 68 18	7.7	•	2		✓6.6	7.1	1.8	8.2	6.8 •
22 3 + 78.6	2395	22 3.8	+ 78 35	6.5	–	1	6.9	✓6.5	7.0	0.7	7.7	6.3 •
21 19 + 77.9	811	21 18.4	+ 77 39	7.0	–	3		✓6.5	7.0	1.7	8.7	7.3 •
21 15 + 78.4	744	21 14.8	+ 78 28	6.8	–	3		✓6.3	6.8	1.7	8.5	7.1 •
21 39 + 78.1	2316	21 39.1	+ 78 7	var	–	1		✓6.3	6.8		7.5	6.1 •
								6.7	7.2	0.7	7.9	6.3
23 11 + 78.4	825	23 11.4	+ 78 27	7.5	–	3		✓6.5	7.0		8.7	7.3
								6.7	7.2	1.7	8.9	7.3 •
22 32 + 68.4	1319	22 32.9	+ 68 27	7.3	–	2		✓6.6	7.1		8.2	6.8 •
								6.9	7.4	1.1	8.5	7.1
22 7 + 78.7	~~2402~~ ~~2366~~	22 6.6	+ 78 42	6.6		1		5.2	5.7	0.7	6.4	5.1 •
		~~22 7.4~~	~~+ 78 36~~	~~8.4~~								
21 53 + 78.9	768	21 53.8	+ 78 52	6.5	–	3		✓6.6	7.1		8.9	7.5 •
								7.0	7.5	1.8	9.3	7.9
21 52 + 57.0	2436	21 51.9	+ 57 6	7.0	•	1		✓6.3	6.8	0.7	7.5	6.1 •

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1887phae.proj..843f

August 26, 1887.

Plate 1521.

	τ	H	Type	No. Lines	K	Focus	Other Lines.
	16.0	8.0	II	6	K=H	1	F.
?	16.6	9.8	II a: 13252		K=H	2	neb.
√	16.0	10.5	I ? I:2 H		K	K=H	1 1 — —
?	16.5	13.7	II a3 13262		K=H	2	neb.
	16.0	15.2	III	1	K	1	—
	16.2	17.6	I	√	K=2H	2	—
?	16.8	21.7	II a2 13272		K=H	1	neb.
?	16.2	22.2	II a 13283		K=H	2	F. neb.
	15.7	9.9	I	6	K	2	F.
	15.5	10.5	I	H	K=H	1	—
	15.6	10.6	III	1	K	1	—
	15.6	11.1	III	1	K	1	—
	15.0	11.2	III	3	K=H	1	F.
	15.2	12.6	III	2	K=H	1	—
	15.2	13.3	III	3	K=H	1	F.
	15.2	14.2	II a3 13292		K=H	1	—
	15.4	17.5	II b 13303		K=H	2	F.
	15.1	19.2	III	1	K	1	—
	15.1	20.6	I	10	?	√	F.
	15.1	23.2	I ?	4	?	2	F.
	14.9	9.2	I	4	K	1	—
	14.7	9.3	II ?	1	K	1	—
	14.6	9.8	I	6	K=√H	2	—
	14.4	11.4	I	3	K	1	—
	14.0	16.7	II	1	K	1	—
	14.6	18.3	II a? 13312		K=H	1	—
?	14.3	19.6	II a 13323		K=.8H	3	F. Neb.
	14.5	20.1	I	√	K=H ?	1	—

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1887phae.proj..843F

	No	R.A.	Dec	Mag		Exp	Cor. Bx.	Means Bx.			
23 13 +79.1	777	23 13.9	+79 6	7.8	—	3	✓	6.0	6.5	1.8	8.3	6.9
22 29 +69.1	1262	22 28.9	+69 9	6.0	—	2	✓	5.7	6.2	1.1	7.3	5.9
22 26 +69.4	1257	22 26.0	+69 26	7.3		2	6.9	6.4	6.9	1.1	8.0	6.6
22 7 +69.4	1228	22 7.4	+69 25	5.9	—	2	✓	5.2	5.7	1.1	6.8	5.4
21 56 +79.6	721	21 56.4	+79 37	6.4	—	3	✓	6.7 7.0	7.2 7.5	1.9	9.1 9.4	7.7 8.0
21 44 +69.5	1198	21 44.4	+69 29	6.7	—	2	✓	5.8	6.3	1.1	7.4	6.0
21 21 +68.9	1214	21 21.7	+68 55	7.0	—	2	✓	6.3	6.8	1.1	7.9	6.5
20 41 +78.9	716	20 41.6	+78 54	6.9	—	3	✓	5.7	6.2	1.8	8.0	6.6
22 29 +69.6	1263	22 29.2	+69 37	6.2	·	2	✓	5.7	6.2	1.1	7.3	5.9
22 25 +69.7	1256	22 25.6	+69 4 X2	7.0	—	2	✓	6.5	7.0	1.1	8.1	6.7
22 48 +79.6	756	22 47.9	+79 37	7.2	—	3	✓	6.6 7.0	7.1 7.5	1.9	9.0 9.4	7.6 8.0
	~~1254~~	~~22 25.2~~	~~+69 38~~	~~7.2~~	✓							
	750 ~~748~~	22 42.8	+79 40	7.0	—	3	✓	6.7 7.0	7.2 7.5	1.9	9.1 9.4	7.7 8.0
22 22 +79.6	1240	22 22.3	+79 2	6.0	—	2	✓	6.0 6.4	6.5 6.9	1.2	7.7 8.1	6.3 6.7
22 26 +79.9	739 ~~1246~~	22 26.2 ~~22 26.2~~	+79 58 ~~+79 56~~	7.5 ~~7.8~~	—	3	✓	6.4 6.6	6.9 7.1	1.9	8.8 9.0	7.4 7.6
22 7 +60.0	2385	22 7.3	+60 2	6.4	—	1	✓	6.1 6.4	6.6 6.9	0.8	7.4 7.7	6.0 6.3
22 4 +69.9	1221	22 4.1	+69 59	6.8	—	2	✓	6.3	6.8	1.2	8.0	6.6
21 29 +79.9	707	21 29.0	+79 54	6.0	—	3	✓	6.7 6.1	6.2 6.6	1.9	8.1 8.5	6.7 7.1
21 43 +60.0	2294	21 43.2	+60 2	6.0	—	1	✓	6.6 7.0	7.1 7.5	0.8	7.9 8.3	6.3 6.7
21 27 +69.9	1173	21 26.8	+69 56	5.0	—	2	✓	B	1.2	B.	B.	
21 27 +79.8	2395	21 27.0	+79 49	5.7	—	1	✓	5.6	6.1	0.7	6.8	5.4
23 5 +79.8	769	23 4.6	+79 47	7.5	·	3	✓	6.1	6.6	1.9	8.5	7.1
23 5 +79.9	768	23 4.4	+79 51	7.7	—	3	✓	6.5	7.0	1.9	8.9	7.5
22 58 +80.0	761	22 58.8	+79 60	7.2	—	3	✓	5.7	6.2	1.9	8.1	6.7
22 20 +70.5	1234	22 20.6	+70 55	7.0	·	2	✓	6.5	7.0	1.2	8.2	6.8
21 53 +60.5	2320	21 52.9	+60 36	7.5	—	1	✓	6.5	7.0	0.8	7.8	6.4
21 19 +80.2	688	21 18.2	+80 1X2	6.5	—	3	✓	6.4	6.9	1.9	8.8	7.4
21 41 +60.4	~~2288~~	21 41.4	+60 26	4.5	—	1	✓	4.7	5.2	0.8	6.0	4.6
21 29 +70.2	1183	21 29.1	+70 10	7.2	—	2	✓	6.1	6.6	1.2	7.8	6.4

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1887phae.proj..843f

August 26, 1887.

Plate 1521.

	T	H	Type	No. Lines	K	Focus	Other Lines.
?	14.5	20.4	III b?	13333	K=H	2	F. seen.
	14.3	22.4	I	3	N	1	—
✓	13.1	8.9	II a?	1334 2	2 K=H	K=H 1	— seen
	13.8	18.1	I	8	K=.2H	3.	F.
?	13.9	18.2	III b.c.	13353	K=H	3	F. Bright seen.
	13.6	18.9	I	3	N	1	—
	13.4	23.0	I	5	?	2	F.
	12.2	6.9	I?	3	N	1	—
	12.6	7.1	I?	3	N	1	—
	12.9	8.1	I	6	K=.5H	1	—
	12.8	13.0	III?	2	K=H	1	—
✓	12.0	12.3	I	I? 4	4 K=H	K=H 1	— —
	12.6	13.8	I	5	N	1	F.
?	12.1	13.8	III b.c.	1336 3	K=H	2	F. Bright seen.
✓	12.0	14.2	I	I ✓ 5	K=.5H	K=.5H 1	— —
?	12.3	14.9	I b	1337 7	N	3	F. seen.
	12.6	16.4	I	4	N	1	—
?	12.0	17.9	III b?	1338 3	K=1H	2	F? seen.
	12.0	21.1	III	1	N	1	—
	12.2	21.2	I?	4	N	3	—
12.55	12.5	21.3	III?	1	?	3	F. seen.
9.15	12.4	21.4	III	1	N	1	—
	12.6	23.7	I?	4	K=H	1	—
	11.3	9.9	III	1	N	1	—
	11.9	10.8	I	5	N	2	F.
✓	11.1	11.9	III	III 3	N	K=H 1	— F.
✓	11.0	14.7	III	2	K=H	1	—
III? 6.8, 7.1. ✓	11.2	14.9	III	III 3	N	K=H 1	— F.

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1887phae.proj..843F

No	RA	Dec	Mag		Diff		Cor.	Means Br.			
20 53 +80.0	672	20 54.7 +	80. 0	5:3	–	3		✓ 5.3	5.8		7.7 (6.3)
								5.9	6.4	1.9	8.3 (6.9)
20 33 +79.7	675	20 32.6 +	79 43	7.3	3604	3 7.4	12-2	✓ 6.2	6.7	1.9	8.6 7.2
22 25 +60.9	3403	22 25.2 +	60 5:3	7.0	–	1	7.0	✓ 6.3	6.8	0.8	7.6 6.2
21 19 +80.6	690	21 19.2 +	80 37	6.3	–	3		✓ 4.9	5.4	2.0	7.4 6.1
21 40 +70.6	1193	21 39.8 +	70 38	5:0	–	2		✓ 5.0	5.5		6.7 5.3
								5.5	6.0	1.2	7.2 5.8
21 10 +80.5	679	21 10.0 +	80 36	7.0	•	3		✓ 6.0	6.5	2.0	8.5 7.1
20 22 +80.1	650 ~~649~~	20 22.6 +	80 4	6.8	–	3		✓ 5.5	6.0	2.0	8.0 6.6
23 40 +80.5	784	23 40.6 +	80 34	8.0		3		✓ 6.5	7.0	2.0	9.0 7.6
23 37 +80.5	780	23 37.1 +	80 30	7.8		3		✓ 6.4	6.9	2.0	8.9 7.5
22 28 +61.0	3314	22 28.4 +	61 2	6.5-	–	1		✓ 6.1	6.6	0.8	7.4 6.1
22 24 +81.2	775	22 24.1 +	81 12	7.0	–	3		✓ 6.1	6.6		8.6 7.2
								6.5	7.0	2.0	9.0 7.6
22 11 +61.6	2272	22 11.6 +	61 36	7.1	–	1	7.2	✓ 6.6	7.1	0.8	7.9 6.5
22 7 +71.4	1112	22 7.4 +	71 24	6.7	•	2		✓ 5.5	6.0	1.2	7.2 5.8
22 7 +71.6	1111	22 7.0 +	71 38	8:2	–	2		✓ 5.0	5.5		6.8 5.4
								5.4	5.9	1.3	7.2 5.8
22 4 +71.6	1101 9	22 4.5 +	71 40	7.2	–	2	6.7	✓ 6.2	6.7	1.2	7.9 6.5
22 0 +61.5	2246	22 0.7 +	61 35-	6.0	3909	1 5.2	9-3	✓ 4.8	5.3	0.8	6.1 3.7
21 51 +71.3	1097	21 50.9 +	71 18	6.7	•	2		✓ 6.1	6.6	1.2	7.8 6.4
21 41 +71.7	1082	21 41.3 +	71 38	8:5-	–	2		✓ 5.5	6.0		7.3 5.9
								5.9	6.4	1.3	7.7 6.3
21 20 +71.4	1062	21 20.8 +	71 24	6.8	–	2		✓ 6.6	7.1	1.2	8.3 6.9
21 34 +61.4	2169	21 34.1 +	61 25	5:0		1		✓ 4.7	5.2	0.8	6.0 4.6
20 37 +80.9	689	20 37.2 +	80 8-6	8:8	–	3		✓ 4.4	5.2		7.2 5.8
								5.1	5.6	? 2.0	7.6 6.2
20 35 +80.9	687	20 35.8 +	80 8-6	7.3-	–	3		✓ 6.3	6.8		8.8 7.4
								6.5	7.0	2.0	9.0 7.0
21 5 +70.9	1164	21 5.5 +	70 8-1	6.0	–	2		✓ 5.8	6.3	1.2	7.5 6.1
23 10 +81.6	814	23 9.6 +	81 36	8.0	–	3		✓ 6.5	7.0		9.1 7.7
								6.8	7.3	2.1	9.4 8.0
22 18 +61.7	2291	22 18.1 +	61 41	6.5-	•	1		✓ 5.7	6.2	0.8	7.0 5.6
22 13 +62.1	2089	22 13.5 +	62 4	6.0	–	1	6.9 7.2	✓ 6.4	6.9 7.2	0.8	7.7 6.3 8.0 6.6
22 3 +82.2	673	22 3.3 +	82 10	8.0	–	3		✓ 5.9	6.4	2.2	8.6 7.2
	674	22 3.3 +	82 10	8.0							
22 0 +62.0	2029	22 0.6 +	62 3	6.0		1	6.8 7.3	✓ 6.3	6.8 7.2	0.8	7.6 6.2 8.0 6.6

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1887phae.proj..843F

August 26, 1887.

Plate 1521.

											Other lines.
		11,8	15,9	I ?	I ?	3	H	N	K=H	1 1	— —
		11,7	16,4	I		3		N		1	—
		11,4	17,4	III	?	1		N		1	—
		11,6	19,5	III		3		K=H		1	F.
		10,4	11,1	I		3		N		1	—
		10,4	11,7	III	h.c. 1339	3		K=H		3	F. Bright pecu.
		10,2	13,2	III	III	1	2	N	K=H	1 1	— —
		10,0	12,0	I	?	V		K=.8H		1	—
		10,5	12,9	I		6		N		2	—
		10,2	13,4	III		1		N		1	—
		10,0	13,6	II	?	II a? 1339 a 2	2	K=H	K=H	1 1	— Seen
III ? 6.9, 7.1		10,6	15,1	III		3		K=H		1	F.
	?	10,5	15,3	II	a 1340	2	3	K=H		3	F? seen. Bright?
		10,1	18,2	II	a? 1341	2		K=H		1	—
		10,8	19,4	I		8		N		4	F.
		10,5	20,9	II		2		K=H		1	—
		9,6	6,9	III		1		N		1	—
		9,1	7,3	I		4		N		1	—
		9,2	7,4	I		7		K=.2H		3	F?
	?	9,3	10,2	II	a ? 1343	2	3	K=H		3	F? seen. Bright?
	?	9,8	14,7	II	a 1342	2		K=H		1	seen.
		9,3	16,2	I		3		N		1	—
		9,5	16,7	III		3		K=H		1	F.
		9,5	20,5	I	I ?	3	H	N	K=H	1 1	— —
		8,9	7,9	I		V		N		2	—
		8,5	13,9	I	I	5	3	K=.5H	N	1 1	— —
		8,7	15,3	I		3		N		1	—
		8,1	15,5	II	II ?	1	2	N	K=H	1 1	— —

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1887phae.proj..843F

No	R.A.	Dec	Mag			Exp		Cor.	Vpg.	Vpr.	Means		
21 56+61,8	2233	21 56.3	+ 61 47	7.0		1	6.9		6.3	6.8	0.8	7.6	6.2
21 55+71,8	1096	21 50.2	+ 71 48	7.0	·	2			6.2	6.7	1.3	8.0	6.6
	3216	21 49.6	+ 61 55	7.5	—				6.5	7.0		7.8	6.4
21 49+61,9	2213	21 49.3	+ 61 9	8.8		1			6.7	7.2	0.8	8.0	6.6
	2193	21 41.0	+ 61 47	6.2									
21 41+61,8	~~2194~~	~~21 41.4~~	~~+ 61 38~~	~~7.8~~	—	1			6.6	6.5	0.8	7.3	5.7
22 17+62,4	2040	22 17.1	+ 62 24	7.5	·	1			6.3	6.8	0.8	7.6	6.2
22 48+82,4	703	22 47.9	+ 82 23	8.0	—	3			5.0	5.5	2.2	7.7	6.3
									5.4	5.9		8.1	6.7
	2048	22 7.8	+ 62 33	6.5	—		7.0		6.6	7.1		7.9	6.5
22 7+62,6	~~700~~	~~22 44.1~~	~~+ 62 30~~	~~8.0~~		1	7.1		6.9	7.4	0.8	8.2	6.8
22 44+82,5	700	22 44.1	+ 82 30	8.0	—	3			6.1	6.6	2.2	8.8	7.4
22 9+62,4	2053	22 9.3	+ 62 26	7.0	·	1			5.8	6.3	0.8	7.1	5.7
22 10+72,6	1022	22 10.2	+ 72 36	6.5	—	2			5.9	6.4	1.3	7.7	6.3
									6.2	6.7		8.0	6.6
22 6+62,7	2045	22 6.3	+ 62 42	8.0	—	1	7.2		6.6	7.1	0.8	7.9	6.3
21 59+62,3	2028	21 59.6	+ 62 24	8.9	—	1			6.5	7.0	0.8	7.8	6.4
									6.8	7.3		8.1	6.7
21 57+72,5	1009	21 57.2	+ 72 28	8.0	—	2			4.5	5.3	1.3	6.6	5.2
21 8+82,4	636	21 8.4	+ 82 24	8.5	—	3			6.5	7.0	2.2	9.2	7.8
20 53+81,9	718	20 52.8	+ 81 59	6.0	3683	3.6	13	+1	4.5	5.0	2.1	7.1	5.7
20 32+81,9	706	20 32.0	+ 81 53	7.4	—	3			6.1	6.6	2.1	8.7	7.3
22 53+72,4	1079	22 53.3	+ 72 21	6.6	—	2			6.5	7.0	1.3	8.3	6.9
									6.9	7.4		8.7	7.3
23 56+82,2	748	23 55.4	+ 82 10	7.0	·	3			6.0	6.5	2.2	8.7	7.3
22 33+62,8	2102	23 33.8	+ 62 50	5.3	—	1			4.9	5.4	0.9	6.3	4.9
22 32+72,9	1049	22 32.2	+ 72 54	5.5	—	2			4.5	5.3	1.3	6.6	5.2
22 3+82,8	672	22 3.2	+ 82 48	8.2	?—	3			6.5	7.0	2.3	9.3	7.9
21 51+73,0	1003	21 51.1	+ 73 ~~.9~~ 60	6.5	3876	6.6	12	-2	6.0	6.5	1.3	7.8	6.4
21 52+62,9	3004	21 52.~~4~~ 6	+ 62 56	5.7	—	1			6.3	6.8	0.9	7.7	6.3
									6.6	7.1		8.0	6.6
20 34+82,3	613	20 33.1	+ 82 22	8.5	?·	3	7.1		6.6	7.1	2.2	9.3	7.9
23 50+82,4	743	23 49.7	+ 82 23	6.0	4230	6.3	16	+2	5	5.7	2.2	7.9	6.5
	~~18 15~~					3							
22 4+63,4	~~8 12~~	22 ~~5.4~~ 4.2	+ 63 ~~2~~ 5 2	~~7~~ 2	?—	1	7.2		6.4	6.9	0.9	7.8	6.4
21 52+83,3	618	21 52.7	+ 83 27	7.2	·	3			5.8	6.3	2.3	8.6	7.2
21 49+83,6	616	21 48.4	+ 83 39	8.8	·	3	7.3		6.7	7.2	2.4	9.6	8.2

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1887phae.proj..843F

August 26, 1887.

Plate 1521.

V	H	Type	No. Lines	K	Focus	Other Lines.	
8.0	16.8	III	1	N	1	—	
8.3	18.1	II	1	N	1	—	
8.5	19.4	I	7	K=.2H	3	F.	
7.9	10.8	I	3	N	1	—	
7.1	12.3	III	1	N	1	—	
7.9	13.7	I	4	N	1	—	
?	7.7	15.1	I b. 1344	K=.5H?	4	F. Brighter? seen?	
	6.1	5.7	I	6	?	3	F.
	6.4	10.2	I?	4	N	2	F.
	6.0	12.3	III	3	K=H	1	F.
	6.7	13.4	III	2	K=H	1	—
?	6.1	16.8	I	5	N	2	F. seen.
?	6.4	19.4	II a? 1345	K=H	1	F. seen.	
	6.0	19.7	I	6	N	2	—
	6.1	24.5	I?	3	N	2	—
	5.0	6.6	III R	3	K=H	2	F.
	5.4	6.9	III	2	K=H	1	—
	5.1	7.6	III	1	N	1	—
	5.8	10.4	III	2	K=H	1	—
	5.2	16.7	I	2	N	1	—
	5.2	17.6	I	5	K=H	1	—
	5.4	18.9	II	2	K=H	1	—
	4.4	6.6	I?	1	N	1	—
	4.6	6.9	III?	2	K=H	1	—
	4.1	11.2	I	7	?	2	F.
	4.0	11.4	I	3	N	1	—
	4.5	12.4	I	3	N	1	—
	4.7	13.9	I	10	N	4	F.

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1887phae.proj..843F

No	Red	Dec	Mag		Diff.		Cor. Br.	Br.			Means
21 24 + 83.6	603	21 25.0 + 83 39	7.5	–	3		✓10.5	7.0		9.4	8.0
							6.8	7.3	2.4	9.7	8.3
21 2 + 83.4	596	21 2.8 + 83 23	7.7	–	3		✓6.1	6.6	2.3	8.9	7.5
20 43 + 83.2	588	20 43.2 + 83 7	6.2	–	3		✓4.8	5.3	2.3	7.6	6.2
23 14 + 83.5	647	23 12.7 + 83 24	8.0	•	3		✓6.2	6.7	2.4	9.1	7.7
22 51 + 84.0	513	22 50.7 + 84 0	7.3	–	3		6.4	6.9		9.4	8.0
							6.7	7.2	2.3	9.7	8.3
22 22 + 83.8	631	22 22.3 + 83 46	7.0	•	3		✓5.9	6.4	2.4	8.8	7.4
21 59 + 63.9	1802	21 59.6 + 63 55	4.5	–	1		✓4.5	5.0	0.9	5.9	4.5
0 43 + 82.9	20	41.6 + 82 55	6.5	–	3		✓4.8	5.3	2.3	7.6	6.2
22 22 + 64.4	1664	22 22.4 + 64 23	5.8		1		✓5.5	6.0	0.9	6.9	5.3
22 54 + 84.6	517	22 54.2 + 84 36	6.5	–	3		✓5.9	6.4		9.0	7.6
							6.3	6.8	2.6	9.4	8.0
22 30 + 84.3	509	22 29.2 + 84 19	7.2	–	3		✓6.3	6.8		9.3	7.9
							6.6	7.1	2.5	9.6	7.2
21 51 + 64.6	1607	21 51.7 + 64 39	6.5	•	1		✓5.5	6.0	0.9	6.9	4.5
20 30 + 84.1	462	20 30.0 ~~29.44~~ + 84 5	7.0	–	3		✓6.0	6.5	2.3	9.0	7.6
20 20 + 84.3	451	20 20.0 + 84 14	7.0	•	3		✓5.5	6.0	2.3	8.3	7.1
21 16 + 64.3	1527	21 16.5 + 64 17	5.3		1		✓5.0	5.5	0.9	6.4	5.0
23 3 + 74.6	1006	23 3.3 + 74 36	4.6	–	2		✓5.0	5.5		6.9	5.3
							5.2	5.7	1.4	7.1	5.7
22 38 + 64.5	1704	22 38.0 + 64 34	6.5	–	1		✓6.4	6.9		7.5	6.4
							6.6	7.1	0.9	8.0	6.6
0 26 + 83.9	9	0 26.3 + 83 53	7.8	–	3		6.3	6.8		7.2	7.8
							✓6.5	7.0	2.4	7.4	8.0
22 34 + 74.6	978	22 34.2 + 74 37	6.5	–	2		✓6.2	6.7		8.1	6.7
							6.5	7.0	1.4	8.4	7.0
21 51 + 65.0	1680	21 51.5 + 65 2	7.5	•	1		✓6.7	7.2	0.9	8.1	6.7
21 48 + 65.1	1664	21 48.0 + 65 4	6.6	–	1		✓6.2	6.7	0.9	7.6	6.2
20 32 + 84.4	463	20 31.0 ~~30.14~~ + 84 40	7.2	–	3		✓6.1	6.6	2.6	9.2	7.8
0 47 + 83.8	20	0 48.4 + 83 49	7.0		3		✓5.9	6.4	2.4	6.8	5.4
23 2 + 74.8	1002	23 1.8 + 74 48	7.3	–	2		✓6.2	6.7		8.2	6.8
							6.4	6.9	1.3	8.4	7.0
22 30 + 75.4	886	22 29.7 + 75 27	8.7	–	2		✓5.0	5.5	1.5	7.0	5.6
23 30 + 85.4	403	23 29.7 + 85 23	7.8	•	3		✓6.0	6.5	2.7	9.2	7.8
22 13 + 65.3	1746	22 13.0 ~~12.44~~ + 65 24	7.0	•	1		✓6.5	7.0	1.0	8.0	6.6
22 26 + 85.4	383	22 24.2 + 85 23	8.0	3968	3.4	3 – 1	✓3.5	4.0	2.7	6.7	5.3

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1887phae.proj..843F

August 26, 1887.

Plate 152.

	v	H	Type	No. Lines	K	Focus	Other Lines.
	4.7	15.2	I	1346 3	N	1	—
?	4.5	16.4	I	4	N	1	seen.
	4.7	23.3	I ?	2	N	1	—
?	3.~~8~~	7.8	III	1347 3	K=2.0H	3	F. seen.
	3.6	11.7	I	4	N	2	—
	3.8	12.9	I	5	N	1	—
	3.1	17.9	II	2	K=H	1	—
	3.6	22.9	III	2	K=H	1	—
?	2.1	8.8	?	1	N	2	F. Bright seen.
	2.6	11.0	I	7	K=.2H	1	F.
	2.5	15.9	I	4	K=.5H	1	—
2.50	2.6	22.1	I	7	K=H	2	—

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1887phae.proj..843F

No	RA	Dec	Mag					Exp	Cor. Br.	Means Br.			
21 59 + 65.3	1712	21 ~~58.10~~ 59.0	+ 65 22	7.0	.		1		4.3	4.8	1.0	5.8	4.4 .
21 53 + 65.5	1691	21 53.3	+ 65 28	6.5	3882	6.2	1 3 -1		6.0	6.5	1.0	7.5	6.1 .
19 12 + 83.6	0 4	19 10.4	+ 83 42	6.5			3		5.9	6.4	2.4	8.8	7.4 .
22 45 + 64	1814	22 44.5	+ 65 26	3.8					4.9	5.4		6.4	3.0
~~22 45 + 64~~	~~1814~~	~~22 44.5~~	~~+ 65 26~~	~~3.8~~	—		1		5.2	5.7	1.0	6.7	3.3 .
23 23 + 85.6	399	23 24.2	+ 85 37	7.5	.		3		5.6	6.1	2.8	8.9	7.5 .
22 16 + 75.7	820	22 16.6	+ 75 46	6.8	.		2		5.9	6.4	1.5	7.9	6.5 .
21 45 + 66.1	1441	21 45.9	+ 66 7	6.4	—		1		6.3	6.8	1.0	7.8	6.4 .
20 56 + 75.4	764	20 56.5	+ 75 21	6.0	—		2		6.4	6.9	1.5	8.4	7.0
									6.6	7.1		8.6	7.2 .
0 50 + 85.5	19	0 49.7	+ 85 29	8.0	—		3		✓	,	,	,	, .
23 54 + 85.9	409	23 52.8	+ 85 34	8.0	—		3		5.7	6.2	2.9	9.1	7.7 .
21 28 + 86.4	319	21 27.7	+ 86 26	7.0	—		3		✓	~~6.6~~	3.0	9.6	~~7.2~~ .
21 27 + 66.2	1410	21 25.0	+ 66 10	8.5	—		1		5.3	5.8	1.0	6.8	3.4 .

✓ 140/10 — 11 − 11/10

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1887phae.proj..843F

Poor plate
Very hard to measure

Ant. Fog due to moon & clouds 7.1

Ant. of Fog. due to chemicals. 7.4

September 7, 1887

Plate 1540.

				No.	Type	Lines K	Focus	Lines	
1	30	21.4	11.3	I?	4	K=H	1	—	
		20.7	17.9	I	6	K=.2H	2	—	
		19.9	9.1	I	7	K=.8H	2	F	
		19.4	14.8	III	2	K=H	1	—	
		18.6	9.4	I/II	1/2	K=H	1	—	
		18.2	14.7	I	4	K=H	1	—	
		18.9	16.0	I	5	K=H	1	—	
		18.5	21.0	III	1	N	1	—	
		16.0	10.6	I?	2	N	2	F	
		15.0	11.3	I	5	K=.5H	2	—	
		15.4	22.5	III	2	K=H	1	—	
		14.4	9.9	III	2	K=H	1	—	
		13.5	8.2	I	6	N	2	—	
		13.3	14.1	I?	1	N	1	—	
		13.1	15.0	II	2	K=H	1	—	
		13.5	23.5	I	7	K=.2H	2	F	
		13.2	23.7	I	5	K=.5H	1	—	
		12.4	6.9	I	3	N	1	—	
		12.5	9.2	I	5	K=.8H	1	—	
		12.4	12.0	III	1	N	1	—	
		12.8	12.7	I	8	K=.2H	3	F	
		12.4	17.3	I	4	?	1	Faint	
		12.0	20.4	I	3	N	2	—	
		10.7	13.6	I	7	N	2	F	
		10.1	14.2	I?	3	N	1	—	
III? 6.4, 6.7		10.4	14.9	III	2	N	1	F	
		10.7	18.0	I	8	N	2	—	
		9.1	7.7	I	5	K=.5H	2	—	

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1887phae..proj..842F

Mean 14

	No	R A	Dec	Mag					Cor. Br.	Br.				
20 17 + 61.8	2000	20 17.2	+ 61 45	5:8	—				√5.4	6.8	0.8	7.6	5:6	
19 57.2 + 52.0	2572	19 57.9	+ 52 [illegible]	5:5	—				√5.0	6.4	0.5	6.9	4.9	
20 27 + 62.5	1821	20 27.2	+ 62 31	4.0	—				√4.6	6.0	0.8	6.8	4.8	
20 2 + 57.7	2623	20 2.4	+ 57 44	5:9	—				√5.4 / 5.8	6.8 / 7.2	0.3	7.3 / 7.7	3.3 / 3.7	
20 20 + 53.1	2394	20 20.6	+ 53	5-	6.2	—			√5.4	6.8	0.6	7.4	5.4	
20 3 + 63.4	1593	20 2.9	+ 63 29	6.5-	—				√5.2	6.6	0.9	7.5	3.5	
19 56 + 63.2	1584	19 56.7	+ 63 9	6.5-	—				√5.2	6.6	0.9	7.5	3.5	
19 19 + 73.1	857	19 18.3	+ 73	5-	4.4	—			√5.1 / 5.4	6.5 / 6.8	1.3	7.8 / 8.1	5.8 / 6.1	
20 33 + 74.4	872	20 33.4	+ 74	26	5:5-				√4.6	6.0	1.4	7.4	5.4	
20 15 + 54.9	2329	20 14.8	+ 54	57	6.0	—			√4.9	6.3	0.6	6.9	4.9	
19 35 + 54.6	2193	19 35.4	+ 54	38	5:8	—			√5.3 / 5.7	6.7 / 7.1	0.5	7.2 / 7.6	5.2 / 5.6	
20 26 + 65.3	1466	20 26.2	+ 65	16	6.3	—			√5.4 / 6.6	6.8 / 7.0	0.9	7.7 / 7.9	5.7 / 5.9	
20 26 + 57.6	2411	20 25.8	+ 57	35	6.0	3590	5.9	11-9	√5.0	6.4	0.6	7.0	5.0	
20 6 + 65.0	1433	20 5.8	+ 65	3 3	7.0	—			√5.6	7.0	1.0	8.0	6.0	
20 2 + 57.0	2324	20 2.1	+ 57	55	6.5	—			√5.2	6.6	0.6	7.2	5.2	
~~19 39 + 54.5~~	~~2394~~	~~19 32.5~~	~~+ 54~~	~~47~~	~~8.5~~	~~—~~								
19 20 + 65.4	1345	19 19.9	+ 65	26	5:3	—			√4.5	5.9	1.0	6.9	4.9	
18 17 + 75.3	682	18 5.0	+ 75	16	5:8	—			√4.8	6.2	1.3	7.7	5.7	
20 41 + 66.1	1318	20 41.4	+ 66	8	5:5-	3630	3.5-	20 0	√5.1	6.5	1.0	7.5	5.5	
20 23 + 56.2	2421	20 22.9	+ 56	10	6.6	—			√5.2	6.6	0.6	7.2	5.2	
20 16 + 66.4	1251	20 16.1	+ 66	23	6.2	—			√5.2 / 5.5	6.6 / 6.9	1.0	7.6 / 7.9	5.6 / 5.9	
20 10 + 56.1	2376	20 10.0	+ 56	18	4.5-	—			√3.9	5.3	0.6	5.9	3.9	
19 53 + 56.3	2831	19 53.2	+ 56	18	6.3	—			√5.0	6.4	0.6	7.0	5.0	
19 14 + 76.4	717	19 14.4	+ 76	19	5:5-	3313	4.9	29 + 9	√4.8	6.2	1.6	7.8	5.8	
20 14 + 77.3	764	20 13.8	+ 77	16	4.8	3545	4.4	26 + 6	√4.0	5.4	1.6	7.0	5.0	
20 4 + 57.4	2144	20 4.9	+ 57	23	7.2				√5.7	7.1	0.7	7.8	5.8	
20 2 + 67.4	1222	20 2.2	+ 67	27	5:1	—			√5.10 / 5.4	6.4 / 6.8	1.0	7.4 / 7.8	5.4 / 5.8	
19 50 + 57.2	2084	19 50.3	+ 57	8	5:4	3453	5.1	12-8	√4.2	5.6	0.7	6.3	4.3	
21 8 + 77.5	800	21 8.4	+ 77	32	6.1	—			√4.9	6.3	1.7	8.0	6.0	

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1887phae.proj..843F

September 7, 1887.

Plate 1570.

V	H	Type	No. lines	K	Focus	Other lines.	
9.1	17.7	II	2	K=H	1	—	
9.5	20.6	III ?	1	N	1	—	
8.2	17.1	III	2	K=H	1	—	
7.2	7.6	II	1	N	1	—	
7.1	11.1	II	2	K=H	1	—	
7.4	17.9	I	4	N	1	—	
6.2	9.1	III III?	2 2	K=H K=H	1 1	— —	
6.5	9.8	I?	4	N	1	seen.	
6.5	17.7	~~I~~ 1348	4	N	1	—	
6.4	17.7	I	5	N	2	—	
6.3	19.9	II 1348	3	K=H	2	F.	
6.0	13.1	II ?	2	K=H	1	—	
5.7	17.1	III	3	K=H	2	F.	
4.7	10.4	II ?	2	K=H	1	—	
4.9	20.6	II	2	K=H	1	—	
4.4	20.9	I ?	2	N	1	—	
3.9	11.9	III	2	K=H	1	—	
3.2	12.1	II ?	2	K=H	1	—	
2.8	8.7	I ?	4	K=H	1	—	

H.0

Amt. of Fog. due to moon & clouds 7.4 Amt. of Fog. due to chemicals 7.6

Plate 1584.

9.12

22.7	11.7	II	1	N	1	—	
? 21.0	7.1	I	6	N	1	seen.	
21.5	9.7	III	2	K=H	1	—	
21.0	9.7	III	2	K=H	1	—	
21.9	11.3	I ?	4	N	2	F	
24.4	11.3	III	1	N	1	—	
21.1	15	I	12	K=2H	1	F	

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1887phaer.proj..849F

Mean 14

	No	R A	Dec	Mag					Cor. Br.	Br.				
19 46 +68.0	1082	19 46.6	+ 68	4	6.4	—			√ 5.6	7.0	1.1	8.1	6.1	
19 40 +57.6	2057	19 40.4	+ 57	40	6.2	—			√ 5.6 / 5.9	7.0 / 7.3	0.7	7.7 / 8.0	5.7 / 6.0	
19 53 +58.4	2013	19 53.2	+ 58	28	8:1	—			√ 5.5 / 5.8	6.9 / 7.2	0.7	7.6 / 7.9	5.6 / 5.9	
21 15 +78.3	744	21 14.8	+ 78	23	6.8	—			√ 5.6	7.0	1.7	8.7	6.7	
20 42 +78.9	716	20 41.6	+ 78	54	6.9	—			√ 5.4	6.8	1.8	8.6	6.6	
19 44 +68.9	1079	19 44.5	+ 68	60 / 59	6.2	3428	3.8	20 0	√ 5.3	6.7	1.1	7.8	5.8	
20 25 +59.3	2240	20 25.0	+ 59	15	7.4	—			7.3 / 7.5 / 5.7 / 6.0	7.1 / 7.4	0.7	7.8 / 8.1	5.8 / 6.1	
20 22 +59.1	2228	20 22.1	+ 59	8	6.4	•			√ 5.4	6.8	0.7	7.5	5.5	
19 51 +59.3	2137	19 ~~50.10~~ 51.0	+ 59	19	5:8	3457	6.0		√	* 6.3				
19 30 +79.3	628	19 30.4	+ 79	18	6.3	3371	5.9		√	?				
19 32 +69.4	1053	19 32.6	+ 69	25	5:0	—			√ 5.1	6.5	1.1	7.6	5.6	
20 23 +80.1	650	20 22.6	+ 80	4	6.8	—			√ 5.6	7.0	1.9	8.9	6.9	
19 48 +69.9	1070	19 48.6	+ 69	53	3.8	—			√ 4.4 / 4.5	5.8 / 5.9	1.2	7.0 / 7.1	5.0 / 5.1	
20 54 +80.0	672	20 54.7	+ 80	0	5:3	—			√ 5.7	7.1	1.9	9.0	7.0	
18 56 +79.7	604	18 55.8	+ 79	46	6.5	—			√ 6.6	7.0	1.9	8.9	6.9	
19 38 +60.2	1991	19 ~~37.44~~ 38.0	+ 60	10	6.5				√ 5.5	6.9	1.8	8.7	6.7	
20 37 +80.6	660	20 37.7	+ 80	35	6.1	—			√ 5.7 / 5.9	7.1 / 7.3	2.0	9.1 / 9.3	7.1 / 7.3	
20 37 +80.9	659	20 37.2	+ 80	56	5:8	—			√ 5.6	7.0	2.0	9.0	7.0	
21 19 +80.6	690	21 19.2	+ 80	57	6.3	—			√ 5.4	6.8	2.0	8.8	6.8	
									118/6	15-77/6				

Mean 6

21 29 +57.0	3091	21 29.3	+ 57	3	6.4	—			√					
22 7 +71.4	1122	22 7.4	+ 71	24	6.7	•			√ 6.0	6.6	1.2	7.8	6.7	
21 57 +71.3	1094	21 56.9	+ 71	18	6.7	—			√ 6.2 / 6.5	6.8 / 7.1	1.2	8.0 / 8.3	6.9 / 7.2	
21 41 +61.8	2193	21 ~~40.10~~ 41.0	+ 61	47	6.2	—			√ 6.1 / 6.3	6.7 / 6.9	0.8	7.3 / 7.7	6.4 / 6.6	
21 34 +61.4	2169	21 34.7	+ 61	25	5:0				√ 5.2	5.8	0.8	6.6	5.5	
21 41 +71.6	1082	21 41.3	+ 71	38	5:5	—			√ 5.9 / 6.2	6.5 / 6.8	0.8	7.3 / 7.6	6.2 / 6.5	
21 15 +61.9	2111	21 15.2	+ 61	8	5.0	—			√	B.	0.8	B.	B.	

~~21 37 +59.6~~ 28 +59.6 Note. Nine stars are omitted on plate. Measures by Cannon.

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1887phae.proj..843F

September 7, 1887.

Plate 1584.

v	H	Type	No. Lines	K	Focus	Other Lines.
?	21.8	23.6	b 1349	3	K=H	3	F. nun.
?	20.8	7.3	b 1350	3	K=H	2	F. nun.
	20.6	7.7	III ?	2	K=H	1	—
	20.6	9.9	III	1	N	1	—
∫√	20.9	12.7	III ? 1	2	N K=H	1 1	— —
	20.3	13.1	I	√	N	2	—
∫√	20.3	13.2	II ? 1	2	N K=H	1 1	— —
	20.√	14.1	I	√	N	2	—
?	19.4	9.1	a 1351	3	K=H	3	F. nun.
∫√	19.0	10.6	II ? 1	2	N K=H	1 1	— —
	19.6	13.7	I	3	N	1	—
∫√	19.6	14.√	III ? 1	2	N K=H	1 1	— —
	19.√	17.7	I	3	N	1	—
	19.1	18.9	I	6	N	2	—
	18.8	7.2	III	2	K=H	1	—
	18.6	7.3	III	2	K=H	1	—
	18.√	10.2	I	√	N	1	—
	18.2	10.9	III	2	K=H	1	—
	18.4	16.9	I	√	N	2	F?
∫√	17.8	14.3	III ? 2	2	K=H K=H	1 1	— —
	17.4	16.7	I	1	N	1	—
	17.√	22.0	III ?	2	K=H	1	—
	16.√	6.0	I	8	K=√H	3	F
√√	16.1	8.6	III	1 2	N K=H	1 1	— —
∫√	16.√	10.1	III	1 2	N K=H	1 1	— —
√√	16.1	14.7	a IIa 1352	1 2	N K=H	1 1	— Seen
	16.6	14.√	b 1353	8	N	3	F
2	4√	16.√	18.3	I	4	K=H	1	—

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1897phae.proj...843F

Mean 6

	A₀	R A	Dec	Mag						Cor. Br.	Br.				
20 42 +61.3	2055-0	20 42.2	+ 61 14	8.7	—					✓ 5.0	5.6		6.4	5.3	.
										5.3	5.9	0.8	6.7	5.6	
22 5 +71.6	1111	22 7.0	+ 71 38	8.2	—					✓ 5.6	6.2		7.5	6.4	,
										5.9	6.5	1.3	7.8	6.7	
21 49 +61.9	2216	21 49.6	+ 61 8.5	7.5-	—					✓ 6.4	7.0	0.8	7.8	6.7	.
21 50 +71.8	1096	21 50.2	+ 71 48	7.0	—					✓ 6.5	7.1		8.4	7.3	.
										6.8	7.4	1.3	8.7	7.6	
21 27 +61.9	3079	21 26.6	+ 61 8.9	6.5-	—					7.2 7.4 ✓ 6.6	7.2		7.7	6.6	,
										6.8	7.4	0.5-	7.9	6.8	
21 26 +62.3	2985-4	21 26.3	+ 62 19	6.3	3797	5.9	11	0		✓ 5.9	6.5	0.5-	7.0	5.9	.
21 25 +62.3	2953	21 25.1	+ 62 18	7.2	—					7.3 ✓ 6.4	7.3	0.5-	7.8	6.7	
21 22 +62.3	2939	21 ~~22.0~~ 22.0	+ 62 16	8.8	3787	5.7	11	0		✓ 5.7	6.3	0.5-	6.8	5.7	.
21 57 +72.5	1009	21 ~~21.10~~ 21.7	+ 72 28	8.0	—					✓ 5.1	5.7	1.3	7.0	5.9	.
21 34 +62.9	3003	21 33.7	+ 62 8.6	6.8-	—					7.4 ✓ 6.6	7.2	0.5-	7.7	6.6	.
21 23 +62.6	2945-	21 23.2	+ 62 40	6.7	.					✓ 6.4	7.0	0.5-	7.5	6.4	.
21 14 +62.6	980	21 13.8	+ 62 34	7.3	—					7.4 7.6 ✓ 6.6	7.2		8.3	7.4	.
										6.8	7.4	1.3	8.7	7.6	
21 6 +62.7	1903	21 6.4	+ 62 42	7.0	.					✓ 6.0	6.6	0.8	7.4	6.3	.
21 6 +62.9	2880	21 5.8	+ 62 8.8	8.8-	3730	5.7	19	-2		✓ 5.4	6.0	0.6	6.6	5.5-	.
22 11 +62.6	1022	22 10.2	+ 62 36	6.8-	—					✓ 6.1	6.7		8.0	6.9	,
										6.3	6.9	1.3	8.2	7.1	
21 52 +62.9	2007	21 52.6	+ 62 56	4.7	—					✓ 6.1	6.7		7.6	6.5-	.
										6.4	7.0	0.9	7.9	6.8	
21 51 +73.0	1003	21 51.1	+ 72 ~~59~~ 60	6.8-	3876	6.6	12	+1		✓ 5.9	6.5	1.3	7.8	6.7	.
21 33 +63.4	2659	21 33.8	+ 63 24	6.8-	—					✓ 6.2	6.8		7.4	6.3	.
										6.5	7.1	0.6	7.7	6.6	
21 12 +63.4	2388	21 12.3-	+ 63 28	8.8	3748	6.0	10	-1		✓ 5.5	6.4	0.6	7.0	5.9	.
21 18 +63.6	2609	21 18.1	+ 63 ~~37~~ 38	7.2	—					7.3 7.5 ✓ 6.7	7.3		7.9	6.8	,
										6.9	7.5	0.6	8.1	7.0	
21 11 +63.8	1708	21 10.8	+ 63 48	6.4-	—					✓ 6.3	6.9	0.9	7.8	6.7	.
21 47 +63.5	1663	20 46.8	+ 63 30	6.5-	—					✓ 6.0	6.6		7.5	6.4	.
										6.4	7.0	0.9	7.9	6.8	
22 0 +63.9	1802	21 59.6	+ 63 8.5	4.5-	—					✓ 4.7	5.3	0.9	6.2	5.1	.
21 48 +64.2	1600	21 48.0	+ 64 14	7.0	—					7.3 7.6 ✓ 6.6	7.2		8.1	7.0	.
										6.9	7.5	0.9	8.4	7.3	
21 36 +64.2	2598-	21 35.9	+ 64 13	6.0	—					7.1 7.4 ✓ 6.4	7.0		7.6	6.5	.
										6.7	7.3	0.6	7.9	6.8	
21 20 +64.4	1536	21 20.3	+ 64 25	7.2	—					7.0 ✓ 6.2	6.8	0.9	7.7	6.6	.
21 16 +64.3	1527	21 16.3	+ 64 17	8.5-	3764	5.3	10	-1		✓ 4.8	5.4	0.9	6.3	5.2	.
20 52 +74.1	890	20 52.8	+ 74 6	7.3	—					✓ 6.0	6.6	1.4	8.0	6.9	.

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September 8, 1887.

Plate 1584

			τ	H	Type	Lines	K	Focus	Lines.		Other			
9	40	✓	15.9	6.7	~~I~~ ?	II?	1	2	N	K=H	1	1	—	—
			15.4	7.9	~~I~~	I	~~?~~	~~?~~	N		2		F	
		✓	15.9	9.8	~~III~~	III	1	2	N	K=H	1	1	—	—
			15.6	13.5	~~I~~	I		6	N		2		F	
			15.6	15.9	~~III~~			2		K=H	1		—	
			15.6	20.8	~~I~~	I		8	N		3		F	
			14.6	7.0	~~I~~	I		7	N		3		F	
		✓	14.5	7.7	~~I~~ ?	II?	1	2	N	K=H	1	1	—	—
			14.5	8.1	~~II~~			2		K=H	1		—	
			14.6	8.8	~~I~~	I		3	N		1		—	
		✓	14.7	12.4	~~III~~	III?	2	2		K=H	K=H	1	—	—
		✓	14.3	14.1	~~III~~	III?	1	2	N	K=H	1	1	—	—
		✓	14.0	14.7	~~II~~	IIa? (1353a)	1	2	N	K=H	1	1	—	Seen
			14.1	17.6	~~III~~			3		K=H	1		F	
	?		13.6	6.6	I	I		4		K=H	1		Seen.	
			13.4	7.5	~~II~~	a? (1354)	2			K=H	1		—	
			13.7	7.8	~~I~~	I?		4	N		2		F	
		✓	13.4	13.6	~~III~~	III	2	2		K=H	K=H	1	—	—
		✓	13.1	14.3	~~III~~	III?	2	2		K=H	K=H	1	—	—
			13.5	15.5	~~I~~	I		~~?~~	N		2		—	
			12.7	6.1	~~I~~	I		6	N		3		—	
		✓	12.8	6.4	~~II~~	II?	3	8		K=H	K=H	1	F	F
			12.6	7.8	~~I~~	I		6	N		2		F	
	?		12.6	9.5	I	I		4		K=H	1		Seen.	
			12.3	13.4	~~I~~	I		~~?~~	N		1		—	
			12.8	13.8	~~I~~	I		7	N		3		F	
			12.1	14.3	~~I~~	I		6		K=2H	2		—	
			12.2	15.0	~~III~~			2		K=H	1		—	

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No.	R. A.	Dec.	Mag.			Mean Cor. Brt.	Brt.			
21 47 +54.3	2640	21 47.6	+54 22	7.0	—	7.3	6.4	7.0	0.6	7.6	6.3
21 51 +64.6	1607	21 51.7	+64 39	6.5-			5.3	5.9	0.9	6.8	5.7
21 56 +74.4	946	21 56.8	+74 17	6.4	—	7.3 7.5	6.6 6.9	7.2 7.5	1.4	8.6 8.9	7.3 7.8
21 24 +54.8	2544	21 24.3	+54 47	6.1			5.6	6.2	0.6	6.8	5.7
21 10 +74.6	907	21 10.4	+74 37	7.0	—		6.1 6.3	6.7 6.9	1.4	8.1 8.3	7.0 7.2
20 33 +74.5	872	20 33.4	+74 26	5.5-	3614 5.1 15 +4		4.6	5.2	1.4	6.6	5.3
21 47 +54.1	2639	21 47.1	+55- 7	6.0	3870 5.5- 7 -4		5.0	5.6	0.6	6.2	5.1
21 53 +64.9	1611	21 53.7	+64 58	7.0	—	7.2	6.4	7.0	0.9	7.9	6.8
21 51 +65.0	1680	21 51.5	+65- 2	7.5-	—		6.4	7.0	0.9	7.9	6.8
21 48 +65.1	1664	21 48.0	+65- 4	6.6			5.9	6.5	0.9	7.4	6.3
21 29 +65.1	1602	21 31.0	+65- 6	7.5-	—	7.3 7.5	6.6 6.9	7.2 7.5	0.9	8.1 8.4	7.1 7.3
21 24 +75.3	788	21 ~~24.0~~ 25.0	+75- 20	6.8	—	7.3 7.6	6.6 6.9	7.2 7.5	1.3	8.7 9.0	7.6 7.9
21 21 +65.7	1582	21 21.1	+65- 32	7.8	—	7.2	6.5	7.1	1.0	8.1	7.1
20 56 +74.4	764	20 56.3	+75- 21	6.0	—		5.8 6.0	6.4 6.6	1.3	7.7 8.1	6.8 7.0
21 59 +65.4	1712	21 ~~59.0~~ 58.0	+65- 22	7.0	—		6.1	6.7	1.0	7.7	6.6
22 17 +75.3	822	22 17.1	+75- 17	7.3	—		6.2	6.8	1.3	8.3	7.2
21 53 +65.5	1691	21 53.3	+65- 28	6.5-			5.6	6.2	1.0	7.2	6.1
21 29 +75.7	791	21 29.1	+75- 46	7.3	—	7.2 7.4 7.6 8	6.4 6.7 6.2 6.9	7.0 7.3 6.8 6.9	1.3	8.3 8.6 8.3 8.6	7.4 7.7 7.2 7.5
21 24 +75.9	757	21 23.8	+75- 5-5-	6.7	—						
21 13 +75.6	778	21 13.4	+75- 42	6.8			5.9	6.5	1.3	8.0	6.9
22 30 +75.5	836	22 29.7	+75- 27	5.7	3996 5.7 15 +4		5.1	5.7	1.3	7.2	6.1
21 50 +55.9	2644	21 50.1	+55 55	6.2							
~~22 26 +75.2~~	832	~~22 26.4~~	~~+75- 29~~	~~7.7~~	—	6.6	5.8	6.4	1.3	7.9	6.8
22 16 +75.2	820	22 16.6	+75 46	6.8			5.5	6.1	1.3	7.6	6.5
21 46 +66.2	1441	21 45.9	+66 7	6.4	—		6.0	6.6	1.0	7.6	6.5
21 26 +66.4	1407	21 26.8	+66 25-	6.5-			6.0	6.6	1.0	7.6	6.5
21 25 +66.2	1405-	21 25.0	+66 10	6.5-	3796 5.4 9 -2		4.7	5.3	1.0	6.3	5.2
21 24 +76.5	836	21 23.7	+76 28	6.5-	—		5.5	6.1	1.6	7.7	6.1
21 17 +76.4	833	21 17.3	+76 24	6.0	—		6.1 6.5	6.7 7.1	1.6	8.3 8.7	7.2 7.6

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September 8, 1887.

Plate 1584.

	V.	H	Type	Lines	K	Foci	No. Lines.	Other Lines.
	12.9	16.6	I? I?	3 4	N	K=H	1 1	— —
	12.0	19.2	II?	1	N		1	—
	12.8	20.8	I	√	N		2	—
	12.1	22.3	I	4	N		2	—
	12.3	22.4	I	6	K=.8H		2	—
	12.8	22.6	I I	4 5	K=H	K=H	1 1	— —
	11.1	10.√	III	1 2	N	K=H	1 1	— —
	11.√	10.8	I	1354a?	?		3	—
	11.4	12.8	III?	1 2	N	K=H	1 1	— —
	11.1	16.7	I	3	N		1	—
?	10.√	7.√	I	1355b?	N		1	Seen.
	10.3	8.3	III?	1 2	N	K=H	1 1	— —
	10.√	8.6	IIa?	1355a 2 2	K=H	K=H	1	— Seen
	10.9	9.9	II?	2 3	N	K=H	1 1	F. F.
	10.4	13.6	III	1 2	N	K=H	1 1	— —
	10.3	14.√	I? I?	I? 4	N	K=H	1 1	— —
	10.0	15.9	I	7	N		3	—
	10.√	20.6	I I	3 4	N	K=H	1 1	— —
	9.6	.9	I	4	K=H		1	—
	9.0	8.1	I	7	K=.√H		2	F.
	9.0	9.1	I? I?	I? 4	H	K=H	K=H 1 1	— —
	9.7	11.9	I	√	N		2	—
	9.9	12.3	I	√	N		2	—
	9.8	13.2	I	4	N		1	—
?	9.0	14.9	I	√	K=.√H		1	Seen.
	9.2	16.0	II?	1 2	N	K=H	1 1	— —
	9.2	16.4	I	1	N		1	—
	9.8	17.3	I	√	K=H		1	—

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	No.	R.A.	Dec.	Mag.				Cor. Brc.	Br.				Mean b
21 8+66.1	1366	21 8.4	+66 7	6.8				6.9	6.4	7.0	1.0	8.0	6.9
20 41+76.3	809	20 41.0	+76 19	7.1	–				6.4	7.0	1.6	8.6	7.5
20 58+76.1	2324	20 58.2	+76 5-	5-8	3711	5.9	5-	-6	5.2	5.8	0.6	6.4	5.3
20 52+76.3	2315-	20 52.4	+76 19	6.0	3692	6.1	5-	-6	5.4	6.0	0.6	6.6	5.5
20 42+66.2	1318	20 41.4	+66 8	5-5-	–				5.3	5.9	1.0	6.9	5.8
20 41+65.7	1499	20 40.9	+65- 48	7.0	–				6.2	6.8	1.0	7.8	6.7
21 42+67.1	1357	21 42.4	+67 8-	8.1	–			7.2 7.3	6.4 6.6	7.0 7.2	1.0	8.0 8.2	6.9 7.1
21 34+76.8	2617	21 34.3	+76 8-0	6.2	–				5.2	5.8	0.7	6.3	5.4
21 27+76.9	2589	21 27.3	+76 8-2	7.5-	–			7.4 7.6	6.6 6.8	7.2 7.4	0.7	7.9 8.1	6.8 7.1
21 3+76.9	824	21 2.4	+76 8-1	8.2					6.5	7.1	1.6	8.7	7.6
22 22.5+76.7	85-9	22 23.4	+76 42	7.3	•				6.0	6.6	1.6	8.2	7.1
22 18+76.9	85-7	22 18.8	+76 8-0	8.2	–			7.3 7.5	6.5 6.8	7.1 7.4	1.6	8.7 9.0	7.6 7.9
21 51+67.1	1375-	21 51.4	+67 5-	6.8	–			6.9	6.4	7.0	1.0	8.0	6.9
21 38+77.0	2374	21 37.9	+77 8-	7.2	–			6.6	6.1	6.7	0.7	7.4	6.3
21 30+77.3	823	21 30.3	+77 18	7.2	–			7.3 7.5	6.6 6.8	7.2 7.4	1.6	8.8 9.0	7.7 7.9
21 21+77.5	2322	21 20.8	+77 27	7.1	–			7.2	6.4 6.6	7.0 7.2	0.7	7.7 7.9	6.6 6.8
21 8+77.5	800	21 8.4	+77 32	6.1	3733	5.8	12	+1	4.7	5.3	1.7	7.0	5.9
20 58+77.2	2273	20 58.1	+77 12	7.0	•			6.8	6.2	6.8	0.7	7.5	6.4
22 39+76.9	870	22 ~~38.10~~ 39.0	+76 51	7.5-	–				6.3	6.9	1.6	8.5	7.4
22 23+77.5	860	22 22.4	+77 30	6.8	–				5.6	6.2	1.7	7.9	6.8
21 50+67.9	1371	21 50.8	+67 48	7.0	–			7.0	6.4 6.6	7.0 7.2	1.1	8.1 8.3	7.0 7.2
21 47+77.5	834	21 46.8	+77 34	7.0	•				5.8	6.4	1.7	8.1	7.1
21 33+67.5	1329	21 32.8	+67 34	6.8	•				5.6	6.2	1.0	7.2	6.1
21 28+67.6	1321	21 28.1	+67 39	7.3	•				5.9	6.5	1.0	7.5	6.4
21 19+77.9	811	21 18.4	+77 59	7.0	–				6.0	6.6	1.7	8.3	7.2
21 15+78.0	2249	21 15.3	+78 1	5.6	–			6.9	6.2	6.8	0.7	7.5	6.4
21 13+78.0	2309	21 13.4	+77 59	6.5-	–				5.9	6.5	0.7	7.2	6.1
21 5+67.6	1288	21 5.8	+67 40	7.0	–				6.0	6.6	1.1	7.7	6.6

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September 8, 1887.

Plate 1584.

	V	H	Type	Lines	K	Focus	Lines	Other Lines
✓ ✓	9.6	21.0	III	III?	1	2	N	K=H 1 1 — —
	9.5	21.9	I		9		N	1 4 F.
	8.0	6.2	I		4			K=H 1 —
✓	8.0	8.0	I		8			K=2H 2 F.
III? 6.4, 6.7.	?	8.9	9.7	III	k. 1356	2	N	2 F. Bright nebs.
✓ ✓	8.8	11.3	II	II	2	2	K=H	K=H 1 1 — —
	8.4	15.2	I	k? 1357	3		N	1 —
	8.9	15.5	I		3		N	1 —
	7.9	7.8	I		8			K=2H 3 F
✓ ✓	7.9	10.0	III	III	1	2	N	K=H 1 1 — —
✓ ✓	7.0	10.6	III	III	2	2	K=H	K=H 1 1 — —
	7.0	11.5	III		2			K=H 1 —
✓ ✓	7.7	13.0	III	III	1	8	N	K=H 1 1 — F
✓ ✓	7.0	13.9	III	III	2	3	K=H	K=H 1 1 — F
	7.4	14.5	I		5		N	1 —
✓ ✓	7.4	15.0	II	II?	1	2	N	K=H 1 1 — —
?	7.0	18.4	I	1358	1		N	2 neb.
✓ ✓	7.3	19.2	III	III?	2	2	K=H	K=H 1 — —
✓ ✓	7.3	21.0	III	III	2	3	K=H	K=H 1 1 — F
✓ ✓	7.2	22.4	I	I	4	3	N	N 1 1 — —
	6.4	6.6	II		2			K=H 1 —
✓ ✓	6.8	5.8	II	II	1	2	N	K=H 1 1 — —
✓ ✓	6.0	9.3	II	II?	2	2	K=H	K=H 1 1 — —
	6.0	10.5	I		4		N	2 —
✓ ✓	6.4	16.1	III	III	3	3	K=H	K=H 1 1 F F
	6.5	17.7	I	1359	7		N	1 3 F
✓ ?	6.5	20.5	I		4			K=H 1 neb.
?	5.5	6.5	I	a 1360	3			K=H 2 F neb.

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1887phae.proj..843F

	No	R.A.	Dec	Mag													
										Means							
										Cor. Brt.		Brt.					
20 47 + 67.5	1267	20 46.8	+ 67 29	6.5-	—					7.2 7.4	6.5 6.7	7.1 7.3	8.1 8.3	1.0	8.1 8.3	7.0 7.2	•
20 14 + 77.3	764	20 13.8	+ 77 16	4.8	3545	4.4	12	+1	✓	3.4		4.0	1.6		5.6	4.5	•
22 41 + 77.7	871	22 41.3	+ 77 44	7.2	—				✓	6.1		6.7	1.7		8.4	7.3	•
22 25 + 78.0	796	22 25.6	+ 78 1'	6.0	—				✓	5.1		5.7	1.7		7.4	6.3	•
21 39 + 58.1	2316	21 39.1	+ 58 7	var	—				✓	5.6 6.1		6.2 6.7	0.7		6.9 7.4	5.8 6.3	•
21 33 + 58.1	2300	21 33.3	+ 58 6'	7.7	—				✓	7.0		6.5	7.1	0.7	7.8	6.7	•
21 15 + 78.4	744	21 14.8	+ 78 23	6.8	•				✓	5.7		6.3	1.7		8.0	6.9	•
21 12 + 78.0	742	21 12.2	+ 78 4	7.5-	•				✓	6.0		6.6	1.7		8.3	7.2	•
22 29 + 78.1	801	22 28.6	+ 78 4	5.7	—				✓	4.7		5.3	1.7		7.0	5.9	•
21 39 + 58.6	2314	21 38.4	+ 58 36	6.7	—					7.0 7.4 7.7 7.6	6.5 6.8 6.7 6.9	7.1 7.4 7.3 7.5	7.8 8.1 8.0 8.2	0.7	7.8 8.1 8.0 8.2	6.7 7.0 6.9 7.1	•
21 36 + 59.1	2409	21 36.8	+ 59 6	6.9	—												
21 53 + 78.9	768	21 53.8	+ 78 52	6.5-	—				✓	6.5 6.8		7.1 7.4	8.9	1.8	9.2	7.8 8.1	•
21 27 + 58.5	2279	21 26.8	+ 58 46'	6.8	—					6.8 7.0 7.2 7.5	6.4 6.7 6.6 6.9	7.0 7.3 7.2 7.5	7.7 8.0 7.9 8.2	0.7	7.7 8.0 7.9 8.2	6.6 6.9 6.8 7.1	•
21 23 + 59.1	2383	21 23.4	+ 59 7	6.4	—												
21 22 + 68.9	1214	21 21.8	+ 68 55	7.0	•				✓	5.9		6.5	1.0		7.3	6.4	•
21 18 + 68.9	1206	21 18.2	+ 68 56	8.0	—				✓	7.2		6.6	7.2	1.0	7.2	6.1	•
20 42 + 78.9	716	20 41.6	+ 78 54	6.9	•				✓	5.7		6.3	1.8		8.1	7.0	•
21 3 + 58.9	2226	21 2.8	+ 58 8	7.3	—					7.1 7.4 6.8	6.6 6.9 6.5	7.2 7.5 7.3	7.9 8.2 8.0	0.7	7.9 8.2 8.0	6.8 7.1 6.9	•
20 56 + 58.9	2201	20 55.9	+ 58 3-2	8.6	—					6.8 7.3 6.6	6.2 6.6	6.8 7.2	7.5 7.9	0.7	7.5 7.9	6.4 6.8	•
~~20 56 + 58.9~~	~~2204~~	~~20 56.7~~	~~+ 58~~	~~8.4~~													
20 50 + 58.7	2187	20 50.2	+ 58 46	6.6	•				✓	7.2		6.4	7.0	0.7	7.7	6.6	•
21 52 + 59.1	2436	21 51.9	+ 59 6	7.0	—				✓	6.2		6.8	0.7		7.5	6.4	•
21 43 + 59.0	2420	21 43.2	+ 59 2	7.0	—				✓	7.2		6.6	7.2	0.7	7.9	6.8	•
22 18 + 79.0	785-	22 18.4	+ 78 8-4	8.0	—				✓	7.3		6.5	7.1	1.8	8.9	7.8	•
21 44 + 69.5	1198	21 44.4	+ 69 29	6.7	•				✓	5.7		6.3	1.1		7.4	6.3	•
21 12 + 69.4	1152	21 12.2	+ 69 27	6.5-	—					7.0 7.2	6.4 6.6	7.0 7.2	8.1 8.3	1.1	8.1 8.3	7.0 7.2	•
21 8 + 59.4	2334	21 8.1	+ 58 59	6.0	3736	5.5	12	+1	✓	5.4		6.0	0.7		6.7	5.6	•
20 47 + 69.1	1130	20 47.4	+ 69 7	7.0	—				✓	7.3		6.6	7.2	1.1	8.3	7.2	•
22 7 + 60.4	1228	22 7.4	+ 69 28-	5.9	V				✓	5.3		5.9	1.1		7.0	5.9	•

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1887phae.proj..843F

September 8, 1887.

Plate 1584.

			No. Lines	K	Other Focus Lines.	
	V.0	9.0	III	2	K=H 1	—
	5.6	11.5	III	1	N 1	—
	V.7	13.0	I	6	K=.8H 2	F.
	V.5	13.6	I	10	? V	F.
III? 6.5, 6.8.	V.4	14.0	III	2	K=H 2	—
	V.1	15.6	II	2	K=H 1	—
✓ ✓	V.0	15.6	III	III 1	2 N K=H 1	— —
	V.0	17.0	III	b 1361	2 K=H 2	—
	V.1	18.9	I	3	N 1	—
✓ ✓	V.6	19.5	~~II~~	II? 1	2: N K=H 1	— —
	4.3	9.1	III	1	N 1	—
	4.2	9.6	I	7	N 3	F
	4.8	13.2	I	3	N 1	—
	4.7	14.9	I	3	N 1	—
	4.0	15.6	I	V	K=H 1	F.
	4.4	19.6	I	4	N 2	—
	3.1	6.4	~~I~~	~~4~~	K=H 1	—
	3.5	6.7	III	1	N. 1	—
III? 6.1, 6.5. ?	3.8	11.5	III	b/c 1362	3 K=H 2	F. 13. ioHL pecu,
	3.9	14.8	I	7	K=.2H 3	—
	3.5	17.1	I	V	K=H 2	F.
?	3.0	18.1	III	b 1363	3 K=H 2	F, pecu,
	3.0	18.2	III	1	N 1	—
	3.7	18.2	III	2	N 1	F.
✓ ✓	4.2	22.9	~~I~~	I ~~4~~	5 K=H	K=H 1 pecu, —
✓ ✓	2.6	8.4	III	III? 1	2 N. K=H 1	— —
?	2.2	9.8	III	a? 1364	K=H 1	pecu,
	2.4	11.4	I?	7	K=H 3	F.

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1887phae.proj..843F

	No	R A	Dec	Mag				Means Cor.	Bx.			
21.43+60.0	2294	21 43.2	+60 2	6.0	—			✓ 6.2	6.8		7.6	6.5
								6.6	7.2	0.8	8.0	6.9
21 56+79.6	721	21 56.4	+79 37	6.4	—			✓ 6.4	7.0		8.9	7.8
								6.5	7.3	1.9	9.2	8.1
21 27+59.8	2395	21 27.0	+59 49	5.7	—			✓ 5.3	5.9	0.7	6.6	5.5
21 07+69.9	1173	21 26.8	+69 56	3.0	—			✓	B.	1.2	B.	B.
21 29+79.9	707	21 29.2	+79 54	6.0	—			✓ 5.8	6.4		8.3	7.2
								6.0	6.6	1.9	8.5	7.4
21 16+60.1	22 ~~23~~ 24	21 16.7	+60 4	6.5	—			✓ 6.3	6.9	0.8	7.7	6.6
21 17+60.2	~~2224~~ 2227	21 16.9	+60 9	6.8	—			6.8 6.0	6.6		7.4	6.3
								7.0 6.2	6.8	0.8	7.6	6.5
20 54+80.0	672	20 54.1	+80 0	5.3	—			✓ 5.5	6.1		8.0	6.9
								5.9	6.5	1.9	8.4	7.3
20 32+79.7	675	20 32.6	+79 43	7.3		3604	7.4 13+2	✓ 6.2	6.8	1.9	8.7	7.6
21 1+59.6	2313	21 1.1	+59 40	7.0	—			7.3 ✓ 6.4	7.0	0.7	7.7	6.6
								✓ 6.3	6.9		8.8	7.7
22 27+79.9	739	22 26.2	+79 58	7.5	—			6.5	7.1	1.9	9.0	7.9
21 41+60.4	2288	21 41.3	+60 26	4.5		3855	4.8 16+5	✓ 4.7	5.3	0.8	6.1	5.1
21 29+70.2	1183	21 29.1	+70 10	7.2				✓ 6.1	6.7	1.2	7.9	6.8
21 18+80.2	688	21 18.2	+80 1X[2]	6.5				✓ 6.1	6.7	1.9	8.6	7.5
21 10+80.5	679	21 10.0	+80 36	7.0	—			✓ 6.1	6.7	2.0	8.7	7.6
20 23+80.1	650	20 22.6	+80 4	6.8				✓ 4.8	5.4	1.9	7.3	6.2
22 58+80.0	761	22 58.8	+79 60	7.2	—			✓ 6.1	6.7	1.9	8.6	7.5
21 52+60.6	2320	21 52.9	+60 36	7.5	—			✓ 6.2	6.8		7.6	6.5
								6.4	7.0	0.8	7.8	6.7
21 40+70.6	1193	21 39.8	+70 38	5.0	—			✓ 5.3	5.9		7.1	6.0
								5.8	6.4	1.2	7.6	6.5
21 20+80.6	690	21 19.2	+80 37	6.3	—			✓ 5.2	5.8	2.0	7.8	6.7
21 5+70.9	1164	21 5.3	+70 51	6.0	—			✓ 5.8	6.4	1.2	7.6	6.5
20 37+80.9	659	20 37.2	+80 56	5.8	—			✓ 5.2	5.8		7.8	6.7
								5.7	6.3	2.0	8.3	7.2
20 35+80.9	654	20 35.8	+80 56	7.5	—			✓ 6.3	6.9		8.9	7.8
								6.5	7.1	2.0	9.1	8.0
20 37+80.6	660	20 37.4	+80 35	6.1	—			✓ 5.9	6.5		8.3	7.4
								6.1	6.7	2.0	8.7	7.6
19 47+79.6	640	19 46.6	+79 39	8.0	—			6.8 ✓ 6.2	6.8	1.9	8.7	7.6
21 46+61.1	2208	21 46.3	+61 7	8.0	—			7.0 ✓ 6.3	6.9		7.7	6.6
								7.2 6.5	7.1	0.8	7.9	6.8
22 24+81.2	743	22 24.1	+81 12	7.0	—			✓	,	,	,	,
21 34+61.4	2169	21 34.1	+61 25	5.0	—			✓	,	,	,	,

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1887phae.proj..843F

September 8, 1887.

Plate 1584.

	H	Type	No. lines	K	Focus	Other lines.		
2,3	14,4	III?	2	K=H	1	—		
2,4	14,6	I	4	N	1	—		
2,8	17.8	II	2	2 K=H	K=H 1	—	—	
2,1	23,8	III b? 1365	2	N	3	F, pecu.		

Aut. of Fog. due to mountclouds. Aut. of Fog. due to chemicals

7.4 Plate 1586. 7.8

21.0	7.1	I	4	2 K=H	K 1	1	—	—
21,6	10,9	I	4	K=H	1	—		
21,1	19,6	I	3	N	1	—		
21,6	19,7	I	5	N	2,	—		
21.5	21,6	III b 1366	2	K=H	2	—		
21,3	23,8	I?	3	N	2	—		
20,5	8,5	III	III	1 2	N K=H	1	—	—
20,1	13,1	III	III?	1 2	N K=H	1	—	—
20,7	19,6	III b? 1367	2	K=H	2	—		
20,1	19,8	I	2	N	1	—		
20,5	20,0	I	3	N	1	—		
20,1	21,6	I	5	N	2	—		
19,9	7,3	II	2	K=H	1	—		
19,5	9,7	I	4	N	2	—		
19,5	12,5	III	2	K=H	1	—		
19,6	14,5	I	3	N	1	—		
19,8	16,0	I	7	K=2H	3	—		
19,8	23,6	III	2	K=H	1	—		
18,0	8,1	III?	1	N	1,	—		
18,4	9,7	III?	2	K=H	1	—		
18,7	15,6	II a 1368	3	K=H	2	F, pecu.		
18,7	16,4	III	2	K=H	K=H	1	—	—

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1887phae.proj..843F

	No	R A	Mag		Cor. Br.	Mean Br.				
21 24 + 81.4	736	21 24.7 + 81 24	7.9							
~~21 22 + 71.5~~	~~1064~~	~~21 22.1 + 71 29~~	~~8.3~~							
21.21 + 71.4	1062	21 20.8 + 71 27	6.8							
21 3 + 81.3	725	21 ~~2.10~~ 3.0 + 81 14	8.0	—	6.8	6.2	6.8	2.0	8.8	7.7
20 42 + 61.3	2086	20 42.4 + 61 17	3.4	—						
					184/17	19 − 22 / 17				
						Mean 10				
23 26 + 71.2	1208	23 26.4 + 71 12	6.8	—	5.9	6.9	1.2	8.1	6.4	
22 52 + 71.6	3515	22 52.9 + 71 33	7.0	—	5.7	6.7	0.5	7.2	5.5	
22 7 + 71.4	1112	22 7.4 + 71 24	6.7	•	5.7	6.7	1.2	7.9	6.2	
22 18 + 61.7	2291	22 18.1 + 61 41	6.8	•	5.5	6.5	0.8	7.3	5.6	
22 18 + ~~71.1~~ 51.1	3358	22 17.9 + 51 30	4.7	—	5.1 / 5.3	6.1 / 6.3	0.5	6.6 / 6.8	4.9 / 5.1	
22 0 + 61.6	2246	22 0.7 + 61 35	6.0		5.3	6.3	0.8	7.1	5.4	
23 1 + 52.0	3371	23 0.8 + 52 2	5.5	—	6.0 / 6.2	7.0 / 7.2	0.5	7.5 / 7.7	6.8 / 6.0	
22 45 + 52.3	3311	22 43.6 + 52 16	7.0	—	5.9 / 6.0	6.9 / 7.0	0.5	7.4 / 7.5	5.7 / 5.8	
22 7 + 71.6	1111	22 7.0 + 71 38	5.2	—	5.3 / 5.5	6.3 / 6.5	1.3	7.6 / 7.8	5.7 / 6.1	
22 17 + 62.3	2070	22 17.1 + 62 24	7.3	•	6.0	7.0	0.8	7.8	6.7	
22 4 + 71.6+	1109	22 4.3 + 71 40	7.2	•	5.9	6.9	1.3	8.2	6.5	
22 9 + 62.4	2083	22 9.3 + 62 26	7.0	•	5.4	6.4	0.8	7.2	5.5	
23 28 + 72.1	1109	23 28.8 + 72 ~~7~~ 8	7.5	—	5.9	6.9	1.3	8.2	6.5	
23 2 + 62.9	2171	23 1.9 + 62 51	6.2	•	5.2	6.2	0.9	7.1	5.4	
22 53 + 72.4	1079	22 53.3 + 72 21	6.6	—	6.2 / 6.5	7.2 / 7.5	0.6	7.8 / 8.1	6.1 / 6.4	
22 41 + 52.6	3295	22 41.3 + 52 87	7.0	•	5.8	6.8	0.5	7.3	5.6	
22 33 + 62.8	2102	22 33.5 + 62 50	5.3	—	4.9	5.9	0.9	6.8	5.1	
21 59 + 62.4	2028	21 59.6 + 62 24	5.9	—	5.8 / 6.1	6.8 / 7.1	0.8	7.6 / 7.9	5.9 / 6.2	
23 9 + 63.5	1935	23 9.4 + 63 29	7.0	—	5.8 / 6.0	6.8 / 7.0	0.9	7.7 / 7.9	6.0 / 6.2	
23 2 + 63.4	1931	23 2.1 + 63 25	6.3	—	6.0	7.0	0.9	7.9	6.2	
22 32 + 72.9	10 ~~40~~ 49	22 32.2 + 72 64	5.5	—	5.0	6.0	1.3	7.3	5.6	
22 34 + 53.1	2950	22 34.4 + 53 ~~7~~ 6	6.0	—	5.8 / 6.0	6.8 / 7.0	0.6	7.4 / 7.6	5.7 / 5.9	

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1887phae.proj..843f

September 8, 1887.

Plate 1576.

V	H	Type	Lines	K	Focus	Lines.	Other
√	√	18.6	18.2	III	III	1	2 N K=H 1 1 — —
		18.9	18.9	III		2	K=H 1 —
√	√	18.1	20.6	III	III	1	2 N K=H 1 1 — —
?		18.8	20.8	II a 1369		3	K=H 2 F, pure.
		17.2	6.9	II		2	K=H 1 —
√	√	17.1	8.8	II	II?	2	2K=H K=H 1 pure, —
		17.2	8.9	II		1	N 1 I
		17.5	9.2	III		1	N 1 —
		17.3	10.3	I		V	N 2 —
		17.6	14.0	I		V	N 2 —
√	√	17.8	15.7	I	I	4	5 N N 1 1 — —
√	√	17.6	17.9	I	I?	4	H N K=H 1 — —
√	√	17.4	17.3	I	I	2	4 N K=H 1 1 — —
√	√	17.7	19.5	I	I	3	6 N N 2 1 — —
√	√	17.8	20.4	III	III?	1	2 N K=H 1 — —
		17.5	21.5	I		3	N 1 —
√		15.0	22.2	I? III	I?	4	4 K=H K=H 1 1 — —
		16.8	7.3	III		2	K=H 1 —
		16.4	9.6	I		V	N 1 —
√	√	16.6	13.1	III	III?	1	2 N K=H 1 1 — —
√	√	16.7	13.7	I	I	3	3 N N 1 1 — —
√	√	16.8	14.1	II	II	2	2K=H K=H 1 1 — —
√	√	16.8	14.5	I	I?	4	3 N N 1 1 — —
√	√	16.6	14.7	I	I	V	6 N N 1 1 — —
		16.4	17.0	I		4	K=H 1 —
		16.6	18.3	I	?	V	K=H 2 F
√	√	17.0	20.0	III	III?	1	2 N K=H 1 1 — —
		16.9	23.3	I		6	7 3 F?

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1887phae..proj...849F

Mean 10

	No	R A	Dec	Mag				Cor. Br.	Br.				
22 23 + 63.3	1852	22 23.3	+ 63 20	6.5-	—			7.1 / 7.4	6.0 / 6.3	7.0 / 7.3	0.9	7.9 / 8.2	6.2 / 6.5
22 10 + 72.6	1022	22 10.2	+ 72 36	6.5-	—				5.8 / 6.0	6.8 / 7.0	1.3	8.1 / 8.3	6.4 / 6.6
22 20 + 53.2	2876 ~~2874~~	22 20.5 ~~20.1~~	+ 53 12 ~~53~~	7.1 ~~7.1~~	—			7.0 / 7.3	6.2 / 6.4	7.2 / 7.4	0.6	7.8 / 8.0	6.1 / 6.3
21 57 + 72.5	1009	21 57.2	+ 72 28	8:0	—				5.3	6.3	1.3	7.6	5.9
23 33 + 73.2	1047	23 33.1	+ 73 10	8:6	—				5.9	6.9	1.3	8.2	6.5
23 6 + 64.0	1773	23 6.6	+ 64 0	7.0	—				5.9	6.9	1.0	7.8	6.1
23 6 + 63.9	1949	23 6.1	+ 63 56	7.0	—				5.9	6.9	0.9	7.8	6.1
23 4 + 63.7	1941	23 4.3	+ 63 45	6.8	—				6.2 / 6.4	7.2 / 7.4	0.9	8.1 / 8.3	6.4 / 6.6
23 9 + 73.5	1023	23 9.3	+ 73 27	6.2	4112	5.6	22+5		5.4	6.4	1.4	7.8	6.1
22 43 + 53.6	2993	22 42.8	+ 53 39	6.0	4032	6.0	8-9		5.2	6.2	0.6	6.8	5.1
22 36 + 53.5	2961	22 36.3	+ 53 29	7.3	•			6.9	5.9	6.9	0.6	7.5	5.8
22 35 + 53.6	2958	22 35.7	+ 53 38	8.0	•			7.1	6.0	7.0	0.6	7.6	5.9
22 31 + 53.6	2932	22 ~~31.0~~ ~~31.0~~	+ 53 40	7.3	•			7.0	6.0	7.0	0.6	7.6	5.9
22 23 + 53.5	2897	22 23.7	+ 53 30	6.5-	•			6.6	5.7	6.7	0.6	7.3	5.6
22 21 + 53.4	2882	22 20.8	+ 53 22	7.6	—			7.3 / 7.5	6.2 / 6.4	7.2 / 7.4	0.6	7.8 / 8.0	6.1 / 6.3
21 51 + 73.0	1003	21 51.1	+ 72 ~~58~~ 60	6.5-	3876	6.6	23+6		6.6	7.6	1.3	8.9	7.2
22 5 + 63.4	1815	22 5.4	+ 63 23	7.2	—			7.1	6.0 / 6.2	7.0 / 7.2	0.9	7.9 / 8.1	6.2 / 6.4
23 14 + 64.0	1787	23 13.9	+ 64 ~~1~~ 2	7.3	—				6.0 / 6.3	7.0 / 7.3	0.9	7.9 / 8.2	6.2 / 6.5
23 3 + 64.4	1764	23 3.4	+ 64 26	6.8	•				5.6	6.6	0.9	7.5	5.8
22 50 + 73.9	99 ~~8~~	22 50.0	+ 73 50	7.5-	—			7.0 / 7.2	6.0 / 6.3	7.0 / 7.3	1.4	8.4 / 8.7	6.7 / 7.0
22 43 + 54.0	2864	22 43.8	+ 53 ~~4~~	8.0	•			7.0	5.9	6.9	0.6	7.5	5.8
22 43 + 64.3	1717	22 42.6	+ 64 18	7.0	—			6.8	5.8	6.8	0.9	7.7	6.0
22 41 + 53.9	2954	22 41.2	+ 53 59	7.6				7.2	6.3	7.3	0.6	7.9	6.2
22 40 + 54.1	2856	22 40.6	+ 53 ~~4~~ 7	7.1	•			6.5	5.6	6.6	0.6	7.2	5.5
22 38 + 64.6	1704	22 38.0	+ 64 34	6.5-	—				5.4	6.4	0.9	7.3	5.6
22 22 + 64.4	1664	22 22.4	+ 64 23	8:8	—				5.3	6.3	0.9	7.2	5.5
22 15 + 64.0	1646	22 15.0	+ 64 4	8.0	—			7.2 / 7.5	6.3 / 6.5	7.3 / 7.5	0.9	8.2 / 8.4	6.5 / 6.7
21 50 + 63.0	1802	21 49.6	+ 63 55	4.5-	—				4.4	5.4	0.9	6.3	4.6

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1887phae.proj..843F

September 8, 1887.

Plate 1576.

				Type	Nos. lines	K	Focus	lines		Other lines	
	15.6	6.6		III	2	K=H	1			—	
✓	15.8	8.4		II IIa? 1369a	2	K=H	K=H	1	1	—	Seen
	15.0	8.7		I	3	N	1			—	
	15.9	10.0		I	6	K=.5H	2			—	
	15.9	10.1		I	4	N	1			—	
	15.0	10.2		I	4	N	1			—	
?	15.1	11.4		III b 1370	3	K=H	3			F, Bright pair.	
	15.5	13.7		III	2	K=H	1			—	
✓	15.2	15.2		III	12	N	K=H	1	1	—	—
	15.9 ✓	16.0 ✓		II II?	2	2K=H	K=H	1	1	—	—
✓?	15.2	21.6		a? IIa? 1371	2	K=H	K=H	1	1		Seen
	14.7	7.5		I	5	K=.5H	2			—	
	14.7	11.7		I?	3	N	1			—	
	14.7	13.7		III b.c 1372	3	K=1.2H	4			F, Bright pair.	
✓	14.6	15.9		I	4H	K=H	K=H	1	1	—	—
	14.3	17.4		I	6	K=.2H	2			—	
	14.4	20.1		I	4	N	1			—	
✓	14.1	23.2		a IIa? 1373	2	2K=H	K=H	1	1	—	Seen
	13.0	9.6		I	6	N	1			—	
✓	13.4	11.7		IIa? 1373a	12	N	K=H	1	1	—	Seen
✓	13.5	12.0		I	I 4H	K=H	K=H	1		—	—
✓	13.8	12.5		III?	2	N	K=H	1	1	—	—
✓	13.1	13.0		III?	2	2K=H	K=H	1	1	—	—
	13.8	13.7		I	5	K=.8H	1			—	
✓	13.6	14.4		I	I 4	5K=H	K=H	1	1	—	—
	13.5	14.7		I	7	K=.2H	2			F,	
✓ 12.15	13.6	17.4		I	2	K=H	1			—	
III? 6.6, 6.9. ✓	13.2	18.0		III?	2	K=H	K=H	2		—	—

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1887phae.proj..843F

No	R.A.	Dec	Mag		Mean 10 Obs.	Obs.			
23 17 + 64.6	1799	23 17.7 + 64 32	6.8	—	6.0	7.0		7.9	6.2
					6.3	7.3	0.9	8.2	6.3
23 8 + 64.6	1779	23 8.9 + 64 39	6.5	—	6.2	7.2	0.9	8.1	6.4
23 23 + 74.4	1022	23 23.3 + 74 26	7.0		5.6	6.6	1.4	8.0	6.3
23 2 + 64.9	1458	23 2.0 + 64 50	6.9	—	5.3	6.3	0.9	7.2	5.3
22 56 + 74.4	2900	22 56.5 + 74 28	6.6		5.4	6.4	0.6	7.0	5.3
23 12 + 74.5	1016	23 12.3 + 74 31	6.6		5.4	6.4	1.4	7.8	6.1
23 3 + 74.6	1006	23 3.3 + 74 36	4.6	—	4.7	5.7	1.4	7.1	5.4
					4.9	5.9		7.3	5.6
22 46 + 74.4	98 X 8	22 46.2 + 74 24	7.8	—	6.2	7.2		8.6	6.9
					6.3	7.3	1.4	8.7	7.0
22 37 + 64.9	17 +1 02	22 37.6 + 64 68	7.3	—	6.2	7.2		8.1	6.4
					6.5	7.5	0.9	8.4	6.7
					6.0	7.0	1.2		

Not found on Chart 2 28.5 + 74.2-3

22 6 + 64.8	1634	22 6.3 + 64 48	7.7	—	7.1	6.1	7.1	0.9	8.0	6.3
23 33 + 74.5	1032	23 33.1 + 74 28	6.5	—		5.3	6.3	1.4	7.7	6.0
23 2 + 74.8	1002	23 1.8 + 74 48	7.3			5.8	6.8	1.3	8.3	6.6
22 44 + 65.5	1814	22 44.3 + 63 26	3.8	—		4.3	5.3		6.3	4.6
						4.6	5.6	1.0	6.6	4.9
22 33 + 65.4	1789	22 33.4 + 65 25 4	6.8	—	7.0	5.9	6.9	1.0	7.9	6.2
22 30 + 75.3	2779	22 30.2 + 75 19	6.8	—		5.4	6.4	0.6	7.0	5.3
22 13 + 65.4	1746	22 13.0 + 65 24	7.0			5.8	6.8	1.0	7.8	6.1
~~22 10 + 75.1~~	2709	~~22 10.3 + 75 6 6 7.8~~		—	7.1	5.9	6.9	1.0	7.9	6.2
22 59 + 75.9	2889	22 58.7 + 75 8 6.6				5.6	6.6	0.6	7.2	5.5
22 51 + 75.7	2858	22 51.0 + 75 43	7.5	—	7.2	6.1	7.1	0.6	7.7	6.0
22 50 + 75.6	2850	22 50.1 + 75 40	7.0	—	7.0	5.9	6.9	0.6	7.3	5.8
22 48 + 75.5	2837	22 48.3 + 75 34	6.8	—	6.9	5.9	6.9		7.3	5.8
					7.2	6.2	7.2	0.6	7.8	6.1
22 47 + 75.9	2880	22 46.6 + 75 6	7.1	—	7.4	6.6	7.0		7.6	5.9
					7.3	6.2	7.2	0.6	7.8	6.1
22 44 + 65.8	1813	22 44.3 + 65 46	7.0	—		5.7	6.7	1.0	7.7	6.0
22 37 + 75.6	2794	22 37.4 + 75 39	7.0	—	6.7	5.8	6.8	0.6	7.4	5.7
22 30 + 75.5	836	22 29.7 + 75 27	6.7	—		4.9	5.9	1.3	7.4	5.7
22 17 + 75.3	822	22 17.1 + 75 17	7.3	—		6.1	7.1	1.3	8.6	6.9
22 28 + 75.9	2769	22 28.1 + 75 8 6.3		—	6.5	5.5	6.5		7.1	5.4
					6.8	5.8	6.8	0.6	7.4	5.7

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September 9 1887.

Plate 1576.

				No.	Type	Lines	K	Focus	Lines.	Other
✓	✓	13.3	19.1	~~I~~	I?	1 4	K=H	K=H	1	— —
		13.4	19.9	=	V	N	2			—
✓	✓	13.6	22.7	=	I	3 4	N	K=H	1	— —
		14.0	23.0	=		4	N		1	—
		13.5	24.1	=		4	N		1	—
✓	✓	12.6	6.6	~~II~~	II?	2	2	K=H	K=H	1 — —
✓	✓	12.5	6.7	=	II	2	2	K=H	K=H	1 — —
		12.0	7.5	~~III~~	b 1374	2		K=H		2 —
		12.4	9.8	=		7		K=H		2 —
✓	✓	12.3	10.6	~~III~~	III?	1	2	N	K=H	1 — —
✓	?	12.6	10.9	~~III~~	b 1375			K=H		2 Reen.
III? 6.4, 6.7.		12.6	11.0	~~III~~	b 1376	1		N		1 —
✓	✓	12.2	11.7	~~III~~	III?	1	2	N	K=H	1 — —
✓		12.1	12.5	~~III~~		2		K=H		1 —
III 6.4, 6.7.	✓	12.9	16.6	~~III~~	b. III 1377	1	3	K=H	K=H	1 1 F? F Reen pum.
	?	12.8	17.3	~~III~~	a 1378	3		K=H		2 F, pum.
✓	✓	12.8	19.2	=	I	2	3	N	N	1 1 — —
		12.2	21.6	=		V		N		1 —
		12.1	23.9	~~III~~	a? 1379	3		K=H		2 F.
		11.4	8.3	~~III~~	?	1		N		1 —
✓	✓	11.0	11.0	~~I~~	I?	1	4	H	N	K=H 1 1 — —
?		11.1	13.2	~~III~~	a? 1380	2		K=H		1 pum.
✓	✓	11.4	15.6	~~II~~	II a 1389 a	2	2	K=H	K=H	1 Reen
		11.0	16.4	~~III~~		2		K=H		1 —
		11.8	18.9	=	I?	4		K=H		1 —
		11.6	20.8	=		9		N		2 —
✓	✓	11.5	22.6	=	I?	3	3	N	N	1 1 — —
		11.8	23.0	=		9		K=H		3 F

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	No	RA	Dec	Mag			Mean 10 Cor. Bm	Bm			
22 17 +65.9	1759	22 17.3	+ 65 58	7.3	—		✓ 5.8	6.8		7.8	6.1
							6.8 6.6	7.0	1.0	8.0	6.3
22 21 +5[illegible].6	2750	22 21.3	+ 5 5 42	6.5	•		✓ 5.5	6.5	0.6	7.1	5.4
	2713	22 11.6	+ 55 26	8.4							
22 11 +5[illegible].4	2714	22 11.7	+ 55 27	7.8	•		6.9 ✓ 5.8	6.8	0.6	7.4	5.7
21 59 +65.4	1712	21 59.0	+ 65 22	7.0	•		✓ 5.6	6.6	1.0	7.6	5.9
21 53 +65.5	1691	21 53.5	+ 65 28	6.5	3882 6.2 13 – 4		✓ 5.5	6.5	1.0	7.5	5.8
23 9 +5[illegible].0	2129	23 9.4	+ 5 5 5.3	7.6	—		✓ 6.0	7.6	0.6	7.6	5.9
23 19 +66.1	1607	23 19.3	+ 66 7	7.3	—		✓ 6.0	7.6	1.0	8.0	6.3
23 6 +56.4	2966	23 6.3	+ 5 6 22	6.0	—		✓ 5.5 6.5 5.8 6.8	6.5 6.8	0.6	7.1 7.4	5.4 5.7
23 4 +66.4	1587	23 4.2	+ 66 28	6.7	—		✓ 5.6	6.6	1.0	7.6	5.9
22 55 +56.3	2927	22 55.4	+ 5 6 20	6.1	—		7.0 7.4 5.9 6.2	6.9 7.2	0.6	7.3 7.8	5.8 6.1
22 54 +56.2	2923	22 54.0	+ 5 6 10	6.0	—		✓ 5.4	6.4	0.6	7.0	5.3
22 58 +66.4	1578	22 58.1	+ 66 27	5.5	—		✓ 5.5 5.9	6.5 6.9	1.0	7.3 7.9	5.8 6.2
22 51 +56.2	2913	22 51.4	+ 5 6 14	7.7	—		7.8 7.5 6.2 6.5	7.2 7.5	0.6	7.8 8.1	6.1 6.4
22 57 +76.1	89 x 2	22 57.2	+ 76 2	7.3	—		✓ 6.2	7.2	1.3	8.7	7.1
22 32 +56.0	2821	22 32.9	+ 5 6 3	6.0	—		6.4 6.7 5.5 5.8	6.5 6.8	0.6	7.1 7.4	5.4 5.7
22 16 +75.7	820	22 16.6	+ 75 46	6.8	—		✓ 5.5	6.5	1.3	8.0	6.3
22 16 +66.2	1501	22 16.7	+ 66 14	7.5	•		7.2 ✓ 6.0	7.0	1.0	8.0	6.3
22 15 +56.2	2755	22 14.8	+ 5 6 12	6.7	•		✓ 5.4	6.4	0.6	7.0	5.3
22 7 +56.1	2727	22 6.6	+ 5 6 7	6.0	—		✓ 5.1	6.1	0.6	6.7	5.0
23 4 +56.6	2958	23 3.9	+ 5 6 40	7.0	—		✓ 6.2 6.4	7.2 7.4	0.7	7.9 8.1	6.2 6.4
22 54 +57.0	2663	22 54.0	+ 5 7 0	7.0	—		7.0 6.3	7.0 7.3	0.7	7.7 8.0	6.0 6.3
22 47 +67.2	1475	22 47.6	+ 67 12	7.3	—		✓ 5.9	6.9	1.0	7.9	6.2
22 36 +56.9	2836	22 36.6	+ 5 6 51	7.9	—		7.2 ✓ 6.1	7.1	0.7	7.8	6.1
22 23 +76.7	883	22 23.4	+ 76 42	7.3	—		✓ 6.0 6.2	7.0 7.2	1.6	8.6 8.8	6.9 7.1
22 25 +56.5	2794	22 24.8	+ 5 6 29	7.1	—		✓ 5.8	6.8	0.6	7.4	5.7
22 18 +56.5	2765	22 17.8	+ 5 6 33	6.7	•		✓ 5.1	6.1	0.6	6.7	5.0
22 11 +56.5	2746	22 11.2	+ 5 6 30	6.5	•		6.8 ✓ 5.5	6.5	0.6	7.1	5.4
22 10 +56.3	2741	22 9.8	+ 5 6 19	5.1	—		✓ 4.3	5.3	0.6	5.9	4.2

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1887phae.proj..843F

September 9, 1887.

Plate 1576.

	V	H	Type	No. lines	K	Focus	Other lines.
✓ ✓	10,8	6.5	I	3	H N	K=H, 1	1 — —
?	10,6	8,3	III b1 1381	2	K=H	2	Bright pcec.
	10,4	8,5	III b.c. 1382	3	K=1,2 H?	4	7? Bright pcec.
	10,1	12,1	II	4	N	1	—
✓ ✓	10,5	12,5	III	1 2	N K=H	1	— —
✓ ✓	10,4	13,6	II	2 2	K=H K=H	1	— —
?	10,0	13,8	II a 1383	2	K=H	2	Seen.
✓ ✓	10,3	17,0	II a 1384	2 2	K=H K=H	2	Seen Seen.
	10,1	23,2	I	4	N	1	—
	10,0	24,0	III	2	K=H	1	—
	9.9	7,2	III ?	2	K=H	1	—
	9,9	9,3	III	2	K=H	1	—
	9,8	9,5	I	2	N	1	—
✓ ✓	9,0	9,7	III	1 2	N K=H	1	— —
✓ ✓	9,3	10,2	III	2 2	K=H K=H	1	— —
	9,6	14,4	I	6	N	2	—
	9,0	14,3	II	2	K=H	1	—
✓	9,5	16,3	I	3	N	1	—
Peculiar spectrum.	9,6	19,0	II a.b.c 1385	2	K=1,2 H	3	Bright pcec.
✓ ✓	9,1	20,3	~~III~~ II a? 1385a	1 2	N K=H	1	— Seen
✓ ✓	9,4	21,2	III?	1 2	N K=H	1	— —
	9,5	23,8	III b.c. 1386	3	K=H	3	f. Bright pcec.
	8,5	15,6	I	6	K=1,2 H	3	—
	8,5	15,9	I	4	N	2	—
✓ ✓	8,7	16,4	I	3 5	N K=H	1	— —
	8,9	17,8	I	3	N	1	—
	8,8	20,1	I?	3	N	1	—
✓ ✓	8,7	20,1	I	4 5	N K=H	1	— —

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1887phae.proj..84SF

	No.	R.A.	Decn.	Magn.					Mean 10 Cor. Br.	Br.				
23 10 +5 6.9	~~2978~~	~~23 10.4 +~~	~~56 52~~	~~7.2~~										
23 12 +67.3	1514	23 12.7 +	67 19	5.2	—				✓6.1	7.1	7.1	0.7	7.8	6.1
23 33 +76.8	928	23 33.4 +	76 ~~49~~ 50	3.5	—				✓5.0	6.0			7.0	3.3
22 50 +57.4	2644	22 50.1 +	57 26	7.0	•				5.3	6.3	1.0	7.3		5.6
22 51 +67.5	1482	22 50.8 +	67 28	7.5	—				✓4.1	5.1			6.7	5.0
22 46 +67.6	1469	22 45.4 +	67 37	8.6	—				4.5	5.5	1.6	7.1		5.4
22 44 +67.8	1468	22 44.1 +	67 49	6.5	—				✓5.6	6.6	0.7	7.3		5.6
22 39 +57.4	2593	22 39.4 +	57 23	6.7	—				7.3 6.2	7.2			8.2	6.5
21 24 +76.5	836	21 20.7 +	76 28	6.5	•				7.5 6.5	7.5	1.0	8.5		6.8
21 17 +76.4	833	21 17.3 +	76 24	6.0	—				7.3 ✓6.2	7.2	1.0	8.2		6.5
23 45 +76.8	934	23 45.0 +	76 48	6.9	—				✓5.5	6.5	1.1	7.6		5.9
23 26 +77.0	909	23 26.2 +	77 0	6.8	—				6.5 ✓5.6	6.6	0.7	7.3		5.6
23 25 +77.1	908	23 25.2 +	77 5	7.0	•				✓5.4	6.4	1.6	8.0		6.3
22 59 +57.9	2588	22 59.0 +	57 54	7.2	—				✓5.9	6.9	1.6	8.5		6.8
22 57 +57.7	2676	22 57.3 +	57 47	6.5	—				✓6.1	7.1		8.7		7.0
22 42 +57.7	2612	22 41.~~4~~ +	57 43	6.3	•				✓5.7	6.7		8.3		6.6
22 41 +77.7	871	22 41.3 +	77 44	7.2	—				5.9	6.9	1.6	8.5		6.8
22 23 +77.5	860	22 22.4 +	77 30	6.8	•				✓5.9	6.9	1.6	8.5		6.8
22 24 +57.6	2548	22 23.8 +	57 41	var.	—				✓6.0	7.0	7.2 7.45	7.7		6.0
	~~2544~~	~~22 23.8 +~~	~~57 39~~	~~7.5~~					6.3	7.3	0.7	8.0		6.3
22 19 +57.8	~~2540~~	~~22 18.6 +~~	~~57 48~~	~~7.6~~	—				6.9 ✓5.9	6.9		7.6		5.9
22 15 +57.6	2508	22 15.4 +	57 41	7.2	—				7.1 6.1	7.1	0.7	7.8		6.1
22 6 +57.5	2478	22 5.8 +	57 29	4.1	—				✓5.3	6.3	0.7	7.0		5.3
22 28 +78.1	801	22 28.6 +	78 4	5.7	—				✓5.9	6.9	1.7	8.6		6.9
22 26 +78.0	796	22 28.6 +	78 1	6.0	3986	5.8	21	+4	✓5.5	6.5	1.7	8.2		6.3
22 33 +58.2	2468	22 33.6 +	58 10	7.0	•				✓4.6	5.6	0.7	6.3		4.6
22 22 +68.3	1303	22 22.2 +	68 18	7.7	•				✓6.0	7.0		7.7		6.0
21 49 +77.5	834	21 46.8 +	77 34	7.0					7.0 6.1	7.1	0.7	7.8		6.1
22 9 +68.3	1284	22 9.3 +	68 15	7.3	•				7.0 6.0	7.0		7.7		6.0
									7.8 6.2	7.2	0.7	7.9		6.2
									✓4.9	5.9		6.6		4.9
									5.4	6.4	0.7	7.1		5.4
									✓4.9	5.9	1.7	7.6		5.9
									✓5.2	6.2	1.7	7.9		6.2
									7.0 ✓5.9	6.9	0.7	7.6		5.9
									✓5.7	6.7	1.1	7.8		6.1
									✓5.7	6.7	1.7	8.4		6.7
									6.9 5.8	6.8	1.1	7.9		6.2

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1887phae.proj..843F

September 9, 1887.

Plate 1576.

	ν	H	Type	No. Lines	K	Other Focus lines.	
	7.8	85	I	7	K=√H	2	—
	7.0	9.3	I	√	N	1	—
?	7.7	9.5	I	b 1387 6	N	3	F, 1 occ.
	7.0	11.4	I	√	N	1	—
	7.4	16.√	I	√	K=H	2	F.
∫ √	7.8	22.√	I	I 3 4	N	K=H 1	— —
∫ √	7.4	23.1	I	I 3 3	N	N 1 1	— —
	7.8	23.3	III	1	N	1	—
	7.1	23.3	II	1	N	3	—
	7.6	24.1	I	4	N	2	—
	6.8	10.6	I	√	K=H	1	—
	6.7	11.9	I	√	N	1	—
∫ √	6.√	12.7	III	III 1 2	N	K=H 1	— —
	6.4	16.4	I	√	N	2	—
∫ √	6.6	17.0	I	? I.2 3 5	N	N 1 1	— —
	6.1	17.0	I	3	N	1	—
	6.√	18.9	III	2	K=H	1	—
∫ √	6.3	19.7	I	~~I.?~~ 1 I.? 1 H	K=H	K=H 1	—
	6.√	20.2	I	? 6	K=H	2	—
	√.4	6.8	I	4	K=H	1	—
	√.9	7.1	I	6	K=√H	2	F.
	√.1	9.√	I	7	K=H	2	—
?	5.6	10.4	II	a? 1388 2	K=H	1	occ.
	√.6	17.√	III	b 1389	K=H	2	F.
	√.1	20.6	I	2	N	1	—
	4.6	12.9	I	4	K=H	1	—
	4.8	~~K.9~~	I	3	N	1	—
	4.√	22.8	III	2	K=H	1	—

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1887phae.proj..842F

Mean 10

	Ao	Rd	Dec	Mag					Corr.	Bc.				
23 3 + 58.5	2552	23 3.6	+ 58	34	6.1	—				5.3	6.3	0.7	7.0	5.3
23 1 + 58.9	2546	23 1.1	+ 58	58	6.5	•				5.5	6.5	0.7	7.2	5.5
23 0 + 58.6	2545	23 0.5	+ 58	38	6.3	4086	5.0	1.3	-4	4.6	5.6	0.7	6.3	4.6
22 53 + 59.0	2615	22 53.2	+ 59	2	6.5	•				5.5	6.5	0.7	7.2	5.5
22 29 + 69.2	1262	22 28.9	+ 69	9	6.6	—				5.3	6.3	1.1	7.4	5.7
22 10 + 58.4	2413	22 10.1	+ 58	23	7.5	•			6.8	5.8	6.8	0.7	7.5	5.8
22 8 + 58.5	2409	22 8.2	+ 58	35	7.5	•			7.2	6.0	7.0	0.7	7.7	6.0
22 6 + 58.4	2403	22 ~~7.0 6.4~~	+ 58	21	6.3	—				6.0 6.3	7.0 7.3	0.7	7.7 8.0	6.0 6.3
22 6 + 58.6	2402	22 6.6	+ 58	42	5.6	—				4.8	5.8	0.7	6.5	4.8
21 8 + 77.5	800	21 8.4	+ 77	32	6.1	3733	5.8	1.9	+2	5.0	6.0	1.7	7.7	6.0
22 56 + 59.0	2629	22 56.4	+ 59	4	7.0	—				5.8	6.8	0.7	7.5	5.8
22 51 + 59.2	2607	22 51.0	+ 59	11	7.3	•				5.9	6.9	0.7	7.6	5.9
22 47 + 59.3	2395	22 47.5	+ 59	20	6.3	—			7.2 7.5	6.2 6.4	7.2 7.4	0.7	7.9 8.1	6.2 6.4
22 29 + 69.6	1263	22 29.2	+ 69	37	6.2	•				5.3	6.3	1.1	7.4	5.7
22 18 + 69.5	57 12 ~~48~~	22 ~~26.0 + 69 26~~ +8.0 + 69 32		3	7.8				6.7	5.7	6.7	1.1	7.8	6.1
22 25 + 69.5	1256	22 25.6	+ 69	4 x	7.0	•				5.9	6.9	1.1	8.0	6.3
21 53 + 78.9	768	21 53.~~8~~	+ 78	~~5~~ 2	6.5	—				6.2 6.5	7.2 7.5	1.8	9.0 9.3	7.3 7.6
22 10 + 69.4	1232	22 10.1	+ 69	25	8.0	—			7.1	6.2	7.2	1.1	8.3	6.6
22 7 + 69.4	1228	22 7.4	+ 69	25	6.9	—				5.0	6.0	1.1	7.1	5.4
0 1 + 78.9	1	0	1.5	+ 78	5.5	6.5	—			5.4	6.4	1.8	8.2	6.5
23 21 + 69.6	1232	23 21.1	+ 69	34	6.2	—				5.3	6.3	1.1	7.4	5.7
23 10 + 70.1	1311	23 10.0	+ 70	6	6.0	—				5.4	6.4	1.2	7.6	5.9
22 57 + 59.6	2631	22 57.4	+ 59	40	6.7	—				5.5	6.5	0.7	7.2	5.5
22 22 + 70.0	1240	22 22.3	+ 70	x 2	6.0	—				5.4 5.8	6.4 6.8	1.2	7.6 8.0	5.9 6.3
22 4 + 69.9	1221	~~22~~	4.1	+ 69	5.9	6.8	•			5.9	6.9	1.2	8.1	6.4
22 59 + 80.0	761	22 58.8	+ 79	60	7.2	—				5.4	6.4	1.9	8.3	6.6
22 20 + 70.6	1234	22 20.6	+ 70	35	7.0	•				5.8	6.8	1.2	8.0	6.3
22 7 + 60.0	2338	22 7.3	+ 60	2	5.4	—				5.6 5.9	6.6 6.9	0.8	7.4 7.7	5.7 6.0

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September 9, 1887.

Plate IV 46.

v	H	Type	No. Lines	K	Focus	Other Lines.
3.6	9.7	II	1	N	1	—
3.4	13.4	III	3	K=H	2	F
~~3.4~~	14.6	III ~~III?~~	2	~~K=H~~ K=H	1	— —
3.0	17.4	I	6	N	1	—
3.9	20.6	III	2	K=H	1	—
2.5	9.1	I	3	N	1.	—
2.6	19.7	I	4	N	2	—
2.1	19.7	III?	2	K=H	2	—
2.3	20.9	I	4	?	2	—
2.1	22.4	I	3	N	1	—
2.6	23.4	III	2	K=H	1	—

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1997plate_proj_.843F

	Ao	RoA	Dec	Mag	
23 0+60.6	2449	23 0.3	+ 60	40	6.8	—
22 46+60.9	2450	22 45.7	+ 60	56	6.0	—
22 39+80.6	731	22 39.1	+ 80	36	6.7	—
22 28+61.0	2314	22 28.7	+ 61	2	6.5	.
21 29+79.9	704	21 29.0	+ 79	54	6.0	—
23 26+71.2	1208	23 26.4	+ 71	12	6.8	.
22 7+71.4	1112	22 7.4	+ 71	24	6.7	.
22 7+71.6	1111	22 7.0	+ 71	38	5.2	—
21 19+80.6	690	21 19.2	+ 80	37	6.3	—
21 51+71.2	1094	21 50.9	+ 71	18	6.7	.
20 54+80.0	672	20 54.1	+ 80	0	5.3	—

119/87

Mean 10

Cor. Brt.	Brt.				
6.0	7.0	0.8	7.8	6.1	
√ 5.3	6.3		7.1	5.4	
5.4	6.4	0.8	7.2	5.5	.
√ 5.9	6.9	7.2	8.9	7.2	.
6.3	7.3	2.0	9.3	7.6	
√ 5.6	6.6	0.8	7.4	5.7	.
√ 5.7	6.7		8.6	6.9	
5.9	6.9	1.9	8.8	7.1	.
√	,	,	,	,	.
√ 5.3	6.3	1.2	7.5	5.8	.
√	,	,	,	,	.
√	,	,	,	,	.
√	,	,	,	,	.
√ 5.6	6.6		8.5	6.8	
5.9	6.9	1.9	8.8	7.1	.

17 − 17 / 7

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Ant. Fog. due to moon and clouds 6.6

Ant. Fog. due to chemicals 7.9

September 13, 1887.

Plate 1564.

	H	Type	No. Lines	K	Found Lines.	Other Lines.	
10 40 ?	22,5	11,1	II a 1390	2	K=H	1	reen
	22,0	22,4	III	2	K=H	1	—
	22,1	22,7	II a? 1391	2	K=H	2	—
	21,2	6,7	III	1	N	1	—
	21,0	7,5	I III	2	K=H	1	—
✓	21,4	7,7	III III	1 2	N K=H	1 1	— —
	21,3	7,8	III ?	1	N	1	—
?	21,0	7,8	II a 1392	2	K=H	2	reen.
?	21,8	9,3	I d?	7	N	2	F, reen.
	21,0	12,2	I ?	4	K=H	1	—
?	21,1	13,6	III b.c. 1393	3	K=H	4	F. Bright reen.
	21,3	15,8	II	1	N	1	—
	21,8	18,2	I	4	K=H	1	—
	21,9	18,9	III	1	N	1	—
	21,8	19,4	III	2	K=H	1	—
	20,6	11,1	I	7	N	3	—
✓	20,1	10,8	III III	2 1	2 N	K=H 1	1 — —
	20,5	11,5	III	2	K=H	1	—
	20,6	13,2	I	3	N	1	—
	20,8	14,3	I	5	N	1	—
	20,6	14,5	I	5	N	1	—
?	20,1	15,9	II a 1394	2	K=H	1	reen.
	20,2	16,5	II	3	K=H	2	F
	20,6	19,6	II	2	K=H	1	—
?	20,5	21,4	I a 1395	2	K=H	1	reen.
	19,0	10,0	III b 1396	3	K=H	2	F.
	19,4	14,4	I	8	N	3	—
	19,0	19,0	I	4	N	2	—

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	No	Rod	Dec	Mag					Cor.	Mean Br.				
23 40 +65.9	1943	23 39.4	+ 63	5.8	6.3	–			✓					
22 54 +56.2	2923	22 54.0	+ 56	10	6.0	–				6.9		7.5	6.0	
									✓	6.1	0.6	7.6	6.1	
22 16 +75.8	820	22 16.6	+ 75	46	6.8	–			✓	6.4	1.3	7.9	6.4	
										6.9		8.4	6.9	
0 30 +76.1	14	0 30.5	+ 76	5	7.0	–			✓	7.2	1.3	8.7	7.2	
23 48 +56.6	3115	23 48.3	+ 56	38	7.5	–			✓	6.7		7.3	5.8	
										6.8	0.6	7.4	5.9	
	10	0	21.7		76	13	6.5			6.8	6.9	7.4	5.9	
23 48 +56.3	~~4112~~	~~23~~	~~47.7~~	+ ~~56~~	~~9~~	8.4	–		✓	7.0	7.1 0.6	7.6	6.1	
										6.5		7.5	6.0	
23 57 +66.4	1649	23 57.2	+ 66	21	6.0	–			✓	6.8	1.0	7.8	6.3	
23 47 +56.7	3111	23 47.2	+ 56	41	5.0	–			✓	6.5	0.7	7.2	5.7	
0 8 +76.2	5	0	8.1	+ 76	9	6.3	–	35 6.2 15 ~~2~~ 0	✓	6.1	1.6	7.7	6.2	
23 45 +76.8	934	23	45.0	+ 76	48	6.9	–		✓	6.4	1.6	8.0	6.3	
23 33 +76.8	928	23	33.4	+ 76	~~49~~ 50	5.5	–		✓	5.2		6.8	5.3	
										5.4	1.6	7.0	5.3	
23 17 +56.7	2999	23	17.6	+ 56	44	7.0	–		✓	7.1	0.7	7.8	6.3	
23 4 +66.4	1587	23	4.2	+ 66	28	6.7	–		✓	6.7	1.0	7.7	6.2	
23 6 +56.3	2966	23	6.3	+ 56	22	6.0	–		✓	7.0		7.6	6.1	
									✓	7.2	0.6	7.8	6.3	
22 58 +66.4	1575	22	58.1	+ 66	27	5.5	–			6.7		7.7	5.2	
										7.0	1.0	8.0	6.5	
23 41 +67.0	1562	23	41.0	+ 67	0	5.5	–	4204 5.1 17 ~~8~~ +2	✓	5.8	1.0	6.8	5.3	
23 36 +57.3	2787	23	36.4	+ 57	15	7.5	–		✓	7.2	7.3	7.9	6.4	
									✓	7.4	7.4 0.7	8.1	6.6	
23 34 +57.0	2780	23	34.1	+ 57	2	7.1	–		✓	7.2		7.9	6.4	
										7.4	0.7	8.1	6.6	
23 30 +67.0	1542	23	~~29.10~~ 30.0	+ 67	3	7.2	•		✓	7.1	1.0	8.1	6.6	
23 26 +77.0	909	23	26.2	+ 77	0	6.8	•		✓	6.5	1.6	8.1	6.6	
23 25 +77.1	908	23	25.2	+ 77	5	7.0	•		✓	6.5	1.6	8.1	6.6	
23 12 +77.4	896	23	11.9	+ 77	22	7.3	–		✓	6.7	1.7	8.4	6.9	
23 12 +67.3	1514	23	12.7	+ 67	19	5.2	–		✓	6.2	1.0	7.2	5.7	
22 39 +76.9	870	22	~~38.10~~ 39.0	+ 76	8.1	7.5	–		✓	6.7	1.6	8.3	6.8	
22 22 +76.6	~~851~~ 859	22	23.7	+ 76	42	7.3	–		✓	6.6	1.6	8.1	6.6	
			~~39.10~~ 40.0											
23 40 +57.9	2804	23	~~39.11~~	+ 57	5.0	5.3	–		✓	6.4		7.1	5.6	
~~23 40 +57.9~~	~~2804~~	~~22~~	~~40.6~~	+ ~~57~~	~~8.4~~	~~8.4~~	~~*~~			6.7	0.7	7.4	5.9	
	2748	23	23.4	+ 57	46	5.7		4153 4.8 17 ~~8~~ +2	✓					
~~23 23 +57.7~~	~~2747~~	~~23~~	~~23.2~~	+ ~~57~~	~~46~~	~~5.2~~			✓	5.8	0.7	6.5	5.0	
22 41 +77.8	841	22	41.5	+ 77	44	7.2	•		✓	6.5	1.7	8.2	6.7	

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September 13, 1887.

Plate 1564.

				No.						Other	
		H		Type	Lines	K		Focus	Lines.		
1	?	19.8	19.5	II	a 1397	2	K=H	1		diff.	
✓	✓	19.2	20.0	II	II?	2 2	K=H	K=H	1 1	—	—
		19.1	21.1	I	6	N		2		—	
		19.5	23.2	I	I?	V		N	1	—	
	?	18.9	6.3	II	a 1398	1		N	2	diff.	
		18.0	6.8	III	1	N		1		—	
		18.0	8.1	I	3	N		1		—	
		18.3	9.5	III	?	2	K=H	1		—	
✓	✓	18.1	14.1	III	III?	1 2	N	K=H	1 1	—	—
✓	✓	18.4	15.2	III	III	1 2	N	K=H	1 1	—	—
		18.0	15.8	I	4	N		1		—	
✓	✓	18.1	17.9	II	1398a IIa?	2	K=H	K=H	1 1	—	diff.
✓	✓	18.4	18.0	III	III	1 2	N	K=H	1 1	—	—
		18.3	20.2	I	7	K=2H		3		F	
		18.2	20.6	I	6	N		2		—	
		18.7	21.8	?	?	2	K=H		1	—	
✓	?	17.0	14.8	II	a 1399 II?	2 2	K=H	K=H	1 1	—	—
✓	✓	17.1	16.1	II	II?	2 2	K=H	K=H	1 1	—	—
✓	✓	17.1	16.9	III	III?	1 2	N	K=H	1 1	—	—
		17.6	19.4	I	6	K=H		2		—	
		17.5	20.2	I	1400 6	N		3		—	
		16.8	6.5	III	1	N		1		—	
		16.0	7.6	I	V	N		2		—	
		16.8	9.1	III	2	K=H		1		—	
		16.4	9.7	I	V	N		2		—	
		16.8	11.1	I	7	K=1.8H		3		F	
		16.8	11.9	I	?	4	K=H		1	—	
		16.8	12.2	III	2	K=H		1		—	

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1887phae.proj..843F

Means

	No	R.A.	Dec	Mag				Gr. Br.	Br.				
22 38+77.3	868	22 38.4 + 77	16	8.1	x	—		✓ 5.9	6.8	1.6	7.4	5.9	
22 55+67.5	866 / 491	22 33.8 + 77	21	8.7	x	—		✓ 7.0 6.1	7.0	1.0	8.0	6.5	
22 22+77.5	860	22 22.4 + 77	30	6.8	•			✓ 5.3	6.2	1.7	7.9	6.4	
22 50+77.4	2644	22 50.7 + 77	26	7.0	•			✓ 6.1	7.0	0.7	7.7	6.2	
0 40+77.2	27	0 40.5 + 77	10	6.7	—			✓ 5.6	6.5	1.6	8.1	6.6	
0 38+77.6	25	0 38.4 + 77	41	7.0	—			✓ 6.0 6.2	6.9 7.1	1.7	8.6 8.8	7.1 7.3	
23 57+68.0	1426	23 57.8 + 68	4	7.0	•			✓ 5.8	6.7	1.1	7.8	6.3	
23 42+78.2	2653	23 42.1 + 78	10	6.8	—			✓ 5.8 6.0	6.7 6.9	0.7	7.4 7.6	5.9 6.1	
23 24+78.4	2603	23 24.3 + 78	20	7.3	—			✓ 6.3 6.5	7.2 7.4	0.7	7.9 8.1	6.4 6.6	
23 20+68.2	1376	23 19.6 + 68	10	7.2	—			✓ 6.3 6.6	7.2 7.5	0.1	8.3 8.6	6.8 7.1	
23 11+78.4	825	23 11.4 + 78	27	7.5	•			✓ 5.7	6.6	1.7	8.3	6.8	
22 51+78.3	814	22 51.0 + 78	18	8.3	x	—		✓ 7.0 6.0	6.9	1.7	8.6	7.1	
22 51+78.2	813	22 50.9 + 78	8	7.7	—			7.1 6.2 6.5	7.1 7.4	1.7	8.8 9.1	7.3 7.6	
22 29+78.1	801	22 28.6 + 78	4	8.7	—			✓ 4.8	5.7	1.7	7.4	5.9	
22 26+78.0	796	22 25.6 + 78	1	6.0	3986	5.8	18	+3 ✓ 5.0	5.9	1.7	7.6	6.1	
22 44+67.8	1468	22 44.1 + 67	49	6.5	—			✓ 5.8	6.7	1.1	7.8	6.3	
23 22+78.7	834	23 22.4 + 78	45	8.0	—			✓ 5.7	6.6 6.7	1.8	8.4	6.9	
23 8+78.8	823	23 8.2 + 78	61	8.5	x	—		✓ 6.3	7.2 7.2	1.8	9.0	7.3	
23 13+78.9	2577	23 13.4 + 78	50	8.0	—			✓ 6.3 6.5	7.2 7.4	1.7	8.9 8.1	6.4 6.6	
23 3+78.7	2542	23 3.6 + 78	34	6.1	—			✓ 5.5	6.4	0.7	7.1	5.6	
23 0+78.6	2543	23 0.3 + 78	38	5.3	4086	5.0	14	-1 ✓ 4.8	5.7	0.7	6.4	4.9	
23 53+78.7	2683	23 53.2 + 78	48	6.3	—			✓ 6.0 6.3	6.4 7.2	0.7	7.6 7.9	6.1 6.4	
23 50+79.2	2798	23 50.3 + 79	13	6.7	•			✓ 5.7	6.6	0.7	7.3	5.8	
23 54+68.8	1418	23 53.8 + 68	46	7.5	—			✓ 6.1 6.4	7.0 7.3	1.1	8.1 8.4	6.6 6.9	
23 42+79.2	2777	23 41.8 + 79	10	6.5	•			✓ 5.5	6.4	0.7	7.1	5.6	
0 1+78.9	1	0 1.5 + 78	55	6.8	—			✓ 4.9	5.8	1.8	7.6	6.1	
23 38+68.9	1393	23 38.2 + 68	56	6.8	—			✓ 5.9	6.8	1.1	7.9	6.4	
23 51+78.0	851	23 50.1 + 78	57	7.8	—			✓ 5.9 6.1	6.8 7.0	1.8	8.6 8.8	7.1 7.3	

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September 13, 1887.

Plate 1564.

	v.	H	Type	Lines	K	Focus	Lines.	Other
	16.7	12.6	II	2	K=H	1	—	
?	16.4	13.5	IIa	1401 2	K=H	1	ccm.	
	16.8	13.7	I	4	K=H	1	—	
?	16.8	14.8	IIa?	1402 2	K=H	1	ccm.	
	16.7	15.6	I	5	N	2	—	
√	16.6	16.0	II?	II 2 2	K=H	K=H 1	1	— —
	16.3	16.2	III	2	K=H	1	—	
	16.8	20.1	IIa	1403 4	N	2	—	
	16.5	21.2	I	4	N	1	—	
	16.5	22.1	I?	4	N	1	—	
	16.1	22.6	II	2	K=H	1	—	
	15.0	5.7	I	7	N	3	f	
	15.4	7.5	I?	4	N	1	—	
	15.7	9.7	I	7	N	3	—	
	15.6	11.8	III	2	K=H	1	—	
	15.2	13.1	IIa	1404 2	K=H	1	—	
	15.8	14.9	I	6	K=2H	2	—	
	15.1	15.1	I	3	N	1	—	
/	15.4	16.4	I	7	K=H	2	—	
	15.9	16.8	II	2	K=H	1	—	
	15.7	17.1	III	III? 1 2	N	K=H	1 1	— —
√	15.8	17.6	III	III 2 2	K=H	K=H	1 1	— —
	15.6	17.9	III	1	N	1	—	
	15.4	18.3	III	1	N	1	—	
	15.3	20.9	IIa	1405 3	K=H	1	f	
	15.6	23.1	III	2	K=H	1	—	
	15.5	24.1	I	I 4	K=H	1	—	
	14.4	15.6	II?	1	N	1	—	

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No	R A	Dec	Mag		Mean g Br.				
23 46 +79.0	796	23 46.1 + 79	2	8.3	—	6.0	6.9	1.8	8.7	7.2
23 27 +79.3	2745	23 26.9 + 79	14	7.0	—	6.1	7.0	0.7	7.7	6.2
23 34 +79.0	790	23 34.0 + 79	1	8.2	—	5.9	6.8	1.8	8.6	7.1
23 23 +79.0	835	23 22.5 + 78	60	7.5	—	5.7	6.6	1.8	8.4	6.9
23 13 +79.1	777	23 13.9 + 79	6	7.8	•	5.3	6.2	1.8	8.0	6.5
23 9 +79.1	772	23 9.6 + 79	7	8.7	—	6.1	7.0 7.1	1.8	8.8	7.3
23 16 +79.3	2710	23 16.1 + 79	20	6.0	—	6.0 6.3	6.9 7.2	0.7	7.6 7.9	6.1 6.4
23 1 +78.9	2546	23 1.1 + 78	58	6.5	—	5.7	6.6	0.7	7.3	5.8
22 56 +79.0	2629	22 56.4 + 79	4	7.0	•	5.9	6.8	0.7	7.5	6.0
22 53 +79.0	2615	22 53.2 + 79	2	6.5		5.7	6.6	0.7	7.3	5.8
22 51 +79.2	2607	22 51.0 + 79	11	7.3	—	6.1	7.0	0.7	7.7	6.2
1 0 +78.9	34	1 0.0 + 78	54	5.6	180 5.6	15 +2 4.4	5.3	1.8	7.1	5.6
0 42 +79.1	19	0 41.6 + 79	2	7.7		5.7	6.6	1.8	8.4	6.9
0 18 +79.3	10	0 17.9 + 79	14	7.0	•	4.8	5.7	1.8	7.5	6.0
23 55 +79.4	799	23 55.4 + 79	30 29	7.5	—	5.7 5.9	6.6 6.8	1.8	8.4 8.6	6.9 7.1
23 42 +79.7	793	23 41.8 + 79	45	8.3	—	6.0	6.9	1.9	8.8	7.3
23 21 +69.5	1332	23 21.1 + 69	34	6.2	—	4.9	5.8	1.1	6.9	5.2
23 20 +69.9	1331	23 20.2 + 69	58	6.8	•	5.8	6.7	1.2	7.9	6.4
23 5 +79.7	769	23 4.6 + 79	47	7.5	—	5.1	6.0	1.9	7.9	6.4
23 14 +70.5	2701	23 13.6 + 69	29	6.7	—	6.0	6.9	0.7	7.6	6.2
22 57 +79.5	789	22 56.6 + 79	34	7.5	—	5.8 6.1	6.7 7.0	1.9	8.6 8.9	7.1 7.4
22 52 +79.4	788	22 51.7 + 79	28	7.8	—	6.1 6.4	7.0 7.3	1.8	8.8 9.1	7.3 7.6
22 48 +79.6	786	22 47.9 + 79	37	7.2	—	5.6 5.9	6.5 6.8	1.9	8.4 8.7	6.9 7.2
22 43 +79.6	780	22 42.8 + 79	40	7.0	—	5.5 5.8	6.4 6.7	1.9	8.3 8.6	6.8 7.1
22 37 +79.6	2631	22 37.4 + 79	40	6.7	—	5.8	6.7	0.7	7.4	5.9
21 54 +78.8	768	21 53.8 + 78	52	6.8	—	5.8 6.1	6.7 7.0	1.8	8.5 8.8	7.0 7.3
22 29 +69.2	1262	22 28.9 + 69	9	6.0	—	5.6	6.5	1.1	7.6	6.1
1 4 +79.2	36	1 3.9 + 79	8	6.8	—	5.5	6.4	1.8	8.2	6.7

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1887phae.proj..843f

September 13, 1887.

Plate 1564.

r	H	Type	No. Lines	K	Focus	Other Lines.
14.5	6.3	III	2	K=H	2	—
14.1	6.8	I	3	N	1	—
14.5	8.7	III	2	K=H	1	—
14.4	14.6	I?	3	N	1	—
14.3	17.2	II a 1406	v	K=.8H	1	—
14.7	16.8	I	6	K=H	2	F
14.1	16.7	II	2	K=H	1	—
14.8	16.9	I	7	K=H	2	F
14.5	19.7	III	2	K=H	1	—
14.4	22.4	III	1	N	1	—
14.8	22.8	II	II 2	2K=H	K=H 1	— —
14.6	23.9	I?	6	K=H	2	F
13.1	6.1	I	v	N	2	—
? 13.5	6.9	I	6	K=H	2	neb.
? 13.8	7.4	II a 1407	2	K=H	2	neb.
? 13.1	10.2	I	4	K=H	1	neb.
13.1	11.6	III	III 2	2K=H	K=H 1	— —
13.6	13.4	I	3	N	1	—
13.8	13.7	I	v	N	1	—
13.8	17.2	I	4	N	1	—
13.5	18.4	III	2	K=H	2	—
13.5	20.0	II?	1	N	1	—
13.4	22.6	II?	II 2	2K=H	K=H 1	— —
13.4	22.7	II	II 2	2K=H	K=H 1	— —
12.6	6.3	I	6	N?	2	F
12.0	10.1	II	1	N	2	—
12.3	12.4	II a 1408	2	K=H	1	—
12.6	13.1	II	1	N	1	—

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1887phae.proj..843F

Mean 9

	No	RA	Dec	Mag				Br.				
0 57 +79.3	29	0 57.1	+ 79	6.4	—			5.4	6.3		8.1	6.6
								5.7	6.6	1.8	8.4	6.9
23 54 +60.0	2656	23 54.0	+ 60	6.8	•			6.1	7.0	0.8	7.8	6.3
23 46 +60.0	2636	23 46.7	+ 60	7.0	—			6.3	7.2		8.0	6.3
								6.5	7.4	0.8	8.2	6.7
23 26 +80.2	770	23 28.8	+ 80	8.3	—			5.7	6.6	1.9	8.3	7.0
23 20 +60.3	2540	23 19.8	+ 60	7.0	—			5.8	6.7	0.8	7.5	6.0
23 13 +60.3	2521	23 13.7	+ 60	7.0	—			4.9	5.8	0.8	6.6	5.1
23 10 +79.3	1311	23 10.0	+ 79	6.0	—			5.8	6.7	1.2	7.9	6.4
22 58 +79.9	761	22 58.8	+ 79	7.2	—			5.1	6.0	1.9	7.9	6.4
22 26 +79.9	739	22 26.2	+ 79	7.5	—			5.5	6.4		8.3	6.8
								5.8	6.7	1.9	8.6	7.1
21 56 +79.6	721	21 56.4	+ 79	6.4	—			5.6	6.5		8.4	6.9
								6.0	6.9	1.9	8.8	7.3
21 54 +79.3	720	21 53.9	+ 79	8.2	—			6.8 5.9	6.8	1.8	8.6	7.1
22 29 +69.6	1263	22 29.2	+ 69	6.2	—			5.5	6.4	0.8	7.2	5.7
23 57 +60.5	2667	23 57.6	+ 60	6.0	4258	6.0	10	5.3	6.2	0.8	7.0	5.3
23 54 +60.4	2654	23 54.3	+ 60	6.0	—			5.5	6.4	0.8	7.2	5.7
0 48 +79.8	24	0 48.6	+ 79	6.5	—			5.1	6.0	1.9	7.9	6.4
0 22 +80.5	10	0 21.2	+ 80	7.9	—			5.8	6.7	2.0	8.7	7.2
23 35 +60.9	2609	23 35.6	+ 60	8.2	—			6.1	7.0	7.37	7.8	6.3
								6.4	7.3	7.55 0.8	8.1	6.6
23 40 +80.5	784	23 40.6	+ 80	8.0	•			5.8	6.7	2.0	8.7	7.2
23 37 +80.5	780	23 37.7	+ 80	7.8	—			5.6	6.5	2.0	8.5	7.0
22 54 +80.5	739	22 53.3	+ 80	7.9	•			5.9	6.8	2.0	8.8	7.3
22 39 +80.6	731	22 39.7	+ 80	6.7	—			5.6	6.5		8.3	7.0
								5.8	6.7	2.0	8.7	7.2
23 0 +60.6	2479	23 0.3	+ 60	6.8	—			6.1	7.0	0.8	7.8	6.3
21 51 +79.9	717	21 50.9	+ 79	8.0	—			6.9 6.1	7.0	1.9	8.9	7.4
21 49 +80.0	706	21 49.1	+ 80	8.2	—			6.8 6.0	6.9	1.9	8.8	7.3
1 6 +80.1	36	1 6.2	+ 80	6.7				4.8	5.7	1.9	7.6	6.1
23 42 +61.3	2533	23 41.8	+ 61	5.9	—			5.5	6.4	0.8	7.2	5.7
23 32 +61.3	2490	23 32.0	+ 61	6.5	—			6.0	6.9	0.8	7.7	6.2
23 45 +81.0	838	23 45.4	+ 81	8.0	—			6.0	6.9	2.0	8.9	7.4

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1887phae.proj..843F

September 13, 1887.

Plate 1564.

			No.				Other		
	R.	H.	Type	Lines	K	Focus	lines.		
	12,5	14,2	I	6	K=.2H?	2	—		
	12,8	14.9	III	1	N	1	—		
	12,8	15.3	II	2	K=H	1	—		
III 6.5, 6.8.	12,0	15.6	III	1	N	1	—		
	12,6	17,6	II	1	N	1	—		
	12,5	17,9	III	III / 1	N	N K=H	1 1	—	—
?	12,0	19.3	II	a 1409 2	K=H	1	cent.		
	12,6	23.5	II	2	K=H	1	—		
	11,6	5.9	I	3	N	1	—		
	11,3	6,6	I	V	N	2	—		
	11.1	8.2	I	? V	K=H	1	—		
	11,4	8,4	I	6	K=.5H	2	—		
	11,8	11.8	III	2	K=H	1	—		
	11,4	16,0	III	III / 2	N	K=H	1 1	—	—
	11,2	17,7	III	III? / 2	N	K=H	1 1	—	—
	10,7	11,4	II	a 1410 2	K=H	1	—		
	10,9	10,2	II	a 1411 3	K=H	2	F		
	10,5	12,7	I	V	K=.5H	2	—		
	10.1	13.1	I	7	K=.2H	3	F		
	10,7	14,0	I	3	N	1	—		
	10.1	14.3	III	2	K=H	1	—		
?	10,2	17,2	III	b.c. 1412 3	K=H	3	F	Bright cent.	
	10.0	19,2	III	?	N	1	—		
	10,4	19,9	I	3	N	1	—		
	10,1	23,2	III	1	N	1	—		
	9,8	7,5	II	2	K=H	1	—		
	9,5	9,2	III	III / 2	N	K=H	1 1	—	—
	9,2	9,5	III	III / 2	N	K=H	1 1	—	—

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1887phae.proj..843F

Weng

	No	R.A.	Dec.	Mag		Cor. Bc.	Bv.				
23 26 +71,3	1208	23 26.4	+ 71 12	6.8	—	✓5.4	6.3	1.2	7.5	6.0	
23 21 +61,1	2454	23 21.6	+ 61 7	7.9	—	✓6.1 / 6.4	7.0 / 7.3	0.8	7.8 / 8.1	6.3 / 6.6	
23 17 +81,0	818	23 16.9	+ 81 3	8.5	—	✓5.9	6.8	2.0	8.8	7.3	
23 18 +61,5	2444	23 18.4	+ 61 29	8.3	—	✓5.5 / 5.9	6.4 / 6.8	0.8	7.2 / 7.6	5.7 / 6.1	
23 10 +61,7	2413	23 10.3	+ 61 10	6.5	—	✓5.6	6.5	0.8	7.3	5.8	
22 43 +81,1	788	22 42.8	+ 81 8	7.4	—	7.0 5.8 / 7.3 6.1	6.7 / 7.0	2.0	8.7 / 9.0	7.2 / 7.5	
22 24 +81,2	775	22 24.7	+ 81 12	7.0	—	✓5.3	6.2	2.0	8.2	6.7	
22 45 +60,9	2450	22 45.7	+ 60 56	6.0	—	✓5.6	6.5	0.8	7.3	5.8	
0 17 +71,0	16	0 17.5	+ 71 0	6.6	•	✓5.8	6.7	1.2	7.9	6.4	
23 56 +61,5	2586	23 56.8	+ 61 29	8.6	2253 6.1 9	✓5.3	6.2	0.8	7.0	5.5	
0 53 +81,2	30	0 52.5	+ 81 11	8.3	✗—	✓5.4	6.3	2.0	8.3	6.8	
0 50 +81,1	23	0 49.6	+ 81 6	7.5	—	✓4.8	5.7	2.0	7.7	6.2	
23 10 +81,6	814	23 9.6	+ 81 36	8.0	—	✓5.5 / 5.7	6.4 / 6.6	2.1	8.5 / 8.7	7.0 / 7.2	
23 8 +81,8	810	23 6.8	+ 81 48	8.1	✗—	✓5.9 / 6.1	6.8 / 7.0	2.1	8.9 / 9.1	7.4 / 7.6	
22 43 +81,7	789	22 43.2	+ 81 44	8.0	—	7.1 6.0 / 7.4 6.4	6.9 / 7.3	2.0	8.9 / 9.3	7.4 / 7.8	
1 25 +80,6	50	1 25.0	+ 80 41	7.4	—	✓5.4	6.3	2.0	8.3	6.8	
0 29 +81,7	13	0 29.0	+ 81 42	6.5	—	✓5.0	5.9	2.1	8.0	6.5	
23 56 +82,2	748	23 55.4	+ 82 10	7.0	—	✓5.1	6.0	2.2	8.2	6.7	
23 51 +82,4	743	23 49.7	+ 82 23	6.0	—	✓4.7	5.6	2.2	7.8	6.3	
23 28 +72,1	1109	23 28.0	+ 72 X8	7.5	•	✓6.1	7.0	1.3	8.3	6.8	
23 33 +82,3	728	23 31.8	+ 82 24	7.5	—	✓5.9 / 6.3	6.8 / 7.2	2.2	9.0 / 9.4	7.3 / 7.7	
22 48 +82,4	703	22 47.9	+ 82 23	8.0	—	4.6 / 5.0	5.5 / 5.9	2.2	7.7 / 8.1	6.2 / 6.6	
22 53 +72,4	1079	22 53.3	+ 72 21	6.6	—	✓6.1 / 6.2	7.0 / 7.1	1.3	8.3 / 8.4	6.8 / 6.9	
22 9 +81,9	764	22 ~~9.7~~ 10.0	+ 81 37	7.7	•	✓5.6	6.5	2.1	8.6	7.1	
21 25 +81,4	736	21 24.7	+ 81 24	7.9	—	✓5.9 / 6.1	6.8 / 7.0	2.1	8.9 / 9.1	7.4 / 7.6	
0 10 +72,2	15	0 10.2	+ 72 8	7.0	—	✓6.1	7.0	1.3	8.3	6.8	
23 50 +72,4	1140	23 49.6	+ 72 24	8.0	—	6.1 / 6.4	7.0 / 7.3	1.3	8.3 / 8.6	6.8 / 7.1	
0 46 +82,3	23	0 ~~45.1~~ 46.0	+ 82 19	8.4	—	✓5.7	6.6	2.2	8.8	7.3	

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1887phae.proj..843F

September 13, 1887.

Plate 1564.

	H	Type	No. Lines	K	Focus	Other lines.	
	9.8	9.7	I	3	N	1	—
	9.0	10.1	I	3	N	2	—
	9.1	12.3	I	4	K=.8H	1	—
√	9.0	14.5	III	III? 1	2 N	K=H 1	1 — —
√	9.0	17.0	III	III 1	3 N	K=H 1	1 — F
	9.8	17.4	I	V	N	2	—
	9.1	19.4	I	7	K=H	2	—
	9.9	20.2	II	2	K=H	2	—
√	9.1	22.8	II	II? 2	2	K=H K=H 1	1 — —
	8.6	7.1	II	2	K=H	1	—
	8.4	9.9	I	V	N	1	—
	8.4	10.2	I	9	K=.2H	4	F
	8.8	10.6	I	V	N	1	—
	8.8	11.1	I	3	N	1	—
	8.6	13.3	I?	4	N	1	—
	8.4	14.9	II?	2	K=H	1	—
	8.1	15.5	I	4	N	2	—
?	8.0	16.5	III	b.c 1413 2	K=H	3	Bright seen.
	8.1	16.7	I	6	?	2	F
	8.0	17.6	I?	3	N	1	—
	8.1	19.2	III	1	N	1	—
?	8.6	19.8	II	a 1414 2	K=H	1	seen.
√	8.9	21.4	II	II? III? 1	2 N	K=H 1	1 — —
?	8.6	22.1	II	a? 1415 2	3	K=H 2	F. seen?
	7.6	6.6	I	V	N	2	—
	7.6	11.3	I	4	N	1	—
	7.5	16.1	III	1	N	1	—
	7.2	16.3	I	? 4	K=H	1	—

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1887phae.proj..843F

	No	RA	Decl	Mag		Cor. Br.	Mean g Br.			
23 56+72,4	1136	23 ~~55.0~~ 56.0	+ 72 21	7.0	•	✓ 5.9	6.8	1.3	8.1	6.6
23 54+72,9	1135-	23 54.3	+ 72 48	6.5-	•	✓ 5.4	6.3	1.3	7.6	6.1
23 33+62,9	2268	23 33.1	+ 62 55	6.7	—	✓ 5.6	6.5	0.9	7.4	5.9
23 19+63,0	1988	23 18.3	+ 63 3	7.0	—	✓ 6.2 / 6.4	7.1 / 7.3	7.3 / 7.5	8.0 / 8.2	6.5 / 6.7
22 49+82,9	704	22 48.8	+ 82 ~~55~~ 56	8.0	—	6.5 / 6.8 ~~5.9~~	6.5 / 6.8	2.3	8.8	7.3 / 7.6
~~22 45+82,5~~	~~703~~ 700	~~22 47.9 + 82 23~~ 22 46.1 + 82 30	~~5.0~~ 8.0	~~4045 4.8 37 + 20~~		✓ 5.4	6.3	2.2	8.5	7.0
23 1+62,9	2141	23 1.9	+ 62 51	6.2	—	✓ 5.4	6.3	0.9	7.2	5.7
~~22 4+82,2~~	673 ~~644~~	22 3.2 ~~3.3~~ + 82 10	7.5 ~~8.0~~	—		✓ 5.2	6.1	2.2	8.3	6.8
21 24+81,9	737	21 25.2	+ 81 ~~55~~ 54	7.5-	—	6.7 ✓ 5.9	6.8	2.1	8.9	7.4
23 56+62,9	2356	23 56.0	+ 62 50	6.5-	—	✓ 5.6	6.5	0.9	7.4	5.7
23 44+63,2	2064	23 43.9	+ 63 11	6.6	•	✓ 5.8	6.7	0.9	7.6	6.1
0 42+82,9	20	0 41.6	+ 82 55	6.5-	—	✓ 4.3	5.2	2.3	7.5	6.0
23 41+63,0	2055-	23 41.7	+ 63 0	7.8	•	✓ 6.0	6.9	0.9	7.8	6.3
0 25+82,8	14	0 24.6	+ 82 50	8.3	✗	✓ 5.2	6.1	2.3	8.4	6.9
23 33+73,3	1047	23 33.1	+ 73 10	6.6		✓ 5.5	6.4	1.3	7.7	6.2
23 22+73,3	1035-	23 ~~21.10~~ 22.0	+ 73 19	7.5-	—	✓ 5.9	6.8	1.4	8.2	6.7
23 14+83,5	647	23 12.7	+ 83 24	8.0	✗ •	✓ 5.3	6.2	2.4	8.6	7.1
22 56+83,5	640	22 55.4	+ 83 34	6.0	—	✓ 4.5 / 4.9	5.4 / 5.8	2.4	7.8 / 8.2	6.3 / 6.7
23 9+73,5	1023	23 9.3	+ 73 24	6.2	—	✓ 5.0	5.9	1.4	7.3	5.8
23 9+63,5	1955-	23 9.4	+ 63 29	7.0		✓ 6.0	6.9	0.9	7.8	6.3
23 2+63,4	1931	23 2.1	+ 63 25	6.3	—	✓ 6.1 / 6.4	7.0 / 7.3	0.9	7.9 / 8.2	6.4 / 6.7
22 3+82,8	672	22 3.2	+ 82 48	8.2	✗—	✓ 5.5	6.4	2.3	8.7	7.2
22 53+62,9	2146	22 ~~52.10~~ 53.0	+ 62 56	6.8	—	7.1 / 7.4 ✓ 6.3 / 6.6	7.2 / 7.5	0.9	8.1 / 8.4	6.6 / 6.9
22 32+72,9	1049	22 32.2	+ 72 54	5.5-	—	✓ 4.8	5.7	1.3	7.0	5.5
23 59+63,4	2107	23 ~~58.10~~ 59.0	+ 63 22	6.4	1 33 16 −1 −4 +1	✓ 6.3	6.2	0.9	7.1	5.6
23 48+73,6	1063	23 47.9	+ 73 36	7.0	4226 6.6 11 −6	✓ 5.4	6.3	1.4	7.7	6.2
23 15+63,9	1974	23 15.0	+ 63 54	7.0	—	✓ 6.2 / 6.4	7.1 / 7.3	0.9	8.0 / 8.2	6.5 / 6.7
23 14+64,0	1984	23 13.9	+ 64 2	7.3	—	✓ 6.1	7.0	0.9	7.9	6.4

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1887phae.proj..843F

September 13, 1887.

Plate 1564.

			Type	No. lines	K	Focus	Other lines.	
	7.0	16.6	III	2	K=H	1	—	
	7.2	18.2	I	√	N	2	—	
	7.2	18.3	II	1	N	1	—	
	7.5	18.7	II	2	K=H	1	—	
	7.5	20.0	I	√	K=H	1	—	
∫	√	7.3	20.6	II	II	1 2	N K=H	1 1 — —
∫	√	7.4	20.9	II	II?	2 2	K=H K=H	1 1 — —
		6.1	6.2	III	2	K=H	1	—
		6.5	10.5	I	? 6	K=H	2	—
		6.6	10.6	I	4	N	2	—
		6.8	11.6	II	2	K=H	2	—
		6.5	12.7	I	3	N	1	—
		6.0	13.5	I	6	K=.5H	2	—
		6.5	14.0	III	1	N	1	—
		6.2	14.5	III (II)	? 1	N	1	—
		6.1	14.8	I	√	N	2	—
		6.0	15.8	III	2	K=H	1	—
		6.1	16.2	I	√	N	2	—
		6.2	17.6	III	2	K=H	1	—
		6.1	18.8	I	4	N	1	—
		6.3	21.2	III	2	K=H	1	—
		6.1	22.6	II	1	N	1	—
∫	√	5.3	10.4	II	II	2 2	K=H K=H	1 1 — —
		5.0	11.4	II	?	3	N	1 —
		5.4	11.9	III	1	N	1	—
?		5.1	14.1	II	a 1416	2	K=H	1 pecc.
?		5.9	17.4	III	?	2	K=H	2 Bright? pecc.?
		5.4	17.6	I (II)	1 5		K=H	1 —

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	No	R A	Dec	Mag		Mean Cor.	Mean B	Mean r		
22 50+84.0	3-13	22 50.7 + 84 0		7.3	—	5.5	6.4	2.4	8.9	7.4
						5.8	6.7		9.2	7.7
22 22+83.8	630	22 22.3 + 83 46		7.0	•	5.3	6.2	2.4	8.6	7.1
23 6+63.9	1949	23 6.1 + 63 56		7.0	—	6.0	6.9	0.9	7.8	6.3
23 4+63.7	1941	23 4.5 + 63 45		6.8	—	6.1	7.0	0.9	7.9	6.4
21 52+83.4	618	21 52.7 + 83 22		7.2	—	5.4	6.3	2.3	8.6	7.1
21 42+83.3	614	21 42.2 + 83 18		8.4	—	6.8 5.9	6.8	2.3	9.1	7.6
21 39+83.2	613	21 38.1 + 83 12		8.6	—	6.8 5.7	6.6	2.3	8.9	7.4
1 55+82.9	51	1 55.1 + 82 52		7.0	—	5.3	6.2	2.3	8.5	7.0
						5.6	6.5		8.8	7.3
0 50+83.9	20	0 48.4 + 83 49		7.0	—	5.0	5.9	2.4	8.3	6.8
23 41+64.0	1861	23 41.7 + 64 4		6.5-	•	5.6	6.5	0.9	7.4	5.9
0 25+83.9	9	0 26.3 + 83 33		7.8	—	5.5	6.4	2.4	8.8	7.3
0 8+84.2	3	0 7.8 + 84 9		8.0	•	5.6	6.5	2.5	9.0	7.5
23 33+74.5	1032	23 33.1 + 74 28		6.5-	—	5.1	6.0	1.4	7.4	5.9
23 42+84.3	3-39	23 42.3 + 84 16		8.1	—	5.8	6.7	2.3	9.2	7.7
						6.1	7.0		9.3	8.0
23 34+84.4	3-33	23 32.8 + 84 22		8.7	—	5.9	6.8	2.5	9.3	7.8
23 23+74.4	1022	23 23.3 + 74 26		7.0	•	5.5	6.4	1.4	7.8	6.3
23 17+64.5	1499	23 17.7 + 64 32		6.8	—	6.0	6.9	0.9	7.8	6.3
						6.2	7.1		8.0	6.5
23 12+74.5	1016	23 12.3 + 74 31		6.6	•	5.4	6.3	1.4	7.7	6.2
22 30+84.3	3-09	22 29.2 + 84 19		7.2	—	5.8	6.7	2.3	9.2	7.7
						6.1	7.0		9.3	8.0
23 3+64.4	1764	23 3.4 + 64 26		6.8	•	5.8	6.7	0.9	7.6	6.1
~~23 1+64.2~~	~~1761~~	~~23 3.2 + 64 24~~		~~8.8~~						
21 25+83.6	603	21 25.0 + 83 39		7.5-	—	5.8	6.7	2.4	9.1	7.6
						6.1	7.0		9.4	7.9
21 2+83.4	3-96	21 2.8 + 83 23		7.7	—	5.5	6.4	2.3	8.7	7.2
	18	0 58.2 + 84 19		8.8						
23 56+74.6	~~103-9~~	~~23 56.8 + 74 37~~		~~8.8~~	—	6.1	7.0 7.2	1.4	8.4	6.9
0 40+84.6	15	0 40.9 + 84 40		8.2		5.8	6.7	2.6	9.3	7.8
23 45+74.7	1047	23 45.4 + 74 44		6.3	—	5.9	6.8	1.4	8.2	6.7
						6.1	7.0		8.4	6.9
23 26+64.9	1819	23 25.7 + 64 36		6.2	—	5.8	6.7	0.9	7.6	6.1
23 3+74.6	1006	23 3.3 + 74 36		4.6	—	4.7	5.6	1.4	7.0	5.5
						5.0	5.9		7.3	5.8
23 2+74.8	1002	23 1.8 + 74 48		7.3	—	5.7	6.6	1.5	8.1	6.6
22 [illegible]						5.1	6.0	2.6	8.6	6.5

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September 13, 1887.

Plate 1564.

					No. Lines	K	Focus	Other Lines.
	5,3	19,1	I		3	N	1	—
	5,2	21,2	III		1	N	1	—
?	5,8	23,8	I d?		5	N	2	F, neu.
	4,8	8,3	III	III ? 2	2	K=H	K=H 1	— —
	4,3	12,4	II		2	K=H	1	—
	4,6	13,9	III	III ? 1	2	N	K=H 1 1	— —
	4,4	14,8	I		5	K=H	2	—
	4,6	14,9	III	III ? 1	2	N	K=H 1	—
	4,1	17,3	I		9	N	4	F
?	3,9	8,0	III a?	1417	2	K=H	2	neu.
	3,2	8,2	III	?	1	N	1	—
	3,3	8,9	II		2	K=H	1	—
?	3,5	11,7	III b.c	1418	3	K=H	4	F. Bright pcku.
	3,6	12,7	III	III	1 2	N	K=H 1 1	— —
	3,2	14,0	I		7	K=,5H	2	—
	3,6	14,9	III	?	2	K=H	1	—
	3,9	15,0	I		6	K=H	2	F
	3,9	17,3	III		1	N	1	—
	3,5	21,5	I		5	N	2	—
	3,0	22,3	II		2	K=H	1	—
?	3,8	22,6	III b?	1419	3	K=H	3	F, neu.
	3,8	23,1	I I?	4		K=H	1	—
	3,2	23,3	I		4	N	2	—
	2,9	9,1	III		2	K=H	1	—
	2,1	9,5	I ?	4		K=H	1	—
?	2,9	11,3	I		6	N	2	neu.
	2,1	14,9	I		6	K=H	3	F
	2,1	18,4	I		3	N	1	—

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* This star (86 344) is beyond the limits of this plate but must be estimated for comparison with Pole Plate

Means

	No	R A	Dec	Mag					Cor. Bx.	Bx.			
23 1+64.9	1958	23 +~~1.2~~ 2.0 +	64 5-0	6.9	·				√ 5.9	6.8	0.9	7.7	6.2
22 34+74.6	978	22 34.2 +	74 37	6.5-	—				√ 5.8 6.1	6.7 7.0	1.4	8.1 8.4	6.6 6.9
20 43+83.2	5-88	20 43.2 +	83 7	6.2	·				√ 4.7	5.6	2.3	7.9	6.4
1 40+84.0	34	1 39.2 +	84 ×2	8.1	—				√ 6.0 6.3	6.9 7.2	7.1 7.3 2.5	9.4 9.7	7.9 8.2
0 26+85.2	11	0 25.4 +	85- 10	8.8	—				√ 5.8	6.7	2.7	9.4	7.9
23 50+85.1	406	23 49.1 +	85- 6	8.8	—				√ 6.0 6.2	6.9 7.1	6.9 7.1 2.7	9.6 9.8	8.1 8.3
23 30+85.4	403	23 29.1 +	85-23	7.8	—				√ 5.3	6.2	2.7	8.9	7.4
23 26+85.2	400	23 25.8 +	85-13	8.0	—				√ 5.8	6.7		9.4	7.9
22 24+85.4	383	22 24.2 +	85-23	5.0	3968	5.4	24	+~~7~~ +9	√ 4.2	6.0 5.1	2.7	9.6 7.8	8.1 6.3
23 55+65.3	~~1985~~ 1987	23 ~~55.6~~ 55.2 +	~~65-38~~ 63 17	6.9 6.3					√ 5.7	6.6	0.9	7.5	6.0
23 54+65.6	1985	23 54.6 +	63 38	6.9	—				√ 6.0 6.2	6.9 7.1	1.0	7.9 8.1	6.4 6.6
0 10+75.7	7	0 10.2 +	75- 28	7.4	—				√ 6.1	7.0	1.3	8.3	7.0
0 52+85.5	19	0 49.7 +	85- 29	5.0	—				√ 4.4 4.9	5.3 5.8	2.8	8.1 8.6	6.6 7.1
0 23+85.5	9	0 22.5- +	85- 31	8.3	—				√ 6.1 6.3	7.0 7.2	6.8 7.0 2.8	9.8 10.0	8.3 8.5
23 54+85.9	409	23 52.8 +	85- 54	8.0	—				√ 5.1	6.0	2.9	8.9	7.4
23 27+85.7	401	23 27.2 +	85- ~~48~~ 46	8.0	—				√ 5.7 5.9	6.6 6.8	2.8	9.4 9.6	7.9 8.1
23 23+85.6	399	23 24.2 +	85- 37	7.5-	—				√ 5.2	6.1	2.8	8.9	7.4
22 25+85.5	384	2~~8~~2 24.7 +	85- 29	6.5-	—				√ 5.8 6.0	6.7 6.9	2.8	9.3 9.7	8.0 8.2
22 30+75.5	836	22 29.7 +	75- 27	5.7	3996	5.7	20	+~~3~~ +5	√ 5.3	6.2	1.3	7.7	6.2
20 32+84.6	463	20 ~~30.14~~ 31.0 +	84 40	7.2	—				√ 5.8	6.7	2.6	9.3	7.8
22 44+65.4	1814	22 ~~44.4~~ 45.1 +	65- 26	3.8	—				√ 4.7 6.0	5.6 5.9	1.0	6.6 6.9	5.1 5.4
20 30+84.1	462	20 ~~29.10~~ 30.0 +	84 5-	7.0	—				√ 5.7	6.6	2.5	9.1	7.6
20 20+84.3	45-1	20 20.0 +	84 14	7.0	·				√ 5.4	6.3	2.5	8.8	7.3
1 52+85.0	41	1 50.8 +	85- 2	7.7	—				√ 5.8 6.0	6.7 6.9	2.7	9.4 9.6	7.9 8.1
0 8+76.2	5-	0 8.1 +	76 9	6.5-	—				√				
23 40+65.9	1943	23 39.4 +	63 5-8	6.3	4199	6.0	14	-~~2~~ -1	√ 5.5	6.4	1.0	7.4	5.9
23 29+86.5	344	23 27.8 +	86 30	6.0	—				* √ 4.7	5.6			
23 4+66.4	1584	23 4.2 +	66 28	6.7	·				√				

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September 13, 1887.

Plate 1564.

λ	H	Type	No. lines	K	Focus	Other lines.
	2,0 19.7	III	2	K=H	1	—
1 00?	2,5 22.9	III	2	K=H	1	seen.

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No	R A	Dec	Mag		Bx.
2258+664	15-45-	22 58.1 +	66 27	3.5-	— ✓
2216+755	820	22 16.6 +	75- 46	6.8	— ✓

~~237~~ 200 / 13 / 14 .

22 − 17 / 13

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1887phae.proj..843F

Pole Plate. — Stars on this plate have been entered in catalogues A. and B. of E. F. and G. Stars.

Dark plate. Very hard to measure.

January 27 – 1888.

Plate 2242

1 35			H	Type	No. Remarks	No. Lines	K	Found	Other Lines	
		22.5	16.8	I				N	2	—
		21.9	7.2	I			K=H		2	Fp
		21.4	8.1	I		3		N	1	—
		21.4	9.2	I?		3		N	1	—
		21.2	10.9	III		2	K=H		1	—
		21.6	17.0	I		4		N	1	—
		20.0	6.3	III?	III?	2		N K=H	1 1	— —
		20.0	6.5	III	III	1	&	N K=H	1 1	— —
		20.8	12.6	I?	I?	4	5	K=H N	1 1	— —
III 5.5, 6.0		20.0	13.5	III	1600	2	K=H		3	F, lem.
		20.9	14.5	III	III	3	3 K=H	K=H	2 2	F F
		20.5	19.0	I		10	K=H		3	F
		19.5	14.0	III	III	2	2 K=H	K=H	1 1	— —
		19.7	14.2	I?	I?	2	3	N N	1 1	— —
		19.0	20.0	II?	II	2	2 K=H	K=H	1	— —
		19.4	22.9	I?		3		N	1	—
		18.0	8.5	I	I	5	H K=H	K=H	1	—
		18.2	13.4	I?	I?	2	3	N N	1 1	— —
		18.0	16.6	I	I	4	H K=H	K=H	1	— —
		18.0	21.2	I	I?	4	4 N	K=H	1	— F?
		17.6	17.1	III		2	K=H		1	—
		17.0	7.1	I		3		N	1	—
		17.1	8.6	II	1600a IIa²	2	K=H	K=H	1 1	— Lem
		17.5	10.0	III	III	2	2 K=H	K=H	1	— —
		17.8	10.7	I	I?	4	4 K=H	K=H	1	— —
		17.0	21.6	I?	I	4	9 K=H	N	1 1	— —
		17.0	23.0	III	1601	2	K=2.54		4	F, lem.
		16.3	7.3	I		4		N	1	—

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Mean -.2 -.10

No.	R.A.	Dec.	Mag.	cor. Br	cor. Br	meas. before and after broken	Br	Red to 1900
74	4 41.0	+ 83 45	6.0	.863	6.4			h m ° ′ 4 56.3 +85 50
196	8 44.3	+ 84 45	6.0	7.0	6.2		5.8	8 54.5 +84 35
132	8 36.2	+ 85 15	8.2	7.9	7.1		6.7	8 48.2 +85 6
128	8 12.7	+ 85 33	7.5	7.6	6.8		6.4	8 25.4 +85 25
~~109~~	~~8 14.6~~	~~+ 85 48~~	~~8.2~~					~~8 27.6 +85 33~~
113	7 37.2	+ 86 6	7.2	7.8 7.9	7.0 7.1		6.6 6.7	7 52.5 +86 0
66	4 30.2	+ 86 4	8.0	7.5	6.7		6.3	4 46.3 +86 10
151	9 28.4	+ 85 3	8.3	7.9 8.2	7.1 7.4		6.7 7.0	7.0 7.3 9 37.5 +84 51
150	9 23.4	+ 85 9	8.0	7.9 8.2	7.1 7.4		6.7 7.0	7.0 7.3 9 34.7 +84 57
103	6 32.9	+ 86 39	8.2	7.6	6.8		6.4	6.6 7 11.6 +86 36
31	1 31.7	+ 87 15	3.0	6.8 7.3	6.0 6.5		5.6 6.1	6 53.9 +87 12
79	3 48.0	+ 86 46	7.0	7.4 7.7	6.6 6.9		6.2 6.5	6.3 6.6 6 8.2 +86 46
51	3 19.3	+ 86 11	6.0	6.6	5.8		5.4	3 33.5 +86 16
46	6 10.0	+ 87 33	8.3	8.0 8.3	7.2 7.5		6.8 7.1	7.2 7.4 6 35.6 +87 32
45	6 0.1	+ 87 24	8.9	8.1	7.3		6.9	7.1 6 24.4 +87 24
39	2 20.2	+ 86 25	8.6	7.6	6.8		6.4	6.7 2 32.2 +86 37
41	1 30.8	+ 85 2	7.7	7.7	6.9		6.5	1 58.8 +85 16
143	9 47.4	+ 86 32	8.6	7.7	6.9		6.8 6.5	9 58.2 +86 19
39	8 47.0	+ 88 1	8.3	8.0	7.2		6.8	7.0 7 16.8 +87 58
33	3 38.7	+ 87 54	8.3	7.9	7.1		6.7	6.9 4 4.9 +88 2
25	1 31.6	+ 86 13	8.8	7.7	6.9		6.5	6.8 1 40.2 +86 26
160	10 11.3	+ 85 38	8.3	7.9 8.2	7.1 7.4		6.7 7.0	10 19.9 +85 45
154	10 33.4	+ 86 8	8.2	7.8	7.0		6.6	10 40.7 +85 54
152	10 8.3	+ 86 48	8.4	7.8	7.0		6.6 6.8	34 10 18.6 +86 8
83	9 29.9	+ 87 16	7.7	7.9 8.1	7.1 7.3		6.7 6.9	7.1 7.2 9 44.0 +87 4
78	9 0.8	+ 87 29	8.0	7.7	6.9		6.5	6.7 9 18.0 +87 18
21	1 4.1	+ 86 10	8.8	8.1	7.3		6.9	6.9 1 10.8 +86 25
19	0 49.7	+ 85 29	5.0	6.2 6.6	5.4 5.8		5.0 5.4	0 54.9 +85 43
139	10 50.4	+ 86 20	8.3	7.7	6.9		6.5	10 57.0 +86 5

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January 27, 1888.

Plate 2242

T	H	Type	No. Remark	No. Lines	K	Focus	Other Lines
16.1	7.5	I	.	6	K=H	2	F?
16.4	13.8	I	.	6	K=.5H	2	—
16.4	17.0	I	.I	3 2	N N	1 1	— —
16.0	17.0	I?	.I	2 3	N N	1 1	— —
16.5	17.7	III	.III	2 2	K=H K=H	1 1	— —
16.5	18.3	I	.I	5 5	K=H K=H	1 1	— —
16.0	18.5	III	.III	2 2	K=H K=H	1 1	— F?
16.5	21.3	III	.	3	K=H	2	F
16.0	21.9	IIa	1602 IIa	2 2	K=H K=H	1 1	seen
16.0	23.8	I	.	3	N	1	—
15.0	7.1	I	.	3	N	1	—
15.3	7.3	IIa	1603	2	K=H	2	F, pum
15.3	11.4	I	.	5	N	2	—
15.7	12.0	III?	.III	2 2	K=H K=H	1 1	— —
15.6	17.1	III?	1604	3	K=1.5H	5	F, pum.
15.4	17.7	I	.	7	K=.2H	3	F?
14.3	7.2	IIa	1605	2	K=1.5H	3	F, pum
14.0	8.9	IIa	1606	3	K=H	3	F, pum.
14.4	10.1	I	.I	4 5	N N	1 1	— —
14.2	11.5	I	.	8	K=H	3	F
14.3	19.2	I	.I	4 4	K=H K=H	1 1	— —
14.0	21.2	I	.	9	K=.8H	3	F
14.7	21.8	I	.	3	N	1	—
14.6	22.5	I	.	5	?	2	—
13.2	7.6	I?	.	5	K=H	2	F
13.7	16.7	I	I.?	3 4	N K=H	1 1	— —
13.7	22.2	I	.	2	K=H	2	—
13.5	23.0	I	1607	2	K=H	2	F

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Mean Z - 1.0

	No	R.A.	Dec.	Mag.	corr. Bv	corr. Bv		corr. Bv	Red. to 1900
10 56 +86.5	161	10 56.2	+88 26	7.2	7.1	6.3	6.4	5.9	11 25 +86 11
7 2 +89.0	13	7 3.7	+89 2	7.0	6.9	6.1	5.9	5.7	7 58.6 +88 58 (59.2)
2 17 +88.4	13	2 17.1	+88 22	8.3	7.9	7.1	6.9	6.7 (6.8)	2 42.2 +88 35
1 51 +88.5	9	1 51.1	+88 29	8.0	7.6	6.8	6.6	6.4 (6.6)	27.0 +88 42 (14.2)
1 59 +88.1	11	1 58.9	+88 3	8.8	7.9 / 8.1	7.1 / 7.3	6.9 / 7.1	6.7 (6.8) / 6.9 (7.0)	21 16.6 +88 16 (7)
1 35 +87.7	15	1 35.6	+87 47	8.2	7.6	6.8	6.6	6.4 (6.6)	14 9.6 +88 0
1 8 +87.8	12	1 7.1	+87 48	8.0	7.9 / 8.2	7.1 / 7.4	6.9 / 7.2	6.7 (6.8) / 7.0 (7.1)	1 17.9 +88 1 (18.0)
0 53 +86.4	17	0 52.8	+86 22	7.3	7.0 / 7.3	6.2 / 6.5	6.0 / 6.3	5.8 / 6.1	0 58.6 +86 37
0 32 +86.2	9	0 32.3	+86 9	8.6	7.8	7.0	6.8	6.6 (6.8)	0 37.2 +86 24
0 28 +85.2	11	0 25.4	+85 10	8.8	7.7	6.9	6.7	6.5	0 29.1 +85 25
11 36 +86.3	172	11 36.4	+86 20	8.2	8.0	7.2	7.0	6.8	11 40.2 +86 5
11 26 +86.4	170	11 23.8	+86 25	7.0	7.2	6.4	6.2	6.0	11 28.3 +86 10
10 55 +85.5	64	10 53.0 (53.9)	+88 26	7.3	7.0	6.2	6.0	5.8	11 4.2 +88 18
10 0 +86.6	60	9 59.6	+88 36	8.5	8.0 / 8.2	7.2 / 7.4	7.0 / 7.2	6.8 (6.8) / 7.0 (7.2)	10 19.4 +88 23
1 5 +86.5	8	1 6.5	+88 32	2.0	B	B	B	B	12 2.0 +88 46
0 47 +88.3	4	0 45.5	+88 15	7.3	6.7	5.9	5.7	5.5	0 55.2 +88 32
11 56 +86.4	176	11 57.4	+86 24	3.7	6.8	6.0	5.8	5.6	11 59.8 +86 8
12 17 +87.2	107	12 12.6	+87 14	6.3	6.8	6.0	5.8	5.6	12 13.7 +87 0
11 50 +87.5	101	11 51.6	+87 48	8.0	7.4	6.6	6.4	6.2 (6.3)	11 53.5 (54.6) +87 33
12 18 +88.5	71	12 14.4	+88 30	6.5	6.7	5.9	5.7	5.5	12 15.0 (14.6) +88 15
23 43 +87.5	217	23 42.4	+87 32	8.5	8.0	7.2	7.0	6.8 (7.0)	23 42.8 +87 47
23 29 +86.5	344	23 27.8	+86 30	6.0	6.3	5.5	5.3	5.1	23 27.7 +86 45
23 55 +86.3	347	23 55.3	+86 14	8.6	7.6	6.8	6.6	6.4	23 57.3 +86 29
23 55 +85.9	409	23 52.8	+85 54	8.0	6.8	6.0	5.8	5.6	23 54.7 +86 9
12 35 +86.5	182	12 34.7	+86 32	6.3	7.2	6.4	6.2	6.0	12 34.6 +86 17
22 35 +88.7	131	22 30.6	+88 44	8.7	8.0	7.2	7.0	6.8	22 (12.3) 16.8 +88 58
23 28 +85.7	401	23 27.2	+85 46	8.0	7.3	6.5	6.3	6.1	23 27.5 +86 0
23 24 +85.6	399	23 24.2	+85 37	7.5	6.9	6.1	5.9	5.7	23 24.4 +85 52
	400	23 23.8	+85 13	8.0					23 23.8 +86 27

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January 27, 1888

Plate 2242.

V	H	Type	No.	Remarks	No. Lines	K	Focus	Other Lines.
	12,5	8,1	I		3	N	1	—
5/1	12,2	9,6	II		2	2 K=H	K=H 1	— —
	13,0	11,4	III?		2	2 K	=H K=H 1	— —
	12,0	11,5	I		4	4 N	K=H 1	— —
III? 6.3, 6.6.	12,9	15,6	III		3	3 K	=H K=H 2	2 F, F
	12,5	16,1	~~II~~ IIa?	1609a	2	2 K	=H K=H 1	2 dem ~~dem~~
	12,8	19,3	I		5	N	2	F
	12,0	19,5	III		2	2 K	=H K=H 1	— —
	12,5	21,0	I		4	4 N	K=H 1	— —
	11,8	6,2	II?		2	3 K	=H K=H 1	— F
	11,0	7,3	III		2	K	=H 1	—
III? 6.5, 6.8	11,0	11,9	III		2	3 K	=H K=H 1	— F
	11,0	15,0	I?		I? 4	~~5~~ K	=H K=H 1	— F
	11,0	19,3	~~I~~		~~III~~ I? ~~I~~ H	H K	=H K=H 1	— —
	11,0	20,7	I		4	H N	K=H 1	— —
	11,4	22,7	III		2	K	=H 1	—
	11,3	22,9	I		8	N	4	—
	10,6	8,6	IIa	1608	2	K	=H 2	dem.
	10,4	11,9	I?		I 2	3 N	N 1	— —
	10,3	16,5	I		I 4	H N	N 1	— —
	10,4	20,1	I		6	N	2	—
	9,5	9,7	III		2	K	=H 1	—
	9,5	17,1	I		I 4	3 K	=H N 1	— —
	9,3	16,8	I?		I 4	H K	=H K=H 1	— —
	8,5	9,5	II		2	K	=H 1	—
	8,0	12,6	I		I 4	H N	K=H 1	— —
	8,6	14,4	IIa	1609a	IIa 2	2 K	=H K=H 1	dem
	8,0	15,2	I		11	K	=H 4	F

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Mean 2 – 10

	No.	R.A.	Dec.	Mag.		Con. Bv	Con. Bv		Con. Bv	Red. to 1900
										h m. ° ′
13 2+86.6	187	13 1.8	+86 39	7.0		7.6	6.8	6.6	6.4	12 59.7 +86 25
13 30+87.3	122	13 30.5	+87 19	8.8	—	7.8	7.0	6.8 6.8	6.6	13 35.1 +87 5
13 34+88.3	77	13 36.7	+88 18	8.3	—	7.9 8.1	7.1 7.3	7.0 7.2	6.7 6.9	13 26.8 +88 4
14 30+88.1	86	14 32.6	+88 4	8.3		8.1	7.3	7.0	6.9	14 18.1 +87 52
20 18+88.8	113	20 8.5	+88 52	6.5	—	7.5 8.0	6.7 7.2	6.5 6.6	6.3 6.8	23.6 88 59
	~~114~~	~~20 17.2~~	~~+88 34~~	~~8.0~~						19 22.2 +89 1
	114	20 17.2	+88 34	8.0	—					
20 20+88.6	~~115~~	~~20 24.2~~	~~+88 26~~	~~8.8~~		8 7.9	7.0 7.3	6.9	6.6 6.7	19 43.3 +88 42
22 32+87.4	205	22 30.8	+87 21	7.3		7.1	6.3	6.1	5.9 6.2	22 24.4 +87 35
22 8+87.1	201	22 7.0	+87 6	8.2	—	7.8 8.1	7.0 7.3	6.8 6.9	6.6 6.9	21 59.2 +87 19
22 45+86.5	335	22 45.6	+86 32	8.0		7.6	6.8	6.6 6.6	6.4	22 42.3 +86 46
13 21+85.5	229	13 20.7	+85 31	7.0	—	7.4	6.6	6.4 6.5	6.2	22.6 13 18.8 +85 17
13 35+86.0	193	13 35.7	+86 1	7.3	—	7.6 7.9	6.8 7.1	6.6 6.9	6.4 6.7	13 32.4 +85 47
15 25+87.8	143	15 26.0	+87 47	7.0	—	7.5 7.9	6.7 7.1	6.5 6.9 6.6 7.0	6.3 6.7	4 15 9.6 +87 37
18 27+88.3	104	18 24.3	+88 14	8.0	—	7.8	7.0	6.8 6.8	6.6	17 53.7 +88 16
21 27+86.9	318	21 26.4	+86 37	8.0	—	7.9	~~7.2~~	7.0	6.8	21 16.3 +87 8
21 55+86.4	324	21 52.8	+86 20	8.2		7.9	7.1	6.9 6.9	6.7	21 46.4 +86 33
22 26+85.5	384	22 24.7	+85 29	6.3	—	7.6 8.0	6.8 7.2	6.6 7.0	6.4 6.8	22 21.7 +85 43
22 25+85.4	383	22 24.2	+85 23	5.0	3968	5.4 5.9	5.1	4.9	4.7	22 21.3 +85 36
14 5+86.4	201	14 5.1	+86 27	7.3	—	7.3	6.5	6.3	6.1	13 59.4 +86 14
15 42+87.5	147	15 43.2	+87 32	7.9		7.9	7.1	6.9 6.8	6.7	15 27.3 +87 23
19 36+87.6	181	19 36.1	+87 36	8.0		7.8	7.0	6.8 6.8	6.6	19 15.7 +87 42
21 27+86.4	319	21 27.7	+86 26	7.0	3789	7.4 7.4	6.6	6.4	6.2	21 19.6 +86 37
14 58+86.5	217	14 58.5	+86 33	6.8	—	7.5 7.7	6.7 6.9	6.5	6.3	14 49.6 +86 22
18 27+87.4	169	18 24.2	+87 24	8.1	—	7.7	6.9	6.7 6.8	6.5	18 43 +87 26
19 30+87.1	180	19 30.8	+87 4	8.0	—	7.7	6.9	6.7 6.8	6.5	19 14.5 +87 10
15 20+86.1	221	15 14.6	+86 4	8.1	—	7.6	6.8	6.6	6.4	15 6.4 +85 54
16 48+86.6	244	16 47.8	+86 31	8.7		7.8	7.0	6.8 6.8	6.6	16 34.8 +86 26
17 50+86.9	264	17 49.1	+86 38	8.3	—	7.6	6.8	6.6 6.7	6.4	17 32.6 +86 58
18 20+86.6	269	18 19.1	+86 36	4.3	3077	4.3	3.2	4.4	4.0	18 4.5 +86 37

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January 27, 1888.

Plate 2242.

V	H	Type	No.	Remarks	Lines	K	Focus	Other Lines.
8.8	15.2	I			7	K=½H	3	F
8.0	16.5	III	III		2 2	K=H	K=H 1	— —
7.9	9.1	III			2	K=H	1	—
7.0	10.7	I			7	K=.8H	2	F
7.9	15.9	III	III?		1 2	N	K=H 1	— —
7.2	18.4	III	III		2 3	K=H	K=H 1	— F
7.2	19.6	I	I?		4 4	K=H	K=H 1	— —
6.3	7.3	III			2	K=H	1	—
6.5	9.8	III			2	K=H	2	1
6.1	15.4	I			6	K=H	2	—
6.5	21.2	II	1610		2	K=H	2	F, perm.
6.5	23.0	I	I?		3 4	N	K=H 1	— —
5.2	8.2	I?			4	K=H	1	—
5.5	10.1	I			3	N	1	—
5.2	20.4	I			4	K=H	1	—
5.6	21.4	I	I		7 6	N	K	3 2 — —
5.6	22.0	I			5	N	2	—
4.8	11.3	I			4	K=H	1	—
4.6	13.2	I			6	?	2	—
4.1	13.9	III			2	K=H	1	—
4.2	14.6	I?	I?		2 3	N	N	1 1 — —
4.1	15.5	I	I		5 5	N	N	1 1 — —
4.0	16.4	II	1611		3	K=H	2	F, perm.
4.1	17.4	I	I		4 4	K=H	K=H	1 — —
4.6	23.8	I			7	N	3	F
3.9	9.3	I			7	K=H	2	F
3.2	9.6	III			2	K=H	1	—
3.2	10.9	I			6	?	2	—

III? 6.6, 6.9.

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Means -1,0

	No.	R.A.	Dec.	Mag.	H.P. No.	Magn.	Cor.	Br.	Cor.	Red. to 1900
18 25+86.9	272	18 24.4	+86 59	6.0	309	5.9	6.6 6.8	5.6	5.4	187.6+87 0
19 2+86.5	282	19 1.6	+86 31	7.0	—		7.0 8.1	6.6 7.9	6.4 6.9	1847.7+86 35
15 18+85.6	249	15 16.6	+85 41	8.0	—		7.7 7.9	6.7	6.6 6.7	159.2+85 31
16 6+85.7	269	16 6.6	+85 43	7.3	—		7.0	6.0	5.8	1557.4+85 36
18 38+86.5	273	18 40.2	+86 30	8.2	—		8.0 8.2	6.9 7.5	6.8 7.0	1826.2+86 32
19 42+85.8	329	19 44.8	+85 47	8.4	—		8.1 8.4	7.0 7.2	6.9 7.2	1933.8+85 53
20 12+85.5	337	20 11.7	+85 28	8.3	—		8.0	7.0	6.8	2030+85 36
15 8+84.5	335	15 6.8	+84 31	7.3	—		7.6 8.1	6.6	6.4 6.9	1516+84 20
15 50+85.3	263	15 50.2	+85 18	7.2	—		7.4 7.8	6.4 6.8	6.2 6.6	1542.5+85 10
18 19+85.7	294	18 18.1	+85 40	7.3	—		7.4	6.4	6.2	1872+85 41
20 31+84.6	463	20 31.0	+84 40	7.2	—		7.2	6.2	6.0	2024.8+84 49
20 58+84.1	474	20 58.2	+84 4	8.4			7.9	6.9	6.7	2053.4+84 15
15 36+84.4	345	15 35.1	+84 22	8.3	—		7.4	6.4	6.2	1529.4+84 13
	352	16 7.8	+84 60	8.4						
16 8+84.9	~~351~~	~~16 7.0~~	~~+84 21~~	~~7.7~~			7.8	6.8	6.6	1602+84 52
20 0+84.4	443	20 0.3	+84 24	8.3	—		7.6	6.6	6.4	1953.8+84 32
20 20+84.3	451	20 20.0	+84 14	7.0			7.0	6.0 8.8	5.8	14.0 2013.8+84 23
20 30+84.1	462	20 30.0	+84 5	7.0			7.3	6.3	6.1	2024.4+84 14
16 38+84.9	360	16 38.2	+84 32	8.3	—		7.9	6.9 7.8	6.7	1630.2+84 47
17 22+84.9	378	17 21.1	+84 37	8.2	—		7.5	6.5	6.3	1712.3+84 54
17 38+84.7	383	17 37.0	+84 44	7.7	—		7.6 7.8	6.6 6.8	6.4 6.6	1728.6+84 42
17 53+84.8	389	17 53.2	+84 49	8.7			8.0	7.0 7.1	6.8	17444+84 49
18 17+84.6	4~~0~~6	18 14.8 ~~15.7~~	+84 ~~39~~ 42	~~8.3~~ 9.0			7.6	6.6 6.7	6.4	64 3 1847.3+84 48
18 32+84.6	412	18 32.8	+84 35	7.3	—		7.4	6.4	6.2	1846+84 37
18 56+84.5	423	18 55.2	+84 29	8.6	—		7.9	6.9 7.0	6.7	1847.4+84 32
20 43+83.2	588	20 43.2	+83 7	6.2			6.8	6.0	5.8	23 2039.1+83 16
16 7+84.1	351	16 7.0	+84 2	7.7	—		7.3	6.3	6.1	1610+83 55
16 19+83.8	468	16 18.1	+83 47	8.2	—		7.6 7.8	6.6	6.4 6.6	1612.2+83 40
16 40+84.0	361	16 40.2	+84 1	7.2	—		7.1	6.1	5.9	1633.6+83 55

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January 27, 1888.

Plate 2242

T	H	Type	No. Remarks	No. Lines	K	Focus	Other Lines.
2.9	8.3	I		4	K=H	2	—
2.4	13.8	II		3	N	1	—
2.5	15.7	III		2	K=H	1	—
2.5	20.4	I		6	N	3	7 N

Standard Light. Amt. of fogging due to Moon & Clouds. Amt. of fogging due to Clouds

One fog. of H.K. width of (5.3, 5.8) 5.5 7.5

on plate.

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Mean Δ = −.16

	No.	R.A.	Dec.	Mag.						Red. to 1900
15 59+83.4	453	15	58.8	+83	23	7.3	—	7.3	6.5	15 53.8+83 15
17 38+83.8	~~383~~ 511	~~17~~ 17	~~38.6~~ 38.6	~~+83~~	~~49~~	~~8.3~~				
	~~383~~	~~17~~	~~37.0~~	~~+84~~	~~44~~	~~7.7~~				17 31.7+83 47
18 16+83.9	527	18	15.8	+83	54	7.7	—			18 8.7+83 54
19 33+83.2	552	19	33.4	+83	10	6.0	3378	6.3*		19 27.9+83 16

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1887phil.proj..243F

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1887phat..proj..843F



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