1887phae.proj..0327

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836

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No. 12.

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January 17, 1887.

Plate 92d.

	V	H	Type	No. Lines / Remarks	K	Focus	Other Lines.
2.5	23.0	10.9	I	8	K=.5H	1	—
	23.0	12.8	I	9	N	2	Flne.
?	23.0	17.1	III	bc. 398 2	K=2.0 H ~~K=1.5 H~~	4	Flne? Flne. Bright
?	23.0	18.5	I.	~	N	1	~~Flne.~~
	22.7	6.2	I	6	K=.5H	1	—
?	22.7	18.2	~~I~~ II	b 399 9	K=.2 H	2	~~Flne.~~
?	22.4	21.0	I	b 400 5	N	1	Flne
	22.3	20.9	I	5	N	1	—
	22.3	17.6	I	7	N	2	—
	22.0	7.0	I?	(3)?	N	1	—
	21.9	5.7	II	a 401 2	K=H	1	Flne
	21.8	16.9	I	4	K=H	1	—
	21.8	18.6	I	...	K=.2H	2	—
	21.5	20.2	I	6	N	1	—
	21.3	13.6	I	6	K=H	1	—
	20.7	17.5	I	J J J	K=H	11	— —
	20.7	9.2	~~II~~ ?	2	K=H	1	—
?	20.5	11.5	II	a 402 2	K=H	1	Flne
?	20.4	14.7	II	a 403 3	K=1.5H	4	Flne Flne.
	20.1	10.2	II	a 404 2	K=H	1	Flne
	20.2	11.3	I	7	K=H	1	—
	20.1	10.6	II	2	K=H	1	—
	20.1	7.1	II	2	K=H	1	—
	20.0	20.0	I	5	N	1	—
	20.0	21.0	I II a	? 405 2	K=H	1	—
	19.9	6.6	I d	9	K=H	2	Flne.
	19.9	9.2	I	8	N	1	—
	20.0	14.6	I	7	K=.8H	2	—

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Mean 7

	No.	R.A.	Dec.	Mag.	Eff.							
1 10+75.5	59	1	10.3	+75 28	6.2	–	2	3	6.4	1.5	7.9	6.8 6.7 ✓
0 49+65.6	115	0	49.4	+65 33	6.0	~~151 6.0 12 ++~~		2	6.2	1.0	7.2	6.5 6.0 ✓
0 32+55.7	139	0	32.3	+55 45	var.	–		1	5.6	.6	6.2	5.4 5.0 4.8 4.9 5.1 ✓
0 11+75.6	7	0	10.2	+75 28	7.4	.		3	6.6	1.6	8.2	7.1 7.0 ✓
1 21+65.4	175	1	20.8	+65 21	6.0			2	6.6	.9	7.5	6.4 6.2 ✓
	67	0	23.2	+65 43	6.5							
0 12+75.7	10	0	11.9	+75 46	7.8	–		2	~~6.4~~	~~1.5~~	~~7.9~~	~~6.8 6.7~~ ✓
23 50+75.5	961	23	50.3	+75 30	7.8	.		3	6.6	1.5	8.1	7.0 6.9 ✓
0 18+55.8	74	0	18.8	+55 50	6.5	.		1	6.7	.6	7.3	6.2 6.1 6.0 ✓
0 26+65.9	70	0	26.0	+65 57	6.5	.		2	6.5	1.0	7.5	6.4 6.3 5.8 ✓
1 42+75.5	76	1	42.2	+75 30	6.8			3	7.1	1.5	8.6	7.5 7.4 6.4 ✓
1 51+75.4	86	1	51.8	+75 25	5.0	–		3	6.4	1.6	8.0	6.9 6.8 5.7 ✓
0 22+76.3	10	0	21.7	+76 13	6.5			3	6.6	1.6	8.2	7.1 7.0 5.9 ✓
0 8+76.2	5	0	8.1	+76 9	6.5	–		3	5.9	1.6	7.5	6.4 6.3 5.2 ✓
0 13+66.3	20	0	13.4	+66 12	7.0	.		2	6.9	1.0	7.9	6.8 6.7 6.2 ✓
0 44+56.4	143	0	44.6	+56 26	7.4			1	7.1	.6	7.7	6.6 6.5 6.4 ✓
0 30+56.7	101	0	30.4	+56 43	7.6	.		1	6.9	7.1	7	7.6 6.5 6.4 6.2 ✓
1 1+56.6	207	1	0.8	+56 35	6.7	–		1	7.2	.6	7.8	6.7 6.6 6.5 ✓
1 8+76.4	40	1	8.4	+76 48	6.4	–		3	6.8	1.6	8.4	7.3 7.2 6.1 ✓
0 48+57.0	150	0	48.4	+57 2	3.8	–		1	5.2	.7	5.9	4.8 4.7 4.5 ✓
0 57+56.9	191	0	57.3	+56 59	7.0	–		1	7.0	.7	7.7	6.6 6.5 6.3 ✓
0 53 57.0	180	0	53.2	+57 2	6.8	.		1	7.0	.7	7.7	6.6 6.5 6.3 ✓
1 1+67.0	98	1	1.1	+67 0	6.8	–		2	6.8	1.0	7.8	6.7 6.6 6.1 ✓
1 9+57.1	237	1	9.2	+57 2	7.0	–		1	6.9	.7	7.6	6.5 6.4 6.2 ✓
0 14+67.0	27	0	13.7	+67 1	6.5	.		2	7.1	1.0	8.1	7.0 6.9 6.4 ✓
23 45+76.8	434	23	45.0	+76 48	6.9	–		3	6.4	1.6	8.0	6.9 6.8 5.7 ✓
1 50+76.6	63	1	50.8	+76 35	5.3	–		3	5.7	1.6	7.3	6.2 6.1 5.0 ✓
1 8+67.0	108	1	8.5	+67 3	6.8	.		2	6.5	1.0	7.5	6.4 6.3 5.8 ✓
0 40+77.2	27	0	40.5	+77 10	6.7	–		3	6.5	1.6	8.1	7.0 6.9 5.8 ✓

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January 17, 1887.

Plate 92a

	T	H	Type	No. Lines	K	Focus	No.	Other Lines. Remarks.
	19.7	17.8	I	I? 8	N	1	1	— —
?	19.8	22.2	III b.c.	406 3	K=1.5 H	4		7 line? Bright?
	19.3	9.4	I	8	N?	2		—
	19.2	9.6	I	9	N	2		—
	19.5	5.7	II	2	K=H	1		—
?	19.1	7.9	III b	407 2	K=1.5 H	2		Rem
	19.1	11.7	I	8	K=.5 H	1		—
	19.0	14.9	III	2	K=H	1		—
	19.2	10.1	I a	408 2	K=H	1		—
					K=.2 H			
?	19.1	22.9	I	6	N	1		Rem
?	18.9	23.0	I	6	N	1		Rem.
	18.9	5.7	II a	409 2	K=H	1		Rem
?	19.0	6.5	II a	410 3	K=H	2		Rem.
?	18.7	7.2	III b	411 2	K=H	1		Rem
					K=H			
	18.8	20.3	I ?	6		1		—
	18.5	16.4	I	9	N	2		Rem.
	18.4	13.4	I	8	K=H	2		7 line.
	18.3	11.5	I	10	K=.2 H	2		—
	18.3	10.8	I	10	N	3		Rem.
					K=.5 H			
	18.2	14.1	I	7	~~K=H~~	1		—
?	18.0	13.2	III b	412 2	K=H	2		Rem
?	17.7	12.8	III b.c. II a	413 6	K=H	3		Rem
	17.5	22.7	I	I 6 5	N	1	1	Bright? Rem? —
?	17.3	15.2	II a	414 4	K=H	2		Rem
	17.2	12.6	I	8	N	2		—
	17.2	6.6	II a	415 2	K=H	1		—
	16.9	7.9	I	3	N	1		—
	17.0	10.5	I	3	N	1		—

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Mean 7

	No.	R.A.	Dec.	Mag.		Exp		Bro.					
0 29+57.3	113	0 29.2	+ 57 13	7.0	.	1		7.0	7.8	7.7	7.7	6.6 6.5	6.3 ✓
23 33+62.9	928	23 33.7	+ 76 50	3.5	_	3		4.8 5.0	1.6	6.6	6.4 5.2 5.4	5.3 5.5	4.1 4.3 ✓
1 27+77.3	58	1 27.6	+ 77 14	6.5		3		6.1	1.6	7.7	6.6 6.5		5.4 ✓
0 59+57.5	200	0 59.7	+ 57 29	6.5		177	5.7 12+1 42 1	6.2	.7	6.9	5.8 5.7		5.5 ✓
1 26+66.9	134	1 26.6	+ 66 52	7.3	_	2		6.9	1.0	7.9	6.8 6.7		6.2 ✓
1 16+67.4	123	1 15.8	+ 67 22	5.2	_	2		6.2 6.5	1.0	7.2 7.5	6.0 6.3	6.1 6.4	5.5 5.8 ✓
0 51+57.6	179	0 51.9	+ 57 35	7.0	_	1		7.0	7	7.7	6.6 6.5		6.3 ✓
0 38+77.6	25	0 38.4	+ 77 41	7.0	_	3		6.9 7.2	1.7	8.6 8.9	7.4 7.7	7.5 7.8	6.2 6.5 ✓
0 24+57.5	48	0 24.3	+ 57 32	7.1	_	1		7.1	7	7.8	6.7 6.6		6.4 ✓
23 26+77.0	909	23 26.2	+ 77 0	6.8	.	3		6.4	1.6	8.0	6.9 6.8		5.7 ✓
23 25+77.1	908	23 25.2	+ 77 5	7.0	.	3		6.5	1.6	8.1	7.0 6.9		5.8 ✓
1 14+57.4	274	1 14.2	+ 57 23	7.0	_	1		6.9	.7	7.6	6.5 6.4		6.2 ✓
1 11+59.4	260	1 11.0	+ 59 28	6.1	_	1		6.4	.7	7.1	6.0 5.9		5.7 ✓
1 49+77.3	73	1 48.5	+ 77 12	6.3	_	3		6.6 6.9	1.6	8.2 8.5	7.0 7.3	7.1 7.4	5.9 6.2 ✓
0 19+57.7	85	0 19.8	+ 57 45	7.3		1		7.2	.7	7.9	6.8 6.7		6.5 ✓
0 34+57.9	132	0 34.2	+ 57 58	6.5	.	1		6.3	.7	7.0	5.9 5.8		5.6 ✓
0 47+67.9	81	0 47.6	+ 67 60	6.7	_	2		6.5	1.1	7.6	6.5 6.4		5.8 ✓
1 11+77.9	49 7	1 11.2	+ 77 58	6.0	_	3		5.8	1.7	7.5	6.4 6.3		5.1 ✓
1 1+68.0	76	1 0.9	+ 68 0	6.0	.	2		5.5	1.1	6.6	5.5 5.4		4.8 ✓
0 44+68.1	57	0 43.6	+ 68 5	7.4	_	2		6.8	1.1	7.9	6.8 6.7		6.1 ✓
0 46+58.2	134	0 46.4	+ 58 11	5.0	_	1		6.3 6.6	.7	7.0 7.3	5.8 6.1	5.9 6.2	5.6 5.9 ✓
0 48+58.4	138	0 48.1	+ 58 23	5.0	_	1		6.0 6.1	.7	6.7 6.8	5.5 5.6	5.6 5.7	5.3 5.4 ✓
23 58+68.1	1426 23	57.8	+ 68 4	7.0									
	+1423 23	56.3	+ 68 4	8.2	.	2		6.7 6.6	1.1	7.7	6.6 6.5		5.9 ✓
0 37+68.6	49	0 37.6	+ 68 32	6.4	_	2		6.5	1.1	7.6	6.5 6.4		5.8 ✓
0 52+68.6	64	0 52.0	+ 68 34	7.0	.	2		6.4	1.1	7.5	6.4 6.3		6.1 ✓
1 24+68.3	113	1 24.2	+ 68 12	6.8	_	2		6.9	1.1	8.0	6.9 6.8		6.2 ✓
1 48+78.3	66	1 47.6	+ 78 11	8.1		3		7.1	1.7	8.8	7.7 7.6		6.4 ✓
1 23+78.4	49	1 22.8	+ 78 25	8.5	.	3		7.3	1.7	9.0	7.9 7.8		6.6

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January 17, 1886.

Plate 9209.

V	H	Type	No. Lines	K.	Focus	Other lines. Remarks.
17.0	13.7	I	4	N	1	—
16.6	12.8	I	11	~~K=.2 H~~ K=.1 H	4	7 line? seen.
16.4	11.3	II	2	K = H	1	—
16.3	14.6	I	6	N	1	—
16.4	17.3	I	7	N	2	7 line.
16.3	18.0	II II	2 2	K = H K=H	1 1	— —
16.3	18.4	I	11	~~K=.5 H~~ K=.3 H	3	—
16.0	10.2	I	8	N	2	—
?	16.0	12.5	II a 416 ~~2~~ 4	K = H	2	seen.
?	15.9	13.1	~~III~~ b 417 ~~3~~ 2	K = H	1	7 line. seen
	16.0	6.9	I	7	N	1	—
	15.9	7.6	II a 418	7	K = H?	1	—
	16.3	16.5	I I	✓ H	? K=H	1 1	— —
	16.0	19.4	I	8	N	2	seen.
	15.9	16.7	I	11	N	3	—
	15.8	19.8	I	4	N	1	—
	16.0	23.2	I	✓	N	1	—
?	15.8	23.4	I d	✓	N	1	seen
	15.8	12.8	I I	3 3	N N	1 1	— —
	15.6	12.0	I	8	K=.2 H	1	—
	15.3	12.4	I I	✓ 3	N N	1 1	— —
	15.5	12.8	I	8	N	3	—
	15.5	17.8	I	11	~~K=.5 H~~ K=.3 H	2	—
	15.5	21.0	I	4	N	1	—
	15.3	22.0	I	✓	~~N~~ K=H	1	—
?	15.2	18.8	I	~~4~~	N	1	seen
Recorded above.	15.3	12.4	I	4	N	1	—
	15.3	7.3.	I	6	N?	1	—

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Mean 7

	No.	R. A.	Dec.	Mag.		Diff	Bre.					
0 51+78.6	28	0 51.0	+ 78 37	8.1	.	3	7.5	1.8	9.3	8.2 8.1	6.5	✓
1 0+78.8	34	1 [illegible].0	+ 78 54	5.6	_	3	4.3	1.8	6.1	5.0 4.9	3.6	✓
0 59+68.9	74	0 59.4	+ 68 55	7.9	_	2	6.7	1.1	7.8	6.7 6.6	6.0	✓
0 41+79.1	19	0 41.6	+ 79 2	7.7	.	3	6.5	1.8	8.3	7.2 7.1	5.8	✓
0 30+59.0	92	0 30.6	+ 59 1	6.5	.	1	6.5	.7	7.2	6.1 6.0	5.5	✓
0 23+68.9	29 ✓	0 22.6	+ 68 59	7.2 ✓	_	2	7.4 7.2 ✓	1.1	8.5	7.4 7.3	6.7	✓
0 2+78.9	1	0 1.8	+ 78 55	6.5	_	3	5.3	1.8	7.1	6.0 5.9	4.6	✓
0 58+69.1	181	0 58.0	+ 59 5	7.2	.	1	6.6	.7	7.3	6.2 6.1	5.9	✓
1 4+79.2	36	1 3.9	+ 79 8	6.5	_	3	5.8	1.8	7.6	6.5 6.4	5.1	✓
0 57+79.3	29	0 57.1	+ 79 14	6.4	_	3	6.3 / 6.5	1.8	8.1 / 8.3	6.9 7.1 / 7.0 7.2	5.6 / 5.8	✓
2 0+78.5	73	1 59.9	+ 78 29	7.3	.	3	6.4	1.7	8.1	7.0 6.9	5.7	
1 53+78.6	69	1 53.2	+ 78 38	7.3	_	3	6.4	1.8	8.2	7.1 7.0	5.7	✓
0 33+59.2	100 ✓	0 33.[illegible]	+ 59 8	7.2 ✓		1	7.2	7.3	7.9	6.8 6.7	6.5	✓
0 22+69.2	68	0 22.3	+ 59 10	6.0	64	6.0	8-3	6.1	.7	6.8 5.7 5.6	5.4	✓
0 18+79.3	10	0 17.9	+ 79 14	7.0	.	3	5.3	1.8	8.1	7.0 6.9	4.6	✓
23 46+79.0	796	23 46.1	+ 79 2	8.3	.	3	7.0	1.8	8.8	7.7 7.6	6.3	✓
23 53+68.8	1418	23 53.8	+ 68 46	7.5	.	2	7.1	1.1	8.2	7.1 7.0	6.4	✓
23 11+78.5	825	23 11.4	+ 78 27	7.5	.	3	6.8	1.7	8.5	7.4 7.3	6.1	✓
0 48+59.3	147 ✓	0 48.1	+ 59 15	8.1 ✓	.	1	7.4	7.3	8.1	7.0 6.9	6.7	✓
1 9+79.4	39	1 9.2	+ 79 22.	8.0	_	3	6.7	1.8	8.5	7.4 7.3	6.0	✓
0 53+69.5	63 ✓	0 53.5	+ 69 33	7.5 ✓	.	2	7.1 ✓	7.4	8.1	7.1 7.0	6.4	✓
0 48+59.6	146	0 48.1	+ 59 35	6.3	145	5.5	1140	5.9	.7	6.6 5.5 5.4	5.2	✓
0 28+59.5	84	0 28.3	+ 59 31	6.0	_	1	6.2	.7	6.9	5.8 5.7	5.5	✓
23 34+79.0	790	23 34.0	+ 79 1	8.2	.	3	7.0	1.8	8.8	7.7 7.6	6.3	✓
23 22+78.9	835	23 22.5	+ 78 60	7.5	.	3	6.8	1.8	8.6	7.5 7.4	6.1	✓
23 55+79.5	799	23 55.4	+ 79 30	7.5	.	3	6.8	1.8	8.6	7.5 7.4	6.1	✓
1 22+69.6	103	1 21.9	+ 69 17	7.0	.	2	6.7	1.1	7.8	6.7 6.6	6.0	✓

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January 17, 1887.

Plate 929.

V	H	Type	No. Lines	K	Focus	Other lines. Remarks:
15.3	7.5	I		K=.2H	2	—
15.0	13.2	I	9	N	2	—
? 15.0	13.9	II	a 419 3	K=H	2	Flare.
14.9	18.5	I	I 8 3	N N	1 1	— —
14.8	20.8	I	I 5 5	N N	1 1	— —
Recorded on page 8						
14.8	22.7	I	6	N	2	—
? 14.9	7.6	I	9	K=H?	7	Flare.
? 14.8	7.6	II	a 420 2	K=H	2	Flare
? 14.7	12.8	?	420 a?	N	7	Flare.
14.5	13.6	I	I 3	N N	1 1	— —
14.5	14.6	I	9	N	2	—
14.5	15.6	III	III ? 2 2	K=H	K=H 1	— Fl?
14.7	16.2	I	5	N	1	—
16.0	24.4	I	7	N	2	—
14.5	11.5	I	I 8 5	N N	1 1	— —
14.2	11.8	I	8	K=.2H	2	—
14.2	12.5	I	8	N	2	—
? 14.0	13.9	II	a 421 3	K=.2H	3	Flare
14.1	17.3	I	9	K=.2H	2	—
14.2	19.8	I	3	N	1	—
No Star on plate.						
13.9	8.6	I	4	K=H	1	—
13.9	11.2	II?	10	K=H	2	—
Recorded above						
13.7	14.6	I	6	N	1	—
? 13.9	20.8	II	a 422 2	K=H	1	Flare
13.7	7.8	I	10	K=.2H	3	—
14.2	12.9	I	8	K=.2H	2	—

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1887phae.proj...837

Mean 7

	No	R.A.	Dec.	Mag.	Exp	Br.				
1 56 + 79.0	63	1 56.6	+ 79 0	6.7	3				59	
~~1 24 + 69.5~~	102	1 20.5	+ 69 31	6.1	~~232 5.9 1140~~	5.9	1.1	7.0	5.8	5.2 ✓
0 49 + 59.6	55	0 48.7	+ 69 43	6.8	.2	6.5	1.2	7.7	6.6 6.5	5.8 ✓
0 49 + 79.7	24	0 48.6	+ 79 46	6.5	−3	5.9	1.9	7.8	6.7 6.6	5.2 ✓
0 25 + 59.7	76	0 23.4	+ 59 45	7.8	.1	7.8 7.4	.7	8.0	6.9 6.8	6.6 ✓
0 16 + 59.6	51	0 16.2 3	+ 59 38	7.7 ✓	.1	7.3 7.4	.7	8.0	6.9 6.8	6.6 ✓
~~23 34 + 79.0~~	~~770~~	~~23 34.0~~	~~+ 79 1~~	~~8.2~~	.	~~6.9~~	~~1.8~~	~~8.7~~	7.6 7.5	
23 14 + 79.2	777	23 13.9	+ 79 6	7.8	.3	6.0	1.8	7.8	6.7 6.6	.5.3 ✓
1 16 + 59.5	248	1 16.4	+ 59 29	3.0	−1	4.7	.7	5.4	4.3 4.2	4.0 ✓
1 20 + 69.5	102	1 20.5	+ 69 31	6.1	−2	6.3	1.1	7.4	6.3 6.2	5.6 ✓
0 48 + 59.9	144	0 48.0	+ 59 56	2.3	.1	B.	8			✓
0 45 + 59.9	134 ✓	0 44.8	+ 59 53	7.5 ✓	.1	7.5 7.5	.7	8.2	7.1 7.0	.6.8 ✓
0 40 + 69.9	46	0 40.8	+ 69 59	7.0	.2	6.4	1.2	7.6	6.5 6.4	5.7 ✓
0 35 + 70.0	43 ✓	0 35.1	+ 70 2	7.8 ✓	−2	6.8 {7.2 7.1 {7.2	7.2	8.0 8.3	6.8 7.1	6.9 {6.1 ✓ 7.2 {6.4
0 31 + 69.9	32	0 31.6	+ 69 55	7.0	.2	6.5	1.2	7.7	6.6 6.5	5.8 ✓
0 13 + 58.8	11	0 3.0	+ 58 51	7.3	.1	6.6	.7	7.3	6.2 6.1	5.9 ✓
0 59 + 69.9	70 ✓	0 58.8	+ 69 55	7.7 ✓	.2	6.7 6.8	1.2	7.9	6.8 6.7	6.0 ✓
0 57 + 70.1	78	0 57.0	+ 70 9	6.7	−2	6.3	1.2	7.5	6.4 6.3	5.6 ✓
1 6 + 80.1	36	1 6.2	+ 80 8	6.7	.3	5.6	1.9	7.5	6.4 6.3	4.9 ✓
0 44 + 61.3	124	0 44.5	+ 60 19	5.0	−1	5.7	.8	6.5	5.4 5.3	5.0 ✓
0 25 + 70.2	24	0 24.8	+ 70 10	6.2	−2	6.2	1.2	7.4	6.3 6.2	5.5 ✓
23 42 + 79.7	798	23 41.8	+ 79 45	8.3	.3	7.0	1.9	8.9	7.8 7.7	6.3 ✓
1 5 + 60.1	188	1 4.9	+ 60 7	7.2	−1	7.0	.8	7.8	6.7 6.6	6.3 ✓
0 54 + 60.3	157	0 54.7	+ 60 18	6.5	−1	6.5	.8	7.3	6.2 6.1	5.8 ✓
~~0 44 + 60.3~~	~~124~~	~~0 44.5~~	~~+ 60 19~~	~~5.0~~						
0 40 + 70.4	53	0 40.7	+ 70 23	7.3	.2	6.9	1.2	8.1	7.0 6.9	.6.2 ✓
0 16 + 60.2	45	0 16.0	+ 60 8	7.5	−1	6.6	.8	7.4	6.3 6.2	5.9 ✓
1 32 + 69.8	114	1 31.8	+ 69 52	5.2	−2	6.7	1.2	7.9	6.8 6.7	6.0 ✓
0 50 + 70.3	65	0 50.8	+ 70 13	6.5	−2	6.2	1.2	7.4	6.3 6.2	5.5 ✓

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Plate 929.

V	H	Type	No. Lines	K	Focus	Other Lines. Remarks.
13.6	8.6	I	7	K=.2H	1	—
13.6	8.8	I	8	N	2	—
13.6	10.1	I	8	N	2	—
13.6	22.8	II	II a? 2	K=H	K=H 1	— Seen
13.6	7.0	I	✓	N	1	—
13.5	9.7	III	III 3	K=H	K=H 1	F. F
13.4	15.8	I	8	N	2	—
13.4	16.3	I	7	K=.2H	1	—
13.3	12.7	III	III 3	K=H	K=H 1	F. —
13.5	13.0	I	?I 4 3	N	N 1	— —
13.0	20.9	I	✓	N	1	—
13.2	23.0	I	✓	N?	2	—
13.0	22.9	I	6	K=.5H	1	—
13.0	7.6	I	✓	N	1	—
13.0	7.0	I	4	N	1	—
12.9	11.1	II	a 4236	K=H	2	F.
12.8	11.1	I	8	N	2	—
12.8	19.8	I	7	N	2	—
12.7	19.5	I	7	K=.8H?	1	—
12.5	10.3	I	8	K=.2H	2	7 line.
12.5	8.9	I	9	N	3	7 line. Seen
12.5	9.0	I	9	N	2	—
12.4	13.9	I	12	K=.2H	2	7 line?
12.4	18.4	I	10	K=.2H	2	7 line
12.6	22.4	II	2	K=H	2	—
12.6	23.2	I	8	K=.2H	2	—
12.3	14.8	III	2	K=H	1	—
12.2	13.7	I	8	K=.2H	1	7 line.
12.3	20.4	I				

H. 0

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Means.

	No.	R.A.		Dec.		Mag.		Opp		Bc.						
1 51+79.9	61	1	50.7	+	79	58	7.5	–	3	6.4	1.9	8.3	7.2 7.1	5.7	✓	
1 15+70.3	102	1	15.2	+	70	13	6.1	.	2	6.0	1.2	7.2	6.1 6.0	5.3		
1 35+80.2	55	1	34.1	+	80	10	7.5	.	3	5.9	1.9	7.8	6.7 6.6	5.2	✓	
0 8+60.2	16	0	8.2	+	60	12	6.9	–	1	6.9 6.9	.8	7.7	6.6 6.5	6.2	✓	
1 11+60.2	209	1	11.6	+	60	11	7.3	.	1	6.9	.8	7.7	6.6 6.5	6.2	✓	
1 40+80.2	58	1	39.7	+	80	11	6.8	–	3	6.9 7.1 7.2 7.3	1.9	8.8 9.1	7.7 7.9 8.0	6.2 6.5	✓	
0 33+70.6	39	0	33.7	+	70	35	7.0	.	2	6.6	1.2	7.8	6.7 6.6	5.9	✓	
0 20+80.6	10	0	21.2	+	80	34	7.9	–	3	6.9	2.0	8.9	7.8 7.7	6.2	✓	
0 48+60.6	137	0	48.6	+	60	38	7.0	–	1	6.8 7.0	6.9 7.1 .8	7.6 7.8	6.4 6.6	6.5 6.7	6.1 6.3	✓
0 47+60.5	135	0	47.5	+	60	28	7.9									
0 ~~57+79.3~~	~~63~~	0	~~56.8~~	+	~~70~~	~~12~~	~~6.5~~		1	7.3	7.5 1.2	8.5	7.4 7.3	6.6	✓	
23 26+80.3	770	23	25.8	+	80	12	8.2	.	3	6.9	1.9	8.8	7.7 7.6	6.2	✓	
23 5+79.7	769	23	4.6	+	79	47	7.5	.	3	6.4	1.9	8.3	7.2 7.1	5.1	✓	
23 6+79.8	768	23	4.4	+	79	51	7.7	–	3	6.5	1.9	8.4	7.3 7.2	5.8	✓	
2 3+80.1	70	2	3.3	+	80	3	7.7	.	3	6.4	1.9	8.3	7.2 7.1	5.7	✓	
2 10+79.9	69	2	10.0	+	79	57	8.3	.	3	7.0	1.9	8.9	7.9 7.8	6.3	✓	
0 55+60.7	158	0	55.4	+	60	49	6.0	–	1	6.5	.8	7.3	6.2 6.1	5.8	✓	
1 25+80.6	50	1	25.0	+	80	41	7.4	.	3	5.8	2.0	7.8	6.7 6.6	5.1	✓	
23 37+80.5	780	23	37.1	+	80	30	7.8	.	3	6.5	2.0	8.5	7.4 7.3	5.8	✓	
23 40+80.6	784	23	40.6	+	80	34	8.0	–	3	6.6	2.0	8.6	7.5 7.4	5.9	✓	
1 35+80.6	57	1	34.9	+	80	39	7.5	–	3	6.2	2.0	8.2	7.1 7.0	5.5	✓	
1 52+80.6	64	1	51.8	+	80	36	6.1	3/8	6.0	1/2+1	5.2	2.0	7.2	6.1 6.0	4.5	✓
1 4+60.9	186	1	4.0	+	60	56	6.6	.	1	6.5	.8	7.3	6.2 6.1	5.8	✓	
0 50+81.1	25	0	49.6	+	81	6	7.5	–	3	6.5	2.0	8.5	6.4 6.3	5.8	✓	
0 17+70.9	16	0	17.5	+	71	0	6.6	–	2	6.4	1.2	7.6	6.5 6.4	5.7	✓	
0 9+60.7	21	0	9.2	+	60	43	6.0	–	1	6.5	.8	7.3	6.2 6.1	5.8	✓	
22 58+79.9	761	22	58.8	+	79	60	7.2	–	3	5.8	1.9	7.7	6.2 6.1	5.1	✓	
0 38+81.2	18	0	38.5	+	81	10	7.6	–	3	6.9 7.1	2.0	8.9 9.1	7.7 7.9 8.0	6.2 6.4	✓	
0 53+81.2	30	0	52.5	+	81	11	8.3	–	3	6.5	2.0	8.5	7.4 7.3	5.8	✓	
0 ~~14+61.2~~	69	0	16.8	+	61	2	6.1	5/6	4.8	1/5+4	5.5	.8	6.3	5.2 5.1	4.8	✓

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Plate 929.

8:50	V	H	Type	No. lines	K	Focus	Other lines.
			Rv. Remarks				
	11.5	8.4	I I? H	?	K=H	1 1	— —
	11.8	18.9	I	6	K=H	1	—
	11.5	10.3	III III	2	K=H	1 1	— —
	11.5	23.1	I	7	K=.5 H	1	—
	11.4	23.2	I		K=H	1	—
	11.3	19.0	I	7	K=n K=.2 H?	1	—
	11.2	21.0	IIa 424	2	K=H	1	—
	11.2	20.8	I I 2	3	N N	1 1	— —
?	11.2	15	IIa 425	3	K=H	2	F. cmn
?	10.8	16.4	IIa 426	2	IIa K=H K=H	2 1	Recc cmn
?	10.7	14.9	III b 427 2		K=H	2	Recc
?	10.6	24.2	IIa 428	2	K=H	1	Recc
	10.5	7.8	II	2	K=H	1	—
	10.5	10.8	I	8	K=.2 H	2	—
?	10.3	16.5	I b 429	7	N	2	Recc
?	10.3	18.4	I b.c 2 430	9	?		Bright Recc.
	10.3	20.8	I? I 4 H		N N	1	—
?	10.0	9.6	IIa 431	2	K=H	1	Recc
	9.9	14.2	II	2	K=H	1	—
	9.9	17.9	I	9	K=.2 H	2	—
	10.0	17.9	IIa II 432	2	K=H K=H	1 1	— —
	10.0	18.7	I I	3 H	N K=H	1 1	— —
	10.0	18.9	I I?	3	N	1 1	— —
?	9.9	19.3	IIa 433	2	K=H	1	Recc
	10.0	21.1	I I?	5	N K=H	1 1	— —
	9.4	18.0	I	11	K=.2 H	3	—
?	9.2	7.6	III b 434	3	K=1.5 H?	2	Fr? Recc
	9.1	19.1	III	2	K=H	1	—
?	11.0	6.4	III b 435	3	K=H	1	F

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Mean 7

	No.	R.A.	Dec.	Mag.	dup	Br.
1 7+61.2	233	1 6.8	+61 8	7.5	1	7.1 7.4 9 8.0 6.9 6.8 6.4
23 45+81.0	838	23 45.4	+81 2	8.1	3	7.0 2.0 9.0 7.9 7.8 6.3
1 38+81.3	61	1 38.4	+81 14	6.8	3	6.8 7.2 7.6 8.8 7.6 7.7 6.1 / 7.1 2.0 9.1 7.9 8.0 6.4
22 53+80.6	739	22 53.3	+80 31	7.9	3	6.6 2.0 8.6 7.5 7.4 5.9
0 5+61.3	16	0 5.5	+61 14	6.7	1	6.8 .8 7.6 6.5 6.4 6.1
0 22+61.6	101	0 22.6	+61 33	7.5	1	6.7 .8 7.5 6.4 6.3 6.0
23 17+81.1	818	23 16.9	+81 3	8.5	3	6.9 2.0 8.9 7.8 7.7 6.2
0 15+61.5	52	0 15.4	+61 30	8.0	1	7.2 7.4 .8 8.0 6.9 6.8 6.5
0 29+61.7	13	0 29.0	+61 42	6.5	3	5.6 2.1 8.9 7.8 7.7 5.1
0 34+61.9	152 / 35	0 34.2 / 0 28.8	+61 58 / +72 6	7.8 / 6.7	1	7.0 .8 7.8 7.6 6.7 6.3 / 7.0 7.3
0 38+71.8	37	0 38.8	+71 53	6.5	2	6.3 6.6 1.3 7.6 7.9 6.4 6.7 6.5 6.8 5.6 5.9
22 38+80.6	731	22 39.1	+80 36	6.7	3	6.5 2.0 8.5 7.4 7.3 5.8
1 24+71.7	87	1 24.4	+71 40	7.8	2	6.9 1.3 8.2 7.1 7.0 6.2
0 57+61.9	206	0 57.3	+61 59	6.5	1	6.4 .8 7.2 6.1 6.0 5.7
0 29+72.2	35	0 28.8	+72 6	6.7	2	6.3 1.3 7.6 6.5 6.4 5.6
0 25+62.2	102	0 24.8	+62 8	4.5	1	4.7 .8 5.5 4.4 4.3 4.0
23 10+81.6	814	23 9.6	+81 36	8.0	3	6.9 7.1 2.1 9.0 7.9 7.8 6.2
1 13+72.1	69	1 13.3	+72 5	6.7	2	6.9 1.3 8.2 7.1 7.0 6.2
0 46+82.3	23	0 46.0	+82 19	8.4	3	6.8 2.2 9.0 7.9 7.8 6.1
23 57+82.2	748	23 55.4	+82 10	7.0	3	5.8 2.2 8.0 6.9 6.8 5.1
0 27+62.2	109	0 26.9	+62 11	7.4	1	7.1 7.4 .8 7.9 6.8 6.7 6.4
23 42+82.2	736	23 42.8	+82 11	8.5	3	7.2 6.9 2.2 9.4 8.3 8.2 6.5
23 40+82.0	735	23 39.7	+82 0	8.2	3	7.1 7.0 2.1 9.2 8.1 8.0 6.4
0 10+72.2	15	0 10.2	+72 8	7.0	2	6.9 1.3 8.2 7.1 7.0 6.2
23 9+81.6	814	23 [illegible]	[illegible]	[illegible]	3	6.8 6.7 2.1 8.9 7.8 7.7 6.1
23 51+82.4	743	23 49.7	+82 23	6.0	3	4.9 2.2 7.1 5.9 6.0 4.2
1 29+72.3	86	1 27.0	+72 17	5.2	2	6.2 6.5 1.3 7.5 7.8 6.3 6.6 6.4 6.7 5.5 5.8
23 32+82.4	728	23 31.8	+82 24	7.5	3	6.7 7.0 2.2 8.9 9.2 7.7 8.0 7.8 8.1 6.0 6.3
23 [illegible]	86	2 [illegible]	+80 50	5.9	3	5.9 [illegible] 7.9 6.7 6.8 5.2 5.6

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Plate q 20.

V	H	Diffuse	No. Lines	Remarks	K	Focus	No. Other Lines.
9.1	21.4	I	7		N?	1	—
8.9	10.6	I	(3)		N	1	—
9.0	13.6	I I	4 3		N N	1 1	— —
8.8	14.6	I	10		K=.2 H	4	7 line. seen.
8.5	15.6	I	7		K=.2 H	2	—
8.6	14.2	II	2		K=H	1	—
?	8.1	10.1	~~III~~ b	4363	K=H	1	~~7~~ seen.
	8.3	21.5	I d?	7	N	1	—
?	8.1	21.8	~~III~~ b.c.?	4373	~~K=H~~ K=1.5 H	2	7 line? seen.
?	7.8	11.0	~~I~~ d?	6	N K=2 H	1	seen
✓	7.7	14.4	I	10	K=.2 H	(3)	I.
✓	7.6	16.9	I I	4 4	N K=H	1 1	— —
	7.6	22.0	I d?	7	K=.2 H	2	—
	7.6	6.6	II	2	K=H	1	—
	7.7	9.7	I	5	N	1	—
	7.6	9.9	I	11	N	(3)	—
	7.4	12.7	I	9	~~K=.5 H~~ K=.2 H	2	—
	7.3	20.3	I	6	N	1	—
?	7.0	9.3	II b	4381	N	1	seen
	7.0	14.2	I	9	K=.5 H	2	I.
?	6.8	15.4	II a	4392	K=H	2	7 line? seen
	6.7	19.6	I	6	N	2	—
	7.0	24.0	I	8	?	2	—
✗	6.7	24.3	II?	1	N	1	seen
	6.8	8.3	I	7	N	2	—
	6.6	10.5	I	5	N	1	—
✗	6.5	15.0	I	9	K=H	(3)	seen.
	6.4	7.9	I	7	N	2	—

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1887phae.proj..837F

Mean 7

	No.	R. A.	Dec.	Mag.	Opp	Br.						
23 56+72.4	1136	23	56.0	+72 21	7.0	.	2	6.7	1.3	8.0	6.9 6.8	6.0 ✓
1 8+72.6	67	1	7.8	+72 38	8.5	.	2	7.2	1.3	8.5	7.4 7.3	6.5 ✓
0 57+82.6	30	0	56.9	+82 41	9.0	.	3	7.0	2.2	9.2	8.1 8.0	6.3 ✓
0 42+82.9	20	0	41.6	+82 55	6.5	-	3	4.7	2.3	7.0	5.9 5.8	4.0 ✓
0 24+82.6	14	0	24.6	+82 50	8.3	-	3	6.3	2.3	8.6	7.5 7.4	5.6 ✓
0 43+62.9	160	0	42.7	+62 59	7.0	-	1	6.8	.9	7.7	7.6 7.5	6.1 ✓
1 56+82.6	51	1	55.5	+82 52	7.0	-	3	6.0 6.3	2.3	8.3 8.6	7.1 7.4	7.2 7.5 5.3 5.6 ✓
23 54+72.8	1135	23	54.3	+72 48	6.5	.	2	6.1	1.3	7.4	6.3 6.2	5.4 ✓
22 48+82.4	703	22	47.9	+82 23	5.0	-	3	5.3 5.7	2.2	7.5 7.9	6.3 6.7	6.4 6.8 4.6 5.0 ✓
1 4+73.3	61	1	5.8	+73 14	7.0	.	2	6.2	1.3	7.5	6.4 6.3	5.6 ✓
	60	1	5.8	+73 12	8.5							
0 42+63.5	99	0	42.0	+63 27	5.8	-	1	5.9	.9	6.8	5.7 5.6	5.2 ✓
0 2+83.4	1	0	1.8	+83 21	8.3	.	3	7.0 6.9	2.3	9.3	8.2 8.1	6.3 ✓
22 44+82.6	700	22	44.1	+82 30	8.0	-	3	6.4	2.2	8.6	7.5 7.4	5.7 ✓
2 46+82.3	76	2	46.8	+82 20	8.0	-	3	6.9	2.2	9.1	8.0 7.9	6.2 ✓
2 4.0+83.0	54	2	3.7	+83 0	8.9							
1 56+82.4	54	1	55.1	+82 52	7.0	.	3	6.8	2.3	9.1	8.0 7.9	6.1 ✓
1 2+63.4	149	1	2.1	+63 26	6.8	188	5.4 12+1	5.7	.9	6.6	5.5 5.4	5.0 ✓
0 54+73.6	51	0	54.5	+73 36	6.8	-	2	6.2	1.4	7.6	6.5 6.4	5.5 ✓
0 1+73.4	2	0	1.0	+73 26	7.0	.	2	6.7	1.4	8.1	7.0 6.9	6.0 ✓
2 14+83.2	56	2	13.3	+83 11	8.0	-	3	6.7 7.0	2.3	9.0 9.3	7.8 8.1	7.9 8.2 6.0 6.3 ✓
0 49+83.6	20	0	48.4	+83 49	7.0	-	3	5.4	2.4	7.8	6.7 6.6	4.7 ✓
0 27+83.8	9	0	26.3	+83 53	7.8	-	3	6.4	2.4	8.8	7.7 7.6	5.7 ✓
23 18+83.5	647	23	12.7	+83 27	8.0	.	3	6.4	2.4	8.8	7.7 7.6	5.7 ✓
23 58+63.4	2107	23	59.0	+63 22	5.4		1	5.9	.9	6.8	5.7 5.6	5.2 ✓
23 38+73.3	1047	23	33.1	+73 10	5.6	-	2	6.6	1.3	7.9	6.8 6.7	5.9 ✓
1 25+73.5	81	1	25.6	+73 33	6.5	.	2	6.1	1.4	7.5	6.4 6.3	5.4 ✓
1 10+73.8	66	1	10.4	+73 49	6.8	.	2	7.0	1.4	8.4	7.3 7.2	6.3 ✓
0 38+74.1	29	0	38.2	+74 4	5.8		2	4.9	1.4	6.3	5.2 5.1	4.2
1 11+63.8	176	1	11.5	+63 55	6.6	.	1	6.4	.9	7.3	6.2 6.1	5.7 ✓

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January 18, 1887.

Plate 9219.

	V	H	Type	No. Lines	Remarks.	K	Focus	Other lines.
	6.2	15.3	I	10		K=.2 H	(3)	7 line.
	6.2	16.3	I	7		K=.5 H	1	—
?	6.2	20.4	III	3	b.c. 440	K=H ?	2	7. Bright line
	6.5	22.1	I	6		N	2	—
	5.9	10.0	I	8		N	(3)	7 line.
	5.7	17.5	III	2		K=H	1	—
	5.3	12.4	I	4		N	1	—
	5.2	14.6	I	4		N K=H	1	—
	5.2	17.9	I	(3)		N	1	—
	5.1	13.7	I	5		N ?	1	—
	5.2	16.6	I	4		N ?	1	—
	4.9	21.7	I	6		N ?	1	7 line
?	4.4	16.3	III	2		K=H	1	7 line
?	4.3	19.5	III	3	b 441	K=H ?	1	7 line, faint
	4.4	23.5	I	(3)		N	1	—
	4.2	23.5	I I	5 4		N N	2 2	— —
	4.0	11.6	III	(3)		K=H	1	7.
	4.1	11.3	II II ?	2 2		K=H K=H	1	— —
	3.9	16.2	III	3 2		K=H	1	7.
	3.8	8.2	III ?	3 2		K=H	2	—
?	3.7	14.3	III	4	b.c. 4424	K=1.5 H K=1.8 H	3	7 line. Bright ?
	3.6	5.7	I	5		N	1	—
	3.4	10.9	I	7		K=.5 H	1	—
	3.5	12.8	I	9		N	2	—
	3.4	17.5	I	7		K=.3 H	2	—
	3.4	18.5	I	5		N	1	—
	3.1	6.2	I	7	d	K=.2 H ?	1	—
	3.0	18.3	I I	8 6		N N	2 2	— —
	3.2	24.2	III ?					

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Merry

	No.	R. A.	Dec.	Mag.		Dif	Br.					
0 36 +74.2	27	0 36.2	+ 74 12	5.5		2	5.5	1.4	6.9	5.7	5.8	✓
0 8 +84.2	3	0 7.8	+ 84 9	8.0		3	6.5	2.5	9.0	7.8	5.8	✓
22 56 +83.6	640	22 55.4	+ 83 34	5.0		3	5.3 / 5.7	2.4	7.7 / 8.1	6.5 / 6.9	6.6 / 7.0	5.6 ✓
23 48 +73.5	1063	23 47.9	+ 73 36	7.0	4226	2	6.3	1.4	7.7	6.5	5.6	✓
1 2 +64.2	127	1 2.4	+ 64 13	5.9	191	5.5	5.7	.9	6.6	5.4	5.0	✓
23 42 +84.3	539	23 42.5	+ 84 16	8.1		3	6.9 / 7.1	2.5	9.4 / 9.6	8.2 / 8.4	8.3 / 8.5	6.2 ✓
1 27 +84.5	29	1 27.5	+ 84 29	8.0		3	7.0	2.5	9.5	8.3	6.3	✓
0 40 +84.6	15	0 40.9	+ 84 40	8.2		3	7.0	2.6	9.6	8.4	6.3	✓
23 33 +84.4	533	23 32.8	+ 84 22	8.7		3	7.0	2.5	9.5	8.3	6.3	✓
0 47 +74.7	41	0 47.7	+ 74 42	8.0		2	6.9	1.4	8.3	7.1	6.2	✓
23 59 +84.6	546	23 59.1	+ 84 36	8.2		3	6.9	2.6	9.5	8.3	6.2	✓
22 23 +83.5	630	22 22.5	+ 83 46	7.0		3	6.7	2.4	9.1	7.9	6.0	✓
0 33 +65.1	~~83~~	~~0 33.5~~	~~+ 65 20~~	~~6.0~~		1	6.9 / 7.0	9	7.8 / 7.9	6.6 / 6.7	6.7 / 6.8	6.2 ✓
22 55 +84.6	517	22 54.2	+ 84 36	6.5		3	6.6 / 6.9	2.6	9.2 / 9.5	8.0 / 8.3	8.1 / 8.4	5.7 ✓
21 52 +83.4	618	21 52.7	+ 83 22	7.2		3	6.9	2.3	9.2	8.0	8.1	6.2 ✓
23 33 +74.5	1032	23 33.1	+ 74 28	6.5		2						
~~23 58 +64.6~~	~~1844~~	~~23 57.5~~	~~+ 64 38~~	~~7.2~~			6.1	3.8	9.9	7.0	5.8	5.4 ✓
1 52 +85.0	41	1 50.8	+ 85 2	7.7		3	6.7 / 6.9	2.7	9.4 / 9.6	8.2 / 8.4	8.3 / 8.5	6.0 ✓
0 56 +65.2	129	0 56.6	+ 65 11	6.9		1	6.9	6.9	9	7.8	6.6	6.2 ✓
0 33 +65.3	83	0 33.5	+ 65 20	6.0		1	6.6 / 6.9	9	7.5 / 7.8	6.3 / 6.6	6.4 / 6.7	5.9 / 6.2 ✓
2 58 +84.4	59	2 58.8	+ 84 23	6.0		3	6.0 / 6.2	2.5	8.5 / 8.7	7.3 / 7.5	7.4 / 7.6	5.3 ✓
0 58 +85.5	19	0 49.7	+ 85 29	5.0		3	5.3 / 5.6	2.8	8.1 / 8.4	6.9 / 7.2	7.0 / 7.3	4.6 / 4.9 ✓
1 49 +74.8	91	1 48.8	+ 74 47	6.5		2	6.3	1.5	7.8	6.6	5.6 ✓	
1 10 +75.5	59	1 10.3	+ 75 28	6.2		2	6.2	1.5	7.7	6.5	5.5 ✓	
0 49 +65.6	115	0 49.4	+ 65 33	6.0	151	1	6.1	1.0	7.1	5.9	5.4 ✓	
23 30 +85.4	403	23 29.7	+ 85 23	7.8		3	6.4	2.7	9.1	7.9	5.7 ✓	
~~0 50 +85.4~~	~~67~~	~~0 23.2~~	~~+ 65 43~~	~~6.5~~		2	6.6	1.0	7.6	6.4	5.9 ✓	
1 21 +65.4	175	1 20.8	+ 65 21	6.0		1	6.4	.9	7.3	6.1	5.7 ✓	
23 6 +74.8	67	23 2.2	+ 65 48	6.5		1						
~~0 18 +75.8~~	~~10~~	~~0 11.4~~	~~+ 75 50~~	~~7.8~~			6.2	1.5	7.7	6.5	5.5 ✓	
23 55 +65.3	1887	23 55.3	+ 65 17	6.3		1	6.6	.9	7.7	6.5	6.1 ✓	

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January 18, 1887.

Plate 929.

	V	H	Type	No. lines	Remarks	K	Focus	Other lines.
"	29	17.5	I	7	~~K=.2H~~ K=.5H		2	7 line.
	27	16.3	I	7	K=.2H		2	—
?	27	17.3	I[a]	443 2	K=H		1	~~Seen~~
	26	17.6	I	8	N		2	—
	24	19.8	I	9	N		3	—
	20	18.5	I	3	N		2	—
	19	14.2	I?	1	N		1	—

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Mean 7

	No.	R.A.	Dec.	Mag.	Eye	Brn.			
23 22+856	399	23 24.2	+ 85 37	7.5	3	6.3	2.8	9.1	7.9 / 8.0
23 52+85.6	409	23 52.8	+ 85 54	8.0	3	6.4	2.9	9.3	8.1 / 8.2
23 27+85.7	401	23 27.2	+ 85 46	8.0	3	6.8	2.8	9.6	8.4 / 8.5
0 26+659	70	0 26.1	+ 65 57	6.5	1	6.4	1.0	7.4	6.2 / 6.3
22 25+85	383	22 24.2	+ 85 23	5.0	3				
3968	5.4	27 +15			+16 1	5.4	2.7	8.1	6.9 / 7.0
0 8+76.2	5	0 8.1	+ 76 9	6.5	2 +3 +2				
35	6.2	46				6.1	1.6	7.7	6.5 / 7.6
	17	0 52.8	+ 86 22	7.5					
0 52+8 6	14	0 49.7	+ 85 29	5.0	3	6.6	2.8	9.1	8.2 / 8.3

~~165~~ ~~141~~ / 12 ~~8-9~~ / 12

~~114~~ / 10 ~~7-3~~ / 10

103 / 9 7-3 / 9

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March 1, 1887.

Plate 829.

		V	H	Type	No. Lines	K	Focus	Other lines
					Remarks.			
9	0	21.7	13.1	I	8	H	1	—
		21.6	15.1	I	8	H?	1	—
		20.3	17.9	I	7	K=H	1	—
	?	19.9	11.7	I b	444 10	H	3	F ?
		19.3	12.0	I	7	H	2	F
		19.2	18.9	I	8	K=.2H	1	F
12.35 P.m.		19.0	9.4	I	4	K=H	1	—
10-30 a.m.		18.9	7.6	II	3	K=H	1	F
		18.7	13.3	I	9	H	3	F
		18.6	18.7	I	3	H?	1	—
		18.4	9.4	I	V	?	1	—
		17.9	11.7	I	10	H	2	F
		17.7	12.0	I	10	K=.2H	2	F
		17.8	24.1	I I	5 5	? K=H	2 1	F —
		17.1	9.4	I	7	H	2	F
		16.6	20.4	I	9	K=.5H	1	F
		16.4	21.7	I	6	K=.5H	1	F
		15.9	22.3	I	8	H	2	F
		15.9	23.2	I	7	H	1	F
		15.4	24.1	III	3	K=H	2	F
		15.2	15.4	I	3	H	1	—
		14.7	13.6	I	6	K=.5H	1	F
	?	14.6	10.9	III b.c	445 2	K=1.2H	4	seen faint.
		14.6	8.2	I	7	H	1	F
		14.5	7.9	I	3	H	1	F
		14.2	13.0	I	3	H	1	—
		13.9	15.6	I	3	H	1	F
		12.3	23.2	III	3	K=H	1	F

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Mean 14

	No.	R.A.	Dec.	Mag.			Br.				
0 24 + 62.1	102	0 24.8	+ 62 8	4.5			5.6	.8	6.4	~~4.4~~ 4.5 ~~2.8~~	4.2
0 17 + 52.2	61	0 17.3	+ 52 15	6.0	57	5.8 16-3	6.9	.5	7.4	5.5	5.5
23 53 + 72.8	1135	23 54.3	+ 72 48	6.5	–		7.0	1.3	8.3	6.4	5.6
0 29 + 53.1	105	0 28.9	+ 53 6	4.1	82	3.7 23+4	5.4	.6	6.0	4.1	4.0
0 28 + 53.4	102	0 28.1	+ 53 22	5.8	77	5.0 18-1	6.2	.6	6.8	4.9	4.8
23 59 + 63.4	2107	23 59.0	+ 63 22	5.4	–		6.6	.9	7.5	5.6	5.2
0 42 + 63.5	~~99~~ 61	0 42.0 ~~54.5~~	+ 63 27 ~~73 36~~	~~5.8~~ 6.8	130	5.4 20+1	6.5 ~~6.5~~	.9	7.4 ~~7.4~~	5.5	5.1
1 4 + 73.3	{60	1 5.8	+ 73 12	8.5							
	61}	1 5.8	+ 73 14	7.0}	–		6~~8~~	1.3	8.1	6.2	5.4
0 23 + 53.7	82	0 23.8	+ 53 43	5.2	69	4.8 20+1	6.2	.6	6.8	4.9	4.8
23 47 + 73.6	1063	23 47.9	+ 73 36	7.0	4226	6.6 17-2	6.9	1.4	8.3	6.4	5.5
0 55 + 73.6	51	0 54.5	+ 73 36	6.8			6.9	1.4	8.3	6.4	5.5
0 39 + 74.0	29	0 38.2	+ 74 4	5.8	114	5.3 21+2	6.0	1.4	7.4	5.5	4.6
0 36 + 74.2	27	0 36.2	+ 74 12	5.5	–		6.4	1.4	7.8	5.9	5.0
23 35 + 63.7	2038	23 35.5	+ 63 43	6.0			6.7	6.5	9	7.6 5.7	5.3
0 37 + 54.4	143	0 37.0	+ 54 26	5.8	110	5.4 17-2	6.5	.6	7.1	5.2	5.1
23 32 + 74.5	1032	23 33.1	+ 74 28	6.5	–		6.6	1.4	8.0	6.1	5.1
23 23 + 74.4	1022	23 23.3	+ 74 26	7.0	–		6.8	1.4	8.2	6.3	5.4
23 51 + 54.9	3082	23 51.7	+ 54 37	5.0			6.5	.6	7.1	5.2	5.1
23 12 + 74.5	1016	23 12.3	+ 74 31	6.6	.		6.7	1.4	8.1	6.2	5.3
23 3 + 74.6	1006	23 3.3	+ 74 36	4.6	–		6.0 6.3	1.4	7.4 7.7	5.5 5.8	4.6 4.7
0 10 + 75.5	7	0 10.2	+ 75 28	7.4	.		7.0	1.5	8.5	6.6	5.6
0 23 + 65.7	67	0 23.2	+ 65 43	6.5	–		6.8	1.0	7.8	5.9	5.4
0 32 + 55.7	139	0 32.3	+ 55 45	var.	–		5.5 5.9	.6	6.1 6.5	4.2 4.6	4.1 4.5
0 48 + 65.5	115	0 49.4	+ 65 33	6.0	151	6.0 17-2	6.7	1.0	7.7	5.8	5.13
1 10 + 75.5	59	1 10.3	+ 75 28	6.2			6.8	1.5	8.3	6.4	5.4
0 26 + 65.9	76	0 26.0	+ 65 57	6.5	.		6.9	1.0	7.9	6.0	5.5
0 13 + 66.2	20	0 13.4	+ 66 12	7.0	.		6.6	1.0	7.6	5.7	5.2
23 47 + 56.7	3111	23 47.2	+ 56 41	5.0	–		6.7 6.9	.7	7.4 7.6	5.5 5.7	5.3 5.5

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March 1, 1887.

Plate 829.

	T	H	Type	No. Lines Remarks	K	Trans	Other Lines.
?	12.1	19.4	III	b.c. 4463	K=H?	3	F. bright.
	12.0	8.8	~~III~~ a ?	4473	~~K=H~~ K=1.2H	3	F.
	11.6	21.7	I	8	K=.2H	2	F.
	10.5	6.8	I	5	K	1	—
	10.2	10.6	I	6	K=.2H	1	F?
	9.8	8.9	III?	2	K	1	F.
	9.5	6.6	I	8	K	2	F.
	9.5	7.4	III	2	K=H	1	—
	9.0	7.0	III	1	K	1	F.
?	9.4	19.0	~~III~~ II a 2	?448 H 3	K=H	5	F. diff.
	8.6	8.4	I	√	K	1	—
	8.4	15.9	I	7	K=H	1	F.
	8.1	10.3	I	9	K=.2H	2	F.
	7.9	13.6	II a	449 F 2	K=H	1	F? Diff
	7.8	14.4	I	7	K=H	1	F.
	6.7	7.2	I	7	K	1	F.
?	6.0	7.3	I?	?	?	5	~~F~~
	5.9	13.4	I	√	K	1	F.
	5.6	10.2	I	√	K	1	F.
	5.5	8.9	I?	3	K	1	—
	5.3	8.2	III	3	K=H	1	F.
	4.8	7.9	I	4	K	1	—
	5.0	19.7	I?	√	~~K~~ K=H	1	—
	4.2	15.0	I	7	~~K=.2H~~ K=.5H	1	F.
	3.9	11.9	I	4	K?	1	—
	3.5	6.8	I d	√	K=H	1	—

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Mean 14

	No.	R.A.	Dec.	Mag.			Bv.				
23 33 +76.8	928	23 33.4	+ 76 50	3.5	–		5.5 5.9	1.6	7.1 7.5	5.2 5.6	4.1 4.5
0 40 +57.0	150	0 40.4	+ 57 2	3.8	–		5.7 5.8	.7	6.4 6.5	4.5 4.6	4.3 4.4
23 41 +67.0	1562	23 41.0	+ 67 0	5.5	–		6.4	1.0	7.4	5.5	5.0
1 27 +77.3	58	1 27.6	+ 77 14	6.5	.		6.7	1.6	8.3	6.4	5.3
0 34 +57.9	132	0 34.2	+ 57 38	6.5	–		7.0	.7	7.7	5.8	5.6
1 11 +77.9	49	1 11.2	+ 77 58	6.0			6.6 6.9	1.7	8.3 8.6	6.4 6.7	5.2 5.5
1 0 +68.0	77	1 0.9	+ 68 0	6.0		184 5320+1	6.2	1.1	7.3	5.4	4.8
0 48 +58.4	138	0 48.1	+ 58 23	5.0	–		6.9 7.2	.7	7.6 7.9	5.7 6.0	5.5 5.8
0 46 +58.2	134	0 46.4	+ 58 11	5.0	–		6.6 6.9	.7	7.3 7.6	5.4 5.7	5.2 5.5
0 1 +58.3	3	0 1.5	+ 58 21	2.2	–		4.4	.7	5.1	3.2	3.0
0 52 +68.6	64	0 52.0	+ 68 34	7.0	.		7.0	1.1	8.1	6.2	5.6
0 1 +78.9	1	0 1.5	+ 78 35	6.5	–		6.5	1.1	7.6	5.7	5.1
1 0 +78.9	34	1 [illegible]	+ 78 54	5.6	–		6.0	1.8	7.8	5.9	4.6
0 22 +59.2	68	0 22.3	+ 59 10	6.0	–		6.9	.7	7.6	5.7	5.5
0 18 +79.3	10	0 17.9	+ 79 14	7.0	–		6.5	1.8	8.3	6.4	5.1
0 48 +59.5	146	0 48.1	+ 59 35	6.3		145 5519+0	6.7	.7	7.4	5.5	5.3
0 48 +59.9	144	0 48.0	+ 59 56	2.3			4.0	.8	4.8	2.9	2.6
0 24 +70.2	24	0 24.8	+ 70 10	6.2	.		6.8	1.2	8.0	6.1	5.4
1 6 +80.1	36	1 6.2	+ 80 8	6.7	.		6.5	1.9	8.4	6.5	5.1
0 50 +70.2	65	0 50.8	+ 70 13	6.5			6.7	1.2	7.9	6.0	5.3
0 44 +60.3	124	0 44.5	+ 60 19	5.0	–		6.5 6.7	.8	7.3 7.5	5.4 5.6	5.1 5.3
1 34 +80.2	55	1 34.1	+ 80 10	7.5	.		6.7	1.9	8.6	6.7	5.3
23 57 +60.5	2667	23 57.6	+ 60 31	6.0		4258 6016-3	6.7	.9	7.6	5.7	5.3
0 16 +61.0	69	0 16.8	+ 61 2	6.1	–		6.7	.8	7.5	5.6	5.3
0 50 +81.1	25	0 49.6	+ 81 6	7.5	.		6.7	2.0	8.7	6.8	5.3
1 5 +70.9	90	1 5.9	+ 70 60	6.0	–		6.4	1.2	7.6	5.7	5.0

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Plate 843

	V	H	Type	No. Lines	K	Focus	Other lines. Remarks
8 40	23.2	9.0	I	4	N	1	—
	23.2	15.0	I	4	N	1	—
	23.2	18.5	I?	2	N	1	—
	21.8	8.1	III	2	K=H	1	—
	21.7	8.4	II	3	K=H	3	F. cum
	21.5	8.9	I	7	N	1	F.
	21.5	9.7	II~2 / III	2	K=H	1	—
	21.7	12.5	III	2	K=H	1	—
	21.3	14.7	I	3	N	1	—
	21.5	18.9	I / I	4 / 5	K=H	1	F.
	21.1	21.5	I	6	N	1	F.
	20.5	12.9	I	3	N	1	—
	20.5	14.5	I I	4 3	K=H N	1 1	— —
	20.5	14.9	I	8	K=.8H	1	F.
?	20.5	15.1	II a ?451	2	K=H	1	F? cum.
	20.3	18.4	I	4	N	1	—
	20.2	20.3	I	6	K=H	1	—
?	19.0	5.7	I d	7	K=H	2	F. cum.
?	19.4	14.0	I	V	K=H	1	F. cum.
	19.5	14.4	I	12	N	2	F.
?	19.0	15.7	I b 452	8	?	1	F. cum.
	19.9	17.7	I	4	N	1	F.
	19.7	17.9	III	3	K=H	1	F.
	19.4	18.5	II ? II ?	2 2	K=H K=H	1 1	— —
	19.2	19.5	II ?	2	K=H	1	—
	18.0	6.5	I	4	K=H	1	F.
	18.5	7.2	I	11	K	2	F.
	18.1	18.1	I	9	N	1	F.

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Mean 12.

	No.	R.A.	Dec.	Mag.		Bre.
0 16 +51.2	62	0 16.4	+51 13	6.0	~~55 5.4 16.4~~	6.5 .5 7.0 ~~5.3~~ 5.1
23 56 +61.5	2586	23 56.8	+61 29	5.6	~~4253 6.1 15.4~~	~~6.6 .8 7.0 5.7~~ 5.5
	2533	23 41.8	+61 24	5.9		~~6.6 .8 7.4 5.7~~
23 42 +61.4	~~2537~~	~~23 42.8~~	~~+61 24~~	~~8.2~~		6.6
0 38 +71.9	37	0 38.8	+71 53	6.5	–	6.8 / 7.0 } 1.3 } 8.3 ~~6.6~~ 5.8 }
0 24 +62.2	102	0 24.8	+62 8	4.5	–	5.6 .8 6.4 ~~4.7~~ 4.4
0 17 +52.3	61	0 17.3	+52 15	6.1	57 58 12 -5	6.5 .5 7.0 ~~5.3~~ 5.3
0 28 +72.1	35	0 28.8	+72 6	6.7	–	6.8 1.3 8.1 ~~6.4~~ 5.6
0 10 +72.2	15	0 10.2	+72 8	7.0	–	6.9 / 7.2 } 1.3 } 8.2 8.5 ~~6.5 6.8~~ } 6.3 } 6.6 5.5
23 56 +72.3	1136	23 56.0	+72 21	7.0	.	7.1 1.3 8.4 ~~6.7~~ 5.9
23 27 +72.1	1109	23 28.0	+72 8	7.5	–	7.1 1.3 8.4 ~~6.7~~ 5.9
23 36 +52.4	3503	23 36.1	+52 21	6.5	.	7.0 .5 7.5 ~~5.8~~ 5.8
0 4 +52.8	19	0 4.6	+52 49	6.5	.	7.1 .5 7.6 ~~5.9~~ 5.9
23 59 +62.9	2363	23 58.6	+62 52	7.2	.	7.0 7.2 9 7.9 ~~6.2~~ 5.8
23 54 +72.8	1135	23 54.3	+72 48	6.5	–	6.6 1.3 7.9 ~~6.2~~ 5.4
23 56 +62.6	2356	23 56.0	+62 50	6.5	–	6.9 .9 7.8 ~~6.1~~ 5.7
23 41 +63.0	2055	23 41.1	+63 6	7.8	.	7.0 .9 7.9 ~~6.2~~ 5.8
23 32 +62.9	2268	23 33.1	+62 55	6.7	–	6.9 .9 7.8 ~~6.1~~ 5.7
0 28 +53.3	102	0 28.1	+53 22	5.8		6.2 .6 6.8 ~~5.1~~ 6.0
0 1 +73.4	2	0 1.0	+73 26	7.1	.	6.8 1.4 8.2 ~~6.5~~ 5.6
23 58 +63.4	2107	23 59.0	+63 22	5.4	1 5.5 17 -7	6.3 .9 7.2 ~~5.5~~ 5.1
23 48 +73.6	1063	23 47.9	+73 36	7.0		6.5 1.4 7.9 ~~6.2~~ 5.3
23 44 +63.2	2064	23 43.9	+63 11	6.6	.	6.8 .9 7.7 ~~6.0~~ 5.6
23 33 +73.3	1047	23 33.1	+73 10	5.6	–	6.7 / 6.9 } 1.3 } 8.0 8.2 ~~6.3 6.5~~ } 6.1 } 6.3 5.5 5.7 }
23 39 +63.5	2051	23 39.6	+63 30	7.0	–	7.2 7.3 9 8.1 ~~6.4~~ 6.0
23 22 +73.3	1035	23 22.0	+73 19	7.5	–	6.8 1.4 8.2 ~~6.5~~ 5.6
0 54 +73.6	51	0 54.5	+73 36	6.8	.	6.7 1.4 8.1 ~~6.4~~ 5.5
0 23 +53.8	82	0 23.8	+53 43	5.2		6.3 .6 6.9 ~~5.2~~ 5.1
23 41 +64.1	1861	23 41.7	+64 4	6.5	.	6.5 .9 7.4 ~~5.7~~ 5.3

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Plate 843.

V	H	Type	No. Lines. Remarks	K	Focus	No. Lines.
17.7	8.9	I	45310	N	2	—
17.5	9.2	I	9	K=.2H	2	F.
17.9	13.8	I? I	2 3	N N	1 1	— —
17.3	17.7	I	10	K=.2H	2	F.
17.3	18.9	I	11	K=.2H	2	F
16.8	15.3	III III	2 2	K=H K=H	1 1	F? —
16.9	16.0	III	3	K=H	1	F.
16.5	16.6	I	6	N	2	F. sm.
16.6	17.1	II a II a 457	3 2	K=H K=H	2	F. sm. sm
16.7	17.4	III III?	1 2	N K=H	1 1	— —
16.4	17.5	II	2	K=H	1	—
16.8	20.4	I	11	K=.2H	2	F.
III? 5.7, 6.0, 6.8. 16.5	21.5	III	3	K=1.2H K=H	3	F. sm.
16.1	21.4	I	4	N	1	—
16.0	21.6	I	8	N	1	F.
16.6	23.2	II a 455	3 2	K=H N	1	sm
15.1	7.3	III	3	K=H N	1	F
15.5	9.7	III III	3 2	K=H K=H	1 1	F. —
15.3	12.9	I?	8	N	1	F.
15.8	13.3	I	7	N	1	F.
15.9	15.2	III b 456	3	K=H	1	F. sm.
15.2	15.3	I	7	N	1	F.
15.3	15.3	II a? II a? 457	2 3	K=H K=H	1 1	— F sm
15.9	22.0	I	V	N	1	—
14.1	8.9	I	6	N	1	—
14.4	9.1	I	6	K=.8H K=1.2H	1	F.
14.6	9.5	I	11	N	2	F.
14.0	13.2	I	8	N	2	F

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	No.	R.A.	Dec.	Mag.		Br.			
0 38+74.0	29	0 38.2	+ 74 4	5.8	114 5.3 23 +4 +5 +6	6.2	1.4 7.6	5.7 5.9	5.0 ✓
0 36+74.3	27	0 36.2	+ 74 12	5.5	–	6.3	1.4 7.7	5.8 6.0	5.1 ✓
0 1+64.3	3 ✓	0 1.6	+ 64 17	7.0 ✓		7.3 7.3 9	8.2	6.3 6.5	6.1 ✓
23 33+74.5	1032	23 33.1	+ 74 28	6.5	–	6.3	1.4 7.7	5.8 6.0	5.1 ✓
23 23+74.4	1022	23 23.3	+ 74 26	7.0	–	6.5	1.4 7.9	6.0 6.2	5.3 ✓
23 54+64.6	1087	23 54.4	+ 64 39	7.5	–	6.9 7.3 7.2 7.5 9	7.8 8.1	6.1 6.4 5.9 6.2	5.7 ✓ 6.0
23 45+74.7	1047	23 45.4	+ 74 44	6.3	–	6.6 6.9 1.4	8.0 8.3	6.3 6.6 6.1 6.4	5.4 ✓ 5.7
23 51+64.9	3082	23 51.7	+ 64 57	5.0	4237 5.0 16 -3 -7	6.0	.6 6.6	4.7 4.9	4.8 ✓
49.9+54.9	3076	23 49.9	+ 54 55	6.0					
23 50+75.0	3055	23 49.6	+ 55 2	7.5	–	6.6 6.6	7.2	5.3 5.5	5.4 ✓
35+74.8	1034	23 35.0	+ 74 46	8.0		7.0 7.2 7.3 7.5	7.6 7.9	5.9 6.2 5.7 6.0	5.8 ✓ 6.1
23 50+64.9	3076	23 49.9	+ 54 55	6.0	–				
23 34+74.9	1033	23 33.7	+ 74 55	8.0	–	7.0	1.5 8.5	6.6 6.8	5.8 ✓
23 12+74.5	1016	23 12.3	+ 74 31	6.6	–	6.4	1.4 7.8	5.9 6.1	5.2 ✓
23 3+74.6	1006	23 3.3	+ 74 36	4.6	–	5.9 6.1	1.4	7.3 5.6 5.8 5.4 5.6	4.7 ✓ 4.7
23 25+64.9	1819	23 25.7	+ 64 56	6.2	.	6.8	.9 7.7	5.8 6.0	5.6 ✓
23 1+74.8	1002	23 1.8	+ 74 48	7.3	.	6.6	1.5 8.1	6.2 6.4	6.4 ✓
23 17+64.5	1799	23 17.7	+ 64 32	6.8	.	7.0	.9 7.9	6.0 6.2	5.8 ✓
0 33+65.3	83	0 33.5	+ 65 21	6.0	98 59	6.8 7.0	.9 7.7 7.9	6.0 6.2 5.8 6.0	5.6 5.8 ✓
0 35+75.2	36 ✓	0 35.2	+ 75 8	7.9 ✓	–	6.8 7.0 7.0 7.2	7.5 8.3 8.5	6.6 6.8 6.4 6.6	5.6 5.8 ✓
0 10+75.5	7	0 10.2	+ 75 28	7.4	.	6.8	1.5 8.3	6.4 6.6	5.6 ✓
0 6+75.3	4	0 6.0	+ 75 13	7.1	.	6.9	1.5 8.4	6.5 6.7	5.7 ✓
23 55+65.3	1987	23 55.2	+ 65 17	6.3	–	6.5 6.8	.9 7.7	7.4 5.7 6.0 5.5 5.8	5.3 ✓ 5.6
23 54+65.7	1985	23 54.6	+ 65 38	6.9	.	6.8	1.0 7.8	5.9 6.1	5.6 ✓
23 54+65.5	1984	23 54.4	+ 65 30	7.0	–	6.9 6.8	1.0 7.9	6.0 6.2	5.7 ✓
23 50+75.5	901	23 50.3	+ 75 30	7.8	.	7.0	1.5 8.5	6.6 6.8	5.8 ✓
0 26+65.9	70	0 26.0	+ 65 57	6.5	.	6.5	1.0 7.5	5.6 5.8	5.3 ✓
0 18+55.8	74	0 18.8	+ 55 50	6.5	–	6.7	.6 7.3	5.4 5.6	5.5 ✓
0 23+65.7	67	0 23.2	+ 65 43	6.5	.	6.3	1.0 7.3	5.4 5.6	5.1 ✓
0 8+76.2	5	0 8.1	+ 76 9	6.5	35 6.2 17 -2 +0	6.3	1.6 7.9	6.0 6.2	5.1 ✓

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Plate 843

	V	H	Type	No. Lines	Remarks	No.	K	Focus	Other Lines.
∫ ?	14.6	16.7	~~II[a]~~ II[a]	458		1	2	H ? K=H	1 — —
	14.4	18.3	I	12			K=.2 H	2	F.
∫	14.6	18.9	~~III~~ ? III	2		2	K=H K=H	1	— —
	13.0	7.0	III	2			K=H	1	—
	13.9	10.5	III	2			K=H	1	F.?
?	13.8	11.6	III	459	l	3	K=H	1	F. seen.
	13.6	13.5	I	7			N	1	F.
	13.6	14.8	III	3			K=H	1	F.
∫	13.7	16.9	I	I		3 H	N K=H	1	— —
	13.2	17.4	II	3			K=H	1	F.
Peculiar spectrum. ?	13.0	17.7	II ?	460	l	3	K=H	1	F. seen.
∫	13.4	19.3	III ?	III		1 2	N K=H	1	— —
∫	13.0	19.7	III	III		2 2	K=H K=H	1	— —
	12.3	8.9	~~II~~ II ?	?		2	K=H	1	—
	12.5	9.1	~~III~~ II[a] ?	461		1	N	1	—
	12.3	11.6	III	2			K=H	1	—
?	12.8	15.8	~~IV~~ II	462	a	3	K=H	1	F. seen.
	12.6	16.4	I	4			N	1	—
III ? 5.2, 5.5, 6.5. ?	12.3	17.1	III	463	l.c	4	K=1.2 H	3	F. seen. Bright?
	12.4	17.9	I	9			K=.1 H ?	2	F.
	12.1	18.0	I	✓			N	1	—
	11.9	18.0	I	8			N	1	—
	12.0	20.0	I	6			N	1	—
	12.0	21.3	I	3			N	1	—
∫	12.2	22.5	I	I		3 H	N K=H	1	— —
	11.5	6.5	III	2			K=H	1	—
	11.5	9.8	II	464	a	3	K=H	1	F. seen
	11.5	13.3	I ?	1			N	1	—

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Mean 12

	No.	R. A.	Dec.	Mag.			Br.								
23 38+75.9	893	23	38.7 + 75	52	8.6		7.0	7.1	1.5	8.5	6.6 6.8		5.8	✓	
23 39+65.9	1943	23	39.4 + 65	58	6.3	–	6.4	1.0	7.4	5.5 5.7			5.2	✓	
23 37+65.7	1935	23	37.1 + 65	45	7.7	–	7.0 7.3	7.2 7.4	1.0	8.0 8.3	6.3 6.6	6.1 6.4	5.8 6.1	✓	
0 36+66.3	58	0	36.0 + 66	22	6.8	–	6.8 7.1	7.9	1.0	8.1	6.2 6.4	6.0 6.2	5.7 5.9	✓	
0 30+76.1	14	0	30.5 + 76	5	7.0	–	6.8 7.0	8.3	1.5	8.5	6.6 6.8	6.4 6.6	5.6 5.8	✓	
0 21+76.3	10	0	21.7 + 76	13	6.5	–	6.6 6.7	8.2	1.6	8.3	6.5 6.6	6.3 6.4	5.4 5.5	✓	
0 3+56.3	11	0	2.9 + 56	21	6.7	14	6.7	6+13			6.7	.6	7.3	5.4 5.6	5.5 ✓
23 57+66.3	1679	23	57.2 + 66	21	6.0	–	6.5 6.8	7.5	1.0	7.8	5.8 5.5	5.6 5.9	5.3 5.6	✓	
23 50+56.4	3119	23	50.5 + 56	19	7.7	.	7.0	7.2	6	7.6	5.7 5.9		5.8	✓	
23 48+56.6	3115	23	48.3 + 56	38	7.5	–	6.6	.6	7.2	5.3 5.5			5.4	✓	
23 47+56.7	3111	23	47.2 + 56	41	5.0	–	6.4	.7	7.1	5.2 5.4			5.2	✓	
23 15+76.3	911	23	15.7 + 76	16	8.0	–	7.1 7.3	7.0 7.2	6	8 8.7	6.8 7.0		5.9	✓	
23 40+56.6	3085	23	40.0 + 56	39	6.0	–	6.8 7.2	7.0 7.5	6	7.4 7.8	5.7 6.1	5.5 5.9	5.6 6.0	✓	
0 46+76.7	28	0	46.7 + 76	41	8.0	–	7.1	.6	8.7	6.8 7.0			5.9	✓	
0 26+66.7	39	0	26.2 + 66	43	7.5	–	7.0	1.0	8.0	6.1 6.3			5.8	✓	
0 14+67.0	27	0	13.7 + 67	1	6.5	–	6.8 7.1	7.8	1.0	8.1	6.7 6.4	5.9 6.2	5.6 5.9	✓	
23 45+76.8	934	23	45.0 + 76	48	6.9	–	6.5	1.6	8.1	6.2 6.4			5.3	✓	
23 52+56.9	3127	23	52.1 + 56	52	7.4	.	7.0	.7	7.7	5.8 6.0			5.8	✓	
23 33+76.8	928	23	33.4 + 76	50	3.5	–	5.5 5.8	7.1	1.6	7.4	5.4 5.7	5.2 5.5	4.3 4.6	✓	
23 41+66.9	1562	23	41.0 + 67	0	5.5		5.9	1.0	6.9	5.0 5.2			4.7	✓	
23 27+77.0	909	23	26.2 + 77	0	6.8	.	6.8	1.6	8.4	6.5 6.7			5.6	✓	
23 26+77.1	908	23	25.2 + 77	5	7.0	.	6.8	1.6	8.4	6.5 6.7			5.6	✓	
23 30+67.0	1542	23	30.0 + 67	3	7.2	.	7.0	1.0	8.0	6.1 6.3			5.8	✓	
23 34+57.0	2780	23	34.1 + 57	2	7.1	.	7.1	.7	7.8	5.9 6.1			5.9	✓	
22 47+76.5	880	22	47.3 + 76	28	8.0	✓	7.0	7.2	1.6	8.6	6.7 6.9		5.8	✓	
1 8+76.8	40	1	8.4 + 76	48	6.4	–	6.6 6.9	8.2	1.6	8.5	6.5 6.8	6.3 6.6	5.4 5.7	✓	
0 40+77.2	27	0	40.5 + 77	10	6.7	.	6.6	1.6	8.2	6.2 6.4			5.4	✓	
0 4+57.4	28	0	4.0 + 57	24	7.5	✓	7.0	.7	7.7	5.8 6.0			5.8	✓	

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Plate 843.

V	H	Type	No. lines Remarks.	K	Focus	Other lines.
11.2	14.7	III	3	K = H	1	F.
11.0	15.0	I	9	K = .2H	1	F.
11.0	15.4	I ? I ?	3 2	N N	1 1	— —
11.2	19.4	I	6	K = H	1	—
11.2	23.1	~~II~~ I ?	~~2~~ 3	~~K = H~~ N	1	~~F?~~
10.6	9.1	~~II~~	~~2~~	~~K = H~~	1	—
10.6	10.2	III	3	K = H	1	F.
10.3	14.7	I	4	N	1	F.
10.0	19.0	I dq	7	K = H	1	F.
?	10.6	19.6	III b 465	3	K = H	1	F. sum
	11.0	23.3	III	3	~~K = H~~ K = 1.2H	2	F. sum.
	9.2	6.9	~~III~~ II ?	3	K = H	1	F.
	9.5	11.7	I I	3 3	N N	1 1	— —
	9.8	~~9.2~~ 9.7	III III	2 2	K = H K = H	1 1	— —
?	9.8	14.0	I	13	~~K = .8H~~ K = H	4	F. sum.
	9.5	22.3	I	7	N	1	F.
	8.7	7.4	II	2	K = H	1	F?
	8.7	13.6	I k 466	3	N	1	F.
	8.6	14.1	I	12	~~K = .2H~~ K = .3H	2	F.
	8.8	15.4	I	3	N	1	—
	8.5	15.1	III	3	K = H	1	F.
	8.9	16.0	III	2	K = H	1	—
?	8.1	16.6	I	3	N	1	sum.
	8.0	16.7	I	7	K = .2H	1	F.
	8.1	~~7.7~~	I d.	7	N	1	F.
	8.4	18.1	II a ? 467	3	K = H	1	F. sum
	8.0	18.9	I	7	N	1	F.
	8.6	23.4	I d	8	K = .2H ?	2	F

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1887phae.proj...8374

Mean 12

	No.	R.A.	Dec.	Mag.		Br.				
23 58+57.6	2865	23 58.7	+57 38	6.5	–	6.6 6.7	.7	7.3 7.4	5.4 5.6 5.5 5.7	5.4 5.5
23 57+57.7	2855	23 57.4	+57 43	6.5	–	6.7	.7	7.4	5.5 5.7	5.5
23 53+67.7	1597	23 53.6	+67 39	7.9	.	7.2	1.0	8.2	7.6 6.3 6.5	6.0
23 11+77.4	896	23 11.9	+77 22	7.3	–	6.8	1.7	8.5	6.6 6.8	5.6
22 38+76.9	870	22 39.3	+76 51	7.5	–	7.0			6.1 6.3	5.8
~~23 12+67.3~~	~~1514~~	~~23 12.7~~	~~+67 19~~	~~5.2~~	~~–~~	7.0 7.3	.7	7.7 8.0	6.0 6.3 5.8 6.1	5.5 6.1
0 19+57.8	85	0 19.7	+57 45	7.3	–	6.8 7.0	1.7	8.5 8.7	6.8 7.0 6.6 6.8	5.6 5.8
0 38+77.8	25	0 38.4	+77 41	7.0	–	6.8	1.1	7.9	6.0 6.2	5.6
23 58+68.1	1426	23 57.8	+68 4	7.0	.	6.8	.7	7.5	5.6 5.8	5.6
23 42+57.1	2653	23 42.1	+57 38	10	6.8	–				
23 40+57.8	2804	23 40.6	+57 50	5.3	–	6.5 6.8	.7	7.2 7.5	5.5 5.8 5.3 5.6	5.3 5.6
23 12+67.3	1514	23 12.7	+67 19	5.2	–	6.7 6.4	1.0	7.1 7.4	5.4 5.7 5.2 5.5	4.9 5.2
1 11+77.9	49	1 11.2	+77 58	6.0	–	6.3	1.7	8.0	6.1 6.3	5.1
0 10+58.3	24	0 10.1	+58 15	7.8	.	7.3	1.7	9.0	7.1 7.3	6.1
0 41+77.9	29	0 41.2	+77 49	8.2		7.3	1.7	9.0	7.1 7.3	6.1
~~0 38+77.8~~	~~25~~	~~0 38.4~~	~~+77 41~~	~~7.0~~	~~–~~	7.5	1.7	9.2	7.5 7.3	6.3
0 1+58.3	3	0 1.5	+58 21	2.2	–	4.9	.7	5.6	3.7 3.9	3.7
22 41+77.7	871	22 41.5	+77 44	7.2	.	6.9	1.7	8.6	6.7 6.9	5.7
0 37+68.5	49	0 37.6	+68 32	6.4	–	6.5	1.1	7.6	5.7 5.9	5.3
0 3+58.9	11	0 3.0	+58 51	7.3		6.7	.7	7.4	5.5 5.7	5.5
0 1+78.9	1	0 1.5	+78 55	6.5	–	6.3	1.8	8.1	6.2 6.4	5.1
23 53+68.6	1418	23 53.8	+68 46	7.5	.	7.0	1.1	8.1	6.2 6.4	5.8
23 50+78.9	851	23 50.1	+78 37	7.8	–	6.8 7.0	1.8	8.6 8.8	6.6 6.9 6.7 7.1 6.9	5.6 5.8
23 53+58.7	2685	23 53.2	+58 46	6.3	–	6.7 6.9	.7	7.4 7.6	5.7 5.9 5.5 5.7	5.5 5.7
23 34+79.0	790	23 34.0	+79 1	8.2	.	7.0	1.8	8.8	6.9 7.1	5.8
23 50+59.3	2795	23 50.3	+59 13	6.7	–	6.7	.7	7.4	5.5 5.7	5.5
23 22+78.9	835	23 22.5	+78 60	7.5	.	6.8	1.8	8.6	6.7 6.9	5.6
23 38+68.9	1393	23 38.2	+68 56	6.8	–	6.7	1.1	7.8	5.9 6.1	5.6
23 41+59.2	2777	23 41.8	+59 10	6.5	.	6.6	.7	7.3	5.4 5.6	5.4
22 29+78.1	801	22 28.6	+78 4	5.7	–	6.0	1.7	7.7	5.8 6.0	4.8

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Plate 843.

τ	π	Type	No. lines	Remarks.	K	Focus	Other lines.
8.5	23.7	I	6	d	N	2	F.
7.8	6.5	I	4		N	1	–
7.2	8.3	III	4683	a	K=H	1	F.
7.8	8.5	I	10		N	2	F.
7.8	8.7	I	4		N	1	F.
7.2	9.0	III	3		K=H	1	F.
7.9	10.4	I	7		N	1	F?
7.9	12.6	I	8		N	2	F.
7.4	14.7	II	3		K=H	1	F.
7.9	18.5	I	11		K=.2H	2	F.
6.9	7.2	I	6		N	1	F.
6.5	8.0	~~IV~~ II?	3		K=H	1	F.
6.2	8.9	I	4		N	1	F.
? 6.4	10.0	III?	4		K=H	1	F. Neb.
6.3	17.6	III	2		K=H	1	–
6.3	19.1	I	7	d	N	2	F.
6.2	20.6	III	2		~~N~~ K=H	1	–
6.9	21.0	I	9		?	2	F.
√.8	7.3	II	469	a	K=H	1	F.
√.3	8.7	II	470	a	K=H	1	F.
√.9	10.1	I	10		K=.2H	1	F.
6.0	10.4	~~III~~ II?	1	?	N	1	–
√.5	15.0	I	10		K=.2H	2	F.
√.7	15.7	I	9		K=.5H	2	F.
√.4	16.1	I	6		N	1	–
√.9	19.5	I	8		K=.2H	2	F.
√.5	28.7	I	7		N	1	F.
4.3	6.4	I?	.5		K=H	1	–

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Mean 12

	No.	R.A.	Dec.		Mag.					Byr.					
22 26 +78.0	796	22	25.6	+78 1	6.0	3986	5.8	23	+4 +5 +6	6.4	1.7	8.1	6.2 6.4	5.2	✓
0 30 +59.0	92	0	30.6	+59 1	6.5	.				7.0	.7	7.7	5.8 6.0	5.8	. ✓
0 25 +59.7	36	01	3.9	+79 8	6.5					6.4	.7	7.1 5.4	5.2	5.2	.
	76	0	25.4	+59 45	7.8					~~6.5~~	.7	7.3 5.6	5.4	5.4	. ✓
1 0 +78.9	34	1	2.2	+78 57	5.6	180	5.6	23	+4 +5 +6	6.1	1.8	7.9 4.9			✓
	68	0	22.3	+59 10	6.0	64	6.0	8	-9 -10	6.1	.7	6.8 5.7		4.9	.
0 22 +59.2	68	0	22.3	+59 10	6.0	64	6.0	14	-5 -10	6.7	7	7.4 6.6	6.5		
	34	1	1.0	+78 54	5.6	180	5.6	29	+12	6.7	1.8	8.5 6.8		5.5	✓
0 56 +79.3	29	0	57.1	+79 14	6.4	_				6.6 6.9	1.8	8.4 6.7 8.7 7.0	6.5 6.8	5.4 5.7	. ✓
0 42 +79.1	19	0	41.6	+79 2	7.7	.				7.0	1.8	8.8	6.9 7.1	5.8	✓
0 17 +79.3	10	0	17.9	+79 14	7.0	.				6.4	1.8	8.2	6.3 6.5	5.2	. ✓
23 56 +79.5	799	23	55.4	+79 30	7.5	_				6.9	1.8	8.7	6.8 7.0	5.7	✓ .
23 13 +79.1	777	23	13.9	+79 6	7.8	_				6.5	1.8	8.3	6.4 6.6	5.3	✓ .
0 28 +59.5	84	0	28.3	+59 31	6.0	78	5.6	17	-2 ±0	6.6	.7	7.3	5.4 5.6	5.4	. ✓
1 9 +79.4	34	1	9.2	+79 22	8.0	_				6.9	1.8	8.7	6.8 7.0	5.7	✓ .
0 31 +69.9	32	0	31.6	+69 55	7.0	.				6.9	1.2	8.1	6.2 6.4	5.7	. ✓
0 48 +79.7	24	0	48.6	+79 46	6.5	_				6.4 6.6	1.9	8.3 6.0 8.5 6.8	6.4 6.6	5.2 5.4	. ✓
23 47 +60.0	2636	23	46.6	+60 3	7.0	_				7.2 7.5	.8	8.0 6.3 8.3 6.6	6.1 6.4	6.0 6.3	✓ .
23 4 +79.7	769	23	4.6	+79 47	7.5	.				6.5	1.9	8.4	6.5 6.7	5.3	✓
22 47 +79.6	756	22	47.9	+79 37	7.2	_				6.9 7.1	1.9	8.8 7.1 9.0 7.3	6.9 7.1	5.7 5.7	✓ .
23 21 +69.5	1332	23	21.1	+69 34	6.2					6.4	1.1	7.5	5.6 5.8	5.2	✓ .
0 41 +69.9	46	0	40.8	+69 59	7.0	_				6.9	1.2	8.1	6.2 6.4	5.7	. ✓
1 6 +80.1	36	1	6.2	+80 8	6.7	_				6.3	1.9	8.2	6.3 6.5	5.1	✓ .
0 24 +70.2	24	0	24.8	+70 10	6.2	_				6.5	1.2	7.7	5.8 6.0	5.3	. ✓
0 16 +60.2	45	0	16.0	+60 8	7.5					7.0	.8	7.8	5.9 6.1	5.8	. ✓
23 57 +60.5	2667	23	57.6	+60 31	6.0	_				6.5	.8	7.3	5.4 5.6	5.3	✓ .
23 54 +60.4	2657	23	54.3	+60 28	6.0	_				6.6	.8	7.4	5.5 5.7	5.4	✓ .
23 37 +80.5	780	23	37.1	+80 30	7.8	.				6.8	2.0	8.8	6.9 7.1	5.6	✓ .
22 58 +79.9	761	22	58.8	+79 60	7.2	_				6.6	.9	7.5	5.6 5.8	5.4	.
23 10 +70.1	1311	23	10.6	+70 6	6.0	4115	5.5	52	+2 +4	6.4	1.2	7.6	5.7 5.9	5.2	✓
1 34 +80.2	55	1	34.1	+80 10	7.5	✓				6.7	1.9	8.6	6.7 6.9	5.5	✓ .

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Plate 843.

γ	H	Type	No. Lines	Remarks	K	Focus	Other Lines.
4.3	10.3	~~I~~	6		N	2	F.
4.3	11.5	I ?	3		N	1	–
4.9	12.2	~~III~~	~~2~~ 3		~~N~~ K=H	1	F.
4.1	20.7	III	2		K=H	1	–
3.6	7.6	~~I~~ II[a]	471 ~~4~~ 3		N	1	F. seen
3.5	10.4	I	4		N	1	–
3.7	10.5	I	5		N	1	–
3.9	13.1	I	3		N	1	–
3.5	15.1	I	8		K=H	2	F.
3.5	18.7	~~III~~ II ?	3		K=H	1	F.
2.9	12.2	II	3		K=H	1	F.
2.9	17.9	III	2		K=H	1	–
19.5	5.6	I	7		N	3	F.

1235

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Mean 12

	No.	R.A.	Dec.	Mag.	Br.					
0 16 + 61.0	69	0 16.8	+ 61 2	6.1	56 5.4 18	6.4	.8	7.2	5.5 5.7	5.2
0 17 + 70.9	16	0 17.5	+ 71 0	6.6	.	6.8	1.2	8.0	6.1 6.3	5.6
0 9 + 60.7	21	0 9.2	+ 60 43	6.0	–	6.7 6.9	.8	7.5 7.7	5.8 6.0	5.6 5.8 5.5 5.7
22 38 + 80.6	731	22 39.1	+ 80 36	6.7	–	6.8 7.0	2.0	8.8 9.0	7.1 7.3	6.9 7.1 5.6 5.8
1 24 + 80.7	50	1 25.0	+ 80 41	7.4	.	6.8	2.0	8.8	6.9 7.1	5.6
0 53 + 81.2	30	0 52.5	+ 81 11	8.3	.	6.9	2.0	8.9	7.0 7.2	5.7
0 50 + 81.1	25	0 49.6	+ 81 6	7.5	.	6.6	2.0	8.6	6.7 6.9	5.4
0 5 + 61.3	16	0 5.5	+ 61 14	6.7	.	6.9	.8	7.7	5.8 6.0	5.7
23 54 + 61.7	2580	23 53.4	+ 61 22	7.2	–	6.7	.8	7.5	5.6 5.8	5.5
23 41 + 61.4	2533	23 41.8	+ 61 24	5.9	–	6.7	.8	7.5	5.6 5.8	5.5
0 28 + 81.7	13	0 29.0	+ 81 42	6.3	–	6.6	2.1	8.7	6.8 7.0	5.4
23 10 + 81.6	814	23 9.6	+ 81 36	8.0	–	7.0 7.2	2.1	9.1 9.3	7.4 7.6	7.2 7.4 5.8 6.0
0 28 + 53.1	105	0 28.9	+ 53 6	4.1	82 3.7 23	5.4	.6	6.0	+4 +5 4.1 5.3	4.3

224 / 13 = 17 / 11 = 187 / 10

230 / 13 = 17 / 11 = 14-18 / 10

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Plate 950.

	V	H	Type	No. Lines / Remarks.	K	Focus	Other lines.
12.41 9 10	22.0	9.9	I	9	N	2	F?
	22.3	10.9	I	8	N	2	—
	23.0	11.9	I?	2	N	1	—
	22.2	12.0	II?	2	K=H	1	neb.
	22.0	13.6	I	4	K=H	1	—
	21.6	15.7	I	8	K=.2H?	2	F?
?	21.5	19.3	II a	4723	K=H	1	F. neb.
	21.8	20.2	I	6	K=.5H	1	—
	20.3	8.8	III	3	K=H	1	F.
?	20.1	9.2	I	br 4739	?	4	F. neb.
	20.0	9.8	I	8	N	2	F.
	20.0	10.4	I	3	N	1	F.
	20.2	13.3	I	3	N	1	F.
	19.9	15.4	I	V	K=H	1	—
?	20.0	19.7	II?	2	K=H	1	neb.
	19.5	22.3	II a	4744 2	K=H N	1	Neb.
?	18.0	6.4	I	9	?	4	F. neb.
	18.9	13.7	I	3	N	1	—
	19.0	15.6	I	8	N	2	F.
?	18.9	15.9	II?	3	K=H	1	F. neb.
	18.0	15.2	I	11	N	3	F.
	18.2	18.5	I	8	K=.5H ~~K=.2H~~	1	F.
?	18.0	18.7	III	3	K=H	1	F. neb.
	18.5	21.0	I	6	K=.5H	1	F.
	17.5	6.7	I	7	?	2	F.
	17.7	14.7	I	7	N	1	F.
Recorded above.	17.9	15.1	I	10	N	3	F.
	17.4	16.5	I	9	N	2	F.

12.55

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Mean 7

	No.	R.A.	Dec.	Mag.		Bn.		
0 16 +51.2	62	0 16.4	+51 13	6.0	55 5.4 13 +0	6.2	.5 6.7 5.4	5.5
0 17 +61.0	69	0 16.8	+61 2	6.1	56 5.4 12 -1	5.8	.8 6.6 5.3	5.1
0 10 +50.7	46	0 10.8	+50 38	6.5		~~6.5~~	~~.5 7.~~ 5.7	.
0 17 +71.0	16	0 17.5	+71 0	6.6	-	6.8	1.2 8.0 6.7	6.1
	.6	0 5.5	+ 61 14	6.7		6.9	.8 7.7 6.4	
0 5 +61.2	~~2586~~	~~23 56.8~~	~~+61 29~~	~~5.6~~	-	6.9		6.2
23 54 +71.4	1246	23 54.3	+71 26	6.9	-	6.5	1.2 7.7 6.4	5.8
23 42 +61.4	2533	23 41.8	+61 24	5.9	-	6.6	.8 7.4 6.1	5.9
23 26 +71.3	1208	23 26.4	+71 12	6.8	-	6.8	1.2 8.0 6.7	6.1
0 39 +71.9	37	0 38.8	+71 53	6.5	-	6.9 / 7.1	8.2 6.9 / 1.3 8.4 7.1	6.2 / 6.4
0 24 +62.1	102	0 24.8	+62 8	4.5		5.1	.8 5.9 4.6	4.4
0 17 +52.3	61	0 17.3	+52 15	6.0	57 5.8 9-4	6.2	.5 6.7 5.4	5.5
0 28 +72.1	35	0 28.8	+72 6	6.7		6.9	1.3 8.2 6.9	6.2
0 10 +72.2	15	0 10.2	+72 8	7.0	.	7.0	1.3 8.3 7.0	6.3
23 56 +72.3	1136	23 56.0	+72 21	7.0	-	6.7	1.3 8.0 6.7	6.0
23 28 +72.1	1109	23 28.0	+72 8	7.5	-	7.1	1.3 8.4 7.1	6.4
23 36 +52.3	3503	23 36.1	+52 21	6.5	.	6.9	.5 7.4 6.1	6.2
0 29 +53.1	105	0 28.9	+53 6	4.1		4.8	.6 5.4 4.1	4.1
0 4 +52.8	19	0 4.6	+52 49	6.5	.	7.0	.5 7.5 6.2	6.3
23 53 +72.9	1135	23 54.3	+72 48	6.5	.	6.4	1.3 7.7 6.4	5.7
23 56 +61.5	2586	23 56.8	+61 29	5.6	-	6.7	.8 7.5 6.2	6.0
23 59 +63.4	2107	23 59.0	+63 22	5.4	1 55 11-2	5.7	9 6.6 5.3	5.0
23 44 +63.2	2064	23 43.9	+63 11	6.6	- ~~55~~	6.8	.9 7.7 6.4	6.1
23 33 +73.3	1047	23 33.1	+73 10	5.6	-	6.5 / 6.8	7.8 6.5 / 1.3 8.1 6.8	5.8 / 6.1
23 33 +62.9	2268	23 33.1	+62 55	6.7	-	6.9	.9 7.8 6.5	6.2
0 28 +53.4	102	0 28.1	+53 22	5.8		5.8	.6 6.4 5.1	5.1
0 1 +73.4	2	0 1.0	+73 26	7.0	.	6.9	1.4 8.3 7.0	6.2
			+					
23 48 +73.6	1063	23 47.9	+73 36	7.0	4226 6.6 12-1	6.4	1.4 7.8 6.5	5.7

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10 a.m.

Plate 950.

	H	Type	No. Lines. Mr. Reinmuth.	K	Focus	Other Lines.	
17.5	20.2	I	3	N	1	—	23
17.0	21.9	I	11	N	2	F.	23
16.5	7.2	I	8	K=.5H	1	F?	
16.9	8.1	I	14	N	3	F.	
16.2	9.6	I	10	N	3	F.	
16.0	9.9	I	10	K=.2H	2	F.	
16.5	10.1	I?	6	~~N~~ K=H	1	F?	
16.5	15.9	I	I .5 H	N K=H	1	— —	2
16.4	18.9	I	7	N	1	F.	2
15.3	16.7	III	3	K=H	1	F.	23
15.6	18.4	I	10	K=.2H	2	F.	23
15.5	19.7	I	8	?	2	F.	2
15.0	21.1	I	10	K=.2H	2	F.	23
14.5	8.6	I	5	?	1	F.	0
14.4	13.9	~~I~~ II a	475 2	~~N~~ K=H	1	Reen	0
14.0	14.1	I	6	N	1	—	0
? 14.2	15.9	~~N~~ II a	476 ~~3~~ 2	~~K=H?~~ ~~K=.8H~~ K=H	1	F. eeu.	2
? 14.8	17.4	~~I~~ I b	477 ~~X~~ 10	~~N~~	3	F. eeu. ?	23
? 14.8	17.9	II a	478 ~~4~~ 2	K=H	2	F. eeu.	23
14.5	18.2	~~I~~ II a ?	479 ~~X~~ 2	K=H	1	F?	23
14.2	22.1	I	4	K=.8H	1	—	23
14.6	22.2	III	b.c 480 3	~~K=H~~ K=1.2H	3	F. Reen. bright?	23
14.1	22.6	I	6	N	2	—	23
13.6	8.0	III	3	K=H	1	F	0
13.1	10.2	I	9	N	2	F.	0
13.7	13.5	I	10	N	2	F.	0
? 13.6	16.0	I?	6	N	1	F.	23
? 12.9	6.0	III	b.c 481 3	~~K=2.5H?~~ K=3.0H	4	F. eeu. bright?	0

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	No	R.A.	Dec.	Mag.		Means Br.			
23 22 +73.3	1035	23 22.0	+ 73 19	7.5	.	7.0	1.4 8.4 7.1	6.3	✓
23 9 +73.5	1023	23 9.5	+ 73 27	6.2	4112 5.6 15+2	5.7	1.4 7.1 5.8	5.0	✓
0 54+73.6	51	0 54.5	+ 73 36	6.8	–	6.6	1.4 8.0 6.7	5.9	✓
0 23+53.7	82	0 23.8	+ 53 43	5.2	69 4.8 13+0	5.5	.6 6.1 4.8	4.8	✓
0 39+74.0	29	0 38.2	+ 74 4	5.8	114 5.3 17+4	5.6	1.4 7.0 5.7	4.9	✓
0 36+74.2	27	0 36.2	+ 74 12	5.5	–	5.8	1.4 7.2 5.9	5.1	✓
0 22+63.9	53	0 22.1	+ 63 57	7.0	.	6.9	9 7.8 6.5	6.2	✓
23 52+73.9	1068	23 52.0	+ 73 60	7.5	.	7.1 7.3	1.4 8.5 7.2	6.4	✓
23 41+64.1	1861	23 41.7	+ 64 4	6.5	.	6.2	9 7.1 5.8	5.5	✓
23 45+74.7	1047	23 45.4	+ 74 44	6.3	–	6.6 / 6.9	1.4 { 8.0 6.7 / 8.3 7.0 }	5.9 / 6.5	✓
23 33+74.5	1032	23 33.1	+ 74 28	6.5	–	5.5	1.4 6.9 5.6	4.8	✓
23 23+74.4	1022	23 23.3	+ 74 26	7.1		6.1	1.4 7.5 6.2	5.4	✓
23 12+74.5	1016	23 12.3	+ 74 31	6.6	–	6.1	1.4 7.5 6.2	5.4	✓
0 47+74.7	41	0 47.7	+ 74 42	8.0		6.9	1.4 8.3 7.0	6.2	✓
0 4+55.1	15	0 4.8	+ 55 9	7.4	.	7.2	.6 7.8 6.5	6.5	✓
0 6+75.3	4	0 6.0	+ 75 13	7.1	.	7.0	1.5 8.5 7.2	6.3	✓
23 55+65.3	1987	23 55.2	+ 65 17	6.3	–	6.5	9 7.4 6.1	5.8	✓
23 51+54.9	3082	23 51.7	+ 54 57	5.0	4237 5.0 10-3	5.4	.6 6.0 4.7	4.7	✓
23 50+74.9	3076	23 49.9	+ 54 55	6.0	–	6.3	.6 6.9 5.6	5.6	✓
23 33+74.9	1033	23 33.7	+ 74 55	8.0	–	7.0	1.5 8.5 7.2	6.3	✓
23 25+64.9	1819	23 25.7	+ 64 56	6.2	–	6.8	9 7.7 6.4	6.1	✓
23 3+74.6	1006	23 3.3	+ 74 36	4.6	–	5.3 / 5.5	1.4 { 6.7 5.4 / 6.9 5.6 }	4.6 / 4.8	✓
23 1+74.8	1002	23 1.8	+ 74 48	7.3	.	6.3	1.5 7.8 6.5	5.6	✓
0 33+65.3	83	0 33.5	+ 65 20	6.0	–	6.8 / 7.0	.9 { 7.7 6.4 / 7.9 6.6 }	6.1 / 6.3	✓
0 23+65.7	67	0 23.2	+ 65 43	6.5	.	6.0	1.0 7.6 5.7	5.3	✓
0 10+75.5	7	0 10.2	+ 75 28	7.4	.	6.4	1.5 7.9 6.6	5.7	✓
23 54+65.7	1985	23 54.6	+ 65 38	6.9	.	6.5	1.0 7.5 6.2	5.8	✓
0 32+55.7	139	0 32.3	+ 55 45	var.	–	5.0 / 5.4	.6 { 5.6 4.3 / 6.0 4.7 }	4.3 / 4.7	✓

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Plate 950.

	V	H	Type	No. Lines. Remarks.	K	Focus	Other Lines.
	12.4	6.1	I	7	K=H	1	F.
	12.5	9.6	I	9	N	1	F
	12.9	9.8	I	6	N	1	—
	12.4	11.1	III	1	N	1	~~F~~ —
?	12.3	12.2	I b?	4826	K=H?	1	F. diff.
	12.5	13.9	I	9	N	2	F.
	12.1	14.3	I	7	N	1	F.
?	12.0	15.4	III b	4833	K=H	1	F. diff.
?	12.6	19.0	I b	4841 N8	N	2	F. diff.
	12.3	23.3	I	V	K=H	1	F.
	11.1	16.4	I II a	4850 N3	K=H	2	F
	11.0	17.1	I	V	K=1.2 H	1	—
?	11.0	17.7	II	4861	K=1.5 H	5	~~F~~ Bright. diff.
	11.5	22.2	I	V	N	1	—
	11.0	9.7	I	3	N	1	—
	10.6	12.2	III	3	K=H	1	F.
	10.6	18.5	I	11	K=1.2 H?	3	F.
	10.2	18.6	I	10	N	1	F.
	10.2	20.7	I	8	N	1	F.
	10.3	22.0	I	3	N	1	—
	10.0	7.0	III?	3	K=H	1	F.
	9.3	8.5	III	2	K=H	1	—
	9.0	9.7	I	3	N	1	—
	9.0	10.7	III	3	K=H	1	F.
	9.9	14.0	~~II~~ II	?	N?	1	F.
d	9.4	14.3	II II	II? 12	N K=H	11	— —
?	9.5	15.3	III	3	K=H	1	F. diff.
	9.3	15.6	I b	4871 10	N	1	F.

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	No	R.A.	Dec.	Mag.		Means Br.
1 10 +75.5	59	1 10.3	+75 28	6.2	_	6.7 1.5 8.2 6.9 6.0 ✓
0 26 +65.9	70	0 26.0	+65 57	6.5	.	6.4 1.0 7.4 6.1 5.7 ✓
0 19 +75.8	74	0 18.8	+75 50	6.5	.	6.6 .6 7.2 5.9 5.9 ✓
0 31 +76.1	14	0 30.5	+76 5	7.0	_	6.9 8.4 7.1 6.2 / 7.2 1.5 8.7 7.4 6.5 ✓
0 21 +76.3	10	0 21.7	+76 13	6.5	_	6.3 1.6 7.9 6.6 5.6 ✓
0 8 +76.2	5	0 8.1	+76 9	6.5	35 6.2 9-4	~~5.4~~ ~~7.0~~ / 5.5 1.6 7.1 5.8 4.8 ✓
0 3 +56.3	11	0 2.9	+56 21	6.7	.	6.4 .6 7.6 5.7 5.7 ✓
23 57 +66.4	1679	23 57.2	+66 21	6.0	_	6.6 7.6 6.3 5.9 ✓ / 6.9 1.0 7.9 6.6 6.2
23 39 +65.9	1923	23 39.4	+65 58	6.3	4199 6.0 6-7	5.6 1.0 6.6 5.3 4.9 ✓
22 50 +75.5	~~901~~	~~23 50.3~~	~~+75 30~~	~~7.8~~	_	~~8.58 22 50.6 + 75 34 7.7~~ / 7.0 1.5 8.5 7.2 6.3 ✓ / ~~7.0~~
23 45 +76.8	934	23 45.0	+76 48	6.9	_	6.2 1.6 7.8 6.5 5.5 ✓
23 52 +56.8	3127	23 52.1	+56 32	7.4	_	7.0 .7 7.7 6.4 6.3 ✓
23 33 +76.8	928	23 33.4	+76 50	3.5	_	7.3 1.6 ✓
22 57 +76.1	892	22 57.2	+76 6	7.3	.	7.0 1.5 8.5 7.2 6.3 ✓
0 26 +66.7	39	0 26.2	+66 43	7.5	.	7.1 1.0 8.1 6.8 6.4 ✓
0 13 +67.0	27	0 13.7	+67 1	6.5	_	6.9 7.9 6.6 6.2 / 7.1 1.0 8.1 6.8 6.4 ✓
23 41 +66.9	1562	23 41.0	+67 0	5.5	_	5.0 1.0 6.0 4.7 4.3 ✓
23 25 +77.1	908	23 25.2	+77 5	7.0	.	6.2 1.5 7.7 6.4 5.5 ✓
23 30 +67.0	1542	23 30.0	+67 3	7.2	.	6.9 1.0 7.9 6.6 6.2 ✓
23 34 +57.0	2780	23 34.1	+57 2	7.2	.	7.1 .7 7.8 6.5 6.4 ✓
1 8 +76.8	40	1 8.4	+76 48	6.4	_	6.6 8.2 6.9 5.9 ✓ / 6.7 1.6 8.3 7.0 6.0
0 24 +57.5	98	0 24.3	+57 32	7.1	_	6.9 7.6 6.3 6.2 / 7.1 .7 7.8 6.5 6.4 ✓
0 19 +57.8	85	0 19.7	+57 45	7.3	.	7.0 .7 7.7 6.4 6.3 ✓
0 38 +77.7	25	0 38.4	+77 41	7.0	_	6.9 8.6 7.3 6.2 / 7.1 1.7 8.8 7.5 6.4 ✓
0 4 +57.4	28	0 4.0	+57 24	7.5	_	6.9 .7 7.6 6.3 6.2 ✓
0 3 +57.7	16	0 2.9	+57 41	8.1	_	7.2 7.2 .7 7.9 6.6 6.5 ✓
23 59 +57.6	2865	23 58.7	+57 38	6.5	_	6.5 7.2 5.9 5.8 / 6.6 .7 7.3 6.0 5.9 ✓
23 57 +57.7	2855	23 57.4	+57 43	6.5	.	6.5 .7 7.2 5.9 5.8 ✓

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Plate 950.

ν	H	Type	No. Lines	K	Focus	Other Lines. Remarks.
	9.4 20.0	I?	√	K=.5H	1	F.
	9.2 23.8	I	9	K=H	1	F
?	9.2 23.9	~~N~~ IIa	488 3	K=2.5H?	2	F. sm.
	8.3 √.9	I	9	K=H	2	F.
√	8.0 12.0	I	I √ 6 5 √ N N √		1 1	F. —
?	8.2 14.6	II a?	489 ~~2~~ 3	K=H	√	F. sm.
	8.6 15.2	I	7	N	1	F
?	8.3 19.6	~~N~~ I	~~2~~ 3	N	1	F. sm.
?	8.9 20.2	III	3	K=1.5H	2	F. sm.
	8.4 23.5	I	4	N	1	—
	7.7 7.5	I II	2	K=H	2	F?
	7.2 8.0	~~I~~ I	~~2~~ 3	N	1	F
	7.1 14.2	I	4	N	1	F.
	7.0 14.6	I	10	K=.8H	2	F.
	7.4 19.6	I	7	N	1	F
	7.8 22.9	I	7	K=.5H	1	F.
	6.3 7.1	I	2	N	1	—
	6.3 9.0	I	10	N	2	—
	6.3 9.3	I	8	N	1	—
	6.3 13.1	I	9	N	1	F.
	6.8 15.7	I	3	N	1	—
	6.3 17.4	I	√	N	1	F?
	6.7 18.7	I	6	N	1	—
	6.3 19.1	I	8	N	1	F.
	6.3 19.6	I	6	N	1	F
	6.8 23.9	I	9	K=H	2	F
	6.7 24.3	I	7	N	1	F.
	5.1 21.6	I ?	6	~~N~~ K=H	1	F.

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Means

	No	R.A.	Dec	Mag.			Br.				
23 11 +77.4	896	23 11.9	+77 22	7.3	–		6.9	1.7	8.6	7.3	6.2
22 39+76.9	870	22 39.0	+76 51	7.5	–		6.8	16	8.4	7.1	6.1
23 12+ 67.3	1514	23 12.7	+67 19	5.2	–		5.8	1.0	6.8	5.5	5.1
0 34+ 57.9	132	0 34.2	+57 58	6.5	–		6.5	.7	7.2	5.9	5.8
0 11 +58.3	30	0 11.6	+58 20	7.3	.		6.9	7.8	.7	7.6	6.3
0 1 +58.3	3	0 1.5	+58 21	2.2	–		4.0	.7	4.7	3.4	3.3
23 57+68.0	1426	23 57.8	+68 4	7.0	.		6.8	1.1	7.9	6.3	6.1
23 42+58.2	2653	23 42.1	+58 16	6.8	–		6.6	.7	7.3	6.0	5.9
	2804	23 40.6	+57 50	5.3			6.2	.7	6.9	5.6	5.5
23 40+57.8	~~2612~~	~~23 41.6~~	~~+57 43~~	~~6.3~~	–		6.5	.7	7.2	5.9	5.8
22 38+77.3	868	22 38.4	+77 16	8.1	.		6.9	16	8.5	7.2	6.2
1 11 +77.9	49	1 11.2	+77 58	6.0	–		6.0	1.7	7.7	6.4	5.3
0 37+68.6	49	0 37.6	+68 32	6.4			6.6	1.1	7.7	6.4	5.9
0 3+58.9	11	0 3.0	+58 51	7.3	.		6.5	.7	7.2	5.9	5.8
0 1+78.9	1	0 1.5	+78 55	6.5	–		5.6	1.8	7.4	6.1	4.9
23 11+78.4	825	23 11.4	+78 27	7.5	.		6.8	1.7	8.5	7.2	6.1
22 41+77.8	871	22 41.5	+77 44	7.2	–		6.6	1.7	8.3	7.0	5.9
0 30+59.0	92	0 30.6	+59 1	6.5			6.8	.7	7.5	6.2	6.1
1 0+78.9	34	1 0.0	+78 54	5.6	180 5.6 18+5		5.6	1.8	7.4	6.1	4.9
0 22+59.2	68	0 22.3	+59 10	6.0	64 6.0 11-2		6.4	.7	7.1	5.8	5.7
0 18+79.3	10	0 17.9	+79 14	7.0	.		6.0	1.8	7.8	6.5	5.3
23 50+78.9	851	23 50.1	+78 57	7.8	.		6.9	1.8	8.7	7.4	6.2
23 50+59.3	2745	23 50.3	+59 13	6.7	.		6.5	.7	7.2	5.9	5.8
23 38+68.9	1393	23 38.2	+68 56	6.8	.		6.7	1.1	7.8	6.5	6.0
23 13+79.1	777	23 13.9	+79 6	7.8	.		6.5	1.8	8.3	7.0	5.8
23 42+59.2	2777	23 41.8	+59 10	6.5	.		6.6	.7	7.3	6.0	5.9
22 29+78.1	801	22 28.6	+78 4	5.7	–		5.6	1.7	7.3	6.0	4.9
22 26+78.0	796	22 25.6	+78 1	6.0	3986 5.8 19+6		6.0	1.7	7.7	6.4	5.3
23 21+69.6	1332	23 21.1	+69 34	6.2	4150 5.7 17+4		6.3	1.1	7.4	6.1	5.6

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Plate 835.

		Type	No. lines	K	Focus	Other lines.
		Remarks				
12 25	21.0 6.1	I ?	3	K=H	1	F.
	21.0 8.7	I ?	1	N	1	—
?	21.6 14.3	II a ?	490 3	K=1.2 H	3	F. diff.
?	21.0 21.6	III b	491 3	K=H	2	F. diff.
?	20.1 6.1	III ?	3	K=H	1	F. diff.
?	20.3 7.3	III	3	K=H	1	F. diff.
	20.4 9.1	I	7	N	1	F
	20.4 11.2	III	3	K=H	1	F
	19.4 10.3	I	8	N	2	F
	19.5 10.9	II ?	3	K=H	1	F
	19.3 12.7	III	3	K=H	1	F
	19.6 12.8	IV	3	K=H	1	F
	19.4 13.6	I ?	2	N	1	—
	19.8 15.7	I	6	N	1	F.
	18.5 12.0	I	7	N	1	F
	18.9 12.3	III	3	K=1.5 H ?	1	F
	18.6 14.6	III ?	3	K=H	1	F
	18.8 22.0	I	3	N	1	F.
	17.2 6.4	I ?	3	N	1	F.
	17.4 9.8	I	8	K=.2 H	1	F.
	17.6 10.7	I ?	3	K=H	1	F.
	17.3 11.9	II	3	K=H	1	F.
	17.8 12.3	I	9	N	2	F
	17.2 12.6	III	3	K=H	1	F.
	17.2 16.2	I	8	K=H	2	F
	17.6 16.6	I	6	N	1	F
	17.6 17.8	I	8	K=H	2	F
	17.3 18.7	I	8	K=.2 H	2	F.

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Mean 12

	No.	R.A.	Dec.	Mag.		Br.			
1 50+76.6	63	1 50^.8	+ 76^ 35	5.3	–	6.4	1.6	8.0 6.7	5.2 ✓
1 8+67.0	168	1 8^.5	+ 67^ 3	6.8		7.0	1.0	8.0 6.7	5.8 ✓
0 40+57.0	150	0 40^.4	+ 57^ 2	3.8	–	5.8	.7	6.5 5.2	4.6 ✓
23 33+76.8	928	23 33^.4	+ 76^ 50	3.5	–	5.6 / 6.0	1.6	7.2 5.9 / 7.6 6.3	4.4 ✓ / 4.8
1 11+57.5	260	1 11^.0	+ 57^ 28	6.1	–	6.4 / 6.6	.7	7.1 5.6 / 7.3 6.0	5.2 ✓ / 5.4
1 16+67.4	123	1 15^.8	+ 67^ 22	5.2	–	6.4 / 6.6	1.0	7.4 6.3 / 7.6 6.5	5.2 ✓ / 5.4
0 59+57.5	200	0 59^.7	+ 57^ 29	6.5	177 5.7 15.2	6.5	.7	7.2 5.5	5.3 ✓
0 52+57.6	179	0 51^.9	+ 57^ 35	7.0	–	7.0 / 7.2	.7	7.7 6.0 / 7.9 6.2	5.8 / 6.0 ✓
1 0+68.0	77	1 0^.9	+ 68^ 0	6.0	184 5.3 20+3	6.2	1.1	7.3 5.6	5.0 ✓
1 11+77.9	49	1 11^.2	+ 77^ 38	6.0	–	6.8	1.7	8.5 6.8	5.6 ✓
0 46+58.2	134	0 46^.4	+ 58^ 11	5.0	–	6.5 / 6.8	.7	7.2 5.5 / 7.5 5.8	5.3 / 5.6 ✓
0 47+67.9	81	0 47^.6	+ 67^ 60	6.7	–	6.8 / 7.0	1.1	7.9 6.2 / 8.1 6.4	5.6 / 5.8 ✓
0 43+68.1	57	0 43^.6	+ 68^ 5	7.4		7.1	1.1	8.2 6.5	5.9 ✓
0 34+57.9	132	0 34^.2	+ 57^ 58	6.5	.	6.5	.7	7.2 5.5	5.3 ✓
0 52+68.6	64	0 52^.0	+ 68^ 34	7.0	.	6.7	1.1	7.8 6.1	5.5 ✓
0 48+58.4	138	0 48^.1	+ 58^ 23	5.0	–	6.3 / 6.5	.7	7.0 5.3 / 7.2 5.7	5.1 / 5.3 ✓
0 37+68.5	49	0 37^.6	+ 68^ 32	6.4	–	6.7 / 6.8	1.1	7.8 6.1 / 7.9 6.2	5.5 / 5.6 ✓
23 58+68.1	1426	23 57^.8	+ 68^ 4	7.0	.	7.0	1.1	8.1 6.4	5.8 ✓
2 0+78.5	73	~~2 0^.0~~ 59.9	+ 78^ 29	7.3		6.8	1.7	8.5 6.8	5.6
0 58+59.1	181	0 58^.0	+ 59^ 5	7.2	–	6.7	.7	7.4 5.7	5.5 ✓
0 59+68.9	74	0 59^.4	+ 68^ 55	7.9	–	6.8	1.1	7.9 6.2	5.6 ✓
1 4+79.2	36	1 3^.9	+ 79^ 8	6.5	–	6.6	1.8	8.4 6.7	5.4 ✓
1 0+78.9	34	1 0^.0	+ 78^ 54	5.6	180 5.6 23+6	6.1	1.8	7.9 6.2	4.9 ✓
0 56+79.3	29	0 57^.1	+ 79^ 14	6.4	–	6.8 / 7.0	1.8	8.6 6.9 / 8.8 7.1	5.6 / 5.8 ✓
0 17+79.3	16	0 17^.9	+ 79^ 14	7.0	–	6.5	1.8	8.3 6.6	5.3 ✓
0 30+59.0	92	0 30^.6	+ 59^ 1	6.5	.	6.7	.7	7.4 5.7	5.5 ✓
0 1+78.9	1	0 1^.5	+ 78^ 55	6.5	–	6.4	1.8	8.2 6.5	5.2 ✓
0 22+59.2	68	0 22^.3	+ 59^ 10	6.0	–	6.5	.7	7.2 5.5	5.3 ✓

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Plate 835.

	V	H	Type	No. Lines	Remarks.	K	Focus	Other Lines.
?	17.3	23.8	II	2		K=H	1	F. diff.
	18.0	24.3	I?	9		~~K=H~~ K=1.2H	4	F.
	16.4	6.8	I	6		N	1	—
	16.4	7.0	III?	3		K=H	1	F.
	16.0	7.1	III	3		K=H	1	F.
	16.6	12.4	I	7		N	2	F.
	16.2	12.7	I	5		N	1	F.
	16.2	13.4	III	3		K=H	1	F.
	16.6	17.2	I	10		K=.5H	2	F.
	16.0	22.1	III?	3		K=H	1	F.
	15.0	8.2	II	2		K=H	1	—
?	15.0	10.7	III a	492		3 K=H	1	F. diff.
	15.3	11.3	I	7		K=.5H	1	F.
	15.4	12.0	I	10		K=H	2	F.
	15.9	12.4	I?	8?		?	5	F. Bright.
?	15.1	13.3	~~II~~ II a	?		493 4 K=H	2	F. diff.
?	15.7	14.1	~~II~~ I	?		~~3~~ 4 K=H	1	F. diff.
	15.7	15.6	I	7		N	1	F.
	15.3	16.7	I	11		K=.2H	2	F.
	15.1	20.2	III	2		K=H	1	—
	14.7	8.3	I	8		K=H	2	F.
?	14.7	9.6	~~III~~ I	?		~~3~~ 4 K=H	1	F. diff.
	14.0	10.5	II a	494		2 K=H	2	F?
	13.9	10.5	II			2 K=H	2	F.
?	14.6	14.2	III?			2 K=H	1	diff.
	13.5	8.4	I	9		K=H	2	F.
?	13.2	8.5	III	3		K=H	1	F.
	13.5	8.6	I	6		N	1	—

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1887phae.proj..837F

Mean 12

	No	R.A.	Dec.	Mag.		Br.				
0 3+58.9	11	0 3.0	+58 51	7.3	–	6.9	.7	7.6	5.9	5.7
0 1+58.3	3	0 1.5	+58 21	2.2	–	4.8	.7	5.5	3.8	3.6
1 56+79.0	63	1 56.6	+79 0	6.7	.	7.0	1.8	8.8	7.1	5.8
1 22+69.3	103	1 21.9	+69 17	7.0	–	6.6 / 6.7	1.1	7.7 / 7.8	6.0 / 6.1	5.4 / 5.5
1 20+69.5	102	1 20.5	+69 31	6.1	–	6.4 / 6.5	1.1	7.5 / 7.6	5.8 / 5.9	5.2 / 5.3
0 48+59.5	146	0 48.1	+59 35	6.3	145 5.5 14-3	6.2	.7	6.9	5.2	5.0
0 48+69.7	55	0 48.7	+69 43	6.8	.	6.6	1.2	7.8	6.1	5.4
0 48+79.7	24	0 48.6	+79 46	6.5	–	6.7 / 6.8	1.9	8.6 / 8.7	6.9 / 7.0	5.5 / 5.6
0 28+59.5	84	0 28.3	+59 31	6.0	–	6.5	.7	7.2	5.5	5.3
23 14+79.1	777	23 13.9	+79 6	7.8	–	6.8 / 6.9	1.8	8.6 / 8.7	6.9 / 7.0	5.6 / 5.7
1 5+60.1	188	1 4.9	+60 7	7.2	–	7.0	.8	7.8	6.1	5.8
0 55+60.3	157	0 54.7	+60 18	6.5	–	6.5 / 6.6	.8	7.3 / 7.4	5.6 / 5.7	5.3 / 5.4
0 56+70.2	78	0 57.0	+70 9	6.7	–	6.7	1.2	7.9	6.2	5.5
1 6+80.1	36	1 6.2	+80 8	6.7	–	6.6	1.9	8.5	6.8	5.4
0 48+59.9	144	0 48.0	+59 36	2.3		4.0	.8	4.8	3.1	2.8
0 44+60.3	124	0 44.5	+60 19	5.0	–	6.0	.8	6.8	5.1	4.8
0 40+69.9	46	0 40.8	+69 59	7.0	–	6.8	1.2	8.0	6.3	5.6
0 31+69.9	32	0 31.6	+69 55	7.0	.	6.9	1.2	8.1	6.4	5.7
0 24+70.2	24	0 24.8	+70 10	6.2	–	6.5	1.2	7.7	6.0	5.3
0 16+60.2	45	0 16.0	+60 8	7.5	–	6.9 / 7.0	8	7.7 / 7.8	6.0 / 6.1	5.7 / 5.8
1 15+70.3	102	1 15.2	+70 13	6.1	–	6.6	1.2	7.8	6.1	5.4
1 34+80.2	55	1 34.1	+80 10	7.5	–	6.9	1.9	8.8	7.1	5.7
0 55+60.8	158	0 55.4	+60 49	6.0	–	6.6	.8	7.4	5.7	5.4
1 24+80.7	50	1 25.0	+80 41	7.4	–	6.5	2.0	8.5	6.8	5.3
0 40+70.4	53	0 40.7	+70 23	7.3	–	6.9 / 7.1	1.2	8.1 / 8.3	6.4 / 6.6	5.7 / 5.9
1 52+80.6	64	1 51.8	+80 36	6.1	–	6.3	2.0	8.3	6.6	5.1
1 53+80.8	65	1 52.6	+80 46	6.7	–	6.7 / 6.9	2.0	8.7 / 8.9	7.0 / 7.2	5.5 / 5.7
1 4+60.9	186	1 4.0	+60 56	6.6	.	6.7	.8	7.5	5.8	5.5

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Plate 835.

	T	H	Type	No. lines	Remarks:	K	Focus	Other lines.
	13.9	9.8	III	3		K=H	1	F.
	13.6	13.5	I	6		?	1	F.
	13.6	17.9	II	3		K=H	1	F.
	13.6	19.8	I	10		H	2	F.
	13.9	21.8	III	3		K=H	1	F.
?	13.9	22.7	~~IV~~ I ?	3		K=H	1	F. diff.
	12.2	6.0	III	3		K=H	1	F.
	12.2	14.5	III	3		K=H	1	F.
?	12.5	15.0	III b?	495 3		K=H	1	F. diff.
	12.6	18.4	II a?	496 2		K=H	1	—
?	12.8	22.5	~~III~~ I a ?	3		K=H	1	F. diff.
	11.3	9.2	III	2		K=H	1	—
	11.8	10.4	I	√		K=H	1	F.
	11.7	15.9	II ?	3		K=H	1	F.
	11.3	17.2	II	3		K=H	1	F.
?	11.6	17.8	I b?	497 6		?	3	F.
	11.4	18.7	I	6		K=H	1	F.
√ √	11.3	21.9	I I √	3 3		H N	11	— —
	10.6	7.2	III	3		K=H	2	F.
	10.2	14.2	I	12		K=.2H	2	F.
	10.9	17.5	I	9		K=.2H.	2	F.
?	10.6	20.8	III ?	3		K=H	1	F. diff.
	9.3	9.7	III	3		K=H	1	F
	9.9	13.8	I	3		N	1	—
?	9.1	14.0	~~III~~ II a ?	498 √		K=.5H ?	2	F. diff.
	9.7	20.9	I	√		K=H	1	F.
	9.4	21.3	III	3		K=H	1	F.
?	8.1	7.8	~~II~~ I	4		K=H	1	F. diff.

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1887phae.proj...8375

Mean 1900

	No.	R.A.	Dec.	Mag.		Brc.		
1 35+80.6	57	1 34.9	+80 39	7.5	–	6.9 / 7.2	2.0	8.9 7.2 / 7.2 7.5	5.7 / 6.0
0 50+81.1	25	0 49.6	+81 6	7.5		6.7	2.0	8.7 7.0	5.5
0 17+70.9	16	0 17.5	+71 0	6.6	–	6.8	1.2	8.0 6.3	5.6
0 17+61.0	69	0 16.8	+61 2	6.1	56 5.4 14-3	6.0	.8	6.8 5.1	4.8
0 9+60.8	21	0 9.2	+60 43	6.0	–	6.7 / 6.9	.8	7.5 5.8 / 7.7 6.0	5.5 / 5.7
22 58+79.9	761	22 58.8	+79 60	7.2	–	6.7	1.9	8.6 6.9	5.5
2 27+80.8	86	2 27.2	+80 50	5.9	–	6.8 / 7.1	2.0	8.8 7.1 / 9.1 7.4	5.6 / 5.9
0 39+71.9	37	0 38.8	+71 53	6.5	–	6.6 / 6.9	1.3	7.9 6.2 / 8.2 6.5	5.4 / 5.7
0 28+81.6	13	0 29.0	+81 42	6.5	–	6.5 / 6.6	2.1	8.6 6.9 / 8.7 7.0	5.3 / 5.4
0 23+61.5	101	0 22.6	+61 33	7.5	–	7.0	.8	7.8 6.1	5.8
0 5+61.2	16	0 5.5	+61 14	6.7	–	6.0	.8	6.8 5.1	4.8
1 13+72.1	69	1 13.3	+72 5	6.7	–	6.8 / 7.2	1.3	8.2 6.5 / 8.5 6.8	5.7 / 6.0
0 57+61.9	206	0 57.3	+61 59	6.5	–	6.7	.8	7.5 5.8	5.5
0 28+72.1	35	0 28.8	+72 6	6.7	–	6.7	1.3	8.0 6.3	5.5
23 57+82.2	748	23 55.4	+82 10	7.0	–	6.8	2.2	9.0 7.3	5.6
0 24+62.1	102	0 24.8	+62 8	4.5		5.6	.8	6.4 4.7	4.4
0 10+72.2	15	0 10.2	+72 8	7.0	–	7.2	1.3	8.5 6.8	6.0
0 7+62.0	29	0 7.1	+62 2	7.4		7.3 (7.4)	.8	8.1 6.4	6.1
1 27+72.3	86	1 27.0	+72 17	5.2	–	6.4 / 6.7	1.3	7.7 6.0 / 8.0 6.3	5.2 / 5.5
0 42+82.9	20	0 41.6	+82 55	6.5	–	5.6	2.3	7.9 6.2	4.4
23 50+82.4	743	23 49.7	+82 23	6.0	–	6.5	2.2	8.7 7.0	5.3
23 56+72.4	1136	23 56.0	+72 24	7.0	–	7.0 / 7.2	1.3	8.3 6.6 / 8.5 6.8	5.8 / 6.0
1 55+82.9	51	1 55.1	+82 52	7.0	–	6.8 / 7.0	2.3	9.1 7.4 / 9.3 7.6	5.6 / 5.8
0 42+62.9	160	0 42.7	+62 59	7.0		7.1	.9	8.0 6.3	5.9
0 41+63.5	99	0 42.0	+63 27	5.8	–	6.3	.9	7.2 5.5	5.1
23 54+72.9	1125	23 54.3	+72 48	6.5	–	6.7	1.3	8.0 6.3	5.5
22 47+82.4	703	22 47.9	+82 23	5.0	–	6.8 / 6.5	2.2	8.5 6.8 / 8.7 7.0	5.1 / 5.3
1 26+73.6	81	1 25.6	+73 33	6.5	–	6.7	1.4	8.1 6.4	5.5

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March 17, 1887.

Plate 835.

λ	H	Type	No. Remarks	K	Focus	Other lines.
8.9	9.5	I	8	H	2	F.
8.6	12.2	I?	5	H	1	F.
8.3	13.8	I	10	K=H	2	F.
8.2	15.0	I?	3	K=H	1	F.
8.4	23.5	I	7	H	2	F.
8.2	23.8	III III	3 3	K=H K=H	1 1	F. F.
7.7	7.5	I	8	K=.2H	1	F.
7.3	9.6	I	8	H	2	F.
7.9	10.1	III	3	K=H	1	F.
7.9	14.6	I	12	H	3	F.
7.6	14.8	I	11	K=.2H	3	F.
7.6	19.9	III	3	K=H	1	F.
7.9	21.5	I? IIa	499 7	K=H	1	F.
6.5	13.3	I	6	K=H	1	F.
5.2	7.9	III	3	K=H	1	F.
5.4	11.0	I	4	H	1	—
?	5.0	13.9 III	loc. 680 3	K=H	2	F. diff.
5.3	15.7	III	3	K=H	1	F.
5.9	15.8	III	2	K=H	1	—
5.7	19.1	III	3	K=H	1	F.
5.8	23.1	I	9	K=H	2	F.
4.4	5.9	I	7	K=.5H	2	F.
4.7	10.5	I?	7	K=.8H	1	F.
4.8	12.4	I	9	K=.2H	2	F.
4.0	15.9	I	8	K=H	1	F.
4.0	16.9	III	3	K=H	1	F.
4.3	17.1	I?	3	K=H	1	F.
4.0	17.2	I	8	H	2	F.

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1887phae_proj..837F

Mean 12

	No.	R.A.	Dec.	Mag.		Br.
1 2 + 63.4	149	1 2^.1	+63 26	6.0	188 5.4 17±0	6.2 .9 7.1 5.4 5.0
0 54 + 73.6	51	0 54.^5	+73^ 36	6.8		6.7 1.4 8.1 6.4 5.5
0 49 + 83.8	20	0 48^.4	+83^ 49	7.0	_	6.4 2.4 8.8 7.1 5.2
0 25 + 83.9	9	0 26^.3	+83^ 53	7.8	_	6.9 2.4 9.3 7.6 5.7
23 59 + 63.4	2107	23 59.^0	+63 22	5.4	1 5.5 17±0	6.3 .9 7.2 5.5 5.1
	1047	23 33.^7	+73 2	5.6		6.8 {6.9 7.1 / 8.2 6.5 5.6}
~~2 33 + 73.2~~	~~36~~	~~33.6~~	~~+73 16~~	~~8.0~~	_	7.0 {7.2 1.4 8.4 6.7 5.8}
1 11 + 63.9	176	1 11.^5	+63^ 33	6.6	_	6.6 .9 7.5 5.8 5.4
1 2 + 64.2	127	1 2.^4	+64 13	5.9	191 5.5 16-1	6.2 .9 7.1 5.4 5.0
1 10 + 73.9	66	1 10.^4	+73^ 49	6.8	_	6.8 6.9 1.4 8.2 8.3 6.5 6.6 5.6 5.7
0 38 + 74.0	29	0 38.^2	+74^ 4	5.8	114 5.3 20+3	5.9 1.4 7.3 5.6 4.7
0 36 + 74.2	27	0 36.^2	+74^ 12	5.5	_	6.0 1.4 7.4 5.7 4.8
22 56 + 83.6	640	22 55.^4	+83^ 34	5.0	_	6.1 6.5 2.4 8.5 8.9 6.5 7.2 4.9 5.3
23 48 + 73.6	1063	23 47.^9	+73^ 36	7.0	_	6.6 1.4 8.0 6.3 5.4
0 47 + 74.7	41	0 47.^7	+74^ 42	8.0	_	7.0 1.4 8.4 6.7 5.8
2 58 + 84.4	59	2 58.^8	+84^ 23	6.0	_	6.5 6.8 2.5 9.0 9.3 7.3 7.6 5.3 5.6
1 52 + 85.0	41	1 50.^8	+85^ 2	7.7	.	6.9 2.7 9.6 7.9 5.7
0 50 + 85.5	19	0 49.^7	+85^ 29	5.0	_	5.6 6.2 2.8 8.4 9.0 6.7 7.3 4.4 5.0
0 33 + 65.4	83	0 33.^5	+65^ 20	6.0	_	6.8 7.0 9 7.7 7.9 6.0 6.2 5.6 5.8
0 32 + 65.1	81	0 33.^0	+65^ 4	7.0	_	7.0 7.2 .9 7.9 8.1 6.2 6.4 5.8 6.0
22 54 + 84.6	517	22 54.^2	+84^ 36	6.5	_	6.6 7.0 2.6 9.2 9.6 7.5 7.9 5.4 5.8
23 33 + 74.5	1032	23 33.^1	+74^ 28	6.5	_	6.1 1.4 7.5 5.8 4.9
1 20 + 65.3	175	1 20.^8	+65^ 21	6.0	_	6.7 .9 7.6 5.9 5.5
1 10 + 75.5	59	1 10.^3	+75^ 28	6.2	_	6.6 1.5 8.1 6.4 5.4
0 49 + 65.6	115	0 49.^4	+65^ 33	6.0	_	6.4 1.0 7.4 5.7 5.2
23 52 + 85.9	409	23 52.^8	+85^ 54	8.0	_	6.5 2.9 9.4 7.7 5.3
23 27 + 85.7	401	23 27.^2	+85^ 46	8.0	_	6.8 7.0 2.8 9.6 9.8 7.9 8.1 5.6 5.8
23 24 + 85.6	399	23 24.^2	+85^ 37	7.5	_	6.7 2.8 9.5 7.8 5.5
0 26 + 65.9	70	0 26.^0	+65^ 57	6.5	✓	6.5 1.0 7.5 5.8 5.3

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Plate 835.

T	H	Type	No. Lines	K	Focus	Other lines. Remarks.
4.5	17.7	I	8	N	2	F.
4.8	17.9	~~II~~ I ?	2	K=H	1	—
3.2	13.8	III	3	K=H	1	F.
3.4	16.3	III	2	K=H	1	—
3.5	18.0	I	10	K=.2H	2	F.
3.7	19.3	I	12	K=.2H	3	F.
2.6	16.3	I	10	K=.8H	2	F.

Plate 875.

?	21.0	8.7	II	a 501	3	K=H	2	F. nm.
III ? ~~H~~ 5, ~~H~~ 5	?	21.1	19.2	III	bc. 502	3	K=1.2H	3	F. nm. Light ?
		20.6	20.0	I ?	3		N	1	—
		20.7	21.6	I	6		N	2	F.
		19.3	10.5	I	2		N	1	—
		18.6	6.5	I	9		K=.2H	2	F.
		18.2	6.8	III	3		K=H	1	F.
	X	18.8	8.7	~~III~~ I	3		K=H	1	F. nm.
	?	18.6	19.0	II	a 503	3	K=H	√	F. nm.
		17.4	10.2	I	10		K=.2H	2	F.
		17.0	13.6	I	7		K=.2H (K=N)	1	?
		17.6	15.7	I	10		K=.8H	2	F.
	?	16.7	9.9	~~II~~ I	3		K=H	1	F. ~~nm.~~
		16.7	10.6	III	3		K=H	1	F.
		16.3	12.1	II	a 504	2	K=H	1	F.
		16.4	20.1	I	6		N	1	F.
		16.5	21.7	II	2		K=H	1	F.?
		15.9	7.1	I	8		N	1	F.
		15.3	7.2	I ?	9 ?		N ?	√	F.

12.45.

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Mean 12.

	No.	R.A.	Dec.	Mag.		Br.	
0 23 + 65.7	67	0 23.2	+ 65 43	6.3	.	6.4 | 1.0 7.4 5.7	5.2 . ✓
0 10 + 75.5	7	0 10.2	+ 75 28	7.4	–	6.8 1.5 8.3 6.6	5.6 . ✓
0 53 + 86.4	17	0 52.8	+ 86 22	7.5	–	6.8 / 7.0 3.0 / 9.8 / 10.0 / 8.1 / 8.3	5.6 / 5.8 . ✓
0 21 + 76.2	10	0 21.7	+ 76 13	6.5	–	6.8 / 7.0 1.6 / 8.4 / 8.6 / 6.7 / 6.9	5.6 / 5.8 . ✓
0 8 + 76.2	5	0 8.1	+ 76 9	6.5	–	6.4 1.6 8.0 6.3	5.2 . ✓
22 22 + 85.4	383	22 24.2	+ 85 23	5.0	–	5.5 1.7 7.2 5.5	4.3 ✓
23 26 + 86.5	344	23 27.8	+ 86 30	6.5	–	6.0 | 3.0 9.0 7.3	4.8 . ✓

156/9 12-9/9

Mean 10

0 40 + 57.0	150	0 40.4	+ 57 2	3.8	–	5.7 | .7 6.4 4.8	4.7 . ✓
23 33 + 76.7	928	23 33.4	+ 76 50	3.5	–	5.4 / 5.7 / 1.6 / 7.0 / 7.3 / 5.4 / 5.7	4.4 / 4.7 . ✓
23 25 + 77.1	908	23 25.2	+ 77 5	7.0	.	7.3 1.6 8.9 7.3	6.3 . ✓
23 41 + 66.9	1562	23 41.0	+ 67 0	5.5	.	5.9 1.0 6.9 5.3	4.9 . ✓
0 34 + 57.9	132	0 34.2	+ 57 58	6.3		7.0 .7 7.7 6.1	6.0 . ✓
1 0 + 68.0	77	1 0.9	+ 68 0	6.0	–	5.9 1.1 7.0 5.4	4.9 ✓
0 48 + 58.4	138	0 48.1	+ 58 23	5.0	–	6.8 / 7.0 .7 / 7.5 5.9 / 7.7 6.1	5.7 / 6.0 . ✓
1 11 + 77.9	49	1 11.2	+ 77 58	6.0	–	6.7 1.7 8.4 6.8	6.7 . ✓
0 1 + 58.3	9	0 1.5	+ 58 21	2.2	–	4.4 .7 5.1 3.5	3.4 . ✓
1 0 + 78.9	34	1 1.0	+ 78 54	5.6	–	5.8 1.8 7.6 6.0	4.8 ✓
0 22 + 59.2	68	0 22.3	+ 59 10	6.0	–	6.7 .7 7.4 5.8	6.7 . ✓
0 1 + 78.9	1	0 1.5	+ 78 35	6.5	–	6.3 1.8 8.1 6.5	5.3 . ✓
1 4 + 79.2	36	1 3.9	+ 79 8	6.5	–	6.7 1.8 8.5 6.9	5.7 ✓
0 56 + 79.3	29	0 57.1	+ 79 14	6.8	–	6.9 / 7.1 1.8 / 8.7 8.9 / 7.1 7.3	5.9 / 6.1 . ✓
0 28 + 59.5	84	0 28.3	+ 59 31	6.0	–	6.8 .7 7.5 5.9	5.8 ✓
23 13 + 79.1	777	23 13.9	+ 79 6	7.8	.	6.8 1.8 8.6 7.0	5.8 ✓
23 38 + 68.9	1393	23 38.2	+ 68 56	6.8	–	7.0 1.1 8.1 6.5	6.0 ✓
0 48 + 59.6	146	0 48.1	+ 59 33	6.3	145 5.5 18+2	6.6 / ~~4.0~~ .7 7.3 5.7	5.6 . ✓
0 48 + 59.9	144	0 48.0	+ 59 56	2.3	✓	~~6.6~~ / 4.0 1.8 4.8 3.2	3.0 . ✓

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March 18, 1887.

Plate 875.

				Type	No. Lines	Remarks.	K	Focus	Other lines.
11.15 G.M.									
11 30	15.6	9.1		II	3		K = H	1	F.
?	15.8	11.5		II a2	505 4		K = H	1	F. sem.
	15.1	13.3		I	7		?	1	F.
	14.6	7.8		III	3		K = H	1	F.
	14.1	7.7		I	√		?	1	F.
?	14.5	8.1		II a	506 √ 3		K = H	2	F. sem.
	14.6	8.9		I	7		K = H	1	F.
	14.8	10.1		I	7		N	2	F.
	14.0	16.7		III	1		N	1	F.
	14.1	17.4		I?	4		N	1	F.
	14.3	19.6		I	8		N	2	F
	14.4	20.4		I	8		K = .5 H	2	F.
	14.8	20.5		I	5		K = .5 H?	2	F.
	14.2	20.9		I	9		K = .5 H	2	F.
	13.3	8.8		I	6		N	1	F.
	13.2	11.7		I	8		N	2	F.
	13.5	15.0		I	8		N	2	F.
	12.8	6.7		I	7		N	2	F.
	12.4	6.8		I	6		K = H	1	F.
	12.1	13.4		III II a	507	3	K = H	1	F.
	12.3	19.6		I	4		N	1	F.
	12.0	22.6		I	6		K = H	1	F.
	11.6	11.1		III	2		K = H	1	F?
	11.3	12.7		II	3		K = H	1	F.
?	11.4	13.1		I? b	508	10	N	3	F. sem.
	11.1	15.6		I	√		K = .5 H	1	F
	11.9	23.2		III?	3		K = H	1	F.
	10.6	15.9		I	8		K = .2 H	2	F.

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Mean 10

	No.	R.A.	Dec.	Mag.		Br.				
0 48+69.7	55	0 48.7	+69 43	6.8	–	7.1	1.2	8.3	6.7	6.1
0 48+79.8	24	0 48.6	+79 46	6.5	–	6.9	1.9	8.8	7.2	5.9
0 24+70.2	24	0 24.8	+70 10	6.2		6.6	1.2	7.8	6.2	5.6
0 56+70.2	78	0 57.0	+70 9	6.7	–	6.7 / 6.9	1.2	7.9 / 8.1	6.3 / 6.5	5.7 / 5.9
1 33+80.2	55	1 34.1	+80 10	7.5		6.6	1.9	8.5	6.9	5.6
0 44+60.3	124	0 44.5	+60 19	5.0	–	6.3	.8	7.1	5.5	5.3
0 50+70.3	65	0 50.8	+70 13	6.5	–	6.8	1.2	8.0	6.4	5.8
1 5+80.1	36	1 6.2	+80 8	6.7	.	6.3	1.9	8.2	6.6	5.3
0 9+60.7	21	0 9.2	+60 43	6.0	–	6.8 / 7.0	.8	7.6 / 7.8	6.0 / 6.2	5.8 / 6.0
23 37+80.5	780	23 37.1	+80 30	7.8		7.0	2.0	9.0	7.4	6.0
23 57+60.5	2667	23 57.6	+60 31	6.0	4258 6.0 12-4	6.4	.8	7.2	5.6	5.4
23 54+60.4	2657	23 54.2	+60 24	6.0	–	6.5	.8	7.3	5.7	5.5
23 4+79.7	769	23 4.6	+79 47	7.5	–	6.5	1.9	8.4	6.8	5.5
22 58+79.9	761	22 58.8	+79 60	7.2	–	6.4	1.9	8.3	6.7	5.4
1 24+80.7	50	1 23.0	+80 41	7.4	.	6.7	2.0	8.7	7.1	5.7
0 50+81.1	25	0 49.6	+81 6	7.5	.	6.3	2.0	8.3	6.7	5.3
0 16+61.0	69	0 16.8	+61 2	6.1	56 5.4 16±0	6.2	.8	7.0	5.4	5.2
1 52+80.6	64	1 51.8	+80 36	6.1	318 6.0 19+3	5.9	2.0	7.9	6.3	4.9
1 53+80.8	65	1 52.6	+80 46	6.7	–	6.7	2.0	8.7	7.1	5.7
0 28+81.7	13	0 29.0	+81 42	6.5	–	6.6	2.1	8.7	7.1	5.6
23 56+61.5	2586	23 56.8	+61 29	5.6		6.8	.8	7.6	6.0	5.8
23 26+71.2	1208	23 26.4	+71 12	6.8	–	6.9	1.2	8.1	6.5	5.9
0 39+71.9	37	0 38.8	+71 53	6.5	–	6.9 / 7.2	1.3	8.2 / 8.5	6.6 / 6.9	5.9 / 6.2
0 28+72.1	35	0 28.8	+72 6	6.7	–	6.9	1.3	8.2	6.6	5.9
0 24+62.1	102	0 24.8	+62 8	4.5		5.7	.8	6.2	4.6	4.4
23 57+82.2	748	23 55.4	+82 10	7.0	–	6.9	2.2	9.1	7.5	5.9
23 41+61.4	2533	23 41.8	+61 24	5.9	–	6.8 / 7.0	.9	7.7 / 7.9	6.1 / 6.3	5.8 / 6.0
23 50+82.4	743	23 49.7	+82 23	6.0	+	6.2	2.2	8.4	6.8	5.2

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March 18, 1887.

Plate 87.5.

	T	H	Type	No.	Remarks.	K	Focus	No. Other lines.	
	10.9	22.4	~~III~~ I			H	1	F.	2
	9.7	12.6	I	10		K=.2H	3	F.	
?	9.7	17.7	I	3	d?	H	1	F.	2
	9.5	19.5	~~III~~ II	3		K=H	1	F.	2
?	9.6	19.8	III	3	b.c. 509	K=H	2	F.	bright? nm. 2
	9.2	20.0	I	5		H	1	F.	2
	8.6	8.2	III	3		K=H	1	F.	1
	8.0	9.2	III?	2		K=H	1	—	0
	8.4	9.2	I	7		K=.5H	2	F.	0
	8.0	17.7	I	5		K=H	1	F.	2
	8.0	18.5	I	5		H	1	F.	2
	8.6	18.7	I	5		H	2	F.	2
	8.5	22.7	III	3		K=H	2	F.	2
	8.5	20.7	III?	2		?	1	F.	2
	7.4	11.6	I	8		H	2	F.	0
	7.1	11.8	I	9		H	2	F.	0
	7.9	12.5	I	7		K=.8H	2	F.	
?	7.6	18.6	III	3	b.c. 510	K=H	2	F.	bright nm. 2
	7.1	23.9	I	8		K=H	2	F.	2
	6.0	20.2	I	7		K=.5H	1	F.	2
	4.2	6.8	III	3		K=H	1	F.	
	5.7	17.9	III	3		K=H	1	F.	2
	4.0	8.0	I	6		K=.2H	1	F.	
?	4.6	12.8	III	3	b.c. 511	K=H	3	F.	
	4.1	13.5	I	6		H	1	F.	
	4.5	15.2	I?	3		H	1	—	
	4.6	15.9	I	6		H	1	F.	
	4.1	16.0	I	8		K=H	2	F.	

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Mean 10

	No.	R.A.	Dec.	Mag.				Br.				
22 23 +81.2	775	22 24.1	+81 12	7.0				6.9	2.0	8.9	7.3	5.9
0 42 +82.9	20	0 41.6	+82 55	6.5	–			5.0	2.3	7.3	5.6	4.0
23 54 +72.6	1135	23 54.3	+72 48	6.5	.			6.7	1.3	8.0	6.4	5.9
23 56 +62.9	2356	23 56.0	+62 50	6.5	–			6.9	.9	7.8	6.2	5.9
22 48 +82.4	703	22 47.9	+82 23	5.0	–			5.6 6.0	2.2	7.8 8.2	6.2 6.6	4.6 5.0
22 43 +82.5	700	22 44.1	+82 30	8.0	.			6.9	2.2	9.1	7.5	5.9
1 56 +82.9	51	1 55.1	+82 58	7.0	–			6.7 6.9	2.3	9.0 9.2	7.4 7.6	5.7 5.9
0 54 +73.6	51	0 54.5	+73 36	6.8	–			6.9 7.1	1.4	8.3 8.5	6.7 6.9	5.7 6.1
0 41 +63.5	99	0 42.0	+63 27	5.8	–			6.6	.9	7.5	5.9	5.6
23 13 +83.5	647	23 12.7	+83 27	8.0	–			6.8	2.4	9.2	7.6	5.8
23 48 +73.6	1063	23 47.9	+73 36	7.0	4226	6.6	15–1	6.7	1.4	8.1	6.5	5.7
23 59 +63.4	2107	23 59.0	+63 22	5.4	1	5.5	16 ±0	6.2	.9	7.1	5.5	5.2
22 3 +82.2	673	22 3.2	+82 10	7.5	–			6.5 6.7	2.2	8.7 8.9	7.1 7.3	5.5 5.7
23 33 +73.2	1047	23 33.1	+73 10	5.6				6.9 7.1	1.3	8.2 8.4	6.6 6.8	5.4 6.1
0 38 +74.0	29	0 38.2	+74 4	5.8	114	5.3	16 ±0	5.5	1.4	6.9	5.3	4.5
0 36 +74.2	27	0 36.2	+74 12	5.5	104	5.6	17 +1	5.9	1.4	7.3	5.7	4.9
0 48 +83.6	20	0 48.4	+83 49	7.0	–			6.1	2.4	8.5	6.9	5.1
22 55 +83.6	640	22 53.4	+83 32	5.0	–			5.5 6.1	2.4	7.9 8.5	6.3 6.9	4.5 5.1
23 9 +73.5	1023	23 9.5	+73 27	6.2	–			6.3	1.4	7.7	6.1	5.3
23 33 +74.5	1032	23 33.1	+74 28	6.5	–			6.3	1.4	7.7	6.1	5.3
2 57 +84.4	59	2 58.8	+84 23	6.0	–			6.5 6.8	2.5	9.0 9.3	7.4 7.7	5.5 5.8
22 54 +84.6	517	22 54.2	+84 36	6.5	–			6.4 6.9	2.6	9.0 9.5	7.4 7.9	5.4 5.9
0 49 +65.6	115	0 49.4	+65 33	6.0	–			6.8	1.0	7.8	6.2	5.8
0 50 +85.5	19	0 49.7	+85 24	5.0	–			5.1 5.5	2.8	7.9 8.3	6.3 6.7	4.1 4.5
0 23 +65.7	67	0 23.2	+65 43	6.5	.			6.6	1.0	7.6	6.0	5.6
0 10 +75.5	7	0 10.2	+75 28	7.4				7.1	1.5	8.6	7.0	6.1
23 31 +85.4	403	23 29.7	+85 23	7.8	.			6.4	2.7	9.1	7.5	5.6
23 22 +85.6	399	23 24.2	+85 37	7.5	–			6.0	2.8	8.8	7.3	5.6

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Plate 875.

V	H	Type	No. lines. Remarks.	K	Focus	Other lines.
4.7	24.0	~~III~~	3	K=H	2	F.
3.6	12.9	~~I~~	6	N	1	F.
3.8	14.9	~~I~~	8	K=.2H	2	F.
3.3	15.4	~~I~~	7	K=.2H	1	F.
3.7	18.4	~~I~~	11	N	3	F.
2.8	12.9	~~III~~	1	N	1	F.
2.5	15.5	~~I~~	10	~~K=.5H~~ K=.3H	2	F.
2.9	22.2	~~I~~	6	K=H	1	F.

Plate 879.

	21.0	6.0	~~I~~	3	N	1	F.?
?	21.4	14.4	~~II~~ a	512 3	K=H	2	F. neb.
?	20.9	21.6	~~III~~ ba	513 3	K=H	3	F. neb.
	19.4	10.4	~~I~~	8	N	2	F.
	18.7	12.4	~~III~~	3	K=H	1	F.
	17.7	12.2	~~I~~	8	K=.2H	2	F.
	17.4	17.7	~~I~~	6	K=H	1	F.
	17.9	24.5	~~I~~ ?	9	~~K=H~~ K=1.5H	4	F.
	16.4	12.4	~~I~~	4	N	1	—
	16.1	15.2	~~I~~	8	K=.5H	4	F.
	15.3	11.9	~~I~~	6	K=.5H	1	F.
	15.9	12.5	?	?	?	5	F.
?	15.0	13.3	~~II~~ a	514 3	K=H	1	F. neb.
	14.9	15.4	~~I~~	6	N	2	F.
	14.7	8.3	~~I~~	6	K=H	1	F.
	14.7	9.4	~~I~~	4	K=H	1	—
?	13.6	8.3	~~I~~	6	N	1	F.
12	40.	13.3	19.9	~~I~~	6	N	1 F.

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Mean 10

	No.	R.A.	Dec.	Mag.			Bye.				
23 3 +74.6	1006	23	3.3 + 74	36	4.6	–	5.8 / 6.2	1.4	7.2 / 7.6	5.6 / 6.0	4.8 / 5.2
~~65 0 26 0 +65 57 6.5~~											
0 31 +76.1	114	0	30.5 + 76	5	7.0		6.8	1.5	8.3	6.7	5.8
23 53 +85.9	409	23	52.8 + 85	54	8.0	–	6.2	2.9	9.1	7.5	5.2
0 8 +76.1	5	0	8.1 + 76	9	6.5	–	6.5	1.6	8.1	6.5	5.5
22 24 +85.4	382	22	24.2 + 85	23	5.0	3968 5.4 17+1	4.7	2.7	7.1	5.5	3.7
0 52 +86.4	17	0	52.8 + 86	22	7.5	–	6.7 / 7.0	3.0	9.7 / 10.3	8.1 / 8.4	5.4 / 6.0
23 27 +86.5	344	23	27.8 + 86	30	6.0	–	~~5.4~~	~~3.0~~	8.4	6.8	
23 39 +65.9	1943	23	39.4 + 65	58	6.3	–	6.7	1.0	7.7	6.1	5.7

146/9 7-5/9

Mean 15

1 50 +76.6	63	1	50.8 + 76 35	5.3	308 5.4 2.7+5	6.5	1.6	8.1	5.9	5.0
0 40 +57.0	150	0	40.4 + 57 2	3.8	–	5.7	.7	6.4	4.2	4.2
23 33 +76.8	928	23	33.4 + 76 50	3.5	–	5.4 / 5.8	1.6	7.0 / 7.4	4.8 / 5.2	3.9 / 4.3
1 0 +68.0	77	1	0.9 + 68 0	6.0	184 5.3 22+0	6.4	1.1	7.5	5.3	4.9
0 48 +58.4	138	0	48.1 + 58 23	5.0	–	6.9 / 7.1	.7	7.6 / 7.8	5.4 / 5.6	5.4 / 5.6
1 0 +78.9	34	1	1.0 + 78 54	5.6	–	5.7	1.8	7.5	5.3	4.2
0 1 +78.9	1	0	1.3 + 78 55	6.3	–	6.6	1.8	8.4	6.2	5.1
0 1 +58.4	3	0	1.3 + 58 21	2.2	–	4.8	.7	5.5	3.3	3.3
0 48 +59.6	146	0	48.1 + 59 35	6.3	141 5.4 21-1	6.8	.7	7.5	5.3	5.3
1 16 +59.5	248	1	16.4 + 59 29	3.0	–	4.7	.7	5.4	3.2	3.2
1 5 +80.1	35	1	5.6 + 80 6	7.3	–	6.7	1.9	8.6	6.4	5.2
0 48 +59.9	144	0	48.0 + 59 36	2.3		4.0	.8	4.8	2.6	2.5
0 44 +60.3	124	0	44.3 + 60 19	5.0	–	6.6	.8	7.4	5.2	5.1
1 31 +69.9	114	1	31.8 + 69 52	5.2	260 5.1 22+0	6.1	1.2	7.3	5.1	4.6
1 15 +70.2	102	1	15.2 + 70 13	6.1	–	7.0	1.2	8.2	6.0	5.5
1 34 +80.2	55	1	34.1 + 80 10	7.5	–	7.2	1.9	8.1	5.9	5.1
1 52 +80.6	64	1	51.8 + 80 36	6.1	318 6.0 20-2	6.0	2.0	8.0	5.8	4.5
0 17 +61.0	69	0	16.8 + 61 2	6.1	56 5.4 18-4	6.4	.8	7.2	5.0	4.9

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Plate 879.

	V	H	Type	No. lines	K.	Focus	Other lines.
12 30	12.2	14.8	I?	2	N	1	F.
	11.3	17.9	I	8	N	2	F.
	10.5	17.3	I	6	K=.2H	1	F.
	9.9	13.9	I	7	K=.2H	2	F.
	9.1	21.1	III	3	K=H	1	F.
	8.6	9.4	I	6	K=.2H	1	F.
	8.8	13.9	I?	5	K=H	1	F.
	7.0	9.4	I	8	N	1	F.
	8.0	13.5	I	7	K=H	1	F.
	7.7	14.4	I	7	N	2	F.
	7.4	14.7	I	8	K=.2H	2	F.
	8.0	23.4	I	5	N	1	—
	7.4	19.6	III	3	K=H	1	F.
	4.9	13.6	III	3	K=H?	2	F
	4.5	12.3	I	4	N	1	F?
	3.4	19.1	I	8	N	2	F.
	3.0	17.8	I	2	N	1	—
12.40	2.5	16.1	I	7	K=H	1	F.

h.c. 515

Plate 848.

9.25 P.M.	22.0	9.3	I	8	N	2	F.
	19.7	8.8	I	9	N	3	F.
	19.3	9.8	I	5	K=H	1	F.
	18.0	7.1	II?	3	K=H	1	F.
	18.9	18.2	I	10	N	2	F.
	18.3	22.8	II?	3	K=H	1	F.
	17.0	17.3	I	9	N	2	F.
	17.7	17.9	I	8	N	2	F.

I?

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Mean 15

	No.	R.A.	Dec.	Mag.		Br.				
0 28 +81.7	13	0 29.0	+81 42	6.5		6.9	2.1	9.0	6.8	5.4
0 24 +62.1	102	0 24.8	+62 8	4.5	71 4.2 21-1	5.5	.8	6.3	41	4.0
23 50 +82.4	743	23 49.7	+82 23	6.0	–	6.4	2.2	8.6	6.4	4.9
0 42 +82.9	20	0 41.6	+82 35	6.5	–	5.3	2.3	7.6	5.4	3.8
22 47 +82.4	703	22 47.9	+82 23	5.0	–	6.2 6.6	2.2	8.4 8.8	6.2 6.6	4.7 5.1
1 2 +63.4	149	1 2.1	+63 26	6.0	–	6.5	.9	7.4	5.2	5.0
0 41 +63.5	99	0 42.0	+63 27	5.8	–	6.9	.9	7.8	5.6	5.4
1 2 +64.2	127	1 2.4	+64 13	5.9	191 5.5 20-2	6.6	.9	7.5	5.3	5.1
0 49 +83.8	20	0 48.4	+83 49	7.0	–	6.8	2.4	9.2	7.0	5.3
0 38 +74.0	29	0 38.2	+74 4	5.8	114 5.3 19-3	5.8	1.4	7.2	5.0	4.3
0 36 +74.2	27	0 36.2	+74 12	5.5	–	6.2	1.4	7.6	5.4	4.7
23 59 +63.3	2107	23 59.0	+63 22	3.4	1 5.5 20-2	6.6	.9	7.5	5.3	5.1
22 57 +83.6	610	22 55.4	+83 34	3.0	–	6.2 6.7	2.4	8.6 9.1	6.4 6.9	4.7 5.2
0 50 +85.5	19	0 49.7	+85 29	3.0	–	5.6 6.1	2.8	8.4 8.9	6.2 6.7	4.1 4.6
0 49 +65.6	115	0 49.4	+65 33	6.0	151 6.0 21-1	7.1	1.0	8.1	5.9	5.6
22 24 +85.4	383	22 24.2	+85 23	5.0	3968 5.4 31+9	5.8	2.7	8.5	6.3	4.3
0 8 +76.2	5	0 8.1	+76 9	6.5	35 6.2 24+2	7.0	1.6	8.6	6.4	5.5
23 27 +86.5	344	23 27.8	+86 30	6.0	–	~~6.4~~	3.0	9.4	7.2	

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Mean 15

1 51 +71.7	117	1 51.2	+71 42	4.0	306 4.1 30 +11 +10	5.8	1.3	7.1	5.4	4.3
1 44 +62.9	320	1 44.1	+62 57	3.3	287 3.6 28 +9 +8	5.5	.9	6.4	4.5	4.0
1 51 +73.2	108	1 50.3	+73 8	6.2	–	6.7	1.3	8.0	6.1	5.2
1 52 +63.7	274	1 52.3	+63 42	6.0	–	6.4	.9	7.3	5.4	4.9
1 2 +63.4	149	1 2.1	+63 26	6.0	188 5.4 20 +1 +0	6.5	.9	7.4	5.5	5.0
0 42 +63.4	99	0 42.0	+63 27	5.8	–	6.6	.9	7.5	5.6	5.1
1 52 +64.2	282	1 52.2	+64 12	6.0	311 5.7 18 −1 −2	6.6	.9	7.5	5.6	5.1
~~1 24 +63.8~~ 1 4.2 +63.8	156	1 3.2	+63 31	7.8	–	6.3	6.2 .9	7.2	5.3	4.4

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Plate 848.

V	H	Type	No. Lines	K	Focus	Other Lines. Remarks.
18.0	16.1	I	5	H	1	F?
17.4	18.0	I	6	?	2	F.
17.0	19.4	I	11	K=.2H	2	F.
17.4	19.8	I	11	?	2	F.
17.0	20.1	I	7	K=.2H	2	F.
17.3	20.5	II?	3	K=H	1	F.
V 16.6	6.9	I	6	H	1	F. neb.
? 16.8	7.9	X I	5	K=H	2	F. neb
15.8	7.5	I	6	H	1	F.
16.0	10.4	II?	2	?	1	F.
15.3	14.1	I	9	K=.2H	2	F.
14.8	10.2	III	3	K=H	1	F.
14.7	11.4	II	3	K=H	1	F.
V 14.9	15.4	II a	5 6	3 K=H	1	F. neb.
14.4	20.5	I	7	K=H	2	F.
13.2	10.2	I	7	H	1	F.
12.2	10.4	I	6	?	1	F.
12.6	10.6	I	7	K=H	2	F.
12.2	13.0	I	4	H	1	F.
12.2	17.4	II	3	K=H	1	F.
12.3	22.6	I	7	K=H	1	F.
V 11.4	11.0	III?	3	K=H	1	F. neb.
11.5	12.1	III	3	K=H	1	F.
11.4	12.0	I	8	H	2	F.
11.5	13.3	I?	5	H	1	F.
? 11.3	15.0	III	3	K=H	2	F.
11.2	15.8	II	3	K=H	1	F.
11.8	16.4	I	8	K=H	1	F.

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Mean 15

	No.	R.A.	Dec.	Mag.		Bv.				
1 11+63.9	176	1 11.5	+ 63 53	6.6	.	6.9	9	7.8	6.9	5.4 ✓
1 2+64.2	127	1 2.4	+ 64 13	5.9		6.3	9	7.2	5.3	4.8 ✓
1 2+54.4	236	1 2.3	+ 54 23	4.8	_	6.2	.6	6.8	4.9	4.7 ✓
0 38+74.0	29	0 38.2	+ 74 4	5.8		6.3	1.4	7.7	5.8	4.8 ✓
0 36+74.2	27	0 36.2	+ 74 12	5.5	_	6.4	1.4	7.8	5.9	4.9 ✓
0 58+54.2	223	0 58.7	+ 54 12	5.7	_	6.5	.6	7.1	5.2	5.0 ✓
1 53+64.4	285	1 53.8	+ 64 24	6.5	.	6.8	.9	7.7	5.8	5.3 ✓
1 42+54.4	396	1 42.5	+ 54 26	5.7	_	6.4	.6	7.0	5.1	4.9 ✓
1 44+54.9	408	1 44.2	+ 54 33	6.6	.	6.9	.6	7.5	5.6	5.4 ✓
1 49+74.9	91	1 48.8	+ 74 47	6.5		6.6	1.5	8.1	6.2	5.1 ✓
1 20+65.3	175	1 20.8	+ 65 21	6.0	_	6.5	.9	7.4	5.5	5.0 ✓
1 52+75.4	86	1 51.8	+ 75 25	5.0	_	6.4 6.7	1.5	7.9 8.2	6.0 6.3	4.9 ✓ 5.2 ✓
1 43+75.5	79	1 42.2	+ 75 30	6.8	_	7.0	1.5	8.5	6.6	5.5 ✓
1 10+75.5	59	1 10.3	+ 75 28	6.2	_	6.5	1.5	8.0	6.1	5.0 ✓
0 49+65.6	115	0 49.4	+ 65 33	6.0	_	6.5	1.0	7.5	5.6	5.0 ✓
1 35+56.3	334	1 35.3	+ 56 22	6.5	.	6.7	.6	7.3	5.4	5.2 ✓
1 35+56.9	330	1 34.8	+ 56 48	6.4		6.8	.7	7.5	5.6	5.3 ✓
1 51+76.6	63	1 50.8	+ 76 35	5.3	_	6.0	1.6	7.6	5.7	4.5 ✓
1 26+66.9	134	1 26.0	+ 66 32	7.3	.	7.0	1.0	8.0	6.1	5.5 ✓
1 9+57.0	237	1 9.2	+ 57 2	7.0	_	7.0	.7	7.7	5.8	5.5 ✓
0 8+76.2	5	0 8.1	+ 76 9	6.5	_	6.4	1.6	8.0	6.1	4.9 ✓
1 48+77.3	73	1 48.5	+ 77 12	6.3	_	6.7 7.0	1.6	8.3 8.6	6.4 6.7	5.2 ✓ 5.5 ✓
1 28+57.3	349	1 28.7	+ 57 14	6.0	_	6.9 7.1	.7	7.6 7.8	5.7 5.9	5.4 ✓ 5.6 ✓
1 32+67.3	149	1 31.7	+ 67 18	6.1	257 5.5 18 -1 -7	6.3	1.0	7.3	5.4	4.8 ✓
1 27+77.3	58	1 27.6	+ 77 14	6.5		6.5	1.6	8.1	6.2	5.0 ✓
1 16+67.4	123	1 15.8	+ 67 22	5.2	_	6.4 6.7	1.0	7.4 7.7	5.5 5.8	4.9 ✓ 5.2 ✓
1 14+57.4	274	1 14.2	+ 57 23	7.0	_	6.9	.7	7.6	5.7	5.4 ✓
1 8+67.0	108	1 8.3	+ 67 3	6.8	_	6.7	1.0	7.7	5.8	5.2 ✓

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Plate 848.

	T	H	Type	No. Lines	Remarks	K	Focus	Other Lines
?	11.0	16.7	~~II~~	a 517 3		K=H	2	F. sem.
	11.3	18.4	I	5		K=H	1	F.
	11.6	20.6	~~II~~ II?	3		K=H	1	F.
	11.4	21.5	II	3		K=H	1	F.
?	10.8	9.7	~~III~~ a?	518 3		K=H	1	F. sem.
	10.0	11.0	I	6		N	1	F.
?	10.0	15.0	II?	2		N	1	F. sem.
	10.7	19.7	I	7		N	2	F.
	9.8	9.5	I	9		N	3	F.
	9.3	11.5	I	5		K=H	1	F.
?	9.0	13.2	~~III~~ b	519 3		K=H	2	F. sem.
	9.5	13.4	III	3		K=H	1	F.
	9.9	17.7	I	8		N	2	F.
	9.5	20.2	III	3		K=H	1	F.
	8.2	16.0	I	7		N	2	F.
	8.5	19.2	~~II~~ a	520 3		K=.5H	1	F
	8.2	21.8	~~X~~ III	3		K=H	1	F.
	8.6	22.6	III	3		K=H	2	F.
	8.9	23.1	III	3		K=H	1	F.
	7.7	7.1	I	4		N	1	F.
	7.7	10.7	~~II~~ a	521 3		K=H	1	F.
	7.5	13.9	I!	3		N	1	F.
	7.0	14.0	II	5		K=H	1	F.
	7.2	15.1	I	13		K=.2H	5	F.
	7.7	15.6	II	5		K=H	1	F.
	7.5	19.9	I	7		K=H	1	F.
	6.2	11.0	I	7		N	2	F.
	6.3	12.1	I	8		N	2	F.

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	No.	R.A.	Dec.	Mag.				Br.				
1 11 +57.5	260	1 11.0	+57 28	6.1	–			6.4	7	7.1	5.2	4.9 ✓
0 40 +77.2	27	0 40.5	+77 10	6.7	–			6.7	16	8.3	6.4	5.2 ✓
0 57 +56.9	191	0 57.3	+56 59	7.0	–			7.0	7	7.7	5.8	5.5 ✓
0 53 +57.0	180	0 53.4	+57 2	6.8								
+56 +57.3	190	0 55.8	+57 15	8.4	–			6.9	7	7.6	5.7	5.4 ✓
1 43 +67.4	168	1 43.5	+67 26	7.4	–			7.0 / 7.1	1.0	8.0 / 8.1	6.1 / 6.2	5.5 / 5.6 ✓
1 32 +57.9	370	1 32.7	+57 34	6.8	.			6.8	7	7.3	5.6	5.3 ✓
1 11 +77.9	49	1 11.2	+77 58	6.0				6.5	17	8.2	6.3	5.0 ✓
0 59 +57.5	200	0 59.7	+57 29	6.5	177	5.7	15 -4 -5	6.5	7	7.2	5.3	5.0 ✓
1 44 +67.9	169	1 44.8	+67 58	5.2	290	5.1	19 +0 +1	5.9	1.1	7.0	5.1	4.4 ✓
1 31 +58.3	273	1 30.9	+58 19	7.2	–			6.9	7	7.6	5.7	5.4 ✓
1 24 +58.5	260	1 24.3	+58 29	6.0	–			6.4 / 6.6	7	7.1 / 7.3	5.2 / 5.4	4.9 / 5.1 ✓
1 24 +68.2	113	1 24.2	+68 12	6.8	–			6.8 / 7.0	1.1	7.9 / 8.1	6.0 / 6.2	5.3 / 5.5 ✓
1 1 +68.0	77	1 0.9	+68 0	6.0	184	5.3	18 -1 -2	6.0	1.1	7.1	5.2	4.5 ✓
0 47 +67.9	81	0 47.6	+67 60	6.7	–			6.7 / 6.9	1.1	7.8 / 8.0	5.9 / 6.1	5.2 / 5.4 ✓
1 0 +78.9	34	1 0.4	+78 34	5.6	180	5.6	23 +4 +5	6.1	1.8	7.9	6.0	4.6 ✓
0 52 +68.6	64	0 52.0	+68 34	7.0	–			6.8	1.1	7.9	6.0	5.3 ✓
0 38 +68.6	49	0 37.6	+68 32	6.4	–			6.8 / 7.0	1.1	7.9 / 8.1	6.0 / 6.2	5.3 / 5.5 ✓
0 48 +58.4	138	0 48.1	+58 23	5.0	–			6.5 / 6.7	7	7.2 / 7.4	5.3 / 5.5	5.0 / 5.2 ✓
0 46 +58.2	134	0 46.4	+58 11	5.0	–			6.6 / 6.9	7	7.3 / 7.6	5.4 / 5.7	5.1 / 5.4 ✓
1 48 +58.9	341	1 48.3	+58 33	7.0	.			6.9	7	7.6	5.7	5.4 ✓
1 56 +78.9	63 / 71	1 56.6	+79 0	6.7	–			6.5	18	8.3	6.4	5.0 ✓
1 21 +69.3	103	1 21.9	+69 17	7.0				6.9	1.0	7.9	6.0	5.4 ✓
1 20 +69.5	102	1 20.5	+69 31	6.1	–			6.7	1.1	7.8	5.9	5.2 ✓
1 16 +59.5	248	1 16.4	+59 29	3.0	–			4.9	7	5.6	3.7	3.4 ✓
1 4 +79.1	36	1 3.9	+79 8	6.5	–			6.6	18	8.4	6.5	5.1 ✓
0 58 +59.0	181	0 58.0	+59 5	7.2	–			6.9	7	7.6	5.7	5.4 ✓
1 34 +59.9	307	1 33.6	+59 49	6.0	266	5.5	16 -3 -4	6.4	7	7.1	5.2	4.9 ✓
1 32 +69.9	114	1 32.8	+69 52	5.2	260	5.1	19 +0 +1	5.8	12	7.0	5.1	4.3 ✓

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Plate 848.

	V	H	Type	No. Lines	K	Focus	Other Lines.	Remarks.
	6.3	16.9	II?	3	K=H	1	F.	sens.
	6.2	19.5	I	4	H	1	F.	
	6.7	19.8	I	7	K=H	1	F.	
	6.9	21.5	I	6	K=H	1	F.	
	6.3	22.3	I	6	K=H	2	F.	
	5.4	9.1	I	11	K=.5H	2	F.	
?	5.4	11.3	I d_2	5	H	1	F.	sens.
	5.7	12.9	I?	5	K=H	1	F.	
	5.6	15.0	I	9	K=.2H	1	F.	
	5.8	15.3	I	8	K=H	1	F.	
	5.5	18.0	I	6	H	1	F.	
	5.3	19.0	I	6	K=H	1	F.	
	5.0	20.5	I	5	K=H	1	F.	
	5.4	20.8	I?	4	K=H	1	F.	
	5.7	22.2	I?	9?	?	5	F.	
?	4.5	11.1	I d?	4	H	1	F.	sens.
	4.6	11.5	I	6	K=H	2	F.	
	4.2	11.5	I?	4	K=H	1	—	
	4.0	20.2	III	3	K=H	1	F.	
	4.7	23.0	~~IV~~ III?	3	K=H	1	F.	
	4.5	23.4	I	6	K=.5H	1	F.	
	3.6	7.5	I	5	H	1	F.	
	3.9	18.1	I	5	H	1	F.	
	2.8	7.2	I	5	K=H	1	F.	
	2.4	9.2	I	7	K=.2H	3	F.	
?	2.7	12.3	I	7?	?	1	F.	sens.
?	4.0	10.1	II a_2	5223	K=H	1	F.	sens.

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Mean 15

	No.	R.A.	Dec.	Mag.		Bpc.				
0 48 +79.7	24	0 48.6	+ 79 46	6.5	_	6.8	1.9	8.7	6.8	5.3 ✓
0 48 +69.7	55	0 48.7	+ 69 43	6.8	.	6.9	1.2	8.1	6.2	5.4 ✓
0 18 +79.3	10	0 17.9	+ 79 14	7.0	_	6.4	1.8	8.2	6.3	4.9 ✓
0 1 +78.9	1	0 1.5	+ 78 55	6.5	_	6.3	1.8	8.1	6.2	4.8 ✓
0 48 +59.6	146	0 48.1	+ 59 35	6.3	_	6.4	.7	7.1	5.2	4.9 ✓
1 50 +70.2	133	1 50.1	+ 70 11	4.6	_	5.8	1.2	7.0	5.1	4.3 ✓
1 51 +79.9	61	1 50.7	+ 79 58	7.5	.	6.9	1.9	8.8	6.9	5.4 ✓
1 34 +80.2	55	1 34.1	+ 80 10	7.5	_	6.8	1.9	8.7	6.8	5.3 ✓
1 15 +70.2	102	1 15.2	+ 70 13	6.1	_	6.5	1.2	7.7	5.8	5.0 ✓
1 5 +80.1	35	1 5.6	+ 80 6	7.3	_	6.6	1.9	8.5	6.6	5.1 ✓
0 56 +70.2	78	0 57.0	+ 70 9	6.7	.	6.8	1.2	8.0	6.1	5.3 ✓
0 51 +70.2	65	0 50.8	+ 70 13	6.5	_	6.7	1.2	7.9	6.0	5.2 ✓
0 55 +60.3	157	0 54.7	+ 60 18	6.5	_	6.6	.8	7.4	5.5	5.1 ✓
0 40 +69.9	46	0 40.8	+ 69 59	7.0	_	6.8	1.2	8.0	6.1	5.3 ✓
0 48 +59.9	144	0 48.0	+ 59 36	2.3		4.7	.8	5.5	3.6	3.2 ✓
1 33 +60.7	312	1 33.1	+ 60 41	6.3		6.7	.8	7.5	5.6	5.2 ✓
1 52 +80.6	64	1 51.8	+ 80 36	6.1	_	6.0	2.0	8.0	6.1	4.5 ✓
1 53 +80.7	65	1 52.6	+ 80 46	6.7	_	6.7	2.0	8.7	6.8	5.2 ✓
0 55 +60.8	158	0 55.4	+ 60 49	6.0	_	6.6 6.8	8	7.4 7.6	5.5 5.7	5.1 5.3 ✓
0 44 +60.3	124	0 44.5	+ 60 19	3.0	_	6.1 6.2	.8	6.9 7.0	5.0 5.1	4.6 4.7 ✓
0 24 +70.2	24	0 24.8	+ 70 70	6.8	_	6.5	1.2	7.7	5.8	5.0 ✓
1 48 +60.9	398	1 48.3	+ 60 39	6.6	.	6.5	.8	7.3	5.4	5.0 ✓
1 4 +60.9	186	1 4.0	+ 60 56	6.6	.	6.6	.8	7.4	5.5	5.1 ✓
2 50 +80.9	97 ~~63~~	2 49.6 ~~1 49.0~~	+ 80 54 ~~+ 80 56~~	5.5 ~~8.9~~	_	6.5	~~.8~~ 2.0	8.5	6.6	5.0 ✓
1 51 +71.8	117	1 51.2	+ 71 42	4.0	_	~~5.4~~	~~1.2~~	~~6.7~~	~~4.8~~	✓
1 28 +61.6	304	1 28.4	+ 61 37	6.5		6.8	.8	7.6	5.7	5.3 ✓
1 45 +71.0	111	1 45.3	+ 71 0	7.2	✓	7.1	1.2	8.3	6.4	5.6 ✓

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Plate 876.

V	H	Type	No. lines Remarks	K	Focus	Other Lines.
21.8	9.3	I	8.	K=.2H	3	F.
19.5	8.8	I	9	N	5	F.
19.0	9.7	II	2	K=1H	1	—
18.6	18.2	I	8	N	2	F.
17.7	7.1	III	3	K=H	1	F.
17.5	7.9	I	8	N	2	F.
17.9	16.1	I	3	N	1	F.
17.0	18.0	I	8	N	2	F.
17.1	19.8	I	6	N	2	F.
18.0	22.7	II?	3	K=H	1	F.
16.4	6.7	I	4	N	1	—
? 16.7	7.3	I a 2	5	N	1	F.
? 16.5	7.9	I b	5235	K=H	1	F.
16.8	19.5	I	9	K=.2H	3	F.
16.8	20.0	I	7	K=.5H	2	F.
17.0	20.5	~~I~~ III?	3	K=H	1	F.
15.8	10.3	I	4	N	1	F.
14.6	10.1	III	3	K=H	1	F.
15.0	14.1	I	6	N	1	F.
14.6	15.3	I?	3	N	1	—
14.1	20.5	I	7	N	1	—
12.7	10.2	I	5	K=.5H	1	—
12.4	10.5	II a	5248	~~K=.5H~~ K=H 3	2	F.
12.1	15.4	III	3	K=H	1	F.
12.0	10.3	I	2	K=H	1	—
11.1	12.0	I	7	N	2	F.
? 11.2	13.2	II a	5252	K=H	1	—
? 11.0	15.0	III b	5263	K=H	2	F.

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1887phae.proj..837F

Mean 13

	No.	R.A.	Dec.	Mag.					Br.				
1 51+71.8	117	1	51^2	+71^42	4.0	–			5.2	13	6.5	4.7	3.9 ✓
1 44+62.9	320	1	44^1	+62^57	3.3	287	3.6	22 +4 +3	4.9	9	5.8	4.0	3.6 ✓
1 51+73.1	108	1	50^5	+73^8	6.2	–			6.7	13	8.0	6.2	5.7 ✓
1 2+63.4	149	1	2^1	+63^26	6.0	188	5.4	19 +1 +0	6.4	9	7.3	5.5	5.1 ✓
1 52+63.7	274	1	52^3	+63^42	6.0	–			6.6 6.8	9	7.5 7.7	5.7 5.9	5.3 5.5 ✓
1 49+63.9	265	1	49^0	+63^35	5.5	300	5.2	20 +2 +1	6.3	9	7.2	5.4	5.0 ✓
1 11+63.9	176	1	11^5	+63^53	6.6	.			6.8	9	7.7	5.9	5.5 ✓
1 2+64.2	127	1	2^4	+64^13	5.9	191	5.5	16 -2 -3	6.2	9	7.1	5.3	4.9 ✓
0 38+74.0	29	0	38^2	+74^4	5.8	114	5.3	17 -1 -2	5.6	1.4	7.0	5.2	4.3 ✓
0 42+63.5	99	0	42^0	+63^27	5.8	–			6.4	9	7.3	5.5	5.1 ✓
1 54+64.4	285	1	53^8	+64^24	6.5	.			6.9	9	7.8	6.0	5.6 ✓
1 52+64.2	282	1	52^2	+64^12	6.0	311	5.7	18 +0 +1	6.6	9	7.5	5.7	5.3 ✓
1 42+54.4	396	1	42^5	+54^26	5.7	–			6.3	.6	6.9	5.1	5.0 ✓
1 2+54.4	236	1	2^3	+54^23	4.8	–			5.5	.6	6.1	4.3	4.2 ✓
0 36+74.2	27	0	36^2	+74^12	5.5	–			5.5	1.4	6.9	5.1	4.2 ✓
0 58+54.2	223	0	58^7	+54^12	5.7	–			6.7 6.8	.6	7.3 7.4	5.5 5.6	5.4 5.5 ✓
1 49+74.8	91	1	48^8	+74^47	6.5	.			6.5	1.5	8.0	6.2	5.2 ✓
1 51+75.4	86	1	51^8	+75^25	5.0	–			6.4 6.6	1.5	7.9 8.1	6.1 6.3	5.1 5.3 ✓
1 20+65.3	175	1	20^8	+65^21	6.0	233	5.9	16 -2 -3	6.6	9	7.5	5.7	5.3 ✓
1 11+75.5	59	1	10^3	+75^28	6.2				6.5	1.5	8.0	6.2	5.2 ✓
0 49+65.5	115	0	49^4	+65^33	6.0	151	6.0	15 -3 -4	6.5	1.0	7.5	5.7	5.2 ✓
1 35+56.4	334	1	35^3	+56^22	6.3	–			6.7	.6	7.3	5.5	5.4 ✓
1 51+76.6	63	1	50^8	+76^33	5.3	–			5.8	1.6	7.4	5.6	4.5 ✓
1 8+76.8	40	1	8^4	+76^48	6.4	–			6.9 7.2	1.6	8.5 8.8	6.7 7.0	5.6 5.9 ✓
1 35+56.8	330	1	34^8	+56^48	6.4	–			7.0	.7	7.7	5.9	5.7 ✓
~~349~~	~~1~~	~~28.7~~	~~+57^14~~	~~6.0~~									
1 32+67.3 ~~149~~	1	31.7	+67^18	6.1	257	5.5	15 -3 -4	6.0	1.0	7.0	5.2	4.7 ✓
~~58~~	1	27.6	+77^14	6.5									
1 28+57.2	~~349~~	1	28.7	+57^14	6.0	–			6.5	.7	7.2	5.4	5.2 ✓
1 16+67.4	123	1	15.8	+67^22	5.2	–			6.2 6.5	1.0	7.2 7.5	5.4 5.7	4.9 ✓ 5.2

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1887phae.proj..837F

March 21, 1887.

Plate 876.

V	H	Type	No. lines	K	Focus	Other lines.
11.5	16.4	I	4	H	1	F.
10.8	16.7	II	4	K=H	2	F.
10.5	19.7	I	8	K=1.5H	2	F.
9.6	9.5	I	8	K	3	F.
9.8	11.0	I?	4	K	1	—
9.8	15.0	II?	3	K=1.5H?	1	F.
9.6	17.7	I	7	K	3	F.
8.8	13.2	III	3	K=H?	1	F.
8.3	19.2	I	7	K	1	F.
8.4	22.6	III?	3	K=H	1	F.
7.9	16.0	I	9	K=1.2H	2	F.
6.0	10.9	I	5	K	1	—
6.0	12.1	I	8	K	2	F.
6.8	14.1	I	5	K=H	1	F.
6.9	15.2	I	14	K=1.2H	5	F.
6.5	19.7	I	3	K	1	—
6.6	21.4	I	6	K=H	1	F.
6.0	22.3	I	5	K	1	F.
5.2	9.0	I	8	K=1.2H	3	F.
5.4	15.0	I	7	K=1.8H	1	F.
5.5	15.2	I	5	K	1	F.
5.4	18.0	I	3	K	1	—
5.0	19.0	I	4	K	1	—
5.5	22.3	I?	8?	?	5	F.
4.4	11.4	I	7	K	1	F.
4.4	23.1	I	5	K=H	1	F.
3.7	18.1	I	3	K	1	—
2.6	[illegible]	I	3	K	1	—
2.4	9.2	I	5	K	4	F.

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1887phae.proj..837F

Mean 13

	No.	R.A.	Dec.	Mag.					Br.				
1 8+67.0	108	1	8.5	+67 3	6.8	.			6.9	1.0	7.9	6.1	5.6.
1 11+57.5	260	1	11.0	+57 28	6.1	–			6.4	.7	7.1	5.3	5.1.
0 59+57.5	200	0	59.7	+57 29	6.5	–			6.5	.7	7.2	5.4	5.2.
1 44+67.9	168	1	44.8	+67 58	5.2				5.5 5.8	1.1	6.6	4.8	4.2.
1 32+57.9	370	1	32.7	+57 54	6.8				7.0	.7	7.7	5.9	5.7.
1 11+77.9	49	1	11.2	+77 58	6.0	–			6.4	1.7	8.1	6.3	5.1.
1 1+68.0	77	1	0.9	+68 0	6.0	184	5.3	15 −3 −4	5.7	1.1	6.8	5.0	4.4.
1 24+58.5	260	1	24.5	+58 29	6.0	–			6.4 6.7	.7	7.1 7.4	5.3 5.6	5.1 5.4.
0 52+68.6	64	0	52.0	+68 34	7.0	.			6.9	1.1	8.0	6.2	5.6.
0 48+58.4	138	0	48.1	+58 23	5.1	–			6.3 6.6	.7	7.0 7.3	5.2 5.5	5.0 5.3.
1 0+78.9	34	1	0.0	+78 54	5.6	–			5.5	1.8	7.3	5.5	4.2.
1 34+59.8	307	1	33.6	+59 49	6.0	266	5.5	17 −1 −2	6.5	.7	7.2	5.4	5.2.
1 32+69.9	114	1	31.8	+69 52	5.2	260	5.1	17 −1 −2	5.6 6.6	1.2	6.8	5.0	4.3.
1 20+69.5	102	1	20.5	+69 31	6.1	–			6.8	1.1	7.9	6.1	5.5.
1 16+59.5	248	1	16.4	+59 29	3.0	–			4.0	.7	4.7	2.9	2.7.
0 18+79.3	16	0	17.9	+79 14	7.0	.			6.6	1.8	8.4	6.6	6.3.
0 1+78.9	1	0	1.5	+78 55	6.5	–			6.5	1.8	8.3	6.5	5.2.
0 48+59.6	146	0	48.1	+59 35	6.3	145	5.5	15 −3 −4	6.3	.7	7.0	5.2	5.0.
1 50+70.2	153	1	50.1	+70 11	4.6	–			5.4	1.2	6.6	4.8	4.1.
1 15+70.2	102	1	15.2	+70 13	6.1	–			6.7	1.2	7.9	6.1	5.4.
1 6 80.1	36	1	6.2	+80 8	6.7	.			6.9	1.9	8.8	7.0	5.6.
0 54+70.2	~~186~~ 78	0	57.2	+70 9	6.7	~~.~~			6.8	1.2	8.0	6.2	5.5.
0 50+70.2	65	0	50.8	+70 13	6.5	.			6.8	1.2	8.0	6.2	5.5.
0 48+59.9	144	0	48.0	+59 56	2.3				4.0	.8	4.8	3.0	2.7.
1 52+80.6	64	1	51.8	+80 36	6.1	318	6.0	24 +6 +5	6.4	2.0	8.4	6.6	5.1.
0 44+60.3	124	0	44.5	+60 19	5.0	–			6.1	.8	6.9	5.1	4.8.
1 4+60.9	186	1	4.0	+60 56	6.6	.			7.0	.9	7.9	6.1	5.7.
2 50+80.9	97	2	49.6	+80 54	5.5	476	6.0	29 +11 +10	6.9	2.0	8.9	7.1	5.6.
1 51+71.8	117	1	51.2	+71 42	4.0	306	4.1	29 +11 +10	5.3	.9	6.3	4.5	3.4.

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1887phae.proj..837F

March 24, 1887.

Plate 914.

	V	H	Type	No. Lines Remarks	K	Focus	Other Lines.
12 15	22.5	7.0	I	6	N	1	F.
	22.1	8.4	II	3	K = 2.0 H	1	F.
	22.1	10.3	I	5	K = H	1	F.
	22.8	11.2	I	5	N	1	F.
	22.2	18.3	I	6	N	1	F.
	22.4	20.4	II ?	3	K = H	1	F.
	22.5	22.0	I	5	N	1	F.
	22.0	22.5	I	4	N	1	F
?	22.9	23.2	II a?	5272	K = 1.5 H	2	F. very.
	22.9	23.6	I	5	N	1	—
	21.9	7.6	I	7	K = H	2	F.
	21.7	7.7	I	4	K = H	1	—
	21.0	12.5	I	6	?	1	F.
	21.0	13.7	II ?	3	K = H	1	F.
	21.1	16.2	III	3	K = H	1	F.
	20.4	5.7	I	5	N	1	F.
	20.7	9.5	I	11	N	5	F.
	20.0	10.0	I	5	K = H	1	F.
?	20.0	13.3	III h	5284 3	K = H	2	F. very.
	20.3	15.3	I	7	K = .8 H	1	F.
	20.2	16.2	III	3	K = H	1	F.
	20.1	19.7	I	9	K = H	2	F.
	20.2	20.7	III	3	K = H	1	F.
	20.5	22.0	III	3	K = H	1	F.
h	19.4	9.9	I I	4.8	N N	11	F. —
	19.4	10.4	III	3	K = H	1	F.
	19.3	12.6	II a	5296	N	1	F.
	19.0	12.8	I ?	5	K = H	1	F.

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1887phae.proj..837

	No.	R.A.	Dec.	Mag.			Mean g	Br.
1 43+58.8	381	1	43.6	+30 46	6.6	.	6.4	.5 6.9 5.4
1 57+70.9	163	1	56.7	+70 52	7.2	–	6.4	1.2 7.6 6.1 5.5
1 45+71.0	111	1	45.3	+71 0	7.4	–	6.5	1.2 7.7 6.2 5.6
1 33+60.7	312	1	33.1	+60 41	6.3	.	6.3	.8 7.1 5.6
1 3+60.9	186	1	4.0	+60 56	6.6	.	6.5	.8 7.3 5.8 5.6
0 55+60.8	158	0	55.4	+60 49	6.0	–	6.4	.8 7.2 5.7 5.5
0 33+70.6	39	0	33.7	+70 35	7.0	.	6.6	1.2 7.8 6.3
0 54+71.0	216	0	54.4	+71 1	7.1	.	6.7	.5 7.2 5.7 5.8
0 44+60.3	124	0	44.3	+60 19	5.6	–	5.8	.8 6.6 5.4
0 24+70.2	24	0	24.8	+70 10	6.2	.	6.4	1.2 7.6 6.1
1 48+60.9	398	1	48.3	+60 39	6.6	–	6.4	.8 7.2 5.7 5.5
1 42+71.2	486	1	41.7	+71 13	6.3	–	6.6	1.5 8.1 6.6 5.7
1 28+61.6	304	1	28.4	+61 37	6.3		6.5	.8 7.3 5.8 5.6
1 24+71.7	87	1	24.4	+71 40	7.8	–	6.5	1.3 7.8 6.3 5.6
1 8+71.6	64	1	8.2	+71 38	6.8	–	6.9 / 7.1	1.3 8.2 6.7 / 8.4 6.9 6.0 / 6.2
2 15+71.5	140	2	14.8	+71 28	7.7	.	6.8	1.2 8.0 6.5 5.7
1 51+71.7	117	1	51.2	+71 42	4.0	306 4.1 18+3	4.6	1.3 5.9 4.4 3.7
1 34+52.1	420	1	34.5	+52 9	7.0	–	6.7	.5 7.2 5.7 5.8
1 27+72.3	86	1	27.0	+72 17	5.2	–	6.0 / 6.2	1.2 7.2 5.7 / 7.4 5.9 5.1 / 5.3
1 13+72.1	69	1	13.3	+72 5	6.7	–	6.7	1.3 8.0 6.5 5.8
1 8+72.1	68	1	8.0	+72 6	6.7	–	6.7 / 7.0	1.3 8.0 6.5 / 8.3 6.8 5.8 / 6.1
0 58+61.9	206	0	57.3	+61 39	6.5	–	6.4	.8 7.2 5.7 5.5
0 38+71.9	37	0	38.8	+71 53	6.5	–	6.3 / 6.5 / 6.9	1.3 7.6 6.1 / 7.8 6.3 / 7.4 5.9 5.4 / 5.6 / 6.0
0 55+51.7	220	0	55.5	+51 43	6.0	–	7.1	.5 7.6 6.1 6.2
1 35+52.5	424	1	35.1	+52 28	8.5	.	7.0	7.3 5 7.5 6.6 6.1
1 47+72.5	112	1	46.6	+72 27	7.2	–	6.8 / 7.0	1.3 8.1 6.6 / 8.3 6.8 5.9 / 6.1
1 26+52.6	382	1	26.3	+52 36	6.6	.	6.6	.5 7.1 5.6 5.7
1 27+62.7	277	1	26.9	+62 39	7.2	+	6.8	.8 7.6 6.1 5.9

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1887phae.proj..837F

March 24, 1887.

Plate 914.

	γ	H	Type	No. Remarks	No. Lines	K	Focus	Other Lines.
	19.2	16.1	I		5	?	1	F.
	19.4	22.1	I		6	K = H	2	F.
	19.8	22.4	I		6	K = .5 H	1	F.
?	18.9	6.2	II	a	5303	K = H	1	F. diff.
	18.5	7.7	I		7	K = H?	1	F.
	18.3	9.0	I?		11	H	5	F.
	18.0	10.0	I		8	K = .2 H	2	F.
Peculiar spectrum?	18.0	10.5	II	b?	5313	K = H	2	F. diff.
	18.1	14.3	I		I 3 5	H K = H	1 1	— —
?	18.0	16.3	II		3	K = H	2	F. diff.
	17.4	6.5	I		4	H	1	F.
?	17.4	8.6	III		3	K = H	1	F. diff.
?	17.0	11.2	II		3	K = H	1	F. diff.
	17.5	13.6	I		8	—	2	F.
	17.6	14.7	III		III ? 3 3	K = H K = H	1 1	F. F.
	17.8	15.1	I		4	H	1	F.
	17.2	17.9	I		8	K = .5 H	2	F.
	17.4	18.8	I		9	H	2	F.
	17.4	18.5	I		I 4 H	H K = H	1 1	F —
	17.4	20.4	I		7	K = H	1	F.
	17.4	21.6	III		3	K = H	1	F.
	16.5	7.3	I		8	H	2	F.
	16.3	8.0	I		9	H	3	F.
	16.5	9.8	I		6	K = .2 H	1	F.
	16.1	10.1	III		3	K = H	1	F.
	16.7	11.5	I		5	K = H	1	F.
	16.6	12.3	I		4	H	1	F.
1 0	16.8	12.8	III		3	K = H	1	F.

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1887phae.proj..837-

Means

	No.	R.A.	Dec.	Mag.			Br.				
1 8+72.6	67	1	7.8	+72 38	8.5		6.7	1.3	8.0	6.5	5.8
0 28+72.1	35	0	28.8	+72 6	6.7	–	6.5	1.3	7.8	6.3	5.6
0 54+72.0	240	0	54.2	+72 4	7.3	–	6.9	.5	7.4	5.9	6.0
1 47+72.6	468	1	47.2	+72 35	7.5	–	6.6	.5	7.1	5.6	5.7
2 4+72.6	121	2	4.3	+72 39	8.0	–	6.8	1.3	8.1	6.6	5.9
1 44+63.9	320	1	44.1	+62 57	3.3		4.1	.9	5.0	3.5	3.2
1 51+73.1	108	1	50.3	+73 8	6.2	–	6.2	1.3	7.5	6.0	5.3
1 37+63.2	238	1	37.3	+63 8	6.1	–	6.2	.9	7.1	5.5	5.3
1 20+63.1	193	1	20.3	+63 7	8.0	.	6.9	7.0	7.8	6.3	6.0
1 4+73.3	~~160~~	1	3.8	+73 12	8.5	3 –	6.4	1.3	7.7	6.2	5.5
	~~161~~	1	3.8	+73 14	7.0			1.3			
2 14+73.0	139	2	14.2	+73 3	6.9	.	6.7	1.3	8.0	6.5	5.8
2 0+73.4	121	2	0.1	+73 20	6.3	–	6.4		7.8	6.3	5.5
							6.6	1.4	8.0	6.5	5.7
1 31+53.7	362	1	31.8	+53 43	7.8	–	6.9	.6	7.5	6.0	6.0
1 26+73.6	81	1	25.6	+73 33	6.3		6.2	1.4	7.6	6.1	5.3
1 17+73.4	75	1	17.5	+73 27	7.5	–	6.7	6.7	8.1	6.6	5.5
							6.9	6.9	1.4	8.3	6.8	6.0
1 14+73.3	71	1	14.2	+73 22	7.8	.	6.8	1.4	8.2	6.7	5.9
0 54+73.6	51	0	54.5	+73 36	6.8	–	6.4	1.4	7.8	6.3	5.5
1 2+63.5	144	1	2.1	+63 26	6.0	188 5.4 13-2	5.8	.9	6.7	5.2	4.9
1 1+63.4	147	1	1.2	+63 24	7.8	.	6.9	6.8	.9	7.8	6.3	6.0
0 59+63.5	229	0	59.7	+63 27	6.8	–	6.7	6	7.3	5.8	5.8
0 55+63.4	211	0	55.8	+63 25	7.0	–	6.6		7.2	5.7	5.7
							6.9	.6	7.5	6.6	6.0
1 52+63.7	274	1	52.3	+63 42	6.0	312 5.5 15+0	6.1	.9	7.0	5.5	5.2
1 49+63.9	265	1	49.0	+63 55	5.5	300 5.2 15+0	5.8	.9	6.7	5.2	4.9
1 52+73.9	112	1	52.9	+73 52	7.3	–	6.8	1.4	8.2	6.7	5.9
1 35+54.1	368	1	34.9	+54 9	7.5	–	6.8		7.7	5.9	5.9
							7.0	.6	7.6	6.1	6.1
1 30+53.9	354	1	30.1	+53 52	7.5	–	6.7	.6	7.3	5.8	5.8
1 27+53.9	339	1	27.3	+53 57	7.0	.	6.7	.6	7.3	5.8	5.8
							6.5		7.9	6.4	5.6
1 32+73.9	92	1	31.6	+73 52	6.8	+	6.8	1.4	8.2	6.7	5.9

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Plate 914.

				Type	No. Lines	Remarks.	K	Focus	Other lines.
10	30	16.2	18.0	I	I 3 4 4 3		K=H	1 1	F. —
		16.2	18.2	I	8		H	2	F.
		16.2	19.6	I	9		K=1.2 H	3	F.
		16.4	20.0	I	10		H	2	F.
		16.1	20.2	I	8		H	2	F.
		16.4	20.6	II	3		K=H	2	F. nebs.
		16.0	23.6	I	I 3 4 5 3		K=H	1 1	F F. 2
		15.5	7.2	I	6		H	2	F.
		15.9	7.5	I	7		H	2	F.
		15.8	8.0	I	8		H	2	F.
		15.2	10.7	I	6		H	2	F.
		15.5	11.1	III	3		K=H	1	F.
		15.2	12.0	III	3		K=H	1	F. nebs.
		15.5	17.6	II	3		K=H	1	F.
		15.2	18.6	I	6		K=H	1	F.
		14.8	7.6	I	6		H	1	F.
?		14.5	10.4	II	a? 5323		K=H	1	F. nebs.
		14.4	12.7	I	7		K=H	1	F.
?		14.6	12.9	II	a? 533 3		K=H	1	F. nebs.
		14.0	14.3	I	7		H	2	F.
		13.0	8.1	I	I 4 6		K=H	1 1	F F
?		13.6	10.4	III	b.c. 534		K=H	2	F. nebs.
		13.5	11.6	II	a? 535		K=H	1	F.
		13.8	15.5	I	7		K=H	2	F.
		13.2	20.5	I	3		H	1	—
		13.0	20.7	I	7		H	2	F.
?		13.0	24.0	III	? 3		K=H	1	F. nebs.
		12.9	17.5	III	3		K=H	1	F.

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Means

	No.	R.A.	Dec.	Mag.									
1 3 + 64.2	129	1	3.3	+ 64	14	7.4	.						
1 2 + 64.2	127	1	2.4	+ 64	13	5.9	191 5.5 11-4						
0 38 + 74.0	29	0	38.2	+ 74	4	5.8	–						
1 1 + 53.9	236	1	1.2	+ 53	38	7.0	.						
0 36 + 74.2	27	0	36.2	+ 74	12	5.5	104 5.6 15+0						
0 59 + 54.2	223	0	58.7	+ 54	12	5.7	–						
0 49 + 54.2	187	0	48.8	+ 54	10	7.2	.						
1 54 + 64.2	285	1	53.8	+ 64	24	6.5	.						
1 52 + 64.2	282	1	52.2	+ 64	12	6.0	311 5.7 14-1						
1 42 + 54.4	396	1	42.5	+ 54	26	5.7	283 5.5 11-4						
1 49 + 74.9	91	1	48.8	+ 74	47	6.5	.						
1 45 + 74.6	87	1	44.8	+ 74	37	6.5	–						
1 39 + 74.9	84	1	38.8	+ 74	52	6.8	–						
1 9 + 54.7	258	1	9.0	+ 54	40	7.5	–						
0 47 + 74.7	41	0	47.7	+ 74	42	8.0	–						
1 44 + 54.9	408	1	44.2	+ 54	53	6.6	.						
1 34 + 55.1	391	1	34.4	+ 55	9	7.1	–						
1 32 + 75.2	72	1	32.1	+ 75	8	7.0	–						
1 26 + 55.3	360	1	26.2	+ 55	18	7.2	–						
1 20 + 65.3	175	1	20.8	+ 65	21	6.0	233 5.9 12-3						
2 10.2+ 75.4	94	2	10.2	+ 75	27	7.5							
2 [illegible]	437	1	45.3	+ 55	32	7.0	.						
1 52 + 75.4	86	1	51.8	+ 75	25	5.0	–						
1 42 + 75.5	76	1	42.2	+ 75	30	6.8	–						
1 10 + 75.5	59	1	10.3	+ 75	28	6.2	–						
0 58 + 55.6	243	0	58.5	+ 55	36	7.5	.						
0 49 + 65.5	115	0	49.4	+ 65	33	6.0	151 6.0 19+4						
0 33 + 65.4	83	0	33.5	+ 65	20	6.0	–						
1 8 + 55.9	281	1	8.8	+ 55	52	7.2	–						

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Plate 914.

V	H	Type	No. lines	K	Focus	Other lines. Remarks.
12.5	19.4	I	6	H	1	F.
12.7	21.5	I I	5 5	K = H K = H	1 1	F. F.
12.5	22.9	I	6	H	2	F.
11.5	7.4	II	3	K = H	1	F. nebs.
11.5	8.8	I	4	H	1	F.
11.9	10.3	I	7	H	2	F.
11.0	10.5	I	6	H	1	F.
11.4	10.9	I	8	K = H	3	F.
11.2	15.6	III	3	K = H	2	F.
11.4	19.7	II	3	K = H	1	F.
11.4	21.2	III	3	K = H	1	F.
11.1	22.8	I	9	H	2	F.
11.1	23.2	III ?	3	K = H	1	F.
10.5	9.0	I	4	H	1	F.
10.2	11.2	III	3	K = H	1	F.
10.3	12.1	III	1	H	1	F.
10.0	12.2	I	8	H	2	F.
10.9	13.2	I	5	H	1	F.
10.3	13.6	I	8	H	2	F.
10.4	16.6	I	7	H	1	F.
? 10.5	18.0	II a 536	3	K = H	1	F. nebs.
10.0	18.6	I	6	K = H	2	F.
10.2	21.8	I	4	H	1	F.
9.9	8.0	III III	3 3	K = H K = H	1 1	F. F.
9.4	9.9	I	6	H	1	F.
9.1	10.5	I	4	H	1	F.
9.5	13.4	III	3	K = H	1	F.
? 9.9	15.1	III h.c. 537	3	K = H	2	F. nebs.

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1887phae.proj...007F

Means

	No.	R.A.	Dec.	Mag.		Brs.				
1 2 + 56.0	255	1 2.2	+ 55 60	8.0	.	6.7	1.6	7.3	5.8	5.5
0 45 + 65.7	106	0 45.1	+ 65 39	7.0	_	6.7 6.7	1.0	7.7	6.2	5.8
0 10 + 75.5	7	0 10.2	+ 75 28	7.4	.	6.5	1.5	8.0	6.5	5.6
1 46 + 56.4	386	1 45.6	+ 56 23	7.4	_	6.8	.6	7.4	5.9	5.9
1 48 + 66.3	175	1 48.2	+ 66 20	7.2	.	6.7	1.0	7.7	6.2	5.8
1 35 + 56.3	334	1 35.3	+ 56 22	6.5	.	6.3	.6	6.9	5.4	5.4
1 35 + 56.8	330	1 34.8	+ 56 48	6.4	.	6.4	.7	7.1	5.6	5.5
1 50 + 76.5	63	1 50.8	+ 76 35	5.3	_	5.6	1.6	7.2	5.7	4.7
1 8 + 76.8	40	1 8.4	+ 76 48	6.4	_	6.3 / 6.5	1.6	7.9 / 8.1	6.4 / 6.6	5.4 / 5.6
1 0 + 56.5	207	1 0.8	+ 56 35	6.7	_	6.7	.6	7.3	5.8	5.8
0 21 + 76.3	10	0 21.7	+ 76 13	6.5	_	6.3 / 6.5	1.6	7.9 / 8.1	6.4 / 6.6	6.4 / 5.6
0 8 + 76.2	5	0 8.1	+ 76 9	6.5	35 6.2 16 +1	6.2	1.6	7.8	6.3	5.3
0 36 + 66.4	58	0 36.0	+ 66 22	6.8	_	6.7 / 6.9	1.0	7.7 / 7.9	6.2 / 6.4	5.8 / 6.05
1 47 + 66.9	171	1 47.6	+ 66 32	8.3	.	6.9	1.0	7.9	6.4	6.0
1 48 + 77.3	73	1 48.5	+ 77 12	6.3	_	6.4 / 6.6	1.6	8.0 / 8.2	6.5 / 6.7	5.5 / 5.7
1 28 + 57.3	349	1 28.7	+ 57 14	6.0	_	6.6 / 7.0	.7	7.3 / 7.7	5.8 / 6.2	5.7 / 6.1
~~0 40 + 77.5~~	149 65	1 31.7 1 40.4	+ 67 18 + 77 28	6.1 6.3	.	5.6	1.7	7.3	5.8	4.7
1 26 + 66.9	134	1 26.0	+ 66 32	7.3	.	6.5	1.0	7.5	6.0	5.6
1 27 + 77.3	58	1 27.6	+ 77 14	6.3	.	6.3	1.6	7.9	6.4	5.4
1 8 + 67.0	108	1 8.5	+ 67 3	6.8	.	6.4	1.0	7.4	5.9	5.5
1 1 + 67.0	98	1 1.1	+ 67 0	6.8	_	6.6	1.0	7.6	6.1	5.7
0 40 + 77.2	27	0 40.5	+ 77 10	6.7	_	6.3	1.6	7.9	6.4	5.4
0 53 + 57.0	180	0 53.1	+ 57 2	6.8	.	6.6	.7	7.3	5.8	5.7
2 18 + 77.0	84	2 17.7	+ 77 1	7.5	_	6.9 / 7.1	6.7 6.9 / 1.6	8.5 / 8.7	7.0 / 7.2	6.10 / 6.2
1 43 + 67.4	168	1 43.5	+ 67 26	7.4	.	6.6	1.0	7.6	6.1	5.7
1 40 + 67.6	164	1 40.6	+ 67 38	8.0	.	6.8	1.0	7.8	6.3	5.9
1 24 + 57.6	320	1 24.1	+ 57 35	6.5	_	6.8 / 7.0	.7	7.5 / 7.7	6.0 / 6.2	5.4 / 6.1
1 16 + 67.4	123	1 15.8	+ 67 22	5.2	_	5.9 / 6.2	1.0	6.9 / 7.2	5.4 / 5.7	5.0 / 5.35

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March 26, 1887.

Plate 914.

	V	H	Type	Remarks	Std. No. Lines	K	Focus	Other Lines.
8.55 a.m.	9.8	16.8	II[a]	538 V 3		K=H	2	F. very.
	9.0	18.7	III		3	K=H	1	F.
	9.5	19.8	I		9	K=.2H	2	F.
	9.1	21.9	I		5	K=.5H	1	F.
	8.5	9.8	I		10	K	3	F.
	8.9	11.1	I		7	K=.2H	2	F.
	8.2	11.6	I		5	K	1	F.
	8.2	13.7	~~I~~ III ?		3	K=H	1	F.
	8.9	15.2	I		8	K	2	F.
	8.5	17.9	I		8	K	3	F.
	8.3	20.4	I		7	K=H	1	F.
	7.3	7.7	II		2	K	1	F.
	7.5	10.4	I		8	K	2	F.
	7.3	11.1	I ?		6	K=.5H	2	F.
	7.8	13.3	III		3	K=1.2H	2	F.
	7.0	16.2	I		9	K=.2H	3	F.
	7.2	19.4	I		7	K	2	F.
	7.5	22.7	III		3	K=H	2	F.
	7.9	23.2	III		3	K=H	2	F.
	6.5	7.1	I	I	6 ~~6~~	K K	12	F F.
	6.5	8.6	I	I V	3 5	K K	11	— —
	6.1	9.9	I		3	K	1	—
Double Star?	6.6	10.9	I		8	K=.2H	2	F.
	6.6	10.9	I		5	K	1	—
	6.9	12.6	I ?		.5	K=H	1	F.
	6.1	14.1	I		6	K	1	F.
	6.0	15.3	I		12	K=.2H	5	F.
	6.5	15.8	~~V~~ II[a]	539 V 3		K=H	2	F. Keen

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Means

	No.	R.A.	Dec.	Mag.			Br.				
1 11 + 57.1	260	1	11.0	+ 57 28	6.1	–	5.9	.7	6.6	5.1	5.0
0 38 + 77.7	25	0	38.4	+ 77 41	7.0	–	6.8 / 7.0	1.7	8.5 / 8.7	7.0 / 7.2	5.9 / 6.1
0 59 + 57.1	200	0	59.7	+ 57 29	6.5	–	6.0	.7	6.7	5.2	5.1
0 57 + 57.6	179	0	51.9	+ 57 35	7.0	–	6.8	.7	7.5	6.0	5.9
1 44 + 67.9	169	1	44.8	+ 67 58	5.2	290 5.1 15+0	5.5	1.1	6.6	5.1	4.6
1 33 + 57.9	370	1	33.7	+ 57 54	6.8	–	6.2	.7	6.9	5.4	5.3
1 31 + 58.3	273	1	30.9	+ 58 19	7.2	.	6.4	.7	7.1	5.6	5.5
1 24 + 68.2	113	1	24.2	+ 68 12	6.8	–	6.6 / 6.8	1.1	7.7 / 7.9	6.2 / 6.4	5.7 / 5.9
1 11 + 77.9	49	1	11.2	+ 77 38	6.0	210 5.9 18+3	6.0	1.7	7.7	6.2	5.1
1 0 + 68.0	77	1	0.9	+ 68 0	6.0	184 5.3 14-1	5.6	1.1	6.7	5.2	4.7
0 47 + 67.9	81	0	47.6	+ 67 60	6.5	–	6.5	1.1	7.6	6.1	5.6
1 46 + 58.5	331	1	43.8	+ 58 34	7.3	.	6.7	.7	7.4	5.9	5.8
2 0 + 78.5	73	1	59.9	+ 78 29	7.3	.	6.4	1.7	8.1	6.6	5.5
1 53 + 78.6	69	1	53.2	+ 78 38	7.3	–	6.5	1.8	8.3	6.8	5.6
1 24 + 58.1	260	1	24.5	+ 58 29	6.0	–	6.1 / 6.3	.7	6.8 / 7.0	5.3 / 5.5	5.2 / 5.4
1 0 + 78.9	34	1	0.0	+ 78 54	5.6	–	5.5	1.8	7.3	5.8	4.6
0 52 + 68.6	64	0	52.0	+ 68 34	7.0	.	6.5	1.1	7.6	6.1	5.6
0 48 + 58.4	138	0	48.1	+ 58 23	5.0	–	6.1 / 6.3	.7	6.8 / 7.0	5.3 / 5.5	5.2 / 5.4
0 46 + 58.2	134	0	46.4	+ 58 11	5.0	–	6.2 / 6.5	.7	6.9 / 7.2	5.4 / 5.7	5.3 / 5.6
1 48 + 58.9	341	1	48.3	+ 58 55	7.0						
~~2 2 + 68.7~~	~~138~~	~~2~~	~~1.5~~	~~+ 68 41~~	~~7.6~~	.	6.6 6.4	1.1	7.7	6.2	5.7
1 52 + 68.9	144	1	51.9	+ 68 53	8.0	.	6.9 6.9	1.1	8.0	6.5	6.0
2 8 + 79.1	68	2	7.2	+ 79 6	7.7	.	6.9	1.8	8.7	7.2	6.0
1 56 + 79.0	63	1	56.6	+ 79 0	6.7	–	6.0	1.8	7.8	6.3	5.1
~~1 56 + 79.0~~	~~71~~	~~1~~	~~56.2~~	~~+ 78 60~~	~~7.3~~	.	6.6	1.8	8.4	6.9	5.7
1 27 + 58.9	268	1	27.2	+ 58 53	7.2	–	6.9	.7	7.6	6.1	6.0
1 22 + 69.3	103	1	21.9	+ 69 17	7.0	.	6.5	1.1	7.6	6.1	5.6
1 16 + 59.4	248	1	16.4	+ 59 29	3.0	–	4.1	.7	4.8	3.3	3.2
1 4 + 79.2	36	1	3.9	+ 79 8	6.3	–	6.1	1.8	7.9	6.4	5.2

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March 25, 1887.

Plate 914.

V	H	Type	No. Lines / Remarks	K	Focus	Other Lines.
?	6.2	16.4	III ?	3	K=H	1	F. diff.
	6.4	17.9	I	6	K	1	F.
?	6.7	18.0	II a	540 3	K=H	1	F. diff.
	6.4	20.0	I	6	K	1	F.
	6.9	22.0	II a	541 ✓	K=H	1	F.
	5.5	6.1	III	3	K=H	2	F.
	5.8	6.6	I	✓	K	1	F.
	5.1	11.0	I	8	K	2	F.
?	5.6	14.3	II a	542 3	K=H	2	F. diff.
	5.2	17.1	II a?	543 3 ✓	K=H	2	F. diff.
	5.6	20.0	I	7	K	2	F.
	5.8	21.7	I	6	K	2	F.
	5.0	22.4	I	6	K	2	F.
	4.6	7.5	I	✓	K	1	F.
	4.0	9.3	I	9	K	4	F.
	4.3	10.6	I	4	K	1	—
	4.1	11.4	I	6	K	1	F.
	4.6	11.7	I	6	K=.2H?	1	F.
	4.9	12.4	I	11	K	3	F.
	4.4	13.1	I	7	K	1	F.
	4.2	15.1	I	8	K	2	F.
	4.5	15.5	I	7	K	2	F.
	4.6	15.6	I?	✓	K=H	1	F.
	4.4	16.4	I	6	K	1	F.
✓	4.6	17.9	I	I ✓	✓ H ✓	K	K=H 11	F. —
	4.2	18.2	I	7	K	2	F.
	4.1	21.0	I	54	K=.5H	1	—
	4.5	22.4	I?	9?	?	✓	F. Bright.

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1887phae.proj..837F

Means.

	No.	R.A.	Dec.	Mag.		Br.				
0 57+79.3	29	0 57.1	+79 14	6.4	–	6.2		8.0 6.5		5.3
						6.5	1.8	8.3 6.8		5.6 ✓
0 41+79.0	19	0 41.6	+79 2	7.7	.	6.6	1.8	8.4	6.9	5.7 ✓
0 59+68.9	74	0 59.4	+68 55	7.9	–	6.5	1.1	7.6	6.1	5.6 ✓
0 58+79.0	181	0 58.0	+79 5	7.2	.	6.6	.7	7.3	5.8	5.7 ✓
0 37+68.5	49	0 37.6	+68 32	6.4	–	6.5	1.1	7.6	6.1	5.6 ✓
2 47+78.8	103	2 47.1	+78 51	5.6	–	6.2 / 6.5	1.8	8.0 8.3	6.5 6.8	5.3 5.6 ✓
1 50+79.3	376	1 50.7	+79 15	7.0	.	6.7	.7	7.4	5.9	5.8 ✓
1 34+79.8	307	1 33.6	+79 49	6.0	266 5.5 11-4	5.9	.7	6.6	5.1	5.0 ✓
1 20+69.5	102	1 20.5	+69 31	6.1	–	6.1	1.1	7.2	5.7	5.2 ✓
0 48+79.8	24	0 48.6	+79 46	6.5	–	6.2	.9	8.1	6.6	5.3 ✓
0 18+79.3	10	0 17.9	+79 14	7.0	.	5.9	1.8	7.7	6.2	5.0 ✓
0 2+78.9	1	0 1.5	+78 55	6.5	.	5.8	1.8	7.6	6.1	4.9 ✓
0 48+79.6	146	0 48.1	+79 35	6.3	145 5.5 12-3	6.0	.7	6.7	5.2	5.1 ✓
2 36+79.5	86	2 36.1	+79 29	7.0	.	6.4	1.8	8.2	6.7	5.5 ✓
1 50+70.3	153	1 50.1	+70 11	4.6	304 4.6 19+4	5.3	1.2	6.5	5.0	4.4 ✓
2 3+80.0	70	2 3.3	+80 3	7.7	.	6.6	1.9	8.5	7.0	5.7 ✓
1 32+60.3	308	1 32.3	+60 18	6.5	.	6.7	.8	7.5	6.0	5.8 ✓
1 50+79.9	61	1 50.7	+79 38	7.5	–	6.6	1.9	8.5	7.0	5.7 ✓
1 32+69.9	114	1 31.8	+69 52	5.2	260 5.1 15+0	5.4	1.2	6.6	5.1	4.5 ✓
1 35+80.2	55	1 34.1	+80 10	7.5	.	6.4	1.9	8.3	6.8	5.5 ✓
1 15+70.3	102	1 15.2	+70 13	6.1		6.3	1.2	7.5	6.0	5.4 ✓
1 7+80.2	36	1 6.2	+80 8	6.7	.	6.0	1.9	7.9	6.4	5.1 ✓
1 6+80.1	35	1 5.6	+80 6	7.3	–	6.6	1.9	8.5	7.0	5.7 ✓
1 11+60.2	209	1 11.6	+60 11	7.3	.	6.9	.8	7.7	6.2	6.0 ✓
1 6+60.2	193	1 5.6	+60 10	7.5 ✓	.	6.7	.8	7.5	6.0	5.8 ✓
0 57+70.2	78	0 57.0	+70 9	6.7	.	6.3	1.2	7.5	6.0	5.4 ✓
0 40+69.9	46	0 40.8	+69 39	7.0	–	6.5	1.2	7.7	6.2	5.6 ✓
0 48+79.9	144	0 48.0	+79 36	2.3 ✓		4.0	.8	4.8	3.3	3.1 ✓

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Plate 914.

τ	H	Type	No. Lines / Remarks.	K	Focus	Other Lines.
3.4	11.2	I	7	N	1	F.
3.5	11.8	I	6	N	2	F.
3.0	11.7	I	V	K=.2H	1	—
3.5	13.1	I	6	N	1	F.
3.5	13.9	I	7	N	2	—
3.9	19.2	I	7	K=.5H	2	F.
3.9	20.6	~~I~~ II[a]	~~5~~ 4 ~~4~~ 3	K=H ~~K=.5H~~	1	F. nebs
? 3.5	23.2	II[a]	5 4 5 3	K=H	2	F. nebs.
3.2	23.6	I	6	N	1	F.
✓ 2.4	7.5	I ~~I~~	5 ~~5~~	N ~~N~~	1 2	F. —
? 2.4	9.0	III[b]	5 4 6 3	K=H	1	F. nebs.
2.4	10.2	I	V	N	1	F.
2.4	16.4	I	V	K=H	1	—
2.5	16.7	I	6	?	1	F.
2.8	18.2	I	7	N	1	F.
✓ 2.9	20.3	~~I~~ II[a] ? II	3 ~~2~~	K=H ~~K=H~~	1 2	F. F. ?
2.7	22.0	I	4	N	1	F.

Plate 844.

22.0	10.5	I	10	K=.2H	3	F.
22.5	15.0	I	8	K=H ?	2	F.
22.7	20.8	I	V	N	1	—
21.2	11.8	III	1	N	1	F.
✓ 21.7	13.6	III	III ? 3 2	K=H	K=H 1 1	F. —
21.3	15.2	III	3	K=H	1	F.
21.1	17.5	I	6	K=H	1	F.
21.6	20.5	I	3	N	1	—
12 1.5 ?	21.8	20.8	I d ?	5	N	1 F.

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	No.	R.A.	Dec.	Mag.		Br.				
1 33 +60.7	312	1	33.1	+60 41	6.3	6.5	.8	7.3	5.8	5.6
1 52 +80.6	64	1	51.8	+80 36	6.1	5.5	2.0	7.5	6.0	4.6
1 53 +80.5	65	1	52.6	+80 46	6.7	5.9	2.0	7.9	6.4	5.0
1 35 +80.1	57	1	34.9	+80 39	7.5	6.4	2.0	8.4	6.9	5.5
1 24 +80.7	50	1	25.0	+80 41	7.4	6.2	2.0	8.2	6.7	5.3
0 51 +70.2	65	0	50.8	+70 13	6.5	6.4	1.2	7.6	6.1	5.5
0 55 +60.3	157	0	54.8	+60 18	6.5	6.5	.8	7.3	5.8	5.6
0 44 +60.4	124	0	44.3	+60 19	5.0	5.8	.8	6.6	5.1	4.9
0 24 +70.3	24	0	24.8	+70 10	6.2	6.2	1.2	7.4	5.9	5.3
1 48 +60.9	398	1	48.3	+60 59	6.6	6.1	.8	6.9	5.4	
2 27 +80.6	86	2	27.2	+80 50	5.9	6.5	2.0	8.5	7.0	
1 45 +71.0	111	1	45.3	+71 0	7.4	6.6	1.2	7.8	6.3	
0 50 +81.0	25	0	49.6	+81 6	7.5	6.6	2.0	8.6	7.1	
1 5 +70.9	90	1	5.9	+70 60	6.0	5.9	1.2	7.1	5.6	
1 4 +60.9	186	1	4.0	+60 56	6.6	6.1	.8	6.9	5.4	5.2
55 60.8	158	0	55.4	+60 49	6.0	6.0	1.2	7.2	5.7	5.1
0 43 +71.1	37	0	42.9	+70 51	7.3	6.6	1.2	7.8	6.3	5.7
0 33 +70.6	39	0	33.7	+70 35	7.0					

278/19 15-22/19

Mean 10

2 17 +66.7	213	2	17.2	+66 45	4.7	5.5	1.0	6.5	4.7	
1 50 +76.6	63	1	50.8	+76 35	5.3	6.0	1.6	7.6	5.8	
1 35 +56.4	334	1	35.3	+56 22	6.3	6.6	.6	7.2	5.4	
2 7 +57.3	535	2	7.8	+57 13	6.2	6.7	.7	7.4	5.6	5.7
2 1 +56.9	438	2	1.5	+56 58	6.5	6.9	.7	7.7	5.9	6.0
1 48 +77.3	73	1	48.5	+77 12	6.3	6.6	.7	7.3	5.5	5.6
1 28 +77.3	58	1	27.6	+77 14	6.5	6.9	.7	7.6	5.8	5.9
1 26 +66.9	134	1	26.0	+66 52	7.3	6.6	.6	8.2	6.4	5.6
1 35 +56.8	330	1	34.8	+56 48	6.4	6.9	.6	8.5	6.7	5.7
						6.5	1.6	8.1	6.3	5.5
						6.8	1.0	7.8	6.0	5.8
						6.5	.7	7.2	5.4	5.5

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Plate 844.

	V	H	Type	No. Lines	Remarks	K	Focus	Other lines.
8	√0	20.4	7.1	I		7 K=H	2	F.
		20.8	7.7	I		7 K=H	1	F.
	?	20.0	9.5	I?		3 K=1,√H?	1	F. nm.
		20.0	13.0	III		3 K=H	1	F.
		20.4	14.3	III?		3 K=H	1	F.
		20.8	19.3	I		10 K=.2H	2	F.
	?	20.2	22.3	III b	547	3 K=H	2	F. nm.
	?	20.0	22.6	I?		3 K=H	1	F. nm.
		20.4	23.9	I		√ H	1	F.
		19.9	16.7	I		11 H	3	F.
		19.3	19.0	I?		1 H	1	F.
		19.5	21.1	I?		√ H	1	F.
		18.5	6.7	III		3 K=H	1	F.
		18.3	8.1	I?		3 H	1	F.
	?	18.7	14.0	I d?		√ H	1	F. nm.
		18.5	14.7	I?		√ K=H	1	F.
		18.6	17.6	II a	548	3 K=H	1	F.
		18.7	21.5	II a?	549	6 K=H	1	F.
	?	18.9	20.5	III b	550	3 K=H	1	F. nm.
	?	18.2	23.1	III b	551	3 K=H	1	F. nm.
		17.3	7.5	I		7 K=.√H	2	F.
		17.3	8.8	I		6 K=H	1	F.
		17.6	9.5	III		2 H	1	F.
		17.1	11.6	I		7 K=.2H	1	F.
		17.4	13.9	II?		3 K=H	2	F.
One star ?		17.9	14.2	I		8 K=.√H?	2	F.
		17.9	14.2	I		4 H	1	—
		17.4	16.0	I		4 H	1	—

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Mean 10

	No.	R.A.	Dec.		Mag.		Bx.				
3 2+77.3	115	3	2.^2	+77^ 11	6.2	–	6.2	1.6	7.8	6.0	5.2
2 32+67.2	224	2	32.^4	+67^ 12	6.6	–	6.4	1.0	7.4	5.6	5.4
2 23+67.7	215	2	23.^4	+67^ 43	7.5	–	6.7	1.1	7.8	6.0	5.7
2 3+57.9	519	2	3.^5	+57^ 53	6.6	–	6.7 7.0	.7	7.4 7.7	5.6 5.9	5.4 6.0
1 58+57.7	494	1	58.^6	+57^ 44	6.5	–	6.4 6.5	.7	7.1 7.2	5.3 5.4	5.4 5.5
1 32+67.3	149	1	31.^7	+67^ 18	6.1	–	6.0	1.0	7.0	5.2	5.0
1 16+67.4	123	1	15.^8	+67^ 22	5.2	–	6.0 6.4	1.0	7.0 7.4	5.2 5.6	5.0 5.4
0 40+77.2	27	0	40.^5	+77^ 10	6.7	–	6.6	1.6	8.2	6.4	5.6
1 8+67.0	108	1	8.^5	+67^ 3	6.8	.	6.7	1.0	7.7	5.9	5.7
1 44+67.9	169	1	44.^8	+67^ 38	5.2	290 5.1 16-2	5.6	1.1	6.7	4.9	4.6
1 11+77.9	49	1	11.^2	+77^ 38	6.0		6.4	1.7	8.1	6.3	5.4
1 32+57.9	370	1	32.^7	+57^ 54	6.8	.	6.5	.7	7.2	5.4	5.5
2 39+68.3	200 ~~230~~	2 ~~2~~	39.^1 ~~34.0~~	+68^ 17 ~~+67^ 13~~	6.5 ~~8.5~~	–	6.7 ~~6.4~~	1.1	7.8 ~~8.0~~	6.0 ~~6.2~~	5.7 ~~5.9~~
2 58+78.3	109	2	58.^3	+78^ 19	7.0		6.5	1.7	8.2	6.4	5.5
2 0+78.5	73	~~2~~ 1	~~0.8~~ 59.9	+78^ 29	7.3	.	6.5	1.7	8.2	6.4	5.5
1 53+78.6	69	1	53.^2	+78^ 38	7.3	–	6.7	1.8	8.5	6.7	5.7
1 46+58.5	331	1	45.^8	+58^ 34	7.5	–	6.7	.7	7.4	5.6	5.7
1 31+58.3	273	1	30.^9	+58^ 19	7.2	–	6.8	.7	7.5	5.7	5.8
1 24+68.2	113	1	24.^2	+68^ 12	6.8	–	6.8 7.0	1.1	7.9 8.1	6.1 6.3	5.8 6.0
1 24+58.5	260	1	24.^5	+58^ 29	6.0	–	6.3 6.5	.7	7.0 7.2	5.2 5.4	5.3 5.5
2 36+69.0	179	2	35.^9	+69^ 1	6.5	–	6.5	1.1	7.6	5.8	5.5
2 28+69.1	171	2	28.^8	+69^ 4	8.0	–	6.9	1.1	8.0	6.2	5.9
2 47+78.8	103	2	47.^1	+78^ 31	5.6	–	6.3 6.6	1.8	8.1 8.4	6.3 6.6	5.3 5.6
2 9+59.4	467 466	2 2	9.^3 9.^2	+59^ 22 +59^ 20	6.7 6.7	–	6.6	.7	7.3	5.5	5.6
2 0+59.3	422	2	0.^1	+59^ 18	6.8	–	6.6	.7	7.3	5.5	5.6
1 56+78.9	63 71	1	~~56.6~~ ~~56.2+~~	~~+78^ 0~~ ~~+78^ 60~~	6.7 ~~7.3~~	–	6.1	1.8	7.9	6.1	5.1
1 56+78.9	71	1	56.^2	+78^ 6.0	7.3	.	6.6	1.7	8.3	6.5	5.6
1 52.5+59.3	382	1	51.^5	+59^ 16	7.9	.	6.9	.7	7.6	5.8	5.9

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Plate 844.

V	H	Type	No. Lines	K	Focus	Other Lines.
		No. Remarks.				
17.4	16.2	I	5	K=.2H	1	—
17.0	19.1	I?	5	K=H	1	F.
17.4	19.7	I	8	K	2	F.
	16.7	8.2	I I	3	K(H)	11	F.–
16.0	9.0	III?	3	K=H	1	F.
16.5	10.7	~~I~~ IIa 552	~~3~~	K=.5H	1	F, Rem.
16.6	18.6	I	3	K	1	F.
16.7	19.7	III	3	K=H	1	F.
16.0	20.5	I	7	K	2	F.
16.9	20.6	I	6	K=H	1	F.
?	16.3	20.7	IIa 553	3	K=H	2	F, Rem.
16.5	21.2	I?	3	K	1	F.
15.7	13.7	I	4	K	1	F.
15.9	14.8	I	7	K=H	1	F.
15.5	15.5	I	11	K=.2H	3	F.
15.9	15.6	I	4	K	1	—
15.5	16.1	I	7	K	1	F.
15.2	18.5	I	7	K	1	F.
15.2	18.6	I	5	K=H	1	F.
15.9	18.8	I	8	K	3	F.
?	15.5	20.2	I d?	6	K=H	1	F, Rem.
X	15.4	23.1	I	5	K	1	F, Rem.
	14.4	10.5	III	3	K=H	1	F.
	14.1	11.8	III	3	K=H	1	F.
	14.2	14.5	III?	3	K=H	1	F.
?	14.3	14.6	I	5	K	1	F.
	14.6	14.7	I	9	K	2	F.
	14.5	16.0	I?	6	K=.5H	1	F.

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	No	R.A.	Dec.	Mag.			Br.				
1 51 +59.3	376	1	50.7	+59 15	7.0	–	6.7	.7	7.4	5.6	5.7
1 4 +79.2	36	1	3.9	+79 8	6.5	–	6.2	1.8	8.0	6.2	5.2
1 0 +78.9	34	1	0.0	+78 54	5.6	180 5.6 18+0	5.6	1.8	7.4	5.6	4.6
2 27 +59.5	521	2	26.6	+59 27	6.7	.	7.0	7.2 .7	7.7	5.9	6.0
2 55 +79.6	94	2	55.4	+79 36	7.3	–	6.8 / 7.1	1.9	8.7 9.0	6.9 7.2	5.8 6.1
2 36 +79.5	86	2	36.1	+79 29	7.0	–	6.5	1.8	8.3	6.5	5.5
1 9 +79.4	39	1	9.2	+79 22	8.0	.	6.8	1.8	8.6	6.8	5.8
0 56 +79.3	29	0	57.1	+79 14	6.4	–	6.4 / 6.6	1.8	8.2 8.4	6.4 6.6	5.4 5.6
1 34 +59.8	307	1	33.6	+59 49	6.0	266 5.5 16-2	6.4	.7	7.1	5.3	5.4
1 22 +69.3	103	1	21.9	+69 17	7.0	–	6.6	1.1	7.7	5.9	5.6
1 20 +69.5	102	1	20.5	+69 31	6.1	–	6.5	1.1	7.6	5.8	5.5
0 41 +79.0	19	0	41.6	+79 2	7.7		6.9	1.8	8.7	6.9	5.9
2 3 +80.0	70	2	3.3	+80 3	7.7	.	6.8	1.9	8.7	6.9	5.8
1 50 +79.9	61	1	50.7	+79 58	7.5	–	6.6	1.9	8.5	6.7	5.6
1 50 +70.2	153	1	50.1	+70 11	4.6	–	5.4	1.2	6.6	4.8	4.4
	423	1	53.0	+60 0	7.7	.		.8			
1 53 +59.9	~~400~~	1	~~54.6~~	~~+59 48~~	~~7.8~~		7.0	.8	7.8	6.0	6.0
1 33 +80.2	55	1	34.1	+80 10	7.5	.	6.5	1.9	8.4	6.6	5.5
1 6 +80.2	36	1	6.2	+80 8	6.7	.	6.4	1.9	8.3	6.5	5.4
1 5 +80.1	35	1	5.6	+80 6	7.3	–	6.9	1.9	8.8	7.0	5.9
1 31 +69.9	114	1	31.8	+69 52	5.2	260 5.1 19+1	5.8	1.2	7.0	5.2	4.8
0 48 +79.8	24	0	48.6	+79 46	6.5	–	6.4	1.9	8.3	6.5	5.4
0 18 +79.3	10	0	17.9	+79 14	7.0	.	6.0	1.8	7.8	6.0	5.0
2 20 +70.6	183	2	20.9	+70 40	6.5	–	6.7 / 7.1	1.2	7.9 8.3	6.1 6.5	5.7 6.1
2 27 +80.8	86	2	27.2	+80 50	5.9	–	6.0 / 6.5	2.0	8.0 8.5	6.2 6.7	5.0 5.5
1 56 +70.9	163	1	56.7	+70 52	7.2	–	6.5	1.2	7.7	5.9	5.5
1 53 +80.8	65	1	52.6	+80 46	6.7	.	6.4	2.0	8.4	6.6	5.4
1 52 +80.6	64	1	51.8	+80 36	6.1	318 6.0 18+0	5.8	2.0	7.8	6.0	4.8
1 35 +80.6	57	1	34.9	+80 39	7.5	–	6.5	2.0	8.5	6.7	5.5

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Plate 844.

T	H	Type	No. lines	K	Focus	Other lines.
			Remarks.			
14.4	16.7	I ?	1	H	1	F.
14.7	17.2	~~II~~ II	3 2	K=H K=H	1 1	F. —
14.3	20.4	~~I~~ II^a ? 554 ~~3~~		~~K=.5H~~ K=H	1	F.
14.7	21.4	I	8	H	2	F.
13.6	10.1	I	7	K=.2H	2	F.
13.8	16.2	I	5	K=H	1	F.
13.9	16.7	I	10	H	2	F.
12.1	9.7	III	3	K=H	1	F.
12.6	15.3	~~I~~	~~12~~	~~H~~ K=.1H	4	F.
12.6	17.2	I ?	5	K=.2H	1	F?
12.1	19.4	III	2	K=H	1	F.
12.3	21.3	I	7	K=H	1	F.
11.9	6.6	~~III~~ ?	4	H	1	F.
11.6	7.4	I	6	K=.5H	1	F.
? 11.4	10.2	III b 555	3	K=H	2	F. neu.
11.0	10.9	I	4	H	1	F.
11.0	15.9	III	3	K=H	1	F.
11.0	18.9	III	3	K=H	2	F.
? 11.3	20.3 ?	III b ? 556	3	K=H	1	F. neu.
10.6	6.0	I	4	H	1	F.
10.7	9.9	III ?	3	K=H	1	F.
10.5	13.3	III ? II a 556a	3 2	K=H K=H	1 1	F. neu
10.3	14.3	III	3	K=H	1	F.
10.0	17.5	I	14	H	5	F.
9.8	11.9	II	3	K=H	1	F.
9.3	12.2	I	3	H	1	F.
9.6	13.2	III	1	H	1	F.
9.9	13.8	I ?	5	K=H	1	F.

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Mean 10

	No.	R.A.	Dec.	Mag.		Br.				
1 24 +80.9	50	1	25.0	+80 41	7.4		6.3	2.0	8.3	6.5	5.3
1 46 +60.6	383	1	46.3	+60 34	7.3	_	7.0 7.2	.8	7.8	6.0	6.0
1 33 +60.7	312	1	33.1	+60 41	6.3	_	6.5	.9	7.4	5.6	5.5
1 15 +70.2	162	1	15.2	+70 13	6.1		6.4	1.2	7.6	5.8	5.4
2 50 +80.9	97	2	49.6	+80 34	5.5	_	6.7	2.0	7.7	5.9	4.7
1 45 +71.0	112	1	45.3	+71 0	7.4	_	6.7	1.2	7.9	6.1	5.7
1 48 +60.9	398	1	48.3	+60 59	6.6	.	6.4	.8	7.2	5.4	5.4
2 59 +81.6	107	2	59.3	+81 36	7.4	_	6.8 7.0	2.1	8.9 9.1	7.1 7.3	5.5 6.0
1 51 +71.7	117	1	51.2	+71 42	4.0	306 4.1 20+2	4.8	1.3	6.1	4.3	3.8
1 46 +61.6	352	1	45.7	+61 40	7.8	_	7.1	.8	7.9	6.1	6.1
1 24 +71.7	87	1	24.4	+71 40	7.8	_	6.8 7.0	1.3	8.1 8.3	6.3 6.5	5.8 6.0
1 28 +61.6	304	1	28.4	+61 37	6.5	_	6.6 6.6 7.0 7.1	.8	7.4 9.0	5.6 7.2	5.6 6.0
3 38 +81.2	135	3	38.2	+81 9	7.8	.		2.0	9.1	7.3	6.1
2 28 +61.9	~~448~~ 444	~~2~~ 2	~~28.8~~ 27.7	~~+61 58~~ +61 57	~~7.0~~ 6.5	_	6.5	.8	7.3	5.5	5.5
2 24 +72.2	140	2	24.4	+72 10	5.0	_	6.0 6.3	1.3	7.3 7.6	5.5 5.8	5.0 5.3
2 47 +82.3	76	2	46.8	+82 20	8.0	.	6.9	1.2	8.1	6.3	5.9
1 46 +72.4	112	1	46.6	+72 27	7.2	_	6.9 7.2	1.3	8.2 8.5	6.4 6.7	5.9 6.2
1 27 +72.3	86	1	27.0	+72 17	5.2	_	6.0 6.3	1.3	7.3 7.6	5.5 5.8	5.0 5.3
0 28 +81.4	13	0	29.0	+81 42	6.3	_	6.5 6.6	2.1	8.6 8.7	6.8 6.9	5.5 5.6
3 53 +81.6	147	3	53.8	+81 36	7.5	.	6.5	2.1	8.6	6.8	5.5
2 18 +62.5	402	2	17.5	+62 32	7.2	_	7.0 7.2	.8	7.8 8.0	6.0 6.2	6.0 6.2
2 3 +72.9	~~126~~	~~2~~ 2	~~4.2~~ 2.9	~~+72 39~~ +72 36	~~8.0~~ 8.5	_	7.0 7.3	1.3	8.3	6.5	6.9
1 57 +82.9	51	1	55.1	+82 52	7.0	_	6.4 6.7	2.3	8.7 9.0	6.9 7.2	5.4 5.7
1 44 +62.9	320	1	44.1	+62 37	3.3	287 3.6 20+2	4.7	.9	5.6	3.8	3.7
2 15 +73.0	139	2	14.2	+73 3	6.9	_	6.9	1.3	8.2	6.4	5.9
2 8 +63.3	316	2	7.9	+63 16	7.0	.	7.1	.9	8.0	6.2	6.1
2 13 +83.2	56	2	13.3	+83 11	8.0	_	6.6 7.0	2.3	8.9 9.3	7.1 7.5	5.6 6.0
2 2 +83.6	54	2	3.1	+83 0	8.9	_	6.7	2.3	9.0	7.2	5.7

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March 26, 1887.

Plate 844.

	V	H	Type	No. Lines	K	Focus	Other Lines. Remarks
?	9.3	13.9	III	3	K = H	1	F. nebl.
	9.7	15.2	I	10	K = 1.5 H	2	F.
	9.4	18.7	I	9	K = 1.5 H	2	F.
X	9.6	18.9	III	3	K = H	1	F. nebl.
	9.0	19.7	I?	4	N	1	F.
?	9.4	22.0	I d	6	?	1	F.
	8.4	6.8	I	5	K = H	1	F.
X	8.2	7.1	III	3	K = H	1	F. nebl.
	8.8	9.0	I?	5	K = H	1	F.
	8.6	12.0	I	8	N	2	F.
	8.5	12.3	II	2	K = H	1	—
	8.2	14.9	I	5	N	1	F.
√	8.6	15.1	~~V~~ II? II	3 2	K = H K = H	1 1	F. —
	8.7	15.5	I.	3	K = H	1	F. nebl.
	8.2	16.3	I	10	N	2	F.
	8.0	17.8	~~III~~	2	K = H	1	—
	8.0	18.4	I	3	N	1	—
	8.5	18.7	I	8	N	2	F.
	8.6	21.6	II?	3	K = H	1	F.
?	8.9	22.1	I	5	N	1	F.
?	7.3	6.2	I	6	?	2	F.
	7.5	7.7	I	7	N	2	F.
	7.6	13.4	I	4	N	1	F.
	7.6	14.8	II a 5 5 7 3		N	1	F. nebl.
	7.2	15.2	I	8	K = 1.2 H	2	F.
	7.6	15.6	I	10	K = 1.2 H	2	F.
	7.8	17.7	I !	5	K = H	1	F.
	7.3	18.8?	I	3	N	1	—

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Mean 10

	No.	R.A.	Dec.	Mag.		Br.				
2 0+73.4	121	2	0.1	+73 20	6.5	_	6.5		7.9	6.1	5.5 ✓
							6.8	1.4	8.2	6.4	5.8
1 51+73.1	108	1	50.5	+73 8	6.2	_	6.1	1.3	7.4	5.6	5.1 ✓
0 42+82.9	20	0	41.6	+82 55	6.5	_	5.7	2.3	8.0	6.2	4.7 ✓
	238	1	37.3	+63 8	6.1		6.4	.9	7.3	5.5	5.4
1 37+63.1	~~40~~	1	~~37.8~~	~~+83 10~~	~~9.0~~	_	6.6		7.5	5.7	5.6 ✓
0 23+82.8	14	0	24.6	+82 50	8.3		6.9	2.3	9.2	7.4	5.9 ✓
23 57+82.2	748	23	55.4	+82 10	7.0		6.5	2.2	8.7	6.9	5.5 ✓
2 50+73.4	165	2	50.2	+73 22	7.4	_	6.8	1.4	8.2	6.4	5.8 ✓
3 58+82.9	113	3	58.5	+82 59	5.0	_	5.8		8.1	6.3	4.8 ✓
							6.2	2.3	8.5	6.7	5.2
3 24+83.1	91	3	24.8	+83 5	7.3	_	6.8	2.3	9.1	7.3	5.8 ✓
2 9+63.7	320	2	9.1	+63 40	7.0	.	6.5	.9	7.4	5.6	5.5 ✓
2 7+63.8	315	2	7.7	+63 44	7.0	_	7.1	.9	8.0	6.2	6.1 ✓
1 52+73.9	112	1	52.9	+73 52	7.3	.	6.6	1.4	8.0	6.2	5.6 ✓
1 54+63.7	281	1	54.3	+63 41	8.0	_	7.0 7.1	.9	7.9	6.1	6.0 ✓
1 52+63.7	274	1	52.3	+63 42	6.0	_	6.1	.9	7.0	5.2	5.1 ✓
1 49+63.9	265	1	49.0	+63 35	3.5	300 5.2 15-3	5.8	.9	6.7	4.9	4.8 ✓
							6.8		8.2	6.4	5.8
1 32+73.9	92	1	31.6	+73 52	6.8	_	7.0	1.4	8.4	6.6	6.0 ✓
1 27+73.8	84	1	27.4	+73 48	8.3	.	7.0	1.4	8.4	6.6	6.0 ✓
1 26+73.6	81	1	25.6	+73 33	6.5	.	6.4	1.4	7.8	6.0	5.4 ✓
	60	1	5.8	+73 12	8.5						
1 4+73.3	61	1	3.8	+73 14	7.0	?*_	6.4	1.3	7.7	5.9	5.4 ✓
23 50+82.4	743	23	49.7	+82 23	6.0	4230 6.3 19+1	6.0	2.2	8.2	6.4	5.0 ✓
2 56+73.9	168	2	56.3	+73 30	3.2		5.5	1.4	6.9	5.1	4.5 ✓
3 55+83.5	104	3	55.1	+83 26	5.0		5.5	2.4	7.9	6.1	4.5 ✓
2 3+64.1	307	2	2.8	+64 10	7.0	.	6.9	.9	7.8	6.0	5.9 ✓
1 53+74.2	95	1	53.8	+74 10	7.5	.	6.8	1.4	8.2	6.4	5.8 ✓
1 54+64.4	285	1	53.8	+64 24	6.5	_	6.5	.9	7.4	5.6	5.5 ✓
1 52+64.2	282	1	52.2	+64 12	6.0	_	6.3	.9	7.2	5.4	5.3 ✓
2 47+83.8	20	0	48.4	+83 49	7.0	_	6.2	2.4	8.6	6.8	5.2 ✓
1 25+83.9	9	0	26.3	+83 53	7.8	✓.	6.5	2.4	8.9	7.1	5.5 ✓

See Miscellaneous Memoranda Book 8 p. 102.

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March 26, 1887.

Plate 844.

	V	H	Type	No. Lines Remarks	K	Focus	Other Lines.
?	7.6	20.7	II a	558 3	K=H	1	F, nem.
	7.5	23.0	I	5	H	1	F,
	6.1	7.5	I	4	H	1	—
	6.0	9.8	I	6	K=H	1	F
	6.9	11.2	III	3	K=2.0 H	2	F
	6.7	12.6	I	I 3	H	1	— —
?	6.7	11.5	III b	559 3	K=H	1	F, nem.
	6.4	15.3	I	7	H	2	F
	6.6	15.9	III	1	H	1	F
	6.1	16.6	II	2	K=H	1	—
	5.6	13.4	I	7	K=.5H	1	F,
?	5.2	15.0	III	3	K=H	2	F, nem.
	5.5	17.5	III	3	K=H	1	F
	5.8	22.7	II ?	1	H	1	F
	4.5	9.5	III	3	K=H	1	F
	4.7	13.2	III ?	1	H	1	F
?	4.4	13.3	II a ?	560 2	H	1	F, nem.
	4.9	16.1	II a	561 5	K=H	1	F,
?	4.7	16.7	III bc	562 3	K=H	2	F, nem.
	4.4	20.1	I	6	K=H	1	F
	4.7	22.0	I	4	H	1	F?
	3.2	11.4	II a	563 8	K=H	2	F
	3.2	16.2	III	2	K-H	1	—
	3.0	18.3	I	6	H	1	F
	3.4	19.6	III	3	K=H	1	F
	3.5	21.8	III	3	K=H	1	F
	2.4	7.8	I	4	H	1	—
	2.4	10.6	I	11	K=.2H	3	F,
	5.3	23.3	III	3	K=H	1	F

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Mean 10

	No.	R.A.	Dec.	Mag.		Br.				
1 10+73.9	66	1 10.4	+ 73 49	6.8	_	6.9	1.4	8.3	6.5	5.9
0 54+73.6	51	0 54.5	+ 73 36	6.8	.	6.5	1.4	7.9	6.1	5.5
2 48+74.5	131	2 48.6	+ 74 34	7.2	.	6.8	1.4	8.2	6.4	5.8
2 31+74.8	117	2 31.4	+ 74 46	7.2	_	6.7	1.5	8.2	6.4	5.7
2 58+84.4	59	2 58.8	+ 84 23	6.0	_	5.9 / 6.3	2.5	8.4 / 8.8	6.6 / 7.0	4.9 / 5.3
2 7+64.6	313	2 6.3	+ 64 35	7.0	.	7.2	7.4 .9	8.1	6.3	6.2
2 11+64.6	321	2 11.1	+ 64 34	7.0	_	6.9 / 7.1	.9	7.8 / 8.0	6.0 / 6.2	5.9 / 6.1
1 49+74.8	91	1 48.8	+ 74 47	6.5	.	6.3	1.5	7.8	6.0	5.3
1 44+74.6	87	1 44.8	+ 74 37	6.5	_	6.7 / 6.9	1.4	8.1 / 8.3	6.3 / 6.5	5.7 / 5.9
1 39+74.9	84	1 38.8	+ 74 52	6.8	_	6.7	1.5	8.2	6.4	5.7
2 14+85.2	45	2 14.2	+ 85 10	8.6	_	6.7	2.7	9.4	7.6	5.7
1 52+75.4	86	1 51.8	+ 75 25	5.0	_	6.1 / 6.4	1.5	7.6 / 7.9	5.8 / 6.1	5.1 / 5.4
1 32+75.2	72	1 32.1	+ 75 8	7.0	_	6.7 / 6.9	1.5	8.2 / 8.4	6.4 / 6.6	5.7 / 5.9
23 13+83.5	647	23 12.7	+ 83 27	8.0		6.9	2.4	9.3	7.5	5.9
3 53+85.2	63	3 52.4	+ 85 10	6.5	_	6.5 / 6.8	2.7	9.2 / 9.5	7.4 / 7.7	5.5 / 5.8
2 4+65.6	242	2 3.6	+ 65 39	6.8		6.9 / 7.0	1.0	7.9 / 8.0	6.1 / 6.2	5.1 / 6.0
2 3+65.9	239	2 3.2	+ 65 50	6.0		6.5	1.0	7.5	5.7	5.5
1 42+75.6	76	1 42.2	+ 75 30	6.8	_	6.7 / 5.5	1.5	8.2 / 8.3	6.4 / 6.5	5.7 / 4.5
0 50+85.5	19	0 49.7	+ 85 29	5.0	_	6.0	2.8	8.8	7.0	5.0
1 10+75.5	59	1 10.3	+ 75 28	6.2	_	6.4	1.5	7.9	6.1	5.4
1 20+65.4	175	1 20.8	+ 65 21	6.0	233 5.914-4	6.4	.9	7.3	5.5	5.4
3 23+86.2	51	3 19.3	+ 86 11	6.0	_	6.4 / 6.8	2.9	9.0	7.2	5.1 / 5.6
0 53+86.4	17	0 52.8	+ 86 22	7.5	.	6.9	3.0	9.9	8.1	5.9
23 52+85.9	409	23 52.8	+ 85 54	8.0	.	6.6	2.9	9.5	7.7	5.6
23 30+85.4	403	23 29.7	+ 85 23	7.8	_	6.6 / 6.9	2.7	9.3 / 9.6	7.5 / 7.8	5.6 / 5.9
22 55+84.6	517	22 54.2	+ 84 36	6.5	_	6.7 / 7.0	2.6	9.3 / 9.6	7.5 / 7.8	5.7 / 6.0
4 57+85.5	78	4 55.1	+ 85 32	7.0	.	~~6.7~~	~~2.8~~	~~9.5~~	~~7.7~~	
2 17+66.8	213	2 17.2	+ 66 45	4.7	_	~~5.5~~ / 6.1	~~1.0~~ 2.4	~~6.5~~ 8.5	~~4.7~~ 6.7	5.1
22 57+83.6	640	22 55.4	+ 83 34	5.0	_	6.3	2.4	8.9	7.1	5.5

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March 26, 1887.

Plate 844.

	T	H	Type	No. lines	Remarks	K	Focus	Other lines.
	2.9	15.0	I	8		K=H	2	F.
	2.9	19.5	I	6		K=H	1	F.

Plate 1019.

	22.5	10.1	I ?	4		?	1	—
	22.8	13.5	II a	564	7	K=H	1	—
	22.2	18.0	I	3		H	1	—
	22.8	20.1	I	6		?	1	—
	22.7	22.2	I	4		H	1	—
✓	21.1	11.1	II ? IIa	564a	2	K=H	K=H 1	— seen
?	21.5	12.5	II	3		K=H	1	F. seen.
	21.2	15.0	I	13		K=.8H	3	F.
	21.5	16.4	I	5		H	1	F.
?	21.4	18.2	II a	565	3	K=H	1	F. seen.
✓	21.8	20.0	I ? I	3	3	H	H 1	— —
	21.4	21.1	I	8		K=.2H ?	2	F.
	20.8	9.2	III	3		K=H	1	F.
	20.3	9.4	II a ?	566	3	K=H	1	F. seen
	20.7	10.8	I	11		K=.2H	4	F.
✓	20.4	14.0	II ? IIa	566a	2	H	K=H 1	F. F. seen
?	20.0	15.2	III b	567	3	K=H	2	F. seen.
	20.4	16.5	I	7		K=.2H ?	1	—
✓	20.2	18.2	I	3	3	H	H 1	F. —
✓	20.0	19.2	II a	568	2	K=H	K=H 1	— —
	20.2	19.8	II	3		K=H	1	F.
	20.1	20.7	I	6		H	1	—
	20.4	21.1	I	9		H	2	F.
12	20	19.0	I	8		K=.5H	3	F.

11 55. a.m.

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1807phae.proj...837F

	No.	R.A.	Dec.	Mag		Mean 10 Br.
1 50+76.6	63	1 50^.8	+ 76^ 35	5.3	–	5.8 | 1.6 7.4 5.6 | 4.8 ✓
23 23+85.6	399	23 24.^2	+ 85 37	7.5	–	6.7 | 2.8 9.5 7.7 | 5.7 ✓
						175/10 6-11/10
						Mean 7
2 15+55.9	612	2 15.^1	+ 55^ 56	6.3		6.7 | 6.7 3.5 9 ✓
2 3+65.9	239	2 3.^2	+ 65^ 50	6.0	–	~~6.6~~ ~~1.0~~ ~~7.6~~ ~~6.7~~ ✓
1 26+75.9	69	1 26^.3	+ 75^ 59	8.1	.	7.0 1.5 8.5 7.1 6.3
1 11+75.5	59	1 10^.3	+ 75^ 28	6.2		~~6.3~~ ~~1.5~~ ~~7.8~~ ~~6.4~~ ✓
1 20+65.4	175	1 20^.8	+ 65^ 21	6.0	~~233 5.9 12.5~~	~~6.2~~ ~~9~~ ~~7.1~~ ~~5.7~~ ✓
2 12+56.7	393 ✓	2 12.^8	+ 56^ 43	7.0 ✓	–	6.7 6.9 7.7 7.4 6.0 6.0 ✓
2 7+56.4	471	2 6.^8	+ 56^ 23	6.6	–	6.5 .6 7.1 5.7 5.8 ✓
1 51+76.6	63	1 50.^8	+ 76^ 35	5.3	–	5.7 1.6 7.3 5.9 5.0 ✓
1 48+66.3	175	1 48.^3	+ 66^ 20	7.2	.	6.9 1.0 7.9 6.5 6.2 ✓
1 46+56.4	386	1 45.^6	+ 56^ 23	7.4	–	7.0 .6 7.6 6.2 6.3 ✓
1 11+75.9	58 ✓	1 10.^3	+ 75^ 58	7.1 ✓	.	7.1 ~~7.2~~ 1.5 8.6 7.2 6.4 ✓
1 35+56.3	334	1 35.^3	+ 56^ 22	6.5	–	6.5 .6 7.1 5.7 5.8 ✓
2 42+76.5	101	2 42.^2	+ 76^ 29	6.8	–	6.7 8.3 6.9 6.0 ✓
2 24+66.9	223	2 24.^2	+ 66^ 50	7.0	–	6.9 1.6 8.5 7.1 6.2 ✓
2 17+66.7	213	2 17.^2	+ 66^ 45	4.7	–	7.0 1.0 8.0 6.6 6.3 ✓
* 1 7+56.9	~~211~~	1 1.^9	+ 56^ 56	8.5		5.2 ~~1.0~~ 6.2 4.8 4.5 ✓
1 48+77.3	73	1 48.^5	+ 77^ 12	6.3	–	6.6 6.7 7.3 5.9 5.9 ✓
1 48+66.9	171	1 47.^6	+ 66^ 52	8.3	–	6.4 8.0 6.6 5.4 ✓
1 38+65.9	161 ✓	1 38.^9	+ 66^ 57	8.4 ✓		6.6 1.6 8.2 6.8 5.9 ✓
1 14+76.9	42 ✓	1 14.^1	+ 76^ 55	8.0 ✓	–	6.9 1.0 7.9 6.5 6.2 ✓
1 8+76.8	40	1 8.^4	+ 76^ 48	6.4	–	7.0 ~~7.3~~ 1.0 8.0 6.6 6.3 ✓
1 26+66.9	134	1 26.^0	+ 66^ 32	7.3	.	6.9 ~~7.2~~ 1.6 8.5 7.1 6.2 ✓
1 35+56.8	330	1 34.^8	+ 56^ 48	6.4	.	6.5 1.6 8.1 6.7 5.8 ✓
3 2+77.3	115	3 2.^2	+ 77^ 11	6.2	+	6.6 1.0 7.6 6.2 5.9 ✓
*2 1+56.9	*~~138~~	2 1.^4	+ 56^ 58	6.5 –	Should be Wrong Ident. found after Table I was cast	6.4 .7 7.1 5.7 5.7 ✓
						5.4 | 1.6 7.0 5.6 | 4.7 ✓

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March 30, 1887.

Plate 1019.

			Type	No. lines	K	Focus	Other lines. Remarks.
9.55							
10 20	19.5	7.9	I	8	K=.2H	2	F.
	19.2	9.2	I?	3	H	1	—
	19.2	10.3	I?	8	H	1	seen, —
	19.9	12.3	III	3	K=H	1	F.
	19.5	12.4	I	9	K=H	1	— —
	19.0	14.7	II	4	K=H	2	F.
	19.4	16.1	III	3	K=H	1	F.
	19.4	17.2	I	7	H	1	F.
	19.9	17.4	I	4	K=H	1	— —
	19.6	17.5	I	8	H	2	F.
	19.6	19.5	I	10	H	3	F.
	19.7	21.0	II?	2	K=H	1	— seen
	19.4	21.3	I	4	K=H	1	— —
	19.7	22.3	II?	2	K=H	1	—
	19.5	22.7	III	3	K=H	1	F.
	19.1	24.1	I?	4	H	1	F? seen.
	18.0	6.3	III	2	K=H	1	F. —
	18.5	8.3	I	4	H	1	— —
	18.7	9.7	II	5	K=H	1	F. seen.
	18.6	13.1	I?	3	H	1	— —
	18.6	13.4	II?	3	K=H	1	F.
	18.6	15.2	II	2	K=H	1	F. F? seen
	18.0	15.2	I?	3	H	1	F.
	18.5	16.9	I	11	H	3	F.
	18.9	17.7	I	3	H	1	—
	18.1	19.0	I	10	K=.2H?	2	F
	18.6	19.8	I	3	K=H	1	F. —
	18.4	21.5	I	8	K=.5H	2	F.

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Means

	No.	R.A.	Dec.	Mag.			Br.				
2 32+67.2	224	2	32.4+	67 12	6.6	–	6.2	1.0	7.2	5.8	5.5
2 26+67.4	217	2	26.1+	67 26	7.7		6.9	1.0	7.9	6.5	6.2
1 15+57.6	280	1	16.0+	57 29	8.5	.	7.0 7.2 .7		7.7	6.3	6.3
2 7+57.3	535	2	7.8+	57 13	6.2	–	6.7 6.9 .7	7.4 7.6	{6.0 6.2}		6.0 6.2
2 7+57.4	533	2	7.7+	57 21	8.0	–	7.0 7.2 .7		7.7	6.3	6.3
1 59+57.7	494	1	58.6+	57 44	6.5	–	6.2 .7		6.9	5.5	5.5
1 40+77.5	65	1	40.4+	77 28	6.5	–	6.6 6.7 1.7	8.3 8.4	{6.9 5.6}		5.9 6.0
1 43+67.5	168	1	43.3+	67 26	7.4	.	6.6 1.0		7.6	6.2	5.9
1 48+57.1	435	1	48.5+	57 9	8.1	.	6.9 7.2 .7		7.6	6.2	6.2
1 27+77.3	58	1	27.6+	77 14	6.5	.	6.1 1.6		7.7	6.3	5.4
1 32+67.3	149	1	31.7+	67 18	6.1	257 5.5 13-1	5.8 1.0		6.8	5.4	5.1
0 56+76.9	33	0	57.2+	76 54	8.1	–	7.2 7.2 .6		8.8	7.4	6.5
1 22+67.2	134 373	1	22.2+	67 57 13 23	8.2	.	6.8 6.9 1.0		7.8	6.4	6.1
0 47+76.7	28	0	46.7+	76 41	8.0	–	7.0 1.6		8.6	7.2	6.3
1 28+57.3	349	1	28.7+	57 14	6.0	–	6.9 7.2 .7	7.6 7.9	{6.2 6.5}		6.2 6.5
1 8+67.0	108	1	8.5+	67 3	6.8	.	6.5 1.0		7.5	6.1	5.8
3 12+77.5	123	3	12.8+	77 30	7.1	–	7.0 7.2 .7	8.7 8.9	{7.3 7.5}		6.3 6.5
2 23+59.9	385	2	22.6+	57 48	7.5	.	7.1 7.4 .7		7.8	6.4	6.4
2 23+67.7	215	2	23.4+	67 43	7.5	–	6.5 .7		7.2	5.8	5.8
2 5+57.9	522	2	4.8+	57 48	7.5		7.0 7.2 .7		7.7	6.3	6.3
2 3+57.9	519	2	3.5+	57 33	6.6	–	6.8 .7		7.5	6.1	6.1
1 53+67.9	181	1	53.9+	67 34	8.4	–	7.0 7.2 1.1		8.1	6.7	6.3
1 48+78.2	66	1	47.6+	78 11	8.1		6.9 1.7		8.6	7.2	6.2
1 44+67.9	169	1	44.8+	67 58	5.2	290 5.1 30-4	7.2 1.1		8.4	7.7	4.3
1 40+67.6	164	1	40.6+	67 38	8.0	.	6.9 1.0		7.9	6.5	6.2
1 11+77.9	44	1	11.2+	77 58	6.0	–	6.0 1.7		7.7	6.3	5.5
1 39+57.7	399	1	38.9+	57 44	8.2	.	7.0 7.2 .7		7.7	6.3	6.3
1 32+57.9	370	1	32.7+	57 54	6.8	V–	6.3 .7		7.0	5.6	5.6

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Plate 1019.

	Y	H	Type	No. Lines	Remarks	K	Focus	Other Lines.
	18.9	22.5	III	571	3	K=1.5H	2	F.
?	18.5	22.6	I	7		K=1.5H	2	F. sens.
	18.5	23.9	III?	2		K=H	1	—
?	17.3	6.9	II?	572	3	K=H	2	F, sens.
	17.0	8.2	I	7		K=1.5H	2	F.
√2	17.0	11.4	I I	4	H	K=H	K=H	1 1 — —
	17.4	14.1	I	7		N	2	F.
	17.1	14.7	I	7		K=1.5H	2	F.
√4	17.8	15.5	I I	4	3	N	N	1 1 — —
	17.4	17.7	I	5		K=1.2H	1	—
4	17.3	17.9	~~I~~ I?	3		K=H	1	F. sens.
	17.5	20.7	~~III~~ II	3		K=H	1	F.
	17.5	21.8	I	7		N	1	F.
4	17.6	22.5	~~III~~ ?	2		K=H	1	sens.
	16.8	9.4	I	3		N	1	—
	16.3	9.5	III	573	3	K=H	2	F.
	16.2	12.3	~~II~~ III	3		K=H	1	F.
	16.3	13.4	I	5		K=H	1	F.
	16.5	14.4	I	9		K=1.2H	2	—
√√	16.5	14.4	I? I?	4	? H	N	N	1 1 — —
√4	16.6	15.5	I I	7	6	N	N	1 1 — —
	16.0	16.3	I	4		N	1	—
	16.0	16.6	I	7		K=1.2H	2	F.
	16.6	17.2	I	6		N	2	F?
√4	16.7	18.7	III III	2	2	K=H	K=H	1 1 — —
	16.0	19.7	I	10		N	3	F.
	16.2	20.7	I	3		N	1	—
√4?	16.4	21.0	II? II	574	3	2K=K	H	1 1 F, sens. seen

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Mean 7

	No.	R.A.	Dec.	Mag.		Br.				
1 16 + 67.3	123	1 15.8	+ 67 22	5.2	–	6.1 / 6.4	1.0	7.1 / 7.4	5.7 / 6.0	5.4 / 5.7
0 40 + 77.2	27	0 40.5	+ 77 10	6.7	–	6.5	16	8.1	6.7	5.8
1 24 + 57.6	320	1 24.0	+ 57 35	6.5	–	6.9 / 7.1	.7	7.6 / 7.8	6.2 / 6.4	6.2 / 6.4
3 8 + 77.9	119	3 8.9	+ 77 58	7.5	–	6.2	1.7	7.9	6.5	5.5
2 58 + 78.3	109	2 58.3	+ 78 19	7.0	–	6.0	1.7	7.7	6.3	5.3
2 26 + 78.6	95	2 26.8	+ 78 34	8.0	–	7.0 7.2	1.8	8.8	7.4	6.3
2 0 + 78.5	73	~~2 0.1~~ 1 59.9	+ 78 29	7.3	.	6.2	1.7	7.9	6.5	5.5
1 53 + 78.6	79 (6)	1 53.2	+ 78 38	7.3	–	6.6	1.8	8.4	7.0	5.9
1 52 + 68.3	145	1 52.2	+ 68 15	8.1						
~~1 48 + 78.~~	~~66~~	~~1 47.6~~	~~+ 78 18~~	~~8.1~~		6.9 7.1	1.7	8.6	7.2	6.2
1 23 + 78.4	49	1 22.8	+ 78 25	8.5	–	6.9	1.7	8.6	7.2	6.2
1 46 + 58.5	331	1 45.8	+ 58 34	7.5	–	6.8	.7	7.5	6.1	6.1
1 24 + 68.2	113	1 24.2	+ 68 12	6.8	–	6.7	1.1	7.8	6.4	6.0
1 31 + 58.3	273	1 30.9	+ 58 19	7.2	.	6.7	.7	7.4	6.0	6.0
0 38 + 77.6	25	0 38.4	+ 77 41	7.0	–	6.8 / 6.9	1.7	8.5 / 8.6	6.1 / 6.2	6.1 / 6.2
2 26 + 68.7	177	2 26.2	+ 68 40	8.0	.	6.9	1.1	8.0	6.6	6.2
2 47 + 78.8	103	2 47.1	+ 78 51	5.6	–	6.2 / 6.5	1.8	8.0 / 8.3	6.6 / 6.9	5.5 / 5.8
2 18 + 79.1	75	2 18.4	+ 79 5	7.5	–	6.8 / 7.0	1.8	8.6 / 8.8	7.2 / 7.4	6.1 / 6.3
2 7 + 79.1	68	2 7.2	+ 79 6	7.7	–	6.9	1.8	8.7	7.3	6.2
1 56 + 78.9	71	1 56.2	+ 78 60	7.3	–	6.0	1.8	7.8	6.4	5.3
1 59 + 58.9	384	1 59.2	+ 58 56	8.5		6.4 6.3	.7	7.1	5.7	5.7
1 44 + 78.9 +	62	1 43.8	+ 78 60	8.3	.	6.8 6.8	1.8	8.6	7.2	6.1
1 51 + 59.3	382	1 51.5	+ 59 16	7.9	.	6.9	.7	7.6	6.2	6.2
1 51 + 59.3	376	1 50.7	+ 59 15	7.0	–	6.4	.7	7.1	5.7	5.7
1 48 + 58.9	341	1 48.3	+ 58 55	7.0	.	6.3	.7	7.0	5.6	5.6
1 34 + 68.8	125	1 34.1	+ 68 46	7.3	–	6.9 / 7.1 (7.1 / 7.3)	1.0	7.9 / 8.1	6.5 / 6.7	6.2 / 6.4
1 0 + 78.9	34	1 0.0	+ 78 54	5.6	180 5.6 17+3	5.5	1.8	7.3	5.9	4.8
0 51 + 78.6	28	0 51.0	+ 78 37	8.1	.	6.9	1.8	8.7	7.3	6.2
1 34 + 58.9	282	1 33.7	+ 58 54	6.5	+	7.0 7.0	.7	7.7	6.3	6.3

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			Type	No. lines	Remarks	K	Focus	Other lines.
	16.1	22.7	I?	4		K=H	1	—
	16.9	23.5	III ?	3		K=1.5H	2	F.
	15.5	8.6	I	5		K=.5H	1	—
	15.9	9.0	I	3		H	1	—
H	15.6	10.5	I I	3	3	H K	1	1 — —
	15.3	10.8	I	7		H	2	F.
	15.8	12.0	I	8		H	2	F.
H	15.4	12.1	I I	3	H	H K=H	1	1 — —
	15.9	14.3	I	7		K=.5H	2	—
H	15.4	14.7	I I	3	3	K=.5H K	1	1 — —
H	15.0	15.5	II II	3	2	K=H K=H	1	1 F. —
H	15.3	15.7	II II	2	2	K=H K=H	1	1 — —
	15.3	18.6	I	5		H	1	F.?
?	15.5	19.2	II a 575	3		K=H	2	F. seen.
	15.3	19.8	II	3		K=H	2	F.
	15.4	20.8	I	7		H	2	F.
	15.2	21.3	I	6		?	1	F.
	14.6	9.1	III	3		K=H	1	F.
H	14.4	9.7	I I	6	5	H K	1	1 F. —
H	14.2	10.0	I I	3	H	H K	1	1 — —
H	14.1	10.4	II a? II a? 576	2	2	K=H K=H	1	1 — seen
	14.5	13.2	I	7		K=.5H	1	—
	14.4	13.8	I	8		K=.2H ?	2	F.
	14.5	14.9	I	8		K=.2H	2	F.
	14.2	15.7	I	12		K=.2H	4	F.
	14.4	16.0	I	6		H	1	F.
	14.1	16.2	I	8		H	2	F.
H	14.2	17.4	I I	4	5	K=H K=H	1	1 — F.

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Means

	No.	R.A.	Dec.	Mag.		Br.				
1 27+58.9	268	1	27.2 + 58 33	7.2	_	7.0	.7	7.7	6.3	6.3
1 24+58.5	260	1	24.5 + 58 29	6.0	_	6.2 6.3	.7	6.9 7.0	5.5 5.6	5.5 5.6
2 22+59.+	505	2	22.5 + 59 21	7.5	_	6.9	.7	7.6	6.2	6.2
2 28+69.1	171	2	28.8 + 69 4	8.0	.	6.8	1.1	7.9	6.5	6.1
2 15+59.4	484	2	14.8 + 59 20	7.2	.	6.9 7.0	.7	7.6	6.2	6.2
2 36+79.5	86	2	36.1 + 79 29	7.0	.	6.3	1.8	8.1	6.7	5.6
2 9+59.4	466 467	2 2	9.2 + 59 20 9.2 + 59 22	6.7 6.7	?.	6.5	.7	7.2	5.8	5.8
2 10+69.9	144	2	10.6 + 69 39	8.0	.	7.1 7.3	1.1	8.2	6.8	6.4
2 0+59.3	422	2	0.7 + 59 18	6.8	_	6.4	.7	7.1	5.7	5.7
1 59+59.5	415	1	58.7 + 59 30	7.8	_	6.9 7.0	.7	7.6	6.2	6.2
1 55+59.6	401	1	54.9 + 59 39	7.2	_	7.0 7.1	.7	7.7	6.3	6.3
1 54+59.5	397	1	54.1 + 59 32	7.2	_	6.9 7.1	.7	7.6	6.2	6.2
1 9+79.4	39	1	9.2 + 79 22	8.0	.	6.6	1.8	8.4	7.0	5.9
1 4+79.2	36	1	3.9 + 79 8	6.3	_	6.0	1.8	7.8	6.4	5.3
0 56+79.3	29	0	57.1 + 79 14	6.4	_	6.4	1.8	8.2	6.8	5.7
1 21+69.3	103	1	21.9 + 69 17	7.0	.	6.5	1.1	7.6	6.2	5.8
0 41+79.0	19	0	41.6 + 79 2	7.7		6.7	1.8	8.5	7.1	6.0
2 54+79.6	94	2	55.4 + 79 36	7.3	_	6.4 6.5	1.9	8.3 8.4	6.9 7.0	5.7 5.8
2 19+60.0	487	2	18.9 + 60 0	8.1	.	6.6 6.8	.8	7.4	6.0	5.9
2 47+79.9	91	2	46.9 + 79 50	8.8	.	6.8 6.9	1.9	8.7	7.3	6.1
2 22+69.9+	189	2	22.2 + 70 0	8.2	_	7.1 7.3	1.2	8.3	6.9	6.4
2 10+79.9	69	2	10.0 + 79 37	8.8	_	6.9	1.9	8.8	7.4	6.2
2 3+80.0	70	2	3.3 + 80 3	7.7	_	6.5	1.9	8.4	7.0	5.8
1 51+79.9	61	1	50.7 + 79 38	7.5	_	6.4	1.9	8.3	6.9	5.7
1 50+70.2	153	1	50.1 + 70 18	4.6	_	4.9	1.2	6.1	4.7	4.2
1 53+60.0	423	1	53.0 + 60 0	7.7	.	6.9	.8	7.7	6.3	6.2
1 34+80.2	55	1	34.1 + 80 10	7.5	.	6.1	1.9	8.0	6.6	5.4
1 40+70.0	137	1	40.8 + 70 2	7.2	_	6.9 7.0	1.2	8.1	6.7	6.2

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	v	H	Type	No. Lines Remarks.	K	Focus	Other Lines.
	14,5	18.9	I	9	K	3	F.
?	14,0	20,2	II[a]	577 K[3]	K=H	2	F. diff.
√	14,7	20,7	I	I 3 H K	K	K=H 1 1	— —
	14,5	20,8	I	8	K	2	—
?	14.9	21.0	II[a]	578 3	K=H	2	F. diff.
	14.0	23.2	I	7	K	2	F.
√	14.4	23.3	I ?	I 4 3	K	K 1	1 — —
√	13.6	10.7	II ?	II 3 2	K=H	K=H 1 1	F. —
	13,0	10.7	III ?	1	K	1	F.
√	13,2	10.9	III	III 2 2	K=H	K=H 1 1	— F.
	13.4	14.7	I	10	K=.2H	3	F.
√	13,8	15,1	I	I H	K	K 1	1 — —
?	13.4	15.4	II[a]	579 2	K=H	1	diff.
	13,1	16,0	I	7	K=.2H	2	F.
	13,0	16,8	I	9	K	2	F.
√	13,2	17,6	I	I 6 6	K	K 1	1 — —
	13,8	18,6	I	9	K=.2H ?	2	F
	13,8	18,6	I ?		K=H	1	F.
	13,5	21,1	I	7	K=.2H	2	F.
	13,3	21,6	I	8	K	2	F.
X	12,1	6,7	II ?	2	K=H	1	diff.
√	12,0	9,0	II	II[a] 579[a] 2 2	K=H	K=H 1 1	— diff.
	12,3	10,2	I	10	K=.2H	3	F.
√	12,5	10,7	I	I 6	K	K 1	1 — —
?	12,7	11,9	III[b]	580 3	K=H	2	F. diff.
	12,9	14,7	I	7	K=.5H	2	F
	12,8	14,7	II	2	K=H	1	—
	12,5	16,4	I	8	K=.2H	2	F.

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Mean 7

	No.	R.A.	Dec.	Mag.				Byr.				
1 32+69.9	114	1	31.8 +	69 52	5.2	260	5.1 12-72	5.1	1.2	6.3	4.9	4.4
0 48+79.7	24	0	48.6 +	79 46	6.5		–	6.2	1.9	8.1	6.7	5.5
	309	1	34.1 +	59 42	8.0							
1 34+59.7	~~307~~	~~1~~	~~33.6 +~~	~~59 49~~	~~6.0~~		.	7.0	7.1	7.7	6.3	6.3
1 33+59.8	307	1	33.6 +	59 49	6.0	266	5.5 12-72	6.0	.7	6.7	5.3	5.3
1 20+69.5	102	1	20.5 +	69 31	6.1		–	6.0	1.1	7.1	5.7	5.3
0 18+79.3	10	0	17.9 +	79 14	7.0		.	5.9	1.8	7.7	6.3	5.2
1 23+59.7	269	1	23.6 +	59 42	7.3		.	7.1	7.1	.7	7.8	6.4
	182	2	20.5 +	70 18	8.0							
2 20+70.7	~~183~~	~~2~~	~~20.9 +~~	~~70 40~~	~~6.5~~		–	6.7	6.8	1.2	7.9	6.5
2 15+60.9	183	2	20.9 +	70 40	6.5		–	6.7	1.2	7.9	6.5	6.0
	~~472~~	~~2~~	~~14.9 +~~	~~60 32~~	~~6.6~~			6.9	.8	8.1	6.7	6.2
2 38+80.5	89	2	37.8 +	80 28	8.0		–	6.8	6.9	8.8	7.4	6.1
								7.0	7.1	2.0	9.0	7.6	6.3
1 52+80.6	64	1	51.8 +	80 36	6.1		–	5.4	2.0	7.4	6.0	4.7
1 47+80.3	61	1	46.9 +	80 17	8.6		.	7.0	7.1	1.9	8.9	7.5	6.3
1 52+70.5	157	1	52.3 +	70 30	7.3		–	6.9	1.2	8.1	6.7	6.2
1 35+80.6	57	1	34.9 +	80 39	7.5		–	6.5	2.0	8.5	7.1	5.8
1 24+80.7	50	1	25.0 +	80 41	7.4		.	6.2	2.0	8.2	6.8	5.5
	383	1	46.3 +	60 34	7.3							
1 46+60.5	~~135~~	1	47.5 +	60 28	7.9		.	6.8	6.7	.8	7.6	6.2	6.1
1 6+80.2	36	1	6.2 +	80 8	6.7		–	5.8	1.9	7.7	6.3	5.1
1 5+80.1	35	1	5.6 +	80 6	7.3		–	6.5	1.9	8.4	7.0	5.8
1 32+60.3	308	1	32.3 +	60 18	6.5		–	6.4	.8	7.2	5.8	5.7
1 15+70.3	102	1	15.2 +	70 13	6.1			6.2	1.2	7.4	6.0	5.5
2 31+60.9	548	2	31.4 +	60 58	7.1		–	6.8	1.8	7.6	6.2	6.1
2 21+61.0	424	2	21.7 +	61 5	7.0		–	7.0	7.0	.8	7.8	6.4	6.3
2 50+80.9	97	2	49.6 +	80 54	5.5		–	5.4	2.0	7.4	6.0	4.7
2 15+60.9	472	2	14.9 +	60 32	6.6		.	6.7	6.5	.8	7.5	6.1	6.0
2 27+70.8	86	2	27.2 +	80 30	5.9		–	6.4	6.4	2.0	8.1	6.7	5.4
											8.4	7.0	5.7
1 53+80.8	65	1	52.6 +	80 46	6.7		–	6.3	2.0	8.3	6.9	5.6
1 57+70.9	163	1	56.7 +	70 32	7.2		–	6.5	1.2	7.7	6.3	5.8
1 44+71.0	111	1	45.3 +	71 0	7.4		–	6.5	1.2	7.7	6.3	5.8

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March 30, 1887.

Plate 1019.

	r	H	Type	No. Lines / Remarks	K	Focus	Other lines
!	12.5	17.0	I	8	K	2	F.
	12.8	20.8	I	6	K	2	F?
?	11.8	5.4	II a	581 X 3	K=H	3	F, nebs.
?	11.4	5.9	I	5	?	1	F, nebs.
?	11.0	8.8	III?	III? 2 2	K K=H	1 1	— —
	11.4	11.8	I	4	K	1	—
	11.1	15.5	I	13	K=2H?	5	F.
?	11.0	17.6	I b	5824	K	1	nebs.
	11.5	19.1	I	7	K	2	F.
	11.1	20.1	III	2	K=H	1	—
	11.6	21.9	I	4	K	1	—
	10.6	6.7	I?	4	K=H	1	—
	10.5	7.0	I	I 3 2H	K K	1 1	— —
	10.0	7.0	III	1	K	1	F.
	10.1	7.5	I	5	K	1	—
	10.2	7.8	I	6	K	2	F.
	10.7	9.8	III	3	K=H	1	F.
III? 5.6, 6.0.	10.0	10.5	III?	3	K=H	2	F.
	10.7	11.7	II	II a 582a 2 2	K=H K=H	1 1	— F, nebs
	10.9	16.2	I	I 3 H	K K	1 1	— —
?	10.7	19.7	II a	583 3	K=H	1	F, nebs.
	10.9	21.7	I	6.	K	2	—
	10.4	22.2	III	2	K=H	1	—
	10.0	5.5	I	4	K	1	—
?	9.8	5.6	I	5	?	1	F, nebs.
	9.5	5.8	I	I 4. 3	K K	1 1	— —
	9.3	6.0	I	6.	K	2	F.
	9.4	8.6	II	II a 583a ?2 2	K=H K=H	1 1	— nebs

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Means

	No.	R.A.	Dec.	Mag.		Br.				
1 48+60.9	398	1	48.3+	60 59	6.6	.	5.9	1.8	6.7	5.3	5.2 .
1 33+60.7	312	1	33.1+	60 41	6.3	.	6.2	.8	7.0	5.6	5.5 .
3 47+80.3	125	3	46.0+	80 18	4.9	–	5.3	1.9	7.2	5.8	4.6 .
3 42+80.6	123	3	43.3+	80 33	8.3		6.6	2.0	8.6	7.2	5.9 .
2 34+71.7	167	2	34.7+	71 45	7.3		6.9 7.2	2.2 2.3	8.2 8.5	6.8 7.1	6.5 6.5 .
2 15+71.5	140	2	14.8+	71 28	7.7	.	6.8	1.2	8.0	6.6	6.1 .
1 51+71.7	117	1	51.2+	71 42	4.0	–	4.0	1.3	5.3	3.9	3.3 .
1 45+61.6	352	1	45.7+	61 40	7.8	.	7.0	.8	7.8	6.4	6.3 .
0 53+81.2	30	0	52.5+	81 11	8.3	.	6.6	2.0	8.6	7.2	5.9 .
0 39+81.2	18	0	38.5+	81 10	7.6	–	6.8 7.0	2.0	8.8 9.0	7.4 7.6	6.1 6.3 .
0 21+80.6	10	0	21.2+	80 34	7.9	.	6.7	2.0	8.7	7.3	6.0 .
	135	3	38.2+	81 9	7.8			2.0			
3 38+81.2	~~125~~	~~3~~	~~28.8+~~	~~81 6~~	~~7.9~~	–	6.4	–	8.4	7.0	5.7 .
2 31+61.7	462	2	31.2+	61 44	7.0	.	6.9	6.9 .8	7.7	6.3	6.2 .
3 38+81.5	134	3	37.6+	81 27	7.8	–	6.6 6.8	2.1	8.7 8.9	7.3 7.5	5.9 6.1 .
2 29+61.9	448	2	28.8+	61 38	7.0	.	6.8	.8	7.6	6.2	6.1 .
2 28+61.9	444	2	27.7+	61 37	6.5	.	6.2	.8	7.0	5.6	5.5 .
2 59+81.6	107	2	59.3+	81 36	7.4	–	6.8 7.0	2.1	8.9 9.1	7.5 7.7	6.1 6.3 .
2 24+72.2	140	2	24.4+	72 10	5.0	–	5.7 5.8	1.3	7.0 7.1	5.6 5.7	5.0 5.1 .
2 34+81.7	95	2	32.9+	81 47	8.6	–	6.9 6.8	2.1	9.0	7.6	6.2 .
1 30+81.7	51	1	28.9+	81 45	8.7	.	6.8 6.9	2.1	8.9	7.5	6.1 .
1 24+71.7	87	1	24.4+	71 40	7.8	–	6.6	1.3	7.9	6.5	5.9 .
1 28+61.6	304	1	28.4+	61 37	6.5	.	6.1	.8	6.9	5.5	5.4 .
1 8+71.6	64	1	8.2+	71 38	6.8	–	6.8 6.9	1.3	8.1 8.2	6.7 6.8	6.1 6.2 .
3 56+81.0	149	3	55.2+	81 3	8.3	.	6.8	2.0	8.8	7.4	6.1 .
3 56+81.3	150	3	55.7+	81 15	7.9		6.5	2.0	8.5	7.1	5.8 .
2 55+71.9	187	2	54.2+	71 39	8.0	.	7.0 7.0	1.3	8.3	6.9	6.3 .
3 54+81.6	147	3	53.8+	81 36	7.5	.	6.0	2.1	8.1	6.7	5.3 .
2 36+72.3	145	2	36.0+	72 18	7.5	V–	6.8 6.8	1.3	8.1	6.7	6.1 .

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Plate 1019.

	v	H	Type	No. Lines	K	Focus	Other Lines.
			Remarks				
	9,3	10,2	I	5	H	1	F.
	9,5	10,9	III	3	K=H	1	F.
√	9,6	11,2	I? I	4 H	H N	1 1	— —
√	9,8	13,1	II (583 H) II? IIa	3 2	K=H K=H	1 1	F, F. l. sem
	9,1	13,4	I	4	K=.5H	1	—
X	9,0	18,8	III?	3	K=H	2	F. sem
	9,5	16,1	III	2	H	1	F
	9,7	19,0	III b 584	3	K=H	2	F. sem.
√	9,5	19,3	I I	3 H	H K=H	1 1	— —
	9,9	20,4	II a 585	3	K=H	2	F. sem
	9,6	21,2	I	5	H	1	F
	9,4	22,0	III	3	K=H	1	F.
√	9,2	22,1	III III	? 2 2	K=H K=H	1 1	— —
	8,0	9,5	I	6	K=H	1	F.
√	8,1	10,4	III III	1 3	H K=H	1 1	F, F. l.
	8,4	12,0	I?	7	K=.5H	1	F.
√	8,7	12,4	I I	.5 H	H N	1 1	F. —
	8,0	12,5	I	7	K=.5H	1	F.
√	8,2	12,6	I? I	3 H	H K=H	1 1	— —
√	8,5	12,8	II II	2 2	K=H K=H	1 1	— —
	8,2	13,3	III	3	K=H	1	F.
	8,5	13,9	I	6	K=.5H	1	F.
	8,9	14,4	III?	3	K=H	2	F.
	8,2	15,4	I	9	K=.2H	2	F.
	8,6	17,8	I	11	H	.5	F.
	8,0	18,7	I	10	K=.2H	3	F.
?	8,1	19,3	III b 586	3	K=H	2	F. sem.
√	8,5	19,3	I I	3 2	H N	1 1	— —
	8,5	21,8	III	1 2	K=H	1	—
	8,1	22,2	I	6	H	1	F.

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Means

	No.	R.A.	Dec.	Mag.		Br.				
2 17+62.5	402	2 17.3	+ 62 32	7.2	.	6.9	.8	7.7	6.3	6.2
	76	2 46.8	+ 82 20	8.0		6.3		8.5	7.1	5.6
2 47+82.3	~~658~~	~~2 47.6~~	~~+ 82 21~~	~~9.0~~	_	6.5	.2	8.7	7.3	5.8
2 13+62.4	388	2 13.3	+ 62 23	7.3	.	6.7	6.8 .8	7.5	6.1	6.0
2 14+82.4	55	2 13.6	+ 82 21	8.7	_	6.7	6.8 .2	8.9	7.5	6.0
2 4+72.7	121	2 4.3	+ 72 39	8.0	_	6.8	.3	8.1	6.7	6.1
0 45+82.3	23	0 46.0	+ 82 19	8.4	_	6.6		8.8	7.4	5.9
						6.7	.2	8.9	7.5	6.0
						6.8		8.1	6.7	6.1
1 46+72.5	112	1 46.6	+ 72 27	7.2	_	6.9	.3	8.2	6.8	6.2
1 27+72.3	86	1 27.0	+ 72 17	5.2	_	6.8	.3	7.1	5.7	5.1
0 41+81.9	20	0 41.6	+ 81 60	9.0	.	7.0	7.0 2.1	7.4	6.0	5.4
0 28+81.7	13	0 29.0	+ 81 42	6.5	_	5.8	2.1	9.1	7.7	6.3
1 13+72.1	69	1 13.3	+ 72 5	6.7	.	6.7	.3	7.9	6.5	5.1
						6.8		8.0	6.6	6.0
1 8+72.1	68	1 8.0	+ 72 6	6.7	_	7.0	.3	8.1	6.7	6.1
						6.9	7.0	8.3	6.9	6.3
1 25+62.3	274	1 25.6	+ 62 20	6.5	_	7.1	7.1 .8	7.7	6.3	6.2
								7.9	6.5	6.4
3 14+82.9	90	3 14.9	+ 82 52	8.2	_	6.5	.2	8.7	7.3	5.8
2 59+82.9	82	2 59.9	+ 82 60	7.5	_	6.8	6.7	9.1	7.7	6.1
						7.1	7.0 .3	9.4	8.0	6.6
2 14+72.0	139	2 14.2	+ 73 3	6.9	_	6.4	.3	7.7	6.3	5.7
2 11+72.0	~~128~~	2 11.2	+ 72 50	7.5	.	6.7	6.9 .3	8.0	6.6	6.0
2 8+63.3	316	2 7.9	+ 63 16	7.0	_	6.8	.9	7.7	6.3	6.1
	131	2 10.2	+ 73 8	7.9						
2 23+83.3	~~60~~	~~2 23.6~~	~~+ 83 15~~	~~9.0~~	.	6.7	6.9 .3	9.0	7.6	6.0
2 20+82.9	59	2 20.8	+ 82 59	9.0	_	6.7	6.9 .3	9.0	7.6	6.0
2 14+83.2	56	2 13.3	+ 83 11	8.0	_	6.3		8.6	7.2	5.6
						6.5	.3	8.8	7.4	5.8
2 2+83.0	54	2 3.1	+ 83 0	8.9	_	6.4	.3	8.7	7.3	5.7
1 57+82.9	51	1 55.1	+ 82 52	7.0	_	5.9		8.2	6.8	5.2
						6.0	.3	8.3	7.9	5.3
1 51+73.1	108	1 50.5	+ 73 8	6.2	_	5.8	.3	7.1	5.7	5.1
1 47+62.9	320	1 47.1	+ 62 57	3.3	287 3.6 14+0	4.1	.9	5.0	3.6	3.4
0 41+82.9	20	0 41.6	+ 82 55	6.5	_	5.0	.3	7.3	5.9	4.3
						6.1		7.0	5.6	5.4
1 37+63.2	238	1 37.3	+ 63 8	6.1	_	6.3	.9	7.2	5.8	5.6
1 36+62.9	305	1 37.0	+ 62 55	8.0	.	7.1	7.4 .9	8.0	6.6	6.4
1 27+62.7	277	1 26.9	+ 62 39	7.2	_	6.8	.8	7.6	6.2	6.1
23 57+82.2	748	23 55.4	+ 82 10	7.1		5.9	.2	8.1	6.7	5.2

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Plate 1019.

V	H	Type	No. of Lines	K	Focus.	Other Lines.	Remarks.
7.5	9.0	I	6	K	2	F.	
7.0	10.7	~~I~~ I?	I ? 2 4	K=H	K=H	1 1	— —
7.2	12.3	I	7	K	2	F.	
7.0	12.6	~~II~~ I?	1	K	1	F.	
?	7.9	14.1	III b	587	2	K=H	1	neu.	
7.3	15.9	I	9	K=.5H	2	F.	
7.2	18.9	I	8	K	2	F.	
		19.8	I	5	K=H	1	F.	
	7.1	20.6	I	5	K	1	—	
	7.7	21.0	III	III 4 2 5	K	K=H	1 1	F. —	
7.2	21.8	I	6	K	1	F.	
7.5	22.2	I	6	K	2	F.	
?	6.0	6.3	I d	7	K	3	F. neu.	
6.9	6.9	I	6	K=.5H	1	F.	
6.7	7.1	III	3	K=H	3	F.	
6.1	7.7	I	9	K	3	F.	
		6.2	12.1	I	IV 3 4	K	K	1 1	— —	
6.3	13.7	I	6	K	1	F.	
6.2	15.0	I	7	K	1	F.	
?	6.8	15.1	I b 588	5	K	1	F. neu.	
6.2	15.9	I	9	K=.2H?	2	F.	
6.8	16.6	I	9	K	3	F.	
6.4	17.8	I	9	K=.5H	2	F.	
6.6	18.0	III	3	K=H	1	F.	
6.6	18.6	I	3	K	1	—	
6.2	20.9	~~I~~ I?	3	K=H	1	F.	
6.0	23.2	I	7	K=H	1	F.	
5.8	5.6	I	5	K	1	F.	

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Main 7

	No.	R.A.	Dec.	Mag.		Br.				
3 23 +83.0	91	3 24.8	+83 5	7.3	.	6.2	2.3	8.5	7.1	5.5
3 0 +83.5	79	3 0.1	+83 30	8.2	–	6.7 6.8	2.4	9.1	7.7	6.0
2 9 +63.7	320	2 9.1	+63 40	7.0	.	6.1	9	7.0	5.6	5.4
2 7 +63.7	315	2 7.7	+63 44	7.0		7.0	9	7.9	6.5	6.3
2 0 +73.4	121	2 0.1	+73 20	6.5	–	6.3 6.5	1.4	7.7 7.9	6.3 6.5	5.6 5.8
1 52 +63.7	274	1 52.3	+63 42	6.0	–	5.9	.9	6.8	5.4	5.2
1 26 +73.6	81	1 25.6	+73 33	6.5	.	6.0	1.4	7.4	6.0	5.3
0 23 +82.9	14	0 24.6	+82 50	8.3	–	6.4	2.3	8.7	7.3	5.7
1 14 +73.4	71	1 14.2	+73 22	7.8	.	6.9	1.4	8.3	6.9	6.2
0 8 +82.6	5	0 9.4	+82 34	8.6	–	6.9 7.1	6.9 7.0 2.2	9.1 9.3	7.7 7.9	6.2 6.4
1 4 +73.3	60 1 5.8 + 73 12 8.5 / 61	1 5.8	+73 14	7.0	? * .	6.2	1.3	7.5	6.1	5.5
23 59 +82.4	743	23 49.7	+82 23	6.0	4230 6.3 15+1	5.6	2.2	7.8	6.4	4.9
2 56 +73.7	168	2 56.3	+73 50	5.2	493 4.7 17+3	5.0	1.4	6.4	5.0	4.3
2 50 +73.4	165	2 50.2	+73 22	7.4	–	6.8	1.4	8.2	6.8	6.1
3 58 +82.9	113	3 58.5	+82 39	5.0	–	5.5 5.8	2.3	7.8 8.1	6.4 6.7	4.8 5.1
3 55 +83.5	104	3 55.1	+83 26	5.0	684 5.4 18+4	4.8	2.4	7.2	5.8	4.1
2 37 +84.0	48	2 36.7	+84 2	9.2	.	6.9 6.8	2.5	9.4	8.0	6.2
2 3 +64.2	307	2 2.8	+64 10	7.0	.	6.8	.9	7.7	6.3	6.1
1 53 +74.2	95	1 53.8	+74 10	7.5	.	6.8	1.4	8.2	6.8	6.1
1 52 +73.9	112	1 52.9	+73 32	7.3	.	6.7	1.4	8.1	6.7	6.0
1 52 +64.2	282	1 52.2	+64 12	6.8	–	7.0	.9	7.9	6.5	6.3
1 49 +63.9	265	1 49.0	+63 35	5.5	300 5.2 12-2 ~~684 5.4~~	5.5	.9	6.4	5.0	4.8
0 48 +83.8	20	0 48.4	+83 49	7.0	–	5.8	2.4	8.2	6.8	5.1
1 31 +73.9	92	1 31.6	+73 52	6.8	–	6.6 6.9	1.4	8.0 8.3	6.6 6.9	5.9 6.2
1 27 +73.8	84	1 27.4	+73 48	8.3	.	6.8	1.4	8.2	6.8	6.1
1 10 +73.8	66	1 10.4	+73 49	6.8	–	6.5	1.4	7.9	6.5	5.8
0 54 +73.6	51	0 54.5	+73 36	6.8	–	6.2	1.4	7.6	6.2	5.5
4 26 +82.9	125	4 27.1	+82 56	8.5		6.4	2.3	8.7	7.3	5.7

* Miscellaneous Memoranda, Book 8, p. 102.

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Plate 1019.

V	H	Type	No. Lines Remarks.	K	Focus	Other Lines.
5.0	7.2	III	1	H	1	F.
5.9	9.0	I	5	H	1	F.
5.3	9.7	I	I 4 H	H H	1 1	— —
5.5	11.2	III b?	589 4	K=1.2H	2	F.
5.4	11.9	I	3	H	1	—
5.8	15.5	I	6	H	2	—
5.0	15.5	I	6	H	2	—
5.3	16.1	III	3	K=H	1	F.
? 5.9	18.9	II a	590 3	K=H	1	F, neb.
4.7	7.7	I	6	H	1	F.
4.7	10.0	I	6	K=H	1	F.
4.5	11.1	I	I 3 3	H H	1 1	— —
? 4.7	12.8	II a	591 2 IIa 2	K=H K=H	1 1	F neb, neb
4.2	13.5	I	7	K=1.2H	2	F.
4.5	14.5	II ?	2	K=H	1	—
4.7	16.8	I	7	K=H	1	F.
4.6	17.6	I	3	H	1	—
4.0	17.6	I	5	K=H	1	F.
4.0	19.5	I	4	H	1	—
4.9	19.5	I	7	K=.5H	1	F.
4.4	22.8	I	7	K=H	1	F.
? 3.4	7.8	I d.	5	H	1	F, neb.
? 3.1	9.5	II a	592 3	K=H	2	F, neb.
3.9	12.8	I	I 4 H	H H	1 1	— —
3.5	12.8	I	5	H	1	—
? 3.4	13.5	II a?	593 3	K=H	1	F, neb.
? 3.8	15.1	III b?	594 3	K=H	2	F, neb.
3.5	16.3	I	5	H	1	—

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1887phae.proj..837

Mean of

	No.	R.A.	Dec.	Mag.		Br.				
4 11 +83.8	114	4 11.0	+ 83	43	7.4	–	6.5 / 6.7	8.9 / 9.1	7.5 / 7.7	5.8 / 6.0 ✓
2 38 +74.2	120	2 37.6	+ 74	8	7.3	.	6.7	1.4	8.1	6.7	6.0 ✓ .
3 28 +84.3	69 ✓ / ~~66~~	3 28.1 / ~~21.6~~	+ 84	13 / ~~21~~	8.8 ✓ / ~~8.4~~	.	6.8 6.8	2.5	9.3	7.9	6.1 ✓ .
2 58 +84.4	59	2 58.8	+ 84	23	6.0	–	5.5 / 5.8	8.0 / 8.3	6.6 / 6.9	4.8 / 5.1 ✓ .
2 11 +64.6	321	2 11.1	+ 64	34	7.0	.	6.9	.9	7.8	6.4	6.2 ✓ .
1 53 +64.4	285	1 53.8	+ 64	24	6.5	.	6.2	.9	7.1	5.7	5.5 ✓ .
1 48 +74.8	91	1 48.8	+ 74	47	6.5	.	5.8	1.5	7.3	5.9	5.1 ✓ .
1 44 +74.6	87	1 44.8	+ 74	37	6.5	–	6.7 / 6.9	8.1 / 8.3	6.7 / 6.9	6.0 / 6.2 ✓ .
0 26 +83.9	9	0 26.3	+ 83	33	7.8	–	6.2	2.4	8.6	7.2	5.5 ✓ .
2 48 +74.5	131	2 48.6	+ 74	34	7.2	.	6.5	1.4	7.9	6.5	5.8 ✓ .
2 31 +74.8	117	2 31.8	+ 74	46	7.2	–	6.5	1.5	8.0	6.6	5.8 ✓ .
2 23 +74.9	111 ✓	2 23.2	+ 74	54	7.3 ✓	.	6.8 7.0	1.5	8.3	6.9	6.1 ✓ .
2 7 +64.9	314 ✓	2 7.0	+ 64	35	7.2 ✓	–	6.9 7.0 ✓	.9	7.8	6.4	6.2 ✓ .
2 14 +85.2	45	2 14.2	+ 85	10	8.6	–	6.1	2.7	8.8	7.4	5.4 ✓ .
1 52 +85.0	41	1 50.8	+ 85	8	7.7	–	6.3	2.7	9.0	7.6	5.6 ✓ .
1 38 +74.9	84	1 38.8	+ 74	52	6.8	–	6.6	1.5	8.1	6.7	5.9 ✓ .
0 40 +84.7	15	0 40.9	+ 84	40	8.2	.	6.7	2.6	9.3	7.9	6.0 ✓ .
1 32 +75.2	72	1 32.1	+ 75	8	7.0	–	6.6	1.5	8.1	6.7	5.9 ✓ .
23 59 +84.6	546	23 59.1	+ 84	36	8.2	.	6.5	2.6	9.1	6.7	5.8 ✓ .
0 8 +84.2	3	0 7.8	+ 84	9	8.0	–	6.3	2.5	8.8	7.4	5.6 ✓ .
23 13 +83.5	647	23 12.7	+ 83	27	8.0	–	6.3	2.4	8.7	7.3	5.6 ✓ .
4 20 +84.6	88	4 21.2	+ 84	36	7.7	.	6.4	2.6	9.0	7.6	5.7 ✓ .
3 53 +85.2	63	3 52.4	+ 85	10	6.5	–	5.8	2.7	8.5	7.1	5.1 ✓ .
2 30 +85.3	50 ✓	2 30.9	+ 85	16	8.8 ✓	.	6.8 6.7	2.7	9.5	8.1	6.1 ✓ .
2 10 +75.5	94	2 10.2	+ 75	27	7.5	.	6.5	1.5	8.0	6.6	5.8 ✓ .
2 4 +65.6	242	2 3.6	+ 65	39	6.8	–	7.0	1.0	8.0	6.6	6.3 ✓ .
1 51 +75.4	86	1 51.8	+ 75	25	8.0	–	5.9 / 6.1	1.5	7.4 / 7.6	6.0 / 6.2	5.2 / 5.4 ✓ .
1 43 +75.5	76	1 42.2	+ 75	30	6.8	.	6.6	1.5	8.1	6.7	5.9 ✓ .

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1887phae.proj..837F

March 30, 1887.

Plate 1019.

	r	H	Type	No. lines	No Remarks.	K	Focus	Other lines.
?	3.4	16.7	III	3	J.C. 595	K=H	3	F. sun,
	3.5	17.9	I	5		K=H	1	—
	3.0	20.3	I	7		K=H	1	F.
	3.3	22.4	I	6		H	2	F.
	3.6	23.3	III	3	b 596	K=H	2	F.
?	3.7	23.5	I	3	a	H	1	sun,
	2.9	13.6	I	7		K=√H	2	F.
	2.0	19.7	I	5		K=√H	2	—
	2.1	21.9	III	3		K=H	1	F.
	1.8	11.4	I?	3		H	2	F.
	1.8	16.5	I	3		H	1	—
12 40	1.7	18.4	I	2		H	1	F.

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1887phae.proj..837

Mean 7

	No.	R.A.	Dec.	Mag.			Brc.				
0 50+85.5	19	0 49.7+	85 29	5.0	–		4.9 5.3	2.8	7.7 8.1	6.3 6.7	4.2 4.6 ✓
0 23+85.2	11	0 23.4+	85 10	8.8	–		6.7	2.7	9.4	8.0	6.0 ✓
1 10+75.5	59	1 10.3+	75 28	6.2	–		6.0	1.5	7.5	6.1	5.3 ✓
1 20+65.3	175	1 20.8+	65 21	6.0	233 5.9 12.2		6.2	.9	7.1	5.7	5.5 ✓
22 57+83.6	640	22 55.4+	83 34	5.0	–		5.6 6.0	2.4	8.0 8.7	6.6 7.0	4.9 ✓ 5.35
0 47+74.8	41	0 47.7+	74 42	8.0	.		6.8	1.4	8.2	6.8	6.1 ✓
2 3+65.9	239	2 3.2+	65 30	6.0	–		6.5	1.0	7.5	6.1	5.8 ✓
23 29+85.4	403	23 29.7+	85 23	7.8	–		~~6.8~~	~~.7~~	~~8.7~~	~~7.3~~	✓
22 55+84.6	517	22 54.2+	84 36	6.5	–		~~6.3~~ 6.5	2.6	~~8.9~~ 9.1	~~7.5~~ 7.7	✓
3 20+86.2	51	3 19.5+	86 11	6.0	~~575 5.8 2.5~~		~~5.4~~	~~2.9~~	~~8.3~~	~~6.9~~	✓
1 48+66.3	175	1 48.3+	66 20	7.2	.		~~6.9~~	~~1.0~~	~~7.9~~	~~6.5~~	✓
23 53+85.9	409	23 52.8+	85 54	8.0	✓ .		~~5.9~~	~~2.9~~	~~8.8~~	~~7.4~~	✓

~~64~~ / 12 = 152/11

N-15 / 12 = 11-13/11

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1887phae.proj--837F

April 4, 1887.

Plate No. 877.

	V	H	Type	No. Lines	Remarks	K	Focus	Obs. Lines.
9 30	21.9	10.4	I	6		H	2	—
	21.2	12.5	~~II~~ III b?	597 3		K=H	2	F.
	21.1	15.9	~~I~~ III	2		K=H	1	—
	21.4	21.1	I	9		H	4	F.
	19.3	7.7	III	1		H	1	F.
?	19.6	9.3	II	5985	as	K=½H	3	F. bright? diffuse.
	18.5	10.2	I	6		H	1	—
	18.5	20.7	I	5		H	1	F.
	17.9	9.6	I	3		H	1	—
	17.9	11.3	I	9		H	3	F.
	16.4	12.4	I	4		H	1	—
	16.6	15.7	I	6		H	1	F.
	15.2	7.8	I	8		H	2	F.
	15.1	8.3	I	5		H	1	F.
III ? 6.4, 6.7.	15.1	13.6	III	599 1	b.c.	H	1	F.
	15.5	19.5	II ?	2		K=H	1	—
	15.4	20.1	I	7		K=1.2H	1	F.
	14.3	19.5	~~I~~ III ?	3		K=H	2	F.
	14.9	21.4	I ?	5		H	1	F.
	13.7	8.7	I	5		H	1	—
	13.4	9.6	III	3		K=H	1	F.
	13.8	20.7	~~II~~ I a? ?	2		H	1	F.
	12.7	13.3	III	3		K=H	1	F.
	12.1	18.0	I	9		K=1.5H	3	F.
	12.0	19.2	I	8		K=H	2	F.
	11.3	11.1	I	9		K=1.5H	2	F.
	11.4	15.0	I	8		K=1.2H	1	F.
	10.3	13.4	I	4		H	1	F.

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1887phae.proj...837

Mean 13

	No.	R.A.	Dec.	Mag.		Br.				
2 50+51.8	665	2 50.6	+51 47	5.7	470 5.1 18+0	6.4	.5	6.9	5.8	5.1 ✓
2 44+52.1	641	2 44.0	+52 9	4.2	–	6.0 / 6.3	.5	6.5 / 6.8	4.7 / 5.0	4.7 / 5.0
2 24+72.2	140	2 24.4	+72 10	5.0	–	6.6 / 6.7	1.3	7.9 / 8.0	6.1 / 6.2	5.1 / 5.3
1 51+71.7	117	1 51.2	+71 42	4.0	306 4.1 22+3	5.0	1.3	6.3	4.5	3.7 ✓
3 19+72.9	178	3 19.4	+72 50	6.7	–	6.6 / 6.9	1.3	7.9 / 8.2	6.1 / 6.4	5.1 / 5.4
2 54+52.9	654	2 54.3	+52 56	3.2	–	5.4	.5	5.9	4.1	4.1 ✓
2 55+63.5	390	2 55.2	+63 30	6.0	488 5.8 17-1	6.6	.9	7.5	5.7	5.3 ✓
1 50+73.2	108	1 50.5	+73 8	6.2	.	6.6	1.3	7.9	6.1	5.3 ✓
3 8+73.7	180	3 8.1	+73 38	6.9	.	7.0	1.4	8.4	6.6	5.7 ✓
2 56+73.8	168	2 56.3	+73 50	5.2	493 4.7 20+7	5.3	1.4	6.7	4.9	4.0 ✓
2 48+74.6	131	2 48.6	+74 34	7.2	.	6.9	1.4	8.3	6.5	5.6 ✓
2 32+54.5	598	2 32.8	+54 30	6.0	424 5.6 16-2	6.6	.6	7.2	5.4	5.3 ✓
3 7+65.1	340	3 7.2	+65 6	4.5	516 4.8 18+0	5.7	.9	6.6	4.8	4.4 ✓
3 4+65.1	388	3 4.8	+65 6	5.5	.	7.0	.9	7.9	6.1	5.7 ✓
2 40+55.3	714	2 40.2	+55 18	3.5	–	6.5 / 6.9	.6	7.1 / 7.5	5.3 / 5.7	5.0 / 5.4
2 19+54.9	557	2 19.2	+54 53	6.5	–	7.1	.6	7.7	5.9	5.8 ✓
1 49+74.8	91	1 48.8	+74 47	6.5	–	6.6	1.5	8.1	6.3	5.3 ✓
1 51+75.5	86	1 51.8	+75 25	5.0	–	6.4 / 6.6	1.5	7.9 / 8.1	6.1 / 6.3	4.9 / 5.1
2 12+55.2	598	2 12.3	+55 11	5.7		6.5	.6	7.1	5.3	5.2 ✓
3 3+65.9	335	3 3.6	+65 50	7.0	.	6.7	1.0	7.7	5.9	5.4 ✓
2 54+56.1	767	2 54.7	+56 8	5.0	–	6.4 / 6.7	.6	7.0 / 7.3	5.2 / 5.5	4.9 / 5.1
1 42+75.5	76	1 42.2	+75 30	6.8		6.7	1.5	8.2	6.4	5.4 ✓
2 42+76.5	101	2 42.2	+76 29	6.8	–	6.9 / 7.2	1.6	8.5 / 8.8	6.7 / 7.0	5.4 / 5.7
2 17+66.7	213	2 17.2	+66 45	4.7	–	5.4	1.0	6.4	4.6	4.1 ✓
1 51+76.6	63	1 50.8	+76 35	5.3	–	5.9	1.6	7.5	5.7	4.6 ✓
3 2+77.3	115	3 2.2	+77 11	6.2	–	5.8	1.6	7.4	5.6	4.5 ✓
2 32+67.2	224	2 32.4	+67 12	6.6	–	6.5	1.0	7.5	5.7	5.2 ✓
2 41+57.7	651	2 40.9	+57 42	6.2	.	6.8	.7	7.5	5.7	5.5 ✓

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1887phae.proj...837F

April 4, 1887.

Plate No. 847.

T	H	Type	Lines	K	Focus	Other Lines.
10.1	16.6	I	3	H	1	—
10.8	19.2	III?	2	H	1	F. faint.
9.8	8.3	I	6	H	1	F.
9.0	11.7	I	6	K=H	1	F.
9.2	13.7	II?	3	K=H	1	F.
9.9	19.9	III?	2	K=H	1	—
9.9	21.4	I	7	H	1	F.
8.2	12.9	III	3	K=H	1	F.
8.5	17.5	I	6	K=.2H	1	F.
8.6	23.7	I	8	H	2	F.
7.0	8.9	I	5	H	1	—
7.8	14.3	I	6	K=.5H	1	F.
7.5	17.6	I	9	K=.2H	2	F.
7.9	18.1	I	5	K=H	1	F.
8.0	22.5	I	5	?	1	F.
7.8	13.9	I	4	?	1	—
5.4	16.6	I	3	H	1	—
5.4	17.7	I	3	H	1	—
5.7	22.3	I	4	H	1	F.
6.0	22.9	I	8	K=.5H	2	F.
4.4	7.3	I	3	H	1	—
4.4	8.0	I d?	7	K=.5H	2	F.
4.0	12.8	I	7	K=.2H	2	F.
4.2	14.6	III	3	K=H	1	F.
4.2	17.4	I	8	K=.2H	1	F.
4.7	19.0	I	4	H	1	—
4.6	21.9	I	9	K=.5H	2	F.
3.6	6.9	III	3	K=H	1	F.

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1887phae.proj..837F

Mean 13

	No.	R.A.	Dec.	Mag.		Br.				
2 23+67.7	215	2	23.4 + 67 43	7.5	.	7.0	1.1	8.1	6.3	5.7 ✓
1 48+77.3	73	1	48.5 + 77 12	6.3		6.7 / 7.0	1.6	8.3 / 8.6	6.5 / 6.8	5.4 / 5.7 ✓
3 28+77.7	133	3	29.0 + 77 39	7.2	.	6.6	1.7	8.3	6.5	5.3 ✓
2 58+78.3	109	2	58.3 + 78 19	7.0	-	6.4	1.6	8.0	6.2	5.1 ✓
2 39+68.3	200	2	39.1 + 68 17	6.5	-	6.8	1.1	7.9	6.1	5.5 ✓
1 40+77.5	65	1	40.4 + 77 28	6.5	-	6.9 / 7.1	1.7	8.6 / 8.8	6.8 / 7.0	5.6 / 5.8 ✓
1 27+77.3	58	1	27.6 + 77 14	6.5	.	6.5	1.6	8.1	6.3	5.2 ✓
2 47+78.8	103	2	47.1 + 78 31	5.6	-	6.7 / 7.0	1.8	8.5 / 8.8	6.7 / 7.0	5.4 / 5.7 ✓
2 0+78.5	73	1	59.9 + 78 29	7.3	-	6.6	1.7	8.3	6.5	5.3 ✓
1 44+67.9	169	1	44.8 + 67 58	5.2	290 5.1 15 -3 -4	5.5	1.1	6.6	4.8	4.2 ✓
3 6+69.2	205	3	6.3 + 69 12	6.5	.	6.8	1.1	7.9	6.1	5.5 ✓
2 36+69.0	179	2	35.9 + 69 8	6.5	-	6.7	1.1	7.8	6.0	5.4 ✓
1 56+78.9	63	1	56.6 + 79 0	6.7	-	6.4	1.8	8.2	6.4	5.1 ✓
1 53+78.6	69	1	53.2 + 78 38	7.3	-	6.8	1.8	8.6	6.8	5.5 ✓
1 11+77.9	49	1	11.2 + 77 58	6.0		6.4	1.7	8.1	6.3	5.1 ✓
2 38+79.5	86	2	36 + 79 29	7.0		Not found on Charts ✓				
2 3+80.0	70	2	3.3 + 80 3	7.7	.	7.0	1.9	8.9	7.1	5.7 ✓
1 50+79.9	61	1	50.7 + 79 38	7.5	.	7.0	1.9	8.9	7.1	5.7 ✓
1 4+79.2	36	1	3.9 + 79 8	6.5	.	6.6	1.8	8.4	6.6	5.3 ✓
1 0+78.9	34	1	0.0 + 78 54	5.6	-	5.6	1.8	7.4	5.6	4.3 ✓
3 54+80.2	127	3	53.8 + 80 9	6.8	.	6.9	1.9	8.8	7.0	5.6 ✓
3 46+80.4	125	3	46.0 + 80 18	4.9	-	5.7	1.9	7.6	5.8	4.4 ✓
2 50+80.9	97	2	49.6 + 80 54	5.5	-	5.8	2.0	7.8	6.0	4.5 ✓
2 27+80.8	86	2	27.2 + 80 50	5.9	-	6.7 / 7.0	2.0	8.7 / 9.0	6.9 / 7.2	5.4 / 5.7 ✓
1 52+80.6	64	1	51.8 + 80 36	6.1	-	5.9	2.0	7.9	6.1	4.6 ✓
1 34+80.2	55	1	34.1 + 80 10	7.5	-	6.7	1.9	8.6	6.8	5.4 ✓
1 50+70.2	153	1	50.1 + 70 11	4.6	-	5.2	1.2	6.4	4.6	3.9 ✓
4 2+80.5	133	4	2.0 + 80 28	5.7	-	6.4 / 6.8	2.0	8.4 / 8.8	6.6 / 7.0	5.1 / 5.5 ✓

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1887phae.proj--837F

April 4, 1887.

Plate 877.

	V	H	Type	Remarks	No. Lines	K	Focus	Other Lines.
	3.9	12.5	I		5	K=H	1	F.
	3.8	17.3	I		6	K=H	1	F.
	3.5	19.5	II?		3	K=H	1	F.
	3.8	21.4	I		4	K=H	1	—
12.45 a. M.	1.7	21.1	I		2	H	2	F.

Plate 939.

	22.5	13.6	IIa	600	3	K=H	2	F
	22.3	16.6	I?		3	H	1	—
	22.8	22.8	I		5	K=3H2	4	—
	21.0	7.6	I		3	H	1	—
	20.8	8.2	I		3	H	1	—
	20.8	9.3	I		6	H	2	F.
	20.6	9.5	II?		2	K=H	1	—
	20.5	10.6	II?		3	K=H	1	F.
	20.8	11.5	I		9	H	3	F.
?	20.1	13.6	IIa	601	√	K=H	3	F. nebs.
?	20.0	16.8	III	602	3	K=H	2	F. nebs.
	20.4	17.4	I		6	H	2	F.
	20.4	17.2	I		4	H	1	—
	20.8	19.9	I		4	H	1	—
	20.2	22.1	I		9	H	√	F.
	20.9	23.0	I?		3	H	1	—
√	19.5	7.6	IIa	603	2	K=H	K=H1	— nebs
	19.7	14.0	I		√	H	1	F.
	18.3	8.7	I		6	H	2	F.
	18.6	10.5	IIa2	604	3	K=H	√	F. nebs
	18.6	12.9	III		1	H	1	F.

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1887phae..proj...8374

Mean. 13

	No.	R.A.	Dec.	Mag.				Br.				
2 44+60.9	591	2	44.5	+60 56	5.9	–		6.8	.8	7.6	5.8	5.5
1 53+80.8	65	1	52.6	+80 46	6.7	–		6.7	20	8.7	6.9	5.4
1 24+80.7	50	1	23.0	+80 41	7.4	–		6.8	20	8.8	7.0	5.5
1 6+80.1	36	1	6.2	+80 8	6.7	–		6.5	19	8.4	6.6	5.2
1 51+71.7	117	1	51.2	+71 42	4.0	306	4.1	5.2	1.3	6.5	4.7	

Means

2 44+60.9	591	2	44.5	+60 56	5.9	–		6.4	.8	7.2	6.0	
2 31+60.9	548	2	31.4	+60 38	7.1	.		6.9	.8	7.7	6.5	6.3
1 50+70.2	153	1	50.1	+70 11	4.6	304	4.6	5.3	1.2	6.5	6.3	
3 9+61.5	559	3	9.4	+61 28	6.5	.		6.7	.8	7.5	6.3	6.1
3 1+51.6	689	3	1.3	+51 38	7.3	.		6.9	.5	7.4	6.2	6.3
2 58+51.6	681	2	57.7	+51 39	6.8	.		6.6	.5	7.1	5.9	6.0
3 11+71.7	198	3	11.7	+71 41	7.2	–		6.8	1.3	8.1	6.9	6.2
2 57+61.8	525	2	57.1	+61 49	6.5	–		6.8	.8	7.6	6.4	6.2
2 51+51.8	665	2	50.6	+51 47	5.7	470	5.1	5.6	.5	6.1	4.9	5.0
2 44+52.1	641	2	44.0	+52 9	4.2	–		5.5	.5	6.0	4.8	4.9
2 24+72.2	140	2	24.4	+72 10	5.0	–		5.9 / 6.2	1.3	7.2 / 7.5	5.8 6.0 / 6.3	5.3 / 5.6
2 27+61.0	444	2	27.7	+61 57	6.6	.		6.5	.8	7.3	6.1	5.9
2 28+61.9	448	2	28.8	+61 38	7.0	.		7.0	.8	7.8	6.6	6.4
2 23+51.7	588	2	23.4	+51 40	6.5	.		6.8	.5	7.3	6.1	6.2
1 51+71.7	117	1	51.2	+71 42	4.0	306	4.1	4.3	1.3	5.6	4.4	3.7
2 14+51.4	556	2	13.6	+51 25	6.5	.		7.0	.5	7.5	6.3	6.4
3 10+62.2	549	3	10.0	+62 13	7.5	–		7.0	.8	7.8	6.6	6.4
2 43+52.4	641	2	42.6	+52 24	7.0	.		6.8	.5	7.3	6.1	6.2
3 19+72.9	178	3	19.4	+72 50	6.7	.		6.3	1.3	7.6	6.4	5.7
2 54+52.9	654	2	54.3	+52 56	3.2	–		4.1	.5	4.6	3.4	3.5
2 33+52.9	616	2	32.8	+52 54	6.0	–		6.8 / 7.1	.5	7.3 / 7.6	6.1 / 6.4	6.2 / 6.5

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Plate 939.

V	H	Type	No. lines	K	Focus	Other lines.
18.3	18.2	I	4	K=H	1	—
17.5	11.3	I	7	H	2	—
17.7	13.1	I	4	H	1	—
17.5	20.2	III	2	H	1	F.
17.5	21.6	I	9	K=√H	2	F.
16.9	10.6	II	2	K=H	1	—
16.8	12.3	I	9	H	√	F.
16.8	13.4	III	III 3	2 K=H	K=H 1	F. Fi.
16.3	14.4	III	III 2	K=H	K=H 1	F. —
16.2	14.9	I	4	H	1	—
16.4	15.0	III	III 2	2 H	K=H 1	F. Fi.
16.1	21.0	I	4	H	1	—
16.7	21.4	I	7	H	2	F.
15.9	7.6	III	III 1	2 H	K=H 1	F. Fi.
15.6	7.9	III	2	K=H	1	—
15.2	10.4	I?	I 3	H H	K=H 1	— —
15.7	10.6	I	7	H	2	F.
15.2	12.1	I	6	K=H	1	—
15.0	11.4	I	√	H	1	—
15.4	13.4	I	8	H	2	F.
15.5	16.8	I	8	H	3	F.
15.5	20.7	I	√	K=H	1	—
15.5	22.7	I	4	H	1	—
15.4	23.9	I	4	H	1	F.
14.0	8.9	I	7	H	4	—
14.0	9.4	I	6	H	2	—
14.6	10.2	I	4	K=H	1	—
14.6	11.8	I	I 4	H H	1 1	— —

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Mean 6

	No.	R.A.	Dec.	Mag.		Bx.				
2 14+73.0	139	2 14.2	+73	3	6.9	–	6.9	1.3	8.2	7.0	6.3
2 55+63.5	390	2 55.2	+63	30	6.0	488 5.8 12+0	6.1	.9	7.0	5.8	5.5
2 50+73.4	165	2 50.2	+73	22	7.4	.	6.9	1.4	8.3	7.1	6.3
2 0+73.4	121	2 0.1	+73	20	6.5		6.5 / 6.6	1.4	7.9 / 8.0	6.7 / 6.8	5.9 / 6.0
1 51+73.2	108	1 50.5	+73	8	6.2	–	5.9	1.3	7.2	6.0	5.3
3 8+73.6	180	3 8.1	+73	38	6.9	–	6.6	1.4	8.0	6.8	6.0
2 56+73.8	168	2 56.3	+73	50	5.2	493 4.7 14+2	4.7	1.4	6.1	4.9	4.1
2 46+63.8	370	2 46.0	+63	50	6.5	–	6.9 / 7.1	7.0 / 7.3	7.8 / 8.0	6.6 / 6.8	6.3 / 6.5
2 41+64.0	354	2 41.1	+64	4	7.4	–	7.0 / 7.3	7.2 / 7.3	7.9 / 8.2	6.7 / 7.0	6.4 / 6.7
2 38+74.1	120	2 37.6	+74	8	7.3	.	6.8	1.4	8.2	7.0	6.2
2 38+64.0	351	2 38.2	+64	2	7.2		7.0 / 7.2	7.1 / 7.3	7.9 / 8.1	6.7 / 6.9	6.4 / 6.6
1 52+73.9	112	1 52.9	+73	52	7.3	.	6.8	1.4	8.2	7.0	6.2
2 9+63.7	320	2 9.1	+63	40	7.0	.	6.5	.9	7.4	6.2	5.9
3 12+64.0	391	3 12.2	+64	4	6.0	–	6.8 / 7.1	6.9 / 7.3	7.7 / 8.0	6.5 / 6.8	6.2 / 6.5
3 28+74.1	168	3 28.4	+74	4	6.8	–	6.8 / 6.9	1.4	8.2 / 8.3	7.0 / 7.1	6.2 / 6.3
2 59+64.5	376	2 59.7	+64	32	8.0	.	6.9	7.0	7.9	7.8	6.6
2 59+64.4	375	2 58.7	+64	20	7.0	.	6.5	.9	7.4	6.2	5.9
2 49+54.6	629	2 49.5	+54	37	8.0	–	6.9	.6	7.5	6.3	6.3
3 4+74.7	144	3 3.6	+74	41	7.4	.	6.6	1.4	8.0	6.8	6.0
2 48+74.6	131	2 48.6	+74	34	7.2	.	6.4	1.4	7.8	6.6	5.8
2 32+74.5	598	2 32.8	+54	30	6.0	424 5.6 9$^{-3}_{-4}$	5.9	.6	6.5	5.3	5.3
1 53+74.2	95	1 53.8	+74	10	7.5	–	6.7	1.4	8.1	6.9	6.1
2 3+64.1	307	2 2.8	+64	10	7.0	.	6.8	.9	7.7	6.5	6.2
1 32+73.9	92	1 31.6	+73	52	6.8	.	6.8	1.4	8.2	7.0	6.2
3 7+65.1	340	3 7.2	+65	6	4.5	516 4.8 11$^{-1}_{-2}$	5.0	.9	5.9	4.7	4.4
3 4+65.1	338	3 4.8	+65	6	6.5	.	6.4	.9	7.3	6.1	5.8
3 13+74.8	151	3 13.4	+74	44	7.9	–	7.0	1.4	8.4	7.2	6.4
2 53+64.9	367	2 53.7	+64	52	7.7	–	7.0	7.2 .9	7.9	6.7	6.4

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	Y	X	Type	No. Lines	Remarks	K	Focus	Other Lines.
9.33	14.0	13.9	I	I	6 6	H N	1 1	— —
	14.5	14.5	I	I	5 5	K=H	K=H 1 1	— —
	14.4	14.7	I	I	5 5	H N	1 1	F. —
?	14.0	14.8	III	b:c	605 3	K=H	2	F. bright sun?
	14.5	15.4	I		6	K=.2H	2	—
	14.9	15.6	I		6	K=H	1	—
	14.3	17.5	III	III	3 3	H	K=H 1 1	F. F
	14.6	19.9	I		3	H	1	—
	14.5	20.3	II	?	605a IIa? 3 2	K=H	K=H 1 1	F. Lcm
	14.5	20.7	I		7	K=H	2	F.
	14.2	21.1	I		8	H	2	F.
	14.5	21.7	III		3	K=H	1	F.
	14.6	22.3	II	?	3	K=H	1	F.
	13.6	6.1	I		4	H	1	F.
	13.6	9.2	III	III ?	2	K=H	1	—
	13.4	10.6	III		2	K=H	1	—
	13.4	12.9	I	I	6 5	K=.5H	H 1 1	— —
	13.4	18.2	I		6	H	1	—
	13.2	20.5	II	?	2	K=H	2	—
	13.7	22.4	I			K=H	1	F.
?	13.6	22.6	II	a ?	606 3	K=H	2	F. cm.
	13.4	23.1	II		3	K=H	1	F.
	12.6	9.8	I		8	H	2	—
	12.0	10.4	I		2	H	1	—
?	12.2	10.7	III	b ?	607 3	K=H	3	F. bright? cm.
	12.6	21.6	I	?	4	H	1	F.
	12.2	21.7	I	I ?	1	H	1	—
	12.3	22.1	I		6	H	2	F.

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Means

	No.	R.A.	Dec.	Mag.		B				
2 44+65.2	306	2 43.8	+65 13	7.0	.	6.8 6.7	.9	7.7	6.5	6.2 ✓
2 40+75.0	113	2 40.5	+75 3	8.6	_	6.9 6.8	1.5	8.4	7.2	6.3 ✓
2 40+65.0	300	2 40.0	+65 1	7.0	.	6.6 6.5	.9	7.5	6.3	6.0 ✓
2 40+55.3	714	2 40.2	+55 18	3.5	_	5.9 6.2	.6	6.5 6.8	5.3 5.6	5.3 5.6 ✓
2 37+55.0	656	2 37.5	+54 59	7.3	_	6.7	.6	7.3	6.1	6.1 ✓
2 31+74.8	117	2 31.4	+74 46	7.2	_	6.4	1.5	7.9	6.7	5.8 ✓
2 26+65.1	280	2 25.8	+65 7	6.1	_	6.7 6.7 7.0 7.1	.9	7.6 7.9	6.4 6.7	6.1 6.4 ✓
2 22+54.8	567	2 22.0	+54 49	6.5	.	6.7	.6	7.3	6.1	6.1 ✓
2 20+54.9	561	2 20.6	+54 54	6.5	_	6.9 7.0	.6	7.5	6.3	6.3 ✓
2 19+54.9	557	2 19.2	+54 53	6.5	_	6.4	.6	7.0	5.8	5.8 ✓
1 49+74.8	91	1 48.8	+74 47	6.5	.	5.9	1.5	7.4	6.2	5.3 ✓
1 44+74.6	87	1 44.8	+74 37	6.5	_	6.6 6.8	1.4	8.0 8.2	6.8 7.0	6.0 6.2 ✓
2 14+54.7	535	2 13.8	+54 42	6.4	_	6.8	.6	7.4	6.2	6.2 ✓
3 20+65.0	348	3 20.5	+65 2	7.0	.	6.6	.9	7.5	6.3	6.0 ✓
3 22+75.3	143	3 22.1	+75 14	6.5	_	6.4 6.5	1.5	7.9 8.0	6.7 6.8	5.8 5.9 ✓
2 55+55.5	738	2 54.9	+55 30	6.3	_	6.8 7.0	.6	7.4 7.6	6.2 6.4	6.2 6.4 ✓
2 54+75.5	127	2 53.5	+75 30	8.3	_	6.7 6.6	1.5	8.2	7.0	6.1 ✓
2 10+75.5	94	2 10.2	+75 27	7.5	.	6.5	1.5	8.0	6.8	5.9 ✓
1 52+75.4	86	1 51.8	+75 25	5.0	_	5.6	1.5	7.1	5.9	5.0 ✓
1 38+74.9	84	1 38.8	+74 52	6.8	_	6.6	1.5	8.1	6.9	6.0 ✓
2 12+55.2	598	2 12.3	+55 11	5.7	_	5.6	.6	6.2	5.0	5.0 ✓
1 32+75.2	72	1 32.1	+75 8	7.0	_	6.8	1.5	8.3	7.1	6.2 ✓
3 3+65.8	335	3 3.6	+65 50	7.0	.	6.3	1.0	7.3	6.1	5.7 ✓
3 15+76.1	125	3 14.7	+76 6	8.6	.	6.9	1.5	8.4	7.2	6.3 ✓
2 54+56.1	767	2 54.7	+56 8	5.0	_	6.3 6.4	.6	6.7 6.9	5.5 5.7	5.5 5.7 ✓
1 43+75.5	76	1 42.2	+75 30	6.8	.	6.4	1.5	7.7	6.5	5.6 ✓
2 15+55.9	612	2 15.1	+55 56	6.3	_	6.3	.6	6.9	5.7	5.7 ✓
2 3+65.9	239	2 3.2	+65 50	6.0	344 6.1 11 -2	6.2	1.0	7.2	6.0	5.6 ✓

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V	H	Type	No. Lines	No. Remarks	K	Focus	Other Lines.
11.0	8.0	II	608	a 3	K=H	1	F.
11,5	10,0	II? II!	3	2	K=H K=H	1 1	F. F
11,4	11,8	II	2		K=H	1	—
11,6	14,3	III	3		K=H	1	F.
11.6	15.0	II II	3	2	K=H K=H	1 1	F. F.
11,0	19,0	I	10		K=.2H	5	F.
11.0	22,5	II II	3	2	K=H K=H	1 2	F. F.
11,1	23,3	I	4		K=H	1	—
11.1	23,3	I I	3	3	H H	1 1	— —
11.1	23.9	II?	3		K=H	1	F.
10,7	9,5	I	7		K=H	1	—
10,2	12,1	I	10		K=.5H	4	F.
10,2	16,0	I	9		K=.2H	2	F.
10.9	18,0	I I	3	3	H H	1 1	— —
10.7	17.7	II?	1		H	1	F.
10.9	20,1	I	10		K=.2H	3	F.
10,4	23,5	III III	3	3	K=H K=H	1 1	F. F.
9,8	7,1	II a? III	3	608a 2	K=H K=H	1 1	F. seen F. seen
9,2	14,5	I	8		H	2	F.
9,6	17,2	II	609	a 2	K=H	1	—
? 9.1	17.7	II	610	a? 4	K=H	2	F. seen.
? 9,6	20,1	III	611	b? 3	K=H	2	F. seen.
9.1	21,4	I I	4		K=H K=H	1 1	F. —
9,0	22,3	I	7		K=.2H	2	F.
9,5	23,4	III III	3	3	K=H K=H	1 1	F. F.
8,2	7,7	I I	3	4	H H	1 1	— —
8,2	7,9	III	1		H	1	—
8,3	9,2	I	2		H	1	—

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Means.

	No.	R.A.	Dec.	Mag.	Br.				
3 4+56.6	798	3	4.8	+56 35	6.0		6.3	x.6 6.9 5.7	5.7
2 57+56.5	778	2	57.4	+56 27	7.0		6.8 6.8	x.6 7.4 6.2	6.2
3 3+76.5	120	3	3.5	+76 31	8.2		6.9	.6 8.5 7.3	6.3
2 42+76.5	101	2	42.2	+76 29	6.8		6.4 6.6	.6 8.0 8.2 {6.8 7.0}	5.8 6.0
2 39+56.5	718	2	38.9	+56 28	6.5		6.6 6.6	.6 7.2 6.0	6.0
2 17+66.8	213	2	17.2	+66 45	4.7		5.8	1.0 6.8 5.6	5.2
2 11+56.5	568	2	11.7	+56 34	6.7		6.3 6.1	.6 6.9 5.7	5.7
1 26+75.9	69	1	26.3	+75 59	8.1		6.0	1.5 7.5 6.3	5.4
1 56+66.3	185	1	56.3	+66 17	8.8		6.3 6.5	1.0 7.3 6.1	5.7
2 6+56.4	471	2	6.8	+56 23	6.6		6.6	.6 7.2 6.0	6.0
3 24+76.7	128	3	24.0	+76 41	7.5		6.7	.6 8.3 7.1	6.1
3 3+77.3	115	3	2.2	+77 11	6.2		4.8	.6 6.4 5.2	4.2
2 32+67.2	224	2	32.4	+67 12	6.6		5.8	1.0 6.8 5.6	5.2
2 22+66.8	219	2	22.2	+66 47	8.1		7.0 7.1	1.0 8.0 6.8	6.4
2 24+66.9	223	2	24.2	+66 50	7.0		6.9	1.0 7.9 6.7	6.3
1 51+76.6	63	1	50.8	+76 35	5.3		4.9	.6 6.5 5.3	4.3
2 8+56.9	486	2	7.9	+56 31	6.5		6.7 7.0	{6.7 7.0} 7.4 7.7 {6.2 6.5}	6.1 6.4
3 19+67.0	273	3	18.6	+67 4	7.5		6.8 6.9	{6.8 7.0} 7.8 7.9 {6.6 6.7}	6.2 6.3
2 41+57.7	651	2	40.9	+57 42	6.2		6.2	.7 6.9 5.7	5.6
2 26+67.4	217	2	26.1	+67 26	7.7		7.0	1.0 8.0 6.8	6.4
2 23+67.7	215	2	23.5	+67 43	7.5		6.3	1.1 7.4 6.2	5.7
1 48+77.3	73	1	48.5	+77 12	6.3		6.3 6.5	{6.3 6.5} 7.9 8.1 {6.7 6.9}	5.4 5.4
2 15+57.5	566	2	15.1	+57 31	8.1		7.1 7.1	1.7 7.8 6.6	6.5
1 27+77.3	58	1	27.6	+77 14	6.5		5.8	.6 7.4 6.2	5.2
~~2 18+57.2~~	~~67~~	~~67~~	~~17.8~~	~~+78~~	~~8.5~~		6.7 7.0	{6.5 6.7} 7.7 8.0 {6.5 6.8}	6.1 6.4
~~2 54+66.6~~	~~242~~	~~2~~	~~54.6~~	~~+66 50~~	~~7.8~~				
3 16+67.9	535	2	7.8	+57 13	6.2		6.9	1.1 8.0 6.8	6.3
	~~252~~	~~3~~	~~16.7~~	~~+68 2~~	~~8.8~~		7.7 7.9	{7.7 7.9} 9.4 9.6 {8.2 8.4}	7.1
	270	3	16.6	+67 56	8.4				
3 43+77.8	138	3	43.0	+77 46	7.0				
3 30+77.7	134	3	30.7	+77 51	8.0		6.9	1.7 8.6 7.4	6.3

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γ	H	Type	Hyperlines No. Remarks	K	Focus	Other Lines.
8.8	9.3	I	6	N	2	—
8.5	10.5	I	3 3	N N	1 1	— —
8.5	11.5	II	2	K=H	1	—
8.0	12.7	I	9	K=.5H	2	F.
8.2	14.8	II[a]	6123	K=H	2	F.
8.0	16.7	I	I 5	K=.5H K=H	1 1	— —
8.9	20.8	III	2	K=H	1	—
7.7	6.2	III	3	K=H	1	F.
7.1	13.8	III	3	K=H	1	F.
7.2	17.1	I	3	N	1	—
7.4	18.4	I	6	K=.2H	2	F.
? 7.0	19.1	II[a]	6133	K=H	1	F.
7.0	23.5	II?	1	?	2	F.
6.6	8.0	I	5	K=.5H	1	—
6.0	10.1	I	7	N	2	—
6.6	10.4	I	I 5 H	K=H K=H	1 1	— —
6.4	12.4	I	I 5 5	K=.2H N	1 1	— —
6.6	12.7	I	I 4 4	N N	1 1	— —
6.8	15.3	I	7	K=.2H	2	F.
6.4	16.6	I?	1	N	1	—
6.4	16.6	I	4	N	1	—
6.3	17.7	I	4	N	1	—
6.4	18.7	I	8	K=.5H	2	F.
14.7	24.5	I	6	N	2	F.
? 5.0	5.3	I?	8?	K=H	3	F.
5.0	6.1	I	6	N	1	F.
5.1	8.7	I	3	N	1	—
5.6	10.6	I	6	N	1	—

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	No.	R.A.	Dec.	Mag.		Br.				
3 28+77.6	133	3 29.0	+77 39	7.2	.	6.0	1.7	7.7	6.5	5.4 ✓ .
3 19+77.9	126 ✓	3 18.5	+77 56	8.3 ✓	.	6.9 6.9	1.7	8.6	7.4	6.3 ✓ .
3 8+77.9	119	3 8.9	+77 58	7.5	_	6.9	1.7	8.6	7.4	6.3 ✓ .
2 58+78.3	109	2 58.3	+78 19	7.0	_	5.9	1.7	7.6	6.4	5.3 ✓ .
2 39+68.3	200	2 39.1	+68 17	6.5	_	6.0	1.1	7.1	5.9	5.4 ✓ .
2 32+58.3	508 ✓	2 32.4	+58 14	7.5 ✓	_	6.9 6.7	1.7	7.6	6.4	6.3 ✓ .
1 40+77.5	65	1 40.4	+77 28	6.5	_	6.5		8.2	7.0	5.9 ✓
						6.7	1.7	8.4	7.2	6.1 .
3 59+77.7	150	3 59.3	+77 42	7.0	_	6.8		8.5	7.3	6.2 ✓
						7.0	1.7	8.7	7.5	6.4 .
2 47+78.8	103	2 47.1	+78 51	5.6	_	6.0		7.8	6.6	5.4
						6.4	1.8	8.2	7.0	5.8 ✓ .
2 26+68.7	177	2 26.2	+68 40	8.0	.	6.9	1.1	8.0	6.8	6.3 ✓
2 0+78.5	73	1 59.9	+78 29	7.3	_	5.8	1.7	7.5	6.3	5.3 ✓ .
1 53+78.6	69	1 53.2	+78 38	7.3	_	6.1	1.8	7.9	6.7	5.5 ✓ .
1 11+77.9	49	1 11.2	+77 58	6.0	_	5.5	1.7	7.2	6.0	4.9 ✓ .
3 48+78.6	142	3 47.8	+78 32	8.0	_	6.6	1.8	8.4	7.2	6.0 ✓ .
3 6+69.3	205	3 6.3	+69 12	6.5	.	6.1	1.1	7.2	6.0	5.5 ✓ .
3 4+68.9	230 ✓	3 3.8	+68 54	8.0 ✓	_	7.0 7.0	1.1	8.1	6.9	6.4 ✓ .
2 50+59.1	582 ✓	2 49.7	+59 6	7.0 ✓	_	6.6 6.5	1.7	7.3	6.1	6.0 ✓
2 48+59.0	540 ✓	2 48.3	+58 60	7.2 ✓	.	7.0 7.2	1.7	7.7	6.5	6.4 ✓ .
2 36+69.0	179	2 36.9	+69 1	6.5	_	5.8	1.1	6.9	5.7	5.2 ✓ .
2 18+79.1	75	2 18.4	+79 3	7.5		6.1	1.8	7.9	6.7	5.5 ✓ .
2 28+69.1	171	2 28.8	+69 4	8.0	.	6.5	1.1	7.6	6.4	5.9 ✓ .
2 7+79.1	68	2 7.2	+79 6	7.7	.	6.9	1.8	8.7	7.5	6.3 ✓ .
1 56+79.0	63	1 56.6	+79 0	6.7	_	5.5	1.8	7.3	6.1	4.9 ✓ .
1 53+64.4	285	1 53.8	+64 24	6.5	.	6.3	.9	7.2	6.0	5.7 ✓ .
3 17+59.4	660	3 17.4	+59 26	4.5	_	4.8	.7	5.5	4.3	4.2 ✓ .
3 28+69.4	222	3 28.2	+69 23	7.2	.	6.9	1.1	8.0	6.8	6.3 ✓ .
3 44+79.5	125	3 43.7	+79 22	8.3	.	6.8	1.8	8.6	7.4	6.2 ✓ .
3 3+69.5	203	3 2.8	+69 26	7.7	.	6.6	1.1	7.7	6.5	6.0 ✓ .

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April 4, 1887.

Plate 939.

γ	H	Type	No. Lines Remarks	K	Focus	Other Lines.
5,5	13,1	III	2	K=H	1	—
5,2	13,7	I	4	H	1	—
5,7	14,9	I	8	K=.2H	2	F.
5,7	19,2	I	4	H	1	—
5,5	22,5	I	3	H	1	—
4,9	14,4	I I	3 4	H K=H	1 1	— —
5,0	14,7	II II	2 2	K=H K=H	1 1	— —
4,8	15,7	II[a]	6 14 II[a] 2	2 K=H K=H	1 1	diff. diff.
4,4	17,7	I	5	H	1	—
4,4	18,8	I	5	H	1	—
4,4	22,7	I	3	H	1	—
4,7	23,3	I?	5	K=H	2	F.
4,9	23,9	I	7	K=H?	3	F.
3,4	8,3	III?	1	H	1	F.
3,3	9,0	II[a2]	6 15 3	K=.5H	3	F. diff.
3,1	12,7	I	3	H	1	—
3,5	13,2	I I	4 3	H N	1 1	— —
3,1	15,5	III	3	K=H	1	F.
3,2	18,4	I	7	H	2	F.
3,7	20,1	I	4	?	1	diff.
?	3,5	23,0	I[d]	8	?	H F. diff.
?	2,7	5,6	I[d]	7	H	3 F. diff.
	2,2	7,8	I	5	H	1 —
	2,6	7,8	III	3	K=3,0 H?	2 F.
	2,7	9,4	I I	3 3	H N	1 1 — —
?	2,9	13,7	II[a]	6 16 3	K=H	2 F? diff.
	2,9	13,7	I	8	K=.3H K=.7H	3 F.
	2,7	15,8	III	2	K=H	1 —

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Mean 6.

	No.	R.A.	Dec.	Mag.		Br.				
2 55+79.6	94	2	55.4	+79 36	7.3	-	6.4 / 6.6	1.9	8.3 / 8.5	7.1 / 7.3	5.8 / 6.0
2 49+79.7	91	2	49.5	+79 44	8.3	.	6.7	1.9	8.6	7.4	6.1
2 36+79.5	86	2	36.1	+79 29	7.0	-	6.0	1.8	7.8	6.6	5.4
2 22+79.3	505	2	22.5	+79 21	7.5	.	6.9	.7	7.6	6.4	6.3
2 9+79.4	466 / 467	2	9.2	+79 20 / 22	6.7 / 6.7	?	6.7	.7	7.4	6.2	6.1
2 42+79.9	559	2	41.8	+79 52	7.6	.	6.9	6.8 .7	7.6	6.4	6.3
2 40+79.8	552	2	40.0	+79 49	6.9	-	6.8	6.8 .7	7.5	6.3	6.2
2 36+79.9	541	2	36.1	+79 57	6.2	-	6.6	6.7 .8	7.4	6.2	6.0
2 3+80.1	70	2	3.3	+80 3	7.7	.	6.1	1.9	8.0	6.8	5.5
1 50+79.9	61	1	50.7	+79 58	7.5	.	6.1	1.9	8.0	6.8	5.5
1 9+79.4	39	1	9.2	+79 22	8.0	.	6.5	1.8	8.3	7.1	5.9
1 4+79.2	36	1	3.9	+79 8	6.5	-	5.8	1.8	7.6	6.4	5.2
1 0+78.9	34	1	0.0	+78 54	5.6	-	5.0	1.8	6.8	5.6	4.4
3 53+80.2	127	3	53.8	+80 9	6.8		6.4 / 6.6	1.9	8.3 / 8.5	7.1 / 7.3	5.8 / 6.0
3 46+80.4	125	3	46.0	+80 18	4.9	-	5.2	1.9	7.1	5.9	4.6
2 48+60.7	608	2	48.4	+60 42	7.2	.	6.8	.8	7.6	6.4	6.2
2 46+60.6	597	2	46.3	+60 32	7.8	.	7.1 7.1	.8	7.9	6.7	6.5
2 27+80.8	86	2	27.2	+80 50	5.9	-	6.0 / 6.3	2.0	8.0 / 8.3	6.8 / 7.1	5.4 / 5.7
1 52+80.6	64	1	51.8	+80 36	6.1	318 6.0 13 +1 +0	5.3	2.0	7.3	6.1	4.7
1 34+80.2	55	1	34.1	+80 10	7.5		6.0	1.9	7.9	6.7	5.4
1 50+70.2	153	1	50.1	+70 11	4.6		4.8	1.2	6.0	4.8	4.2
3 34+70.5	257	3	34.2	+70 25	5.7	598 5.3 13 +1 +0	5.4	1.2	6.6	5.4	4.8
4 4+80.6	134	4	4.2	+80 35	7.4	.	6.7	2.0	8.4	7.3	
4 2+80.5	133	4	2.0	+80 28	5.7	-	6.2 / 6.5	2.0	8.2 / 8.5	7.0 / 7.3	5.6 / 5.9
3 8+70.8	241	3	8.5	+70 45	7.5	.	6.9	6.9 1.2	8.1	6.9	6.3
2 44+60.9	591	2	44.3	+60 56	5.9	-	5.9	.8	6.7	5.5	5.3
2 50+80.9	97	2	49.6	+80 54	5.5	-	5.1	2.0	7.1	5.9	4.5
2 31+60.9	548	2	31.4	+60 58	7.1	-	6.9 / 7.0	.8	7.7 / 7.8	6.5 / 6.6	6.3 / 6.4

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Plate 939.

V	H	Type	No. Lines	K	Focus	Other Lines.
2.8	18.3	II	6	K=.5H	2	F.
2.7	19.7	II	3	H	1	—
2.5	20.5	II	5	K=H	1	—
2.4	21.6	II	3	K=2.0H?	1	F.
2.9	22.4	II	7	K=H	1	F.
2.9	24.1	II	4	K=H	1	—
1.9	5.6	II	2	H	4	F.
1.9	9.6	II	4	H	1	—

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Means

	No.	R.A.	Dec.	Mag.			Bx.				
1 53 +80.7	65	1 52.6	+80 46	6.7	–		6.1	2.0	8.1	6.9	5.5
1 35 +80.6	57	1 34.9	+80 39	7.5	.		6.5	2.0	8.5	7.3	5.9
1 24 +80.7	50	1 25.0	+80 41	7.4	–		~~6.8~~	~~2.0~~	~~8.3~~	~~7.1~~	
1 52 +70.5	157	1 52.3	+70 30	7.3	–		~~6.5~~	~~1.2~~	~~7.7~~	~~6.5~~	
1 6 +80.1	36	1 6.2	+80 8	6.7	–		5.9	1.9	7.8	6.6	5.3
0 48 +79.8	24	0 48.6	+79 46	6.5	–		6.3	1.9	8.2	7.6	5.7
3 35 +70.9	259	3 35.1	+70 32	4.3	607	4.6	~~5.0~~	~~1.2~~	~~6.2~~	~~5.0~~	
3 11 +71.2	197	3 10.7	+71 10	7.6	;		~~7.0~~	~~1.2~~	~~8.2~~	~~7.0~~	

~~145~~ / 11 ~~1[illegible]~~ / 11

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Plate 884.

	Y	H	Type	No. lines	K	Focus	Other lines.
12	15	21,3	15,7	I	6	K=H	1	F.
		20,5	23,9	I.	5	K=H	1	F.
		19,3	10,4	~~II~~ I ?	2	K=H	1	—
		18,9	14,2	~~III~~ I	~~3~~ 6	K=H	1	F.
		16,3	8,1	I	6	K=H	1	F.
		16,9	14,4	I ?	6?	N	2	F.
		16,2	21,5	I	3	N	1	—
?		15,1	11,6	I d.	7	?	2	F. sm.
		14,6	10,3	III	1	N	1	F.
		14,9	11,4	I	7	K=.2 H	2	F.
		14,2	10,1	I?	2	?	1	—
		13,0	8,1	III	1	N	1	F.
		13,9	11,2	I	9	K=.2H	3	F.
		13,9	16,1	I	7	K=.5H	2	F.
		13,6	17,9	III	1	N	1	F.
		13,3	20,7	I	7	K=H	2	F.
		13,2	22,2	I ?	5	K=H	1	F.
		13,4	22,5	I	5	K=H	1	F.
		12,9	10,4	II	3	K=H	1	F.
		12,0	22,6	I	5	K=H	1	F.
		10,3	8,0	I	7	N	2	F.
		10,0	9,8	I	4	N	1	F.
		10,0	10,6	III	3	K=H	1	F.
		10,1	13,8	I	3	N	1	—
		10,4	22,1	III	3	K=H	1	F.
		9,8	11,4	III	3	K=H	2	F.
		9,1	18,8	III	3	K=H	1	F.
		8,9	11,7	I	9	N	3	F.

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Mean 14

			No.	R.A.	Dec.	Mag.				Yrs.				
3	2	+77.2	115	3	2.2	+77 11	6.2	_		6.5	1.6	8.1	5.7	5.1 ✓
1	50	+76.6	63	1	50.8	+76 35	5.3	_		6.6	1.6	8.2	5.8	5.2 ✓
3	37	+68.0	286	3	37.5	+68 3	6.5	_		7.0	1.1	8.1	5.7	5.6 ✓
3	18	+58.4	607	3	18.4	+58 22	5.0	_		6.6	1.7	8.3	5.9	5.2 ✓
4	21	+79.3	150	4	21.7	+79 21	7.0	_		6.8	1.8	8.6	6.2	5.4 ✓
3	17	+59.4	660	3	17.4	+59 26	4.5			6.3	.7	7.0	4.6	4.9 ✓
1	56	+79.0	63	1	56.6	+79 0	6.7	.		6.9	1.8	8.7	6.3	5.5 ✓
3	45	+80.3	125	3	46.0	+80 18	4.9			6.1	1.9	8.0	5.6	4.7 ✓
4	2	+80.5	133	4	2.0	+80 28	5.7	_		6.5 / 6.9	2.0	8.5 / 8.9	6.1 / 6.5	5.1 / 5.5 ✓
3	34	+70.4	257	3	34.2	+70 25	5.7	_		6.3	1.2	7.5	5.1	4.9 ✓
4	4	+80.6	134	4	4.2	+80 35	7.4			7.0	2.0	9.0	6.6	5.6 ✓
4	33	+80.9	135	4	33.4	+80 36	5.5	_		6.4 / 6.8	2.0	8.4 / 8.8	6.0 / 6.4	5.0 / 5.4 ✓
3	35	+70.9	259	3	35.1	+70 52	4.3	_		5.4	1.2	6.6	4.2	4.0 ✓
2	49	+80.9	97	2	49.6	+80 54	5.5	_		6.2	2.0	8.2	5.8 / ~~6.0~~	4.8 ✓
2	27	+80.8	86	2	27.2	+80 50	5.9	_		6.7 / 7.2	2.0	8.7 / 9.2	6.3 / 6.8	5.3 / 5.8 ✓
1	52	+80.6	64	1	52.8	+80 36	6.1	_		6.3	2.0	8.3	5.9	4.9 ✓
2	44	+60.9	591	2	44.5	+60 56	5.9	_		7.0	.8	7.8	5.4	5.6 ✓
1	33	+80.2	55	1	34.1	+80 10	7.5	_		7.0	1.9	8.9	6.5	5.6 ✓
3	41	+71.4	222	3	41.0	+71 22	6.5	_		6.9	1.2	8.1	5.7	5.5 ✓
1	25	+80.7	50	1	25.0	+80 41	7.4	_		6.9	2.0	8.9	6.5	5.5 ✓
3	44	+62.6	628	3	44.7	+62 38	5.2	_	639 4.8 21-3	6.1	.8	6.9	4.5	4.7 ✓
3	36	+62.8	612	3	36.9	+62 51	6.5	.		6.8	.9	7.7	5.3	5.4 ✓
3	33	+62.9	604	3	33.4	+62 53	5.3	_		6.4 / 6.6	.9	7.3 / 7.5	4.9 / 5.1	5.0 / 5.2 ✓
3	19	+72.8	178	3	19.4	+72 50	6.7	.		6.9	1.3	8.2	5 / 6.8	5.5 ✓
2	24	+72.2	140	2	24.4	+72 10	5.0	_		6.5 / 6.8	1.3	7.8 / 8.1	6.4 / 5.7	5.1 / 5.4 ✓
3	58	+83.0	113	3	58.5	+82 59	5.0	_	6	6.0 / 6.2	2.3	8.3 / 8.5	5.9 / 6.1	4.6 / 4.8 ✓
1	55	+82.9	51	1	55.1	+82 52	7.0	_		6.9 / 7.2	2.3	9.2 / 9.5	6.8 / 7.1	5.5 / 5.8 ✓
3	55	+83.4	104	3	55.1	+83 26	5.0		684 5.4 20-4	~~5.0~~ 5.0	2.4	7.4	5.0	3.6 ✓

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Plate 884.

	V	H	Type	No. Lines	K	Focus	Other Lines. No Remarks.
	8.1	16.9	I	9	K=.2H	3	F.
	8.6	19.1	I	6	K=.2H	1	F.
	7.3	8.4	I	4	K=.5H	1	—
	7.2	14.8	III	3	K=H	1	F.
?	6.9	22.7	I d	6	?	3	F. diff.
	5.5	12.4	III ?	3	K=H	1	F.
	5.7	16.2	I b 6179	9	H	3	F.
	5.7	21.3	I	4	H	1	F.
	4.1	10.1	I	3	H	1	—
	3.9	10.8	I ?	3	H	1	—
	3.6	13.7	~~II~~ I a 6187	7	K=H	1	F.
	3.2	19.2	III b 6193	3	K=H	2	F.

Plate 898.

	22.7	6.4	I	4	K=H	1	—
	22.0	12.5	I	7	K=H	2	F.
	22.6	13.2	I	7	H	1	—
?	22.3	19.3	~~II~~ I a 6203	3	H	1	F? diff.
	22.8	22.1	III	2	K=H	2	—
	21.9	10.2	I	7	K=.2H	2	F.
	22.0	14.4	I	4	H	1	—
	21.0	16.8	I	10	K=.2H	3	F.
	20.3	9.2	I	7	H	2	F.
	20.2	14.0	I	8	H	2	F.
F?	20.8	14.5	II a 6217	3 2	K=H K=H	1 1	F. diff. F? diff.
	19.3	11.7	I	8	H	2	F.
	19.7	13.8	I	3	H	1	—
	19.0	14.6	I	8	K=.2H	2	F.

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Mean 14

	No.	R.A.	Dec.	Mag.				Br.				
2 56 +73.8	168	2	56.3	+73 50	5.2	–		5.4	1.4	6.8	4.4	4.0 ✓
2 55 +63.5	390	2	55.2	+63 30	6.0	–		6.8	.9	7.7	5.3	5.4 ✓
5 1 +83.8	141	5	0.6	+83 43	7.1	–		6.9	24	9.3	6.9	5.5 ✓
2 58 +84.4	59	2	58.8	+84 23	6.0	–		6.1		7.6	5.2	4.7
								6.4	1.5	7.9	5.5	5.0 ✓
0 41 +82.9	20	0	41.6	+82 55	6.5			5.8	23	8.1	5.7	4.4 ✓
3 52 +85.2	63	3	52.4	+85 10	6.5	–		6.9		9.6	7.2	5.5 ✓
								7.0	2.7	9.7	7.3	5.6
3 7 +65.1	340	3	7.2	+65 6	4.5	516	4.8 20-4	5.9	9	6.8	4.4	4.5 ✓
0 48 +83.8	20	0	48.4	+83 49	7.0	.		6.9	24	9.3	6.9	5.5 ✓
4 55 +85.5												
3 47 +76.0	78	4	33.1	+85 32	7.0	.		6.7	28	9.5	7.1	5.3 ✓
4 41 +85.8	74	4	41.0	+85 45	6.0	863	6.4 33+9	6.9	2.8	9.7	7.3	5.5 ✓
3 19 +86.2	31	3	19.3	+86 11	6.0	–		6.6		9.5	7.1	5.2
								6.7	2.9	9.6	7.2	5.3 ✓
0 49 +85.5	19	0	49.7	+85 29	5.0	–		6.0		8.8	6.4	4.6
								6.5	2.8	9.3	6.9	5.1 ✓

94/4 9-11/4

Mean 5

								Eph					
4 29 +75.7	189	4	29.4	+75 40	6.0	–		3	6.3	1.5	7.8	6.6	✓
3 32 +66.7	284	3	32.4	+66 45	6.2	–		2	6.4	1.0	7.4	6.2	5.9 ✓
3 27 +56.4	826	3	27.0	+56 28	6.5	.		1	6.5	.6	7.1	5.9	✓
3 4 +56.6	798	3	4.8	+56 33	6.0	511	5.9 13+11		6.6	.6	7.2	6.0	6.1 ✓
2 55 +56.1	767	2	54.7	+56 8	5.0	–		1	6.6		7.2	6.0	✓
									6.8	.6	7.4	6.2	
3 38 +56.7	847	3	37.9	+56 40	7.0	–		1	6.7	.7	7.4	6.2	6.2 ✓
3 24 +76.6	128	3	24.0	+76 41	7.5	.		3	7.0	1.6	8.6	7.4	6.5 ✓
3 2 +77.2	115	3	2.2	+77 11	6.2	–		3	5.4	1.6	7.0	5.8	4.9 ✓
3 42 +57.5	732	3	42.0	+57 31	6.0	631	5.8 14+21		6.5	.7	7.2	6.0	6.0 ✓
3 28 +77.7	133	3	29.0	+77 39	7.2	.		3	6.4	1.7	8.1	6.9	5.9 ✓
3 22 +57.4	730	3	22.2	+57 22	7.0	–		1	6.9	7.0	7.7	7.6	6.4 6.4 ✓
3 37 +68.0	286	3	37.5	+68 3	6.5	.		2	6.3	1.1	7.4	6.2	5.8 ✓
3 31 −77.9	134	3	30.7	+77 51	8.0	.		3	7.0	1.7	8.7	7.5	6.5 ✓
3 22 +58.3	619	3	22.0	+58 16	7.0	–		1	6.5	.7	7.2	6.0	6.0 ✓

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Plate 898.

	V	H	Type	No. Lines	K	Focus	Other Lines.
	18.7	9.2	III	1	H	1	F.
	18.2	11.9	III	3	K=H	1	F.
	18.3	12.2	I	5	H	1	—
	18.8	12.6	I	√	K=.√H	1	—
?	18.9	15.4	I b	6 2 2 1 1	K=.√H	3	F, sum.
	18.9	17.0	I	7	K=.8H	2	F.
	18.3	22.5	I	√	K=H	1	F.
?	17.6	6.7	I d ?	7	K=H	2	F, sum.
	17.6	9.5	I	√	K=H	1	F
	17.9	15.4	I	8	K=.2H	2	F
H	17.6	15.7	I	I 3 3	H H	1 1	— —
	17.2	17.3	I	8	H	2	F.
	17.7	18.0	III	3	K=H	1	F.
	17.2	22.7	I	6	H	1	F.
?	16.9	8.8	III b	6 2 3 3	K=H	1	F, sum.
	16.5	10.7	~~IV~~ II? ?	3	K=H	1	F.
	16.6	12.7	I	√	H	1	—
	16.8	13.5	I	6	H	1	F.
	16.5	14.3	I	6	K=H	1	F.
	16.9	15.6	I	12	K=.√H	4	F.
	16.1	15.8	I	6	H	2	—
	16.5	17.1	III	3	K=H	1	F.
	16.0	17.6	I	4	K=H	1	—
	16.7	17.9	I	4	H	1	—
	16.2	18.8	I	7	K=.2H	2	F.
	16.3	22.5	I	8	K=.2H	2	F.
?	16.7	22.8	I	√	?	1	F, sum.
?	16.6	23.2	I	6	K=H	1	F, sum.

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Mean 5

	No.	R.A.	Dec.	Mag.		Dyp	Br.				
3 51+68.3	303	3 51.5	+68 16	6.0	_	2	6.9 7.2	11	8.0 8.2	6.8 7.1	6.4 6.7
3 50+78.6	146	3 50.6	+78 38	7.2	_	3	6.8 7.0	18	8.6 8.8	7.4 7.6	6.3 6.5
3 48+78.5	142	3 47.8	+78 32	8.0	.	3	6.7	18	8.5	7.3	6.2
3 29+58.4	837	3 29.5	+58 22	6.5	_	1	6.9	.7	7.6	6.4	6.4
3 18+58.4	607	3 18.4	+58 22	5.0	_	1	5.8	.7	6.5	5.3	5.3
2 58+78.3	109	2 58.3	+78 19	7.0	_	3	6.4	17	8.1	6.9	5.9
2 39+68.3	200	2 39.1	+68 17	6.5	_	2	6.7	11	7.8	6.6	6.2
3 52+58.7	690	3 52.4	+58 45	5.0	_	1	6.2	.7	6.9	5.7	5.7
4 15+78.7	157	4 15.5	+78 41	7.5	_	3	6.7	18	8.5	7.3	6.2
3 18+58.9	608	3 18.6	+58 52	6.6	_	1	6.5	.7	7.2	6.0	6.0
3 15+68.9	250	3 15.4	+68 57	7.3	.	2	7.1	7.3	11	8.2	7.0 6.6
3 6+69.2	205	3 6.3	+69 12	6.5	.	2	6.3	11	7.4	6.2	5.8
2 47+78.8	103	2 47.1	+78 51	5.6	_	3	6.0 6.6	18	7.8 8.4	6.6 7.2	5.5 6.1
2 0+78.5	73	1 59.9	+78 29	7.3	.	3	6.3	17	8.0	6.8	5.8
3 44+59.2	736	3 44.2	+59 12	7.0	_	1	6.9 7.0	.7	7.6 7.7	6.4 6.5	6.4 6.5
4 6+79.4	143	4 5.6	+79 21	8.0	_	3	6.9	18	8.7	7.5	6.4
3 44+79.4	125	3 44.7	+79 22	8.3	.	3	6.6	18	8.4	7.2	6.1
3 28+69.4	222	3 28.2	+69 23	7.2	.	2	6.6	11	7.7	6.5	6.1
3 23+59.5	675	3 23.2	+59 33	7.0	_	1	6.6	.7	7.3	6.1	6.1
3 17+59.4	660	3 17.4	+59 26	4.5	_	1	5.2	.7	5.9	4.7	4.7
3 16+59.7	657	3 16.6	+59 44	6.7	.	1	6.4	.7	7.1	5.9	5.9
2 55+79.6	94	2 55.4	+79 36	7.3	_	3	6.5 6.8	19	8.4 8.7	7.2 7.5	6.0 6.3
2 49+79.7	91	2 49.3	+79 44	8.3	.	3	6.7	19	8.6	7.4	6.2
3 3+69.5	203	3 2.8	+69 26	7.7	.	2	6.7	11	7.8	6.6	6.2
2 36+79.5	86	2 36.1	+79 29	7.0	_	3	6.4	18	8.2	7.0	5.9
1 56+79.0	63	1 56.6	+79 0	6.7	_	3	5.7	18	7.5	6.3	5.2
2 36+69.0	179	2 35.9	+69 1	6.5	.	2	6.3	11	7.4	6.2	5.8
1 53+78.6	69	1 53.2	+78 38	7.3	_	3	6.4	18	8.2	7.0	5.9

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Plate 898.

	V	H	Type	No. lines	K	Focus	Other lines.
	15,6	5,7	~~I~~?	6	K=H	3	F.
	15,2	12,0	~~III~~	3	K=H	1	F.
↓ H	15,4	12,1	~~I~~ I	4 H	K=H	K=H 11	— F?
?	15,0	12,7	~~II~~ a 624	3	K=.8H	4	F. diff.
Recorded on page 140	~~15,9~~	~~17,5~~	~~I~~	~~4~~	~~K=H~~	~~1~~	~~—~~
↓ H	14,0	6,2	~~III~~ II	2	2 K=H	K=H 11	— —
	14,0	9,0	~~III~~	3	K=H	1	F.
	14,1	10,7	~~I~~	7	K=.5H	1	F.
	14,1	11,3	~~I~~	7	K=.2H	2	F.
	14,4	11,4	~~III~~ b.c. 625	3	K=H	2	F.
	14,8	12,6	~~I~~	9	K=.2H?	3	F.
	14,4	13,0	~~I~~	5	K=.2H	1	—
↓ H	14,0	16,8	~~I~~ I	3 H	36 K=H	11	— —
↓ H	14,2	18,9	~~I~~ I	3 H	36 K=H	11	— —
	14,7	20,9	~~I~~	3	H	1	—
	14,4	21,4	~~I~~	6	K=.5H	1	F.
	14,2	22,5	~~I~~	6	K=H	1	F.
	13,5	8,5	~~I~~ I ?	2	K=H	1	—
	13,0	9,2	~~III~~ bc 626	3	K=H	3	F. brighter?
	13,4	9,5	~~I~~	4	H	1	—
	13,9	12,5	~~I~~	12	K=.2H	5	F.
?	13,3	13,5	~~II~~ a 627	3	K=H	1	F. diff.
	13,4	16,4	~~I~~	6	K=H	1	F.
	13,8	17,2	~~I~~	9	K=.5H	4	F.
III ? 6.3, 6.6.	13,6	19,0	~~III~~ b 628	3	K=H	2	F.
	13,2	21,9	~~I~~	7	H	3	F.
	13,7	22,7	~~I~~?	4	H	1	F.
	13,3	23,6	~~I~~	7	H	2	F.

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Mean 5

	No.	R.A.	Dec.	Mag.		Exp	Br.				
H 58+79.0	169	4 58.8	+ 79 3	5.2	–	3	~~4.8~~	1.8	6.6	5.4	4.3
3 54+80.2	127	3 53.8	+ 80 9	6.8	–	3	6.2 6.5	1.9	8.1 8.4	6.9 7.2	5.7 6.0
3 36+70.0	262	3 36.8	+ 70 4	7.4	–	2	7.0	6.9 1.2	8.2	7.0	6.5
3 46+80.3	125	3 46.0	+ 80 18	4.9	–	3	4.9	1.9	6.8	5.6	4.4
~~2 49+79.1~~	~~91~~	~~2 49.5~~	~~+ 79 44~~	~~8.3~~	~~–~~		~~6.9~~	~~1.9~~	~~8.8~~	~~7.6~~	
3 56+60.5	780	3 56.0	+ 60 29	7.8	–	1	7.0	7.0 .8	7.8	6.6	6.5
3 44+60.7	768	3 44.8	+ 60 40	5.8	–	1	6.5 6.8	.8	7.3 7.6	6.1 6.4	6.0 6.3
4 11+80.6	140	4 11.4	+ 80 33	7.4	–	3	6.5	2.0	8.5	7.3	6.0
4 4+80.6	134	4 4.2	+ 80 35	7.4	–	3	6.3	2.0	8.3	7.1	5.8
3 34+79.5	257	3 34.2	+ 79 25	5.7	–	2	5.8 6.2	1.2	7.0 7.4	5.8 6.2	5.3 5.7
4 2+80.5	133	4 2.0	+ 80 28	5.7	–	3	5.5	2.0	7.5	6.3	5.0
3 43+80.6	123	3 43.3	+ 80 33	8.3	–	3	6.9	2.0	8.9	7.7	6.4
3 11+60.8	671	3 11.5	+ 60 46	8.0	.	1	7.0	7.1 .8	7.8	6.6	6.5
3 4+60.5	651	3 3.9	+ 60 35	8.0	.	1	7.0	7.2 .8	7.8	6.6	6.5
2 10+79.9	69	2 10.0	+ 79 37	8.3	.	3	7.0	1.9	8.9	7.7	6.5
2 3+80.0	70	2 3.3	+ 80 3	7.7	–	3	6.5	1.9	8.4	7.2	6.0
1 50+79.9	61	1 50.7	+ 79 58	7.5	–	3	6.4	1.9	8.3	7.1	5.9
3 59+70.9	281	3 59.0	+ 70 50	7.0	–	2	6.9	1.2	8.1	6.9	6.4
4 33+80.9	155	4 33.4	+ 80 36	8.5	–	3	5.4 5.8	2.0	7.4 7.8	6.2 6.6	4.9 5.3
3 53+70.9	276	3 53.4	+ 70 37	7.5	.	2	7.0	1.2	8.2	7.0	6.5
3 35+70.9	259	3 35.1	+ 70 52	4.3	–	2	4.4	1.2	5.6	4.4	3.9
3 38+81.2	135	3 38.2	+ 81 9	7.8	–	3	6.8	2.0	8.8	7.6	6.3
3 11+71.2	197	3 10.7	+ 71 10	7.6	–	2	6.9	1.2	8.1	6.9	6.4
2 50+80.9	97	2 49.6	+ 80 54	5.5	–	3	4.9	2.0	6.9	5.7	4.4
2 27+80.8	86	2 27.2	+ 80 8 50	5.9	–	3	6.3 6.6	2.0	8.3 8.6	7.1 7.4	5.8 6.1
1 52+80.6	64	1 51.8	+ 80 36	6.1	318 6.0 12 +0	3	5.2	2.0	7.2	6.0	4.7
2 48+60.7	608	2 48.4	+ 60 42	7.2	.	1	6.8	8	7.6	6.4	6.3
1 34+80.2	55	1 34.1	+ 80 10	7.5	.	3	5.8	1.9	7.7	6.5	5.3

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Plate 898.

V	H	Type	No. lines	K	Focus	Other lines.
13.2	23.7	~~I~~ II[a]?	629	2	K=H	1	Keen
12.0	6.9	~~I~~	5	H	1	F.
12.2	9.6	I	3	H	1	—
12.8	11.6	I	8	K=1.5H	2	F.
12.9	12.2	I	6	K=1.5H	1	—
12.3	12.4	I	8	K=1.2H	2	F.
12.7	13.6	~~III~~	1	H	1	F.
12.8	15.4	~~I~~ I	3 5	H	1 1	— —
12.2	16.2	I	5	K=H	1	F. seen.
12.7	17.5	I	6	H	1	F.
12.8	21.7	I	7	K=1.2H	2	F.
12.4	23.1	I	6	H	1	F.
11.2	6.7	I	5	H	1	F.
11.8	7.0	~~III~~?	3	K=H	1	F.
11.7	8.9	~~III~~	3	K=H	1	F.
11.7	10.3	I	6	K=1.2H	1	F.
11.1	14.0	~~III~~ I?	2	K=H	1	—
11.0	16.9	~~III~~	3	K=H	1	F.
11.9	20.2	I	3	H	1	—
? 10.2	6.2	I d.?	6	H	2	F. seen.
10.2	9.3	I	11	H	4	F.
III ? 6.6, 6.9. 10.2	12.7	~~III~~ b.c.?	630 1	H	1	F. seen.
10.0	14.9	I	7	H	2	F.
Recorded above ~~10.8~~	~~16.9~~	~~III~~	~~3~~	~~K=H~~	~~1~~	~~F.~~
II 10.3	23.2	III?	3	K=2.0H	2	F.
9.0	10.1	III	3	K=H	1	F.
9.2	10.7	I	6	H	2	F.
9.9	11.1	I	8	K=1.2H	2	F.
12.0	13.7	I	5	H	1	—

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Means

	No.	R.A.	Dec.	Mag.		Dyp.	Br.
2 44+60.9	591	2 44.5	+60 56	5.9	–	1	6.5 | 8 7.3 6.1 | 6.0 ✓
4 10+71.5	250	4 10.9	+71 25	7.5	.	2	6.6 12 7.8 6.6 6.1 ✓
4 31+81.4	168	4 31.0	+81 23	8.5	.	3	6.7 21 8.8 7.6 6.2 ✓
3 41+71.4	222	~~4~~ 3 41.0	+71 22	6.5	–	2	6.2 6.12 7.4 6.2 5.7 ✓
3 56+81.3	150	3 55.7	+81 15	7.9	–	3	6.4 20 8.4 7.2 5.9 ✓
3 53+81.6	147	3 53.8	+81 36	7.5	–	3	6.2 21 8.3 7.1 5.7 ✓
3 38+81.5	134	3 37.6	+81 27	7.8	–	3	{6.8 7.0} 21 {8.9 9.1} {7.7 7.9} {6.3 6.5} ✓
	204	3 16.5	+71 21	8.4		21.1 +71 51	
~~3 15+71.4~~	~~201~~	~~3 15.4~~	~~+71 21~~	~~6.5~~	.	2	6.8 6.9 12 8.0 6.8 6.3 ✓
3 11+71.7	198	3 11.7	+71 41	7.2	–	2	6.5 13 7.8 6.6 6.0 ✓
3 9+61.5	559	3 9.4	+61 28	6.5	.	1	6.6 8 7.4 6.2 6.1 ✓
1 53+80.8	65	1 52.6	+80 46	6.7	–	3	6.0 20 8.0 6.8 5.5 ✓
1 35+80.6	57	1 34.9	+80 39	7.5	.	3	6.5 20 8.5 7.3 6.0 ✓
3 55+61.9	676	3 55.2	+61 56	6.5	.	1	6.6 8 7.4 6.2 6.1 ✓
3 53+61.7	669	3 53.5	+61 40	7.0	–	1	6.7 8 7.5 6.3 6.2 ✓
3 57+71.8	239	3 57.7	+71 44	6.3	–	2	{6.4 6.6} 13 {7.7 7.9} {6.5 6.7} {5.9 6.1} ✓
3 40+61.9	644	3 39.8	+61 33	7.0	–	1	6.4 8 7.2 6.0 5.9 ✓
3 30+82.3	101	3 30.5	+82 17	8.4	–	3	6.9 22 9.1 7.9 6.4 ✓
2 47+82.4	76	2 46.8	+82 20	8.0	–	3	{6.4 6.6} 22 {8.6 8.8} {7.4 7.6} {5.9 6.1} ✓
2 57+61.8	525	2 57.1	+61 49	6.5	.	1	6.4 8 7.2 6.0 5.9 ✓
4 16+72.2	227	4 16.8	+72 13	6.0	767 6.0 13+12		6.0 13 7.3 6.1 5.5 ✓
3 44+62.6	628	3 44.7	+62 38	5.2	639 4.8 13+11		5.3 8 6.1 4.9 4.8 ✓
3 29+62.8	597	3 29.6	+62 46	5.0	–	1	{6.8 7.0} 8 {7.6 7.8} {6.4 6.6} {6.3 6.5} ✓
3 19+72.9	178	3 19.4	+72 50	6.7	.	2	6.0 | 13 7.3 6.1 | 5.5 ✓
~~2 47+82.4~~							
2 24+72.2	140	2 24.4	+72 10	5.0	–	2	6.0 | 13 7.3 6.1 | 5.5 ✓
3 52+73.2	212	3 52.6	+73 10	6.5	–	2	6.7 13 8.0 6.8 6.2 ✓
4 27+82.9	123	4 27.1	+82 36	8.5	.	3	6.3 23 8.6 7.4 5.8 ✓
3 36+62.9	612	3 36.9	+62 51	6.5	–	1	6.2 9 7.1 5.9 5.7 ✓
1 25+80.7	50	1 25.9	+80 41	7.4	.	3	6.1 | 20 8.1 6.9 | 5.6 ✓

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	V	H	Type	No. Lines	K	Focus	Other Lines.
?	9.9	11.9	II a 631	3	K=.5H	2	F. diff.
	9.6	12.4	III b.c 6323		K=1.5H	4	F.
	9.6	14.5	I	6	H	1	F.
	9.9	15.1	I	3	H	1	—
	9.0	19.9	III b 6333		K=H	2	F.
	8.0	12.0	III	3	K=H	1	F.
	8.8	12.8	I	12	H	5	F.
	8.5	16.4	I	5	K=H	1	F.
	8.0	18.1	I	13	K=1.2H?	4	F.
	8.9	18.6	III	3	K=H	1	F.
	8.7	19.0	I	4	H	1	—
	8.9	19.3	I	3	H	1	—
	8.5	20.4	I	9	H	2	F.
	8.0	6.9	II? a 634	2	K=H	1	—
	7.1	9.5	I	6	H	2	—
	7.1	15.8	III b.c 6353		K=1.2H	3	F.
	7.0	20.6	I I 4 3 H N			11	— —
	6.6	9.2	I?	2	K=.5H	1	—
	6.2	11.9	I	6	H	1	F.
	6.4	16.9	I	6	H	1	F.
	6.4	18.9	I	7	H	1	F.
	6.9	19.5	I	5	K=1.2H?	2	—
?	6.8	23.8	I d?	6	H	3	F. diff.
	5.0	8.0	I	4	H	1	F.?
III? 6.4, 6.7.	5.6	11.5	III b 636	1	H	2	F. Bright? diff.
?	5.4	13.5	II a 637	3	K=H	2	F. diff.
	5.4	14.6	III	3	K=H	1	F.
	5.6	14.8	I	4	H	1	—

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1887phae.proj...837F

Mean 5

	No.	R.A.	Dec.	Mag.		Expo.				Br.				
3 33+62.9	604	3 33.4	+62 53	5.3	–			1		6.0	.9	6.9	5.7	5.0 ✓
										4.8		7.1	5.9	4.3 ✓
3 58+82.9	113	3 58.5	+82 59	5.0	–			3		5.2	2.3	7.5	6.3	4.7
3 24+83.1	91	3 24.8	+83 5	7.3	.			3		6.3	2.3	8.6	7.4	5.8 ✓
3 16+82.9	90	3 14.9	+82 52	8.2	.			3		6.5	2.3	8.8	7.6	6.0 ✓
										6.1		8.4	7.2	5.6 ✓
1 56+82.9	51	1 55.1	+82 52	7.0	–			3		6.4	2.3	8.7	7.5	5.9
										6.7		9.1	7.9	6.2 ✓
4 11+83.7	114	4 11.0	+83 43	7.4	–			3		6.9	2.4	9.3	8.1	6.4
3 53+83.5	104	3 53.1	+83 26	5.0	684	5.4	10-23			4.0	2.4	6.4	5.2	3.5 ✓
3 8+73.6	180	3 8.1	+73 38	6.9	–			2		6.8	1.4	8.2	7.0	6.3 ✓
2 56+73.9	168	2 56.3	+73 50	5.2	–			2		4.9	1.4	6.3	5.1	4.4 ✓
										6.5		8.8	7.6	6.0 ✓
2 13+83.3	56	2 13.3	+83 11	8.0	–			3		6.8	2.3	9.1	7.9	6.3
2 50+73.4	165	2 50.2	+73 22	7.4	.			2		6.7	1.4	8.1	6.9	6.2 ✓
2 3+83.0	54	2 3.1	+83 0	8.9	.			3		6.6	2.3	8.9	7.7	6.1 ✓
2 55+63.5	390	2 55.2	+63 30	6.0	488	5.8	10-21			5.9	.9	6.8	5.6	5.4 ✓
5 30+82.7	152	5 30.2	+82 42	7.6	–			3		6.6	2.2	8.8	7.6	6.1 ✓
5 0+83.7	141	5 0.6	+83 43	7.1	.			3		5.7	2.4	8.1	6.9	5.2 ✓
										4.9		7.4	6.2	4.4
2 58+84.4	59	2 58.8	+84 28	6.0	–			3		5.3	2.5	7.8	6.6	4.8 ✓
1 33+83.6	38 ✓	1 33.2	+83 36	8.7 ✓	.			3		6.9 6.8	2.4	9.3	8.1	6.4 ✓
	195	4 1.7	+74 15	8.0										
4 2+74.3	~~197~~	~~4 2.6~~	~~+74 18~~	~~8.9~~	–			2		6.9	1.4	8.3	7.1	6.4 ✓
4 20+84.6	88	4 21.2	+84 36	7.7	.			3		6.3	2.6	8.9	7.7	5.8 ✓
3 3+74.7	144	3 3.6	+74 41	7.4	.			2		6.5	1.4	7.9	6.7	6.0 ✓
2 48+74.6	131	2 48.6	+74 34	7.2	.			2		6.4	1.4	7.8	6.6	5.9 ✓
2 59+64.3	375	2 58.7	+64 20	7.0	–			1		6.3	.9	7.2	6.0	5.8 ✓
0 42+82.9	20	0 41.6	+82 35	6.3	134	5.5	16+4	3		4.8	2.3	7.1	5.9	4.3 ✓
3 53+65.1	391	3 53.1	+65 6	6.6	.			1		6.4	.9	7.3	6.1	5.9 ✓
										6.3		7.2	6.0	5.8 ✓
3 36+65.1	389	3 36.3	+65 2	4.6	–			1		7.0	.9	7.9	6.7	6.5
3 53+85.2	63	3 52.4	+85 10	6.3	–			3		5.7	2.7	8.4	7.2	5.2 ✓
										6.5		8.6	6.8	6.0 ✓
3 22+75.3	143	3 22.1	+75 14	6.5	–			2		6.8	1.5	8.3	7.1	6.3
3 20+65.0	348	3 20.5	+65 2	7.0	.			1		6.9	.9	7.8	6.6	6.4 ✓

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Plate 898.

	V	H	Type	No. lines	K	Focus	Other lines.
?	5,6	17,5	I b 638	12	H	4	F? diff.
	5,6	18,1	I	6	H	2	F
	5,0	18,5	II?	1	H	1	F
	5,6	20,0	I	3	H	1	—
	5,6	21,1	I	3	H	1	—
	5,7	22,4	I d?	6	K=H?	2	F
	4,4	10,0	III	1	H	1	F
	4,0	11,2	I	8	H	2	F
	4,0	18,2	I	5	?	1	F?
	4,0	21,6	I	3	H	1	—
	3,8	9,6	I	4	H	1	—
	3,8	11,9	I?	8	K=.5H	2	F
	3,2	12,5	I	4	H	1	—
?	3,5	14,8	II a 639	X 3	K=H	3	F, diff.
?	3,1	20,3	III b.c. 640	3	K=H	3	F, diff.
1.5 P.M.	2,3	12,5	I	7	K=H	2	F

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Mean 5.

	No.	R.A.	Dec.	Mag.		Disp				Br.				
3 7+65.1	340	3	7.2	+65 6	4.5	5/6	48	11-1	1	5.0	.9	5.9	4.7	4.5
3 4+65.1	338	3	4.8	+65 6	6.3	.			1	6.5	.9	7.4	6.2	6.0
1 51+85.0	41	1	50.8	+85 2	7.7				3	6.6	27	9.3	8.1	6.1
1 27+84.5	29	1	27.5	+84 29	8.0	.			3	6.8	25	9.3	8.1	6.3
2 31+74.8	117	2	31.4	+74 46	7.2	.			2	6.7	1.5	8.2	7.0	6.2
0 48+83.8	20	0	48.4	+83 49	7.0	–			3	5.7	2.4	8.1	6.9	5.2
5 17+85.1	80	5	16.0	+85 6	6.0	–			3	6.5 / 7.0	2.7	9.2 / 9.7	8.0 / 8.5	6.0 / 6.5
4 55+85.5	78	4	55.1	+85 32	7.0	.			3	5.6	2.8	8.4	7.2	5.1
3 3+65.9	335	3	3.6	+65 50	7.0				1	6.6	1.0	7.6	6.4	6.1
0 40+84.7	15	0	40.9	+84 40	8.2	.			3	7.0	2.6	9.6	8.4	6.5
4 2+75.7	173	4	2.4	+75 45	6.8	.			2	6.3	1.5	7.8	6.6	5.8
4 39+85.1	74	4	41.0	+85 45	6.0	–			3	6.0	2.8	8.8	7.6	5.5
4 30+86.0	66	4	30.2	+86 4	8.0	.			3	6.8	2.9	9.7	8.5	6.3
3 20+86.2	51	3	19.5	+86 11	6.0	–			3	5.7	2.9	8.3	7.1	4.9
0 50+85.5	19	0	49.7	+85 29	5.0	–			3	4.9 / 5.4	2.8	7.7 / 8.2	6.5 / 7.0	4.4 / 4.9
3 32+66.8	284	3	32.3	+66 45	6.2	–			1	6.4	1.0	7.4	6.2	

112/9 = 12+4/9 = 12 4/9 − 5

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Plate 954.

10.30
9 40

				No. lines	K	Focus	Other lines
	22.7	8.8	I	7	H	2	F
	22.5	15.5	I	5	H	1	—
	22.6	18.5	I	11	K=.2H	5	F
	21.2	10.7	I	5	K=H	1	—
	21.9	11.0	I	4	H	1	—
√	21.0	11.9	II	II' 2 2	K=H K=H	1 1	— —
	21.5	12.8	I	3	H	1	—
	21.5	13.6	I	7	H	3	F
	21.0	14.9	III	3	K=H	1	F
	21.0	16.1	II	2	K=H	1	—
	21.7	17.5	I	6	K=H	2	F
	20.1	11.9	I	8	K=.5H	3	F
	20.5	15.7	II	3	K=H	1	F
√	20.4	16.9	I	I 3 3'	H N	1 1	— —
	20.5	19.3	I	3	H	1	—
	20.6	19.4	III?	2	K=H	1	—
	20.1	21.0	III?	2	K=H	1	—
	20.3	22.0	I	4	K=H	1	—
	19.2	18.1	I	9	H	4	F
	19.9	19.4	I!	3	H	1	—
√	19.7	21.3	II	a 6 4 1 II? 2 2	K=H K=H	1 1	— —
	18.5	6.2	III	3	K=H	2	F
	18.4	6.3	III	2	H	1	F
√	18.1	11.0	II	II? 3 2	K=H K=H	1 1	F —
	18.1	13.2	I	8	H	3	F
	18.3	15.5	II	a 6 4 2	K=H	2	F
	18.6	19.8	I	7	K=.2H	2	F
	18.4	20.4	I	9	K=.2H	2	F

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Mean 4

	No.	R.A.	Dec.	Mag.			Br.				
4 34 +70.7	322	4 34.4	+70 40	6.3	.		6.2	1.2	7.4	6.4	.
3 53 +70.9	276	3 53.4	+70 57	7.5	:		6.7	1.2	7.9	6.9	.
~~3 35 +70.7~~	~~259~~	~~3 35.1~~	~~+70 52~~	~~4.3~~	:						
~~3 44 +68.1~~	~~768~~	~~3 44.8~~	~~+68 40~~	~~5.8~~	.		~~5.2~~	.8	6.0	5.0	.
4 13 +71.6	919	4 13.1	+71 35	6.6	–		6.6	.5	7.1	6.1	6.2
4 21 +71.6	263	4 21.3	+71 35	8.2	.		6.8	1.3	8.1	7.1	6.4
4 11 +61.7	707	4 11.3	+61 41	6.7	–		6.7 6.9	.8	7.5	6.5	6.3
4 10 +71.4	250	4 10.9	+71 25	7.5	.		6.7	1.2	7.9	6.9	6.3
4 4 +61.5	687	4 4.2	+61 29	5.5	705 5.6 8.7		5.6	.8	6.4	5.4	5.2
3 57 +71.7	239	3 57.7	+71 44	6.3	–		6.5 / 6.7	1.3	7.8 / 8.0	6.8 / 7.0	6.1 / 6.3
3 53 +61.7	669	3 53.5	+61 40	7.0	–		6.7	.8	7.5	6.5	6.3
3 41 +71.7	222	3 41.0	+71 22	8.3	–		6.1	1.2	7.3	6.3	5.7
4 16 +72.3	227	4 16.8	+72 13	6.0	–		5.9	1.3	7.2	6.2	5.5
3 55 +61.9	676	3 55.2	+61 36	6.3	–		6.6	.8	7.4	6.4	6.2
3 50 +62.0	643	3 50.2	+62 1	7.5	.		6.9 7.0	.8	7.7	6.7	6.5
3 40 +61.9	644	3 39.8	+61 53	7.0	.		6.6	.8	7.4	6.4	6.2
3 44 +51.8	803	3 44.7	+51 47	6.5	–		6.9	.5	7.4	6.4	6.5
3 39 +52.0	715	3 39.5	+52 2	6.6	–		6.9 / 7.0	.5	7.4 / 7.5	6.4 / 6.5	6.5 / 6.6
3 11 +71.7	198	3 11.7	+71 41	7.2	–		6.5	1.3	7.8	6.8	6.1
3 44 +62.6	628	3 44.7	+62 38	5.2	639 4.8 8.7		4.8	.8	5.6	4.6	4.4
3 44 +52.2	726	3 44.7	+52 13	6.5	.		6.7	.5	7.2	6.2	6.3
3 39 +52.2	714	3 38.5	+52 12	6.5	–		6.9 6.9	.5	7.4	6.4	6.5
4 28 +52.8	865	4 28.5	+52 47	5.4	–		6.4 / 6.7	.5	6.9 / 7.2	5.9 / 6.2	6.0 / 6.3
4 55 +72.6	258	4 55.0	+72 33	7.9	–		6.5 / 6.7	1.3	7.8 / 8.0	6.8 / 7.0	6.1 / 6.3
4 12 +53.2	764	4 12.8	+53 10	7.0	–		6.9 7.0	6	7.5	6.5	6.5
4 5 +53.2	750	4 5.4	+53 14	5.0	711 5.2 11+2		5.7	.6	6.3	5.3	5.3
3 52 +73.2	212	3 52.6	+73 16	6.5	–		6.4	1.3	7.7	6.7	6.0
3 37 +62.9	612	3 36.9	+62 51	6.5	–		5.8	.9	6.7	5.7	5.4
3 19 +72.9	178	3 19.4	+72 50	6.7	–		5.9	1.3	7.2	6.2	5.5

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Plate 954.

	K	H	Type	No. lines	K	Focus	Other lines.
?	18.5	20.6	III ?	64/34	K=H	2	F. diff.
	18.5	21.5	III	1	H	1	F.
	17.4	5.8	I	7	H	3	F
	17.4	6.0	III	1	H	1	F.
	17.8	6.3	I	7	K=H	2	F.
	17.2	6.4	I	4	H	1	—
?	17.2	8.7	I?	8	K=H?	2	F.
	17.4	15.8	III	3	K=H	1	F.
	17.3	16.1	III	3	K=H	1	F.
	17.3	17.3	III	III 1 2	H	K=H 1 1	F. F.
	17.3	18.4	I	5	K=H	1	—
	17.3	21.9	II	II 3 2	K=H	K=H 1 1	F. F.
	16.3	7.0	I	8	H	4	F.
	16.9	8.0	III	1	H	1	F.
	16.4	8.1	I	8	H	3	F.
III ?	16.0	8.5	III	1	H	1	F.
6.5, 6.9.	16.4	9.6	I	8	H	3	F.
	16.3	13.9	I	4	H	1	—
	16.0	14.3	I	5	K=.5H	1	F.
	16.1	15.8	III	III 3 3	K=H	K=H 1 2	F. F.
	16.0	17.6	III	III 1 2	H	K=H 1 1	F. —
	16.3	18.7	III	3	K=H	1	F.
?	16.5	21.7	II a	644 3	K=H	1	F. diff.
	16.8	23.0	III	III 1 3	H	K=H 1 1	F. F.
	16.0	23.0	III ?	III ? 1 2	H	K=H 1 1	F. F. ?
	15.0	13.1	III ?	3	K=H	2	F.
	15.7	15.3	II	3	K=H	2	F.
	15.0	15.8	II a ?	II 6453 3	K=H	K=H 1 1	F. F. diff.

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	No.		R.A.	Dec.	Mag.					Mean 4
3 33+62.9	604	3	33.4	+62 53	5.3	–				5.6 5.7 .9 6.5 6.6 5.5 5.6 5.2 5.3
3 30+62.8	597	3	29.6	+62 46	5.0	–				6.6 6.9 .8 7.4 7.7 6.4 6.7 6.2 6.5
5 0+73.1	280	5	0.4	+73 6	5.8	918	5.7	11+1		5.5 .3 6.8 5.8 5.1
4 38+63.3	543	4	38.6	+63 15	5.8	–				6.7 7.0 .9 7.6 7.9 6.6 6.9 6.3 6.6
4 28+63.2	794	4	28.5	+63 10	5.4	–				6.0 .6 6.6 5.6 5.6
4 36+63.4	536	4	36.6	+63 22	7.0	.				6.4 .9 7.3 6.3 6.0
4 20+63.6	779	4	20.6	+63 36	6.0	–				5.9 .6 6.5 5.5 5.5
3 50+73.6	210	3	50.1	+73 34	6.4	–				6.4 6.7 .4 7.8 8.1 6.8 7.1 6.0 6.3
3 55+63.6	732	3	55.3	+63 37	6.0	–				6.7 7.0 .6 7.3 7.6 6.3 6.6 6.3 6.6
3 40+73.6	204	3	39.8	+73 38	6.5	–				6.8 7.1 .4 8.2 8.5 7.2 7.5 6.4 6.7
3 47+63.6	718	3	47.5	+63 34	6.8	–				6.7 .6 7.3 6.3 6.3
3 27+63.4	497	3	27.3	+63 24	7.0	–				6.6 6.7 .9 7.5 6.5 6.2
4 54+73.7	274	4	54.2	+73 45	5.5	890	5.5	10+0		5.1 1.4 6.5 5.5 4.7
4 46+73.5	264	4	46.2	+73 33	6.3	–				6.8 7.1 1.4 8.2 8.5 7.2 7.5 6.4 6.7
4 46+73.9	265	4	46.4	+73 49	6.3	864	6.0	9+1		5.5 1.4 6.9 5.9 5.1
4 44+74.0	229	4	44.0	+74 3	6.1	–				6.7 7.0 1.4 8.1 8.4 7.1 7.4 6.3 6.6
4 23+63.9	515	4	22.9	+63 57	6.3	786	6.0	6-4		5.7 9 6.6 5.6 5.3
4 3+74.2	749	4	3.0	+74 8	7.0	.				6.8 .6 7.4 6.4 6.4
4 2+74.3	195	4	1.7	+74 15	8.0	–				6.5 1.4 7.9 6.9 6.1
3 49+74.3	186	3	49.9	+74 14	6.4	–				6.5 6.7 1.4 7.9 8.1 6.9 7.1 6.1 6.3
3 36+74.3	174	3	36.8	+74 14	7.2	–				6.9 7.2 1.4 8.3 8.6 7.3 7.6 6.5 6.8
3 28+74.1	168	3	28.4	+74 4	6.8	–				6.4 6.7 1.4 7.8 8.1 6.8 7.1 6.0 6.3
3 8+73.6	180	3	8.1	+73 38	6.9	–				6.4 1.4 7.8 6.8 6.0
3 0+73.3	172	2	59.7	+73 19	6.8	–				6.7 7.0 1.4 8.1 8.4 7.1 7.4 6.3 6.6
2 59+73.7	171	2	58.7	+73 40	7.0	.				6.8 7.0 1.4 8.2 8.4 7.2 7.4 6.4 6.6
4 7+64.8	433	4	7.1	+64 47	6.0	–				5.5 5.7 .9 6.4 6.6 5.4 5.6 5.1 5.3
3 58+64.5	741	3	58.0	+64 26	6.0	–				6.4 .6 7.0 6.6 6.0
3 49+74.8	184	3	49.5	+74 47	7.8	V–				6.3 6.5 1.5 8.0 7.0 6.1

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Plate 954.

V	H	Type	No. Lines	K	Focus	Other Lines.
15.3	16.6	III	7463	K=H	1	F.
15.8	23.2	I	11	H	1	F.
14.9	6.6	I	1	?	1	F.
14.2	12.1	I I	4 3	H H	1 1	F. —
14.4	16.0	I	8	K=.2H	2	F.
III ? 5.5, 5.8, 6.8.	14.2	19.5	III	6473	K=H	2 F.
14.5	20.5	I	4	K=H	1	—
?	14.3	21.8	I	6484	H	1 F. some.
14.9	22.0	I	3	H	1	—
13.8	7.9	II II	1 2	H K=H	1 1	— —
13.0	8.2	I	1	H	2	F.
13.4	10.3	III	3	K=H	1	F.
13.2	10.9	I	9	K=.1H	3	F.
13.3	14.2	I	8	H	2	F.
13.3	17.6	I	3	H	1	—
13.7	19.2	III	3	K=H	2	F.
13.3	21.4	I	7	H	2	F.
13.5	21.7	I I	4 4	H K=H	1 1	— —
13.6	22.9	I	6	K=H	1	F.
13.9	23.8	I	1	?	2	F.
12.4	12.0	I	8	K=.2H	2	F.
12.0	12.1	II	2	K=H	1	—
12.6	16.0	II ? II	2 2	K=H K=H	1 1	— —
12.4	22.6	I I	1 H	H K=H	1 1	F. —
12.2	23.5	I	7	K=H	1	F.
11.9	6.6	I ?	3?	K=H	1	F. some.
11.4	8.1	I	8	H	3	F.
?	11.9	11.4	II	6493	K=H	2 F. some.

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	No.	R.A.	Dec.	Mag.			Mean Br.
3 53 +54.7	734	3 53.2	+54 40	7.0	–		6.6 1.6 7.2 6.2 6.2
2 56 +73.9	168	2 56.3	+73 50	5.2	493	4.7 13 +3 +7	4.6 1.4 6.0 5.0 4.2
4 58 +74.4	238	4 58.8	+74 21	7.2	.		6.5 1.4 7.9 6.4 6.1
4 9 +55.2	869	4 9.3	+55 9	8.0	.		6.6 6.9 1.6 7.2 6.2 6.2
	868	4 9.4	+55 11	8.0			
3 53 +65.1	391	3 53.1	+65 6	6.6	–		6.0 .9 6.9 5.9 5.6
3 36 +65.1	369	3 36.3	+65 2	4.5	–		6.0 6.5 1.4 7.4 7.9 6.4 6.9 5.6 6.1
3 13 +74.8	151	3 13.4	+74 44	7.9	–		6.7 1.4 8.1 7.1 6.3
3 3 +74.7	144	3 3.6	+74 41	7.4	.		6.5 1.4 7.9 6.9 6.1
3 34 +54.6	707	3 34.7	+54 36	6.5	.		6.6 .6 7.2 6.2 6.2
4 24 +55.3	901	4 24.3	+55 12	7.4	–		6.9 6.9 .6 7.5 6.5 6.5
4 50 +75.5	208	4 50.5	+75 29	7.3	.		6.3 1.5 7.8 6.8 5.9
4 33 +75.5	193	4 33.6	+75 27	7.0	–		6.5 6.7 1.5 8.0 8.2 7.0 7.2 6.1 6.3
4 29 +75.7	189	4 29.4	+75 40	6.0	–		5.3 1.5 6.8 5.8 4.9
4 3 +75.7	173	4 2.4	+75 45	6.8	.		5.6 1.5 7.1 6.1 5.2
3 50 +55.6	839	3 49.8	+55 37	7.5	.		6.8 .6 7.4 6.4 6.4
3 22 +75.3	143	3 22.1	+75 14	6.5	–		6.2 6.5 1.5 7.7 8.0 6.7 7.0 5.8 6.1
3 36 +55.5	824	3 36.2	+55 28	6.5	.		6.0 .6 6.6 5.6 5.6
3 26 +65.2	353	3 26.6	+65 10	8.0	.		6.8 6.7 .9 7.7 6.7 6.4
3 20 +65.0	348	3 20.5	+65 2	7.0	–		6.5 .9 7.4 6.4 6.1
2 48 +74.1	131	2 48.6	+74 34	7.2			6.3 1.4 7.7 6.7 5.9
4 10 +56.2	905	4 10.1	+56 9	6.3	–		5.9 .6 6.5 5.5 5.5
4 20 +76.3	169	4 20.7	+76 14	8.0	–		6.8 1.6 8.4 7.4 6.4
3 48 +76.0	160	3 47.4	+75 60	7.5	–		6.7 6.7 1.5 8.2 7.2 6.3
3 19 +65.9	347	3 19.0	+65 48	8.0	.		6.6 6.6 1.0 7.6 6.6 6.2
3 28 +55.0	803	3 28.4	+55 54	7.0	–		6.5 .6 7.1 6.1 6.1
4 39 +66.1	358	4 39.6	+66 4	5.0	–		4.2 1.0 5.2 4.2 3.8
4 55 +76.3	190	4 54.3	+76 17	6.7	.		5.6 1.6 7.2 6.2 5.2
4 26 +76.4	174	4 26.0	+76 19	6.3	+		6.0 1.6 7.6 6.6 5.6

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Plate 954.

V	H	Type	No. lines	K	Focus	Other lines.
11,0	13,3	I	7	H	2	F.
11,2	13,9	I	6	H	2	F.
11,5	19,0	I	5	H	1	F.
11,9	19,8	I	4	H	1	—
11,0	20,8	I	8	H	2	F.
11,0	23,8	I	7	H	2	F.
11,4	24,0	II ? II	3 3	K=2,0 H? K=H	1 1	F. F.
10,2	8,5	I	4	K=H	1	—
10,1	10,7	I	7	H	2	F.
10,0	13,2	III ? III	3 2	K=H K=H	1 1	F. F.?
10,5	13,9	I	7	K=1,8 H	2	F.
10,5	18,2	I	4	H	1	—
10,9	18,6	I	6	K=1,5 H	1	F.
10,2	18,7	I I	3 H	H K=H	1 1	— —
10,8	20,0	II a 650	8	K=H	3	F.
10,7	21,0	III	2	K=H	1	—
10,2	23,3	III	3	K=H	1	F.
9,2	8,2	I	5	K=H	1	—
9,3	10,2	II	2	K=H	1	—
9,9	10,9	I	5	K=H	1	—
9,9	11,0	I	8	K=H	1	F.
9,7	13,4	III	3	K=H	2	F.
9,4	14,6	III	3	K=H	1	F.
9,1	16,2	III	3	K=H	1	F.
9,3	17,7	I	8	K=1,2 H	2	F.
9,5	19,5	I	9	K=1,2 H	2	F.
9,6	20,8	I	9	K=1,5 H	4	F.
8,3	6,0	I	3	H	1	—

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	No.	R.A.	Dec.	Mag.		Mean	Bpc.
4 5+56.8	899	4 5.5	+56 49	7.3	.	6.4	6.0
4 4+66.7	316	4 3.7	+66 44	7.4	.	6.2	5.8
3 44+56.5	857	3 44.2	+56 29	7.0	.	6.6	6.2
3 14+76.1	125	3 14.7	+76 6	8.6	.	6.7	6.3
3 38+56.6	846	3 37.8	+56 40	7.0	.	6.1	5.7
	~~847~~	~~3 37.9~~	~~+56 40~~	~~7.3~~			
3 27+56.4	826	3 27.0	+56 28	6.5	.	6.1	5.7
3 26+56.3	824	3 26.4	+56 14	6.6	_	6.6	6.2
4 23+57.1	817	4 23.0	+57 7	6.8	_	6.6	6.2
4 15+57.3	800	4 15.0	+57 15	6.9	.	6.2	5.8
4 7+67.4	321	4 7.6	+67 23	7.8	_	6.8	6.4
4 3+57.1	785	4 3.2	+57 6	6.5	_	6.5	6.1
3 47+57.0	760	3 47.1	+57 1	7.0	.	6.7	6.3
3 24+76.7	128	3 24.0	+76 41	7.5	_	6.6	6.2
3 38+67.1	296	3 38.7	+67 7	8.0	.	6.8	6.4
3 32+66.7	284	3 32.3	+66 45	6.2	_	5.4	5.0
3 3+76.5	120	3 3.5	+76 31	8.2	_	6.7 7.0	6.3 6.6
2 42+76.5	101	2 42.2	+76 29	6.8	_	6.4 6.6	6.0 6.2
4 33+67.5	347	4 33.5	+67 29	7.5	_	6.4	6.0
4 39+77.5	178	4 39.4	+77 31	7.5	_	6.7	6.3
4 32+77.4	172	4 32.7	+77 18	7.8	_	6.6	6.2
4 19+67.3	334	4 18.6	+67 19	7.3	_	6.3	5.9
4 5+57.5	787	4 5.2	+57 29	6.0	_	6.3 6.6	5.9 6.2
3 59+77.7	150	3 59.3	+77 42	7.0	_	6.5 6.8	6.1 6.4
3 43+77.8	138	3 43.0	+77 46	7.0	_	6.5 6.7	6.1 6.3
3 29+77.6	133	3 29.0	+77 39	7.2	_	5.9	5.5
3 42+57.5	752	3 42.0	+57 31	6.0	_	6.0	5.6
3 2+77.2	115	3 2.2	+77 11	6.2	_	4.9	4.5
5 20+77.5	201	5 19.6	+77 26	8.3	.	6.7	6.3

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April 9, 1887.

Plate 954.

	V	H	Type	Lines	K	Focus	Other Lines.
	8.8	6.4	I V	3 4	N K=H	1 1	— —
	8.1	7.5	I	8	K=1/2H	3	F.
	8.5	10.4	I	5	N	1	F.
	8.5	14.9	III III	3 3	K=H K=H	1 1	F. F
	8.7	15.3	I? I	3 4	N K=H	1 1	— —
	8.1	16.1	III	3	K=H	1	F.
	8.8	17.5	I	3	N	1	—
	8.4	18.7	I	8	K=1/2H	3	F.
	8.2	19.7	I	3	N	1	—
	7.2	7.3	I	4	N	1	—
?	7.5	7.8	II a 651	3	K=H	2	F. diff.
	7.4	8.1	III	3	K=H	1	F.
	7.6	8.6	III?	3	K=H	1	F.
	7.4	13.0	I	7	K=1/5H	2	F.
	7.9	13.2	I	5	N	1	F.
	7.5	14.5	I	3	N	1	—
	7.5	15.4	III	3	K=H	1	F.
	7.6	15.6	I	5	N	1	—
?	7.3	16.6	II a ?652	3	K=H	3	F. diff.
?	7.6	17.1	II a II 653	3 2	K=H K=H	1 1	F. —
	7.4	20.6	I	9	K=1/5H	2	F.
	7.9	22.7	I I	3 3	N N	1 1	— —
	7.4	22.7	III	1	N	1	F.
	6.2	8.8	I	5	N	1	F.
?	6.0	8.9	III a 654	3	K=H	5	F. diff.
	6.1	12.0	I	9	K=1/2H	2	F.
	6.0	12.5	I	10	K=1/2H	3	F.
	6.1	14.0	II?	2	K=H	1	—

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Means

	No.	R.A.	Dec.	Mag.	Br.				
4 43 +67.5	357	4 42.7	+67 33	7.0	6.7	1.7	7.4	6.4	6.3
~~4 42 +67.3~~	~~882~~	~~4 44.4~~	~~+67 19~~	~~8.3~~					
5 7 +77.8	195	5 7.2	+77 50	7.0	5.5	1.7	7.2	6.2	5.1
4 23 +67.9	339	4 22.5	+67 59	7.5	6.7	1.1	7.8	6.8	6.3
3 58 +68.1	310	3 58.3	+68 8	6.5	6.6 6.9	6.6 7.0	7.7 8.0	6.7 7.0	6.2 6.5
3 56 +67.9	310	3 55.6	+67 59	7.4	6.6	6.4 1.1	7.7	6.7	6.2
3 51 +68.3	303	3 51.5	+68 16	6.0	6.6 7.0	1.1	7.7 8.1	6.7 7.1	6.2 6.6
3 31 +77.2	134	3 30.7	+77 51	8.0	6.7	1.7	8.4	7.4	6.3
3 37 +68.0	286	3 37.5	+68 3	6.5	5.5	1.1	6.6	5.6	5.1
3 8 +77.9	119	3 8.9	+77 58	7.5	6.8	1.7	8.5	7.5	6.4
5 11 +78.2	190	5 11.4	+78 12	7.7	6.7	1.7	8.4	7.4	6.3
5 6 +78.1	187	5 6.1	+78 8	7.0	5.9	1.7	7.6	6.6	5.5
5 3 +78.3	183	5 3.4	+78 16	6.8	6.6 6.9	1.7	8.3 8.6	7.3 7.6	6.2 6.5
4 58 +78.2	180	4 58.2	+78 11	8.0	6.8 6.9	1.7	8.5 8.6	7.5 7.6	6.4 6.5
4 15 +78.7	157	4 15.4	+78 41	7.5	6.1	1.8	7.9	6.9	5.7
4 6 +78.4	727	4 5.8	+78 25	7.1	6.6	.7	7.3	6.3	6.2
4 0 +78.6	151	4 0.2	+78 38	8.2	6.6	1.8	8.4	7.4	6.2
3 50 +78.6	146	3 50.6	+78 38	7.2	6.6 6.9	1.8	8.4 8.7	7.4 7.7	6.2 6.5
3 48 +78.5	142	3 47.8	+78 32	8.0	6.4	1.8	8.2	7.2	6.0
3 52 +78.7	690	3 52.4	+78 45	5.0	5.4	.7	6.1	5.1	5.0
3 50 +78.6	685	3 50.8	+78 32	8.0	6.8 6.8	.7	7.5	6.5	6.4
2 58 +78.3	109	2 58.3	+78 19	7.0	5.7	1.7	7.4	6.4	5.3
3 16 +67.9	270	3 16.6	+67 56	8.4	6.7	7.0 1.1	7.8	6.8	6.3
3 29 +78.4	637	3 29.5	+78 22	6.5	6.6 6.9	.7	7.3 7.6	6.3 6.6	6.2 6.5
4 23 +79.1	812	4 23.3	+79 6	7.2	6.5	.7	7.2	6.2	6.1
4 59 +79.0	169	4 58.8	+79 3	5.2	4.7 4.8	1.8	6.5 6.6	5.5 5.6	4.3 4.4
4 10 +79.3	793	4 10.6	+79 16	6.5	6.0	.7	6.7	5.7	5.6
4 22 +79.4	150	4 21.7	+79 21	7.0	5.4	1.8	7.2	6.2	5.6
4 6 +79.4	143	4 5.6	+79 21	8.0	6.7	1.8	8.5	7.5	6.3

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Plate 954.

	V	H	Type	No. Lines	K	Focus	Other Lines.
?	6.0	15.9	I b	6554	H	1	neb.
	6.2	18.7	III	3	K=H	1	F.
	6.1	21.4	III	3	K=H	2	F.
	5.8	6.9	I	4	K=H	1	—
	5.6	20.1	I d?	3	H	1	—
	5.4	22.1	III III	1 2	H K=H	1 1	F. —
?	5.3	24.0	I	v	?	2	neb.
	4.8	8.4	II a	656 1	H	1	—
	4.4	8.4	I	5	K=2.0H	2	—
	4.5	15.0	III	3	K=H	1	F
?	4.3	15.6	II a	?657 5	K=.5H	4	F, neb.
	4.9	20.2	III	3	K=H	1	F.
	4.5	21.9	I	6	K=.5H	1	F.
	3.9	12.4	III I	2 1	K=H	1	F —
	3.6	13.5	I	6	K=.5H	1	F.
	3.6	14.1	I	6	K=.5H	2	F.
	3.9	14.3	III b.c	6583	K=H	2	F.
?	3.6	15.8	II a	659 2	K=H	1	neb.
	3.3	18.4	III	3	K=H	1	F.
	3.7	18.8	I	660 10	K=.2H	4	F.
	2.9	8.9	I	v	H	2	—
	2.8	11.8	III b.c	660 3	K=H	2	F.
	2.3	14.8	I	v	H	1	—
	2.8	18.6	I	10	K=.2H	5	F.
	2.2	19.9	I	9	K=.2H	3	F.
	6.1	5.4	II ?	2	K=H	1	—
11	10.	1.8	13.7	I	1	H	2 —

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	No.	R.A.	Dec.	Mag.		Mean 4 B/c.				
3 44 +79.4	125	3 43.7	+79 22	8.3	.	6.6	18	8.4	7.4	6.2
3 44 +59.3	736	3 44.2	+59 12	7.0	_	6.7 6.9	7	7.4 7.6	6.7 6.6	6.3 6.5
2 47 +78.9	103	2 47.1	+78 51	5.6	_	5.8 6.3	18	7.6 8.1	6.6 7.1	5.4 5.9
4 31 +59.3	826	4 30.8	+59 14	6.9	_	6.5	7	7.2	6.2	6.1
3 28 +69.4	222	3 28.2	+69 23	7.2		6.6	1.1	7.7	6.7	6.2
3 30 +59.5	699	3 30.8	+59 30	6.0	_	6.9 7.2	6.9 7.2	7.6 7.9	6.6 6.9	6.5 6.8
3 6 +69.3	205	3 6.3	+69 12	6.5		5.9	1.1	7.0	6.0	5.5
4 25 +59.8	816	4 25.0	+59 47	7.5	_	6.9	7	7.6	6.6	6.5
5 9 +79.7	173	5 9.0	+79 43	7.7	_	5.9	1.9	7.8	6.8	5.5
3 54 +80.2	127	3 53.8	+80 9	6.8	_	5.9 6.2	1.9	7.8 8.1	6.8 7.1	5.5 5.8
3 46 +80.3	125	3 46.0	+80 18	4.9	_	4.8	1.9	6.7	5.7	4.4
2 55 +79.5	94	2 55.4	+79 36	7.3	_	6.6 6.8	1.9	8.5 8.7	7.5 7.7	6.2 6.4
2 36 +79.5	86	2 36.1	+79 29	7.0	_	6.2	1.8	8.0	7.0	5.8
4 9 +60.4	860	4 9.2	+60 24	5.7	_	6.6 6.9	6.6 6.7	7.4 7.7	6.4 6.7	6.2 6.5
4 11 +80.5	140	4 11.4	+80 33	7.4	_	6.4	2.0	8.4	7.4	6.0
4 4 +80.6	134	4 4.2	+80 35	7.4	_	6.2	2.0	8.2	7.2	5.8
4 2 +80.5	133	4 2.0	+80 28	5.7	_	5.5 5.9	2.0	7.5 7.9	6.5 6.9	5.1 5.5
3 59 +70.9	281	3 59.0	+70 50	7.0	_	6.7	1.2	7.9	6.9	6.3
3 45 +60.7	768	3 44.8	+60 40	5.8	_	6.5 6.9	.8	7.3 7.7	6.3 6.7	6.1 6.5
3 34 +70.5	257	3 34.2	+70 25	5.7	_	4.9	1.2	6.1	5.1	4.5
4 34 +70.7	322	4 34.8	+70 40	6.3	.	6.0	1.2	7.2	6.2	5.6
4 34 +80.9	155	4 33.4	+80 56	5.5	_	5.4 5.9	2.0	7.4 7.9	6.4 6.9	5.0 5.5
3 56 +81.3	150	3 55.7	+81 15	7.9	.	6.8	2.0	8.8	7.8	
3 35 +70.9	259	3 35.1	+70 52	4.3	_	4.4	1.2	5.6	4.6	4.0
2 49 +80.9	97	2 49.6	+80 54	5.5	_	5.3	2.0	7.3	6.3	
4 51 +68.6	361	4 50.6	+68 46	6.5	_	6.3	1.1	7.4	6.4	5.9
4 4 +61.5	687	4 4.2	+61 29	5.5	705 5.6 8-7	5.6	.8	6.4	5.4	

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April 11, 1887.

Plate 1057.

	V	H	Type	No. lines	K	Focus	Other lines.
9 0	22.1	14.2	II	6	H	2	F?
	22,5	16.8	I?	?	H?	4	F
	22,5	20.5	I	V	K=H	1	F
	21.0	8,3	I	6	K=H	1	—
√	21,4	15,1	II a 660a	2	2 K=H K=H	1	— seen
	21,8	17.5	II	2	K=H	1	—
	21.5	18.8	I	8	K=.5H	2	F
	20,0	6.7	I	3	H	1	—
	20.5	9,7	II	2	K=H	1	—
√	20.2	12.9	II a 661 II	2	2 K=H K=H	1	— —
	20,0	13,0	I	V	H	1	—
√	20,0	16.5	I I	4	H H	K=H	1 1 — —
√	20,0	16,8	II a 662 II	2	2 K=H K=H	1	— —
√	20,5	19,7	II a 663 II a	2	2 K=H K=H	1	— seen
	20.2	23.9	I	V	K=H	1	—
	19,8	9.3	I	8	H	3	F.
√	19.6	11,5	II d I d	4	H H	K=H	1 1 diff.
	19.0	12.9	I	8	K=.5H	2	F.
√	19,6	13.4	I I	4	H H	K=H K=H	1 1 — —
	19,5	15,8	II?	2	K=H	1	—
	19,5	16,1	I	3	H	1	—
	19,6	17,9	I	V	K=H	1	—
√	19,3	20.6	I I	3 3	H H	1 1	— —
	19,6	20,8	I	V	K=H	1	—
√	18,3	7.3	II? II	2	2 K=H	K=H	1 1 — —
	18,6	9,5	II a? 664	2	K=H	1	diff.
√	18,2	10,2	I I	4	H H	H H	1 1 — —
12.30	18,7	10,5	I	7	K=.5H	2	F.

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Mean 4

	No.	R.A.	Dec.	Mag.		Br.				
4 54+76.3	190	4 54.3	+76 17	6.7	.	6.2	1.6	7.8	6.6	5.5
4 39+66.1	358	4 39.6	+66 4	5.0		~~5.4~~	1.0	6.4	5.2	
4 2+75.7	173	4 2.4	+75 45	6.8	_	~~6.4~~	1.5	7.9	6.7	
5 22+66.6	401	5 22.4	+66 36	7.0	_	6.4	1.0	7.4	6.2	6.0
4 46+76.6	187	4 45.6	+76 37	8.0	_	6.5 6.3	1.6	8.1	6.9	6.1
4 26+76.3	174	4 26.0	+76 19	6.3	_	6.4	1.6	8.0	6.8	6.0
4 36+56.5	973	4 36.0	+56 30	5.8	_	6.0	.6	6.6	5.4	5.6
5 20+57.1	889	5 20.2	+57 7	6.6	.	6.9	.7	7.6	6.4	6.5
5 34+76.8	211	5 33.9	+76 49	8.1	_	6.9	1.6	8.5	7.3	6.5
5 0+67.2	373	4 59.8	+67 11	7.5	_	7.0 7.1	1.0	8.0	6.8	6.6
4 59+67.3	371	4 59.1	+67 17	7.0	.	6.8	1.0	7.8	6.6	6.4
4 40+67.3	356	4 40.6	+67 18	7.5	.	6.6 6.5	1.0	7.6	6.4	6.2
	354	4 39.1	+67 15	8.0						
4 39+67.3	~~353~~	~~4 38.8~~	~~+67 58~~	~~7.0~~	_	6.9 6.9	1.0	7.9	6.7	6.5
4 24+66.9	335	4 24.6	+66 55	8.0	_	7.0 6.9	1.0	8.0	6.8	6.6
4 4+66.7	316	4 3.7	+66 44	7.4	_	6.6	1.0	7.6	6.4	6.2
5 11+57.4	879	5 11.1	+57 24	5.3	953 5.3 13+1	5.9	.7	6.6	5.4	5.5
5 7+67.4	380	5 7.8	+67 24	8.4	.	6.7 6.6	1.0	7.7	6.5	6.3
5 7+77.8	195	5 7.2	+77 30	7.0	_	6.0	1.7	7.7	6.5	5.6
4 57+67.5	367	4 57.4	+67 29	6.9	_	6.9 6.9	1.0	7.9	6.7	6.5
4 39+77.6	178	4 39.4	+77 31	7.5	_	6.8	1.7	8.5	7.3	6.4
4 42+67.5	357	4 42.7	+67 33	7.0	.	6.6	1.0	7.6	6.4	6.2
4 33+67.5	347	4 33.5	+67 29	7.5	_	6.6	1.0	7.6	6.4	6.2
4 28+57.6	828	4 28.7	+57 35	7.3	.	6.9 6.9	1.7	7.6	6.4	6.5
4 18+67.3	334	4 18.6	+67 19	7.3	_	~~6.5~~	1.0	7.5	6.3	6.1
5 29+67.9	396	5 29.6	+67 53	8.5	_	7.1 7.0	1.1	8.2	7.0	6.7
5 17+67.9	390	5 17.8	+67 53	7.0	_	6.5	1.1	7.6	6.4	6.1
5 8+58.2	828	5 7.9	+58 11	8.3	.	7.1 7.1	1.7	7.8	6.6	6.7
5 7+57.9	874	5 7.0	+57 57	6.5	_	6.2	1	6.9	5.7	5.8

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Plate 1057.

9.22 A.M.	V	H	Type	No. lines	K	Focus	Other lines.	
	18.9	12.0	I	3	N	1	—	
?	18.2	12.2	I[d]	3	?	1	nebs.	
	18.3	12.5	I	1	N	1	—	
	18.5	13.1	I	7	K=H	2	F	
	18.3	13.3	III	3	K=H	1	F	
	18.3	13.9	I?	3	N	1	—	
	18.7	14.0	I I	3 H	N	K=H	1 1	— —
	18.7	18.7	I I	3 H	N	K=H	1 1	— —
?	18.4	19.9	II[a]	?665 3		K=H	1	F, nebs.
	18.7	20.0	III	2		K=H	1	—
	18.1	21.7	III	3		K=H	1	F
	18.6	22.0	II II	2 2		K=H K=H	1 1	— —
	17.1	6.1	II[a]	666 6		N	2	F.
	17.2	13.8	II	II? 3 2		K=H K=H	1 1	F F?
?	17.3	14.1	I[b]	667 8		N	3	F, nebs.
	17.3	14.7	I	6		K=H	1	F.
	17.2	18.0	I	6		K=H	2	F.
	17.8	20.9	II[I?]	? I	4 H	K=H K=H	1 1	— —
	17.5	22.8	II	3		K=H	1	F.
	17.8	23.1	I[d?]	6		N	2	F.
	16.9	5.8	III	2		K=H	1	—
	16.8	6.6	I	8		K=.8H	2	F.
	16.3	9.9	III	III 2 2		K=H K=H	1 1	— —
	16.3	11.8	III	3		K=H	1	F
	16.1	12.0	III[?]	? III	1 2	N	K=H	1 1	— —
?	16.7	13.8	II[a]	668	3	K=H	4	F, nebs.
	16.1	15.0	II[I?]	I	4 H	K=H	K=H	1 1	nebs. —
	16.8	15.3	II?	I	5	K=H	K=H	1 1	F F

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	No.	R.A.	Dec.	Mag.		Mean Br.				
5 4+67.8	379	5	4.5	+67 49	7.5	.	6.9	1.1	8.0	6.8	6.5
5 15+78.3	193	5	15.1	+78 15	7.7		6.7	1.7	8.4	7.2	6.3
5 11+78.2	190	5	11.4	+78 12	7.7	.	6.6	1.7	8.3	7.1	6.2
5 6+78.2	187	5	6.1	+78 8	7.0	_	6.3	1.7	8.0	6.8	5.9
5 3+78.3	183	5	3.4	+78 16	6.8	_	6.6 / 6.8	1.7	8.3 / 8.5	7.1 / 7.3	6.2 / 6.4
4 58+78.2	180	4	58.2	+78 11	8.0		6.9	1.7	8.6	7.4	6.5
4 57+77.9	187	4	57.6	+77 54	8.3	.	7.0 6.9	1.7	8.7	7.5	6.6
4 28+67.9	343	4	28.8	+67 31	8.0	.	6.9 6.8	1.1	8.0	6.8	6.5
4 22+67.9	339	4	22.5	+67 39	7.5	_	6.8	1.1	7.9	6.7	6.4
3 59+77.8	150	3	59.3	+77 42	7.0	_	6.6 / 6.9	1.7	8.3 / 8.6	7.1 / 7.4	6.2 / 6.5
3 43+77.8	138	3	43.0	+77 46	7.0	_	6.6 / 6.9	1.7	8.3 / 8.6	7.1 / 7.4	6.2 / 6.5
4 12+67.7	327	4	11.9	+67 42	8.1	_	7.1 7.1	1.1	8.2	7.0	6.7
6 14+78.0	247	6	14.2	+77 60	7.5	.	6.2	1.7	7.9	6.7	5.8
5 4+78.8	185	5	4.3	+78 49	8.9	_	6.9 6.8	1.8	8.7	7.5	6.6
4 54+58.7	805	4	53.6	+58 49	6.5	9886		.7	6.2 / 5.0		
	804	4	53.6	+58 45	6.0	9885 5.1 11-1 *	5.5	.7	6.2 / 5.0		5.1
4 50+68.8	361	4	50.6	+68 46	6.5	_	6.6	1.1	7.7	6.5	6.2
4 15+78.6	157	4	15.4	+78 41	7.5	_	6.5	1.8	8.3	7.1	6.1
3 49+78.0	~~143~~	~~3~~	~~48.6~~	~~+78 2~~	~~8.5~~	~~_~~	7.0 7.1	1.7	8.7	7.5	6.6
3 30+77.9	134	3	30.7	+77 51	8.0	_	6.8	1.7	8.5	7.3	6.4
3 29+77.6	133	3	29.0	+77 39	7.2	.	6.0	1.7	7.7	6.5	5.6
6 18+78.1	227	6	18.0	+78 7	6.0	_	6.5 / 6.9	1.7	8.5 / 8.6	7.0 / 7.4	6.1 / 6.5
6 10+78.3	226	6	10.5	+78 17	7.5	_	6.2	1.7	7.9	6.7	5.8
5 9+59.2	870	5	9.5	+59 8	7.0	_	6.9 / 7.0 7.0 / 7.1	1.7	7.7 / 7.7	6.4 / 6.5	6.5 / 6.6
5 2+59.3	857	5	2.5	+59 12	6.5	_	6.7 / 6.9	.7	7.4 / 7.6	6.2 / 6.4	6.3 / 6.5
5 18+79.3	182	5	18.0	+79 14	8.7		7.0 7.1 / 7.2 7.3	1.8	8.8 / 9.0	7.6 / 7.8	6.6 / 6.8
4 59+79.0	169	4	58.8	+79 3	5.2	_	5.3	1.8	7.1	5.9	4.9
4 47+79.3	163	4	46.9	+79 17	8.8	_	7.0 6.9	1.8	8.8	7.6	6.6
4 47+68.9	357	4	46.5	+68 37	7.0	_	6.8 6.6	1.1	7.9	6.7	6.4

* Spectra of both stars superimposed on plate. Mean of brightness and visual light of both.

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Plate 1057.

	V	H	Type	Nos. Lines	K	Focus	Other Lines.	
	16.9	17.2	II a	2 2	K=H K=H	1 1	— acm	4
	16.0	17.2	I	9	H	3	F.	4
	16.9	19.5	I	4	H	1	—	4
	16.0	19.8	I	7	K=H	2	F.	4
	16.7	20.4	III	3	K=H	1	F.	3
	16.8	20.7	I	6	H	2	F.	3
	16.2	21.7	I	6	H	1	F.	4
	15.4	6.7	I	3	K=H	1 1	— —	5
	15.4	7.3	III	3	K=H	1	F.	
	15.3	8.9	I?	v	K=H	1	—	5
	15.4	12.9	I	7	H	2	F.	5
	15.9	14.1	III	3 3	K=H K=H	1 1	F. F.	4
	15.4	14.2	I	4 4	H K=H	1 1	— —	4
	15.4	15.7	I	5 5	K=H K=H	1 1	— —	4
	15.7	17.3	II	2 2	K=H K=H	1 1	— —	
	15.7	18.7	III	2	K=H	1	—	4
	15.3	20.7	I	6	K=H	1	—	3
	14.5	7.7	II	2	K=H	1	—	3
	14.8	6.8	II	2	K=H	1	—	6
?	14.0	7.2	I d	6	H	2	F. acm.	6
	14.5	7.7	II	2	K=H	1	—	6
	14.2	8.2	I d	6	K=1.5H	1	F.	5
	14.5	11.2	I	6	H	2	—	5
	14.6	11.3	II	2 2	K=H K=H	1 1	— F.	5
	14.0	12.1	III	2 2	H K=H	1 1	F. —	5
	14.4	14.8	III? b.a. 669	3	K=1.5H	3	F.	4
	14.2	19.2	III	2 2	H K=H	1 1	F. —	3
	14.3	20.0	I	4 4	H K=H	1 1	— —	4

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1887phae.proj..8375

Mean 4

	No.	R.A.	Dec	Mag.		Yr.				
4 23 +78.9	161	4 23.4	+78 32	8.1	–	7.0	18	8.8	7.6	6.6
4 22 +79.4	150	4 21.7	+79 21	7.0	.	5.9	18	7.7	6.5	5.5
4 0 +78.6	151	4 0.2	+78 38	8.2	.	6.6	18	8.4	7.2	6.2
4 30 +79.3	826	4 30.8	+79 14	6.9	–	6.4	7	7.1	5.9	6.0
3 50 +78.6	146	3 50.6	+78 38	7.2	–	6.6 / 6.9	18	8.4 / 8.7	7.2 / 7.5	6.2 / 6.5
3 47 +78.5	142	3 47.8	+78 32	8.0	.	6.5	18	8.3	7.1	6.1
4 23 +79.1	812	4 23.3	+79 6	7.2	.	6.6	7	7.3	6.1	6.2
~~5 35 +78.7~~	~~856~~	~~5 34.5~~	~~+78 44~~	~~7.3~~	✓					
	~~209~~	~~6 15.8~~	~~+79 14~~	~~8.0~~	–	7.0	7.0	7.7	6.5	6.6
6 8 +79.0	202	6 9.2	+79 4	7.0	–	6.7 / 6.9	18	8.5 / 8.7	7.3 / 7.5	6.3 / 6.5
5 52 +79.4	196	5 53.0	+79 21	7.8	–	6.7	18	8.5	7.3	6.3
5 9 +79.7	173	5 9.0	+79 43	7.7	.	6.2	19	8.1	6.9	5.8
4 54 +69.5	302	4 53.8	+69 26	6.5	–	6.7 / 6.9	6.4 / 6.6	7.8 / 8.0	6.6 / 6.8	6.3 / 6.5
4 53 +69.7	301	4 53.4	+69 39	8.5	.	6.9	6.8	8.1	8.0	6.8
4 44 +69.7	288	4 44.3	+69 42	7.8	–	6.9	6.6	8.1	8.0	6.8
	149	4 20.1	+79 28	8.5	✓					
~~4 22 +79.4~~	~~150~~	~~4 21.7~~	~~+79 21~~	~~7.0~~	–	7.1	7.1	18	8.9	7.7
4 6 +79.4	143	4 5.6	+79 21	8.0	–	6.6	18	8.4	7.2	6.2
3 44 +79.4	125	3 43.7	+79 22	8.3	–	6.6	18	8.4	7.2	6.2
5 42 +69.6	330	5 42.0	+69 34	7.3	–	6.8	11	7.9	6.7	6.4
6 16 +79.3	209	6 15.8	+79 14	8.0	–	6.8	18	8.6	7.4	6.4
6 15 +79.7	208	6 15.4	+79 41	6.3	1209 6.3 16+4	6.0	19	7.9	6.7	5.6
6 8 +79.6	201	6 8.2	+79 34	7.5	–	6.8	19	8.7	7.5	6.4
5 17 +60.2	884	5 16.9	+60 8	7.0	–	6.5	8	7.3	6.1	6.1
5 10 +79.1	351	5 10.6	+79 6	6.7	.	6.1	12	7.3	6.1	5.7
5 4 +60.0	870	5 4.6	+60 0	8.2	–	6.8 / 6.9	6.7 / 7.0	7.8 / 8.8	7.6 / 7.6	6.4 / 6.5
5 19 +80.3	177	5 20.0	+80 18	8.2	–	7.0 / 7.2	19	8.9	7.7	6.6
4 50 +60.3	856	4 50.6	+60 13	5.0	–	5.5 / 5.6	8	6.3 / 6.4	5.1 / 5.2	5.1 / 5.2
3 57 +80.0	129	3 57.0	+80 1	8.3	–	6.9 / 7.1	7.0 / 7.9	8.8 / 9.0	7.6 / 7.8	6.5 / 6.7
4 19 +79.0	305	4 19.0	+79 2	7.8		6.9	6.8 / 1.2	8.1	6.9	6.5

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Plate 105.

ν	H	Type	No. Lines	K	Focus	Other Lines.
14.7	21.2	~~I~~ II[a]	670	6	K=H	1	F.
13.8	6.7	~~II~~ II[a]	671	3	K=H?	3	F. Allen
13.9	9.3	~~I~~ I[d?]	7	K=.√H	2	F.
13.3	9.4	~~II~~	2	K=H	1	—
13.5	11.8	~~I~~	6	K=.√H	1	F.
13.0	14.1	~~III~~ III	3 3	K=H K=H	1 1	F. F
13.1	15.2	~~II~~ II[a]	672	3	K=H	2	F. Allen.
13.0	15.9	~~III~~ III[b.c]	673	3	K=H	3	F.
13.9	16.8	~~III~~ III	1 2	H K=H	1 1	F. —
13.5	17.1	~~III~~ III	2 2	H K=H	1 1	F. —
13.4	17.3	~~I~~	8	H	2	F.
13.5	17.7	~~I~~	8	K=H	2	F.
13.4	18.3	~~I~~	6	H	2	F.
13.6	18.5	~~III~~?	3	K=H	2	F.
13.9	19.3	~~III~~	3	K=H	1	F.
13.6	19.9	~~II~~ II[a]	?674	3	K=H	4	F. Allen.
13.0	20.0	~~I~~	6	K=.√H	1	F.
13.7	21.7	~~II~~ II	2 3	K=H K=H	1 1	— F.
12.6	7.2	~~III~~	2	K=H	1	—
12.5	8.4	~~III~~	2	K=H	1	—
12.3	12.7	~~I~~ I[I]	2	H K=H	K=H 1 1	— —
12.2	13.0	~~II~~ II?	3 3	K=H	K=H 1 1	F. F
12.0	16.0	~~I~~	√	K=H	1	F.
12.4	17.1	~~I~~	.6	H	1	F.
12.2	18.8	~~I~~	4	H	1	—
12.2	19.2	~~I~~ I	√5	H	H 1 1	— —
12.4	20.2	~~III~~ III	1 3	H K=H	1 1	— F.
11.7	7.5	~~I~~	√	K=.√H	1	—

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	No.	R.A.	Dec.	Mag.		Mean 4 Br.
4 25 +59.8	816	4 25.0	+59 47	7.5	–	6.7 | 7 7.4 6.2 | 6.3 ✓
6 21 +79.7	212	6 21.4	+79 42	5.5	–	5.6 19 7.5 6.3 5.2 ✓
5 22 +70.3	362	5 22.4	+70 16	7.0	–	6.5 12 7.7 6.5 6.1 ✓
5 54 +80.4	202	5 54.0	+80 24	7.8	–	6.8 19 8.7 7.5 6.4 ✓
5 25 +80.5	181	5 25.4	+80 32	7.9	–	6.7 20 8.7 7.5 6.3 ✓
4 53 +60.9	857 ✓	4 53.4	+60 38	6.7 ✓	–	6.7 {6.6} / 7.0 {6.9} 8 7.5 {6.3} 7.8 {6.6} 6.3 ✓ 6.6 ✓
4 48 +60.9	853	4 48.6	+60 31	7.0	–	6.2 8 7.0 5.8 5.8 ✓
4 34 +80.9	135	4 33.4	+80 56	5.5	–	5.6 / 6.0 20 7.6 {6.4} 8.0 {6.8} 5.2 5.6 ✓
4 23 +80.4	149	4 23.8	+80 22	8.1 ✓	–	7.0 {6.9} ✓ / 7.3 {7.1} 19 9 8.9 {7.7} 8.2 {8.0} 6.6 6.9 ✓
4 19 +80.6	146 ✓	4 19.5	+80 32	8.0 ✓	–	6.9 {7.0} / 7.2 {7.3} 20 8.9 {7.7} 9.2 {8.0} 6.5 6.8 ✓
4 34 +70.7	322	4 34.4	+70 40	6.3	.	5.9 12 7.1 6.9 5.5 ✓
4 11 +80.6	140	4 11.4	+80 33	7.4	–	6.2 20 8.2 7.0 5.8 ✓
4 4 +80.6	134	4 4.2	+80 35	7.4	.	6.1 20 8.1 6.9 5.7 ✓
4 2 +80.5	133	4 2.0	+80 28	5.7	–	5.8 / 6.1 20 7.8 {6.6} 8.1 {6.9} 5.4 5.7 ✓
3 54 +80.2	127	3 53.8	+80 9	6.8	–	5.9 / 6.3 19 7.8 {6.6} 8.2 {7.0} 5.5 5.9 ✓
3 46 +80.3	125	3 46.6	+80 18	4.9	–	5.2 19 7.1 5.9 4.8 ✓
3 43 +80.6	123	3 43.3	+80 33	8.3	–	6.6 20 8.6 7.4 6.2 ✓
3 27 +79.9	110 ✓	3 27.1	+79 51	7.8 ✓	–	6.8 6.6 19 8.7 7.5 6.4 ✓
6 21 +80.4	217	6 20.9	+80 22	7.3	–	6.9 / 7.1 19 8.8 {7.6} 9.0 {7.8} 6.5 6.7 ✓
6 9 +80.7	210	6 8.6	+80 39	7.2	–	6.9 / 7.2 20 8.9 {7.7} 9.2 {8.0} 6.5 6.8 ✓
4 59 +61.3	763 ✓	4 59.1	+61 16	8.8 ✓	–	7.0 7.1 8 7.8 6.6 6.6 ✓
5 12 +81.3	187	5 11.7	+81 16	8.6		6.9 6.9 Not found on 6.5 t.
4 43 +71.4	282	4 42.8	+71 23	8.0	–	6.7 12 7.9 6.7 6.3 ✓
4 40 +61.2	739	4 40.6	+61 14	6.9	.	6.5 8 7.3 6.1 6.1 ✓
3 56 +81.0	149	3 55.2	+81 3	8.3	.	6.5 20 8.5 7.3 6.1 ✓
4 22 +71.2	265 ✓	4 21.9	+71 10 ✓	8.0 ✓	.	6.6 6.5 12 7.8 6.6 6.2 ✓
3 39 +80.8	121 ✓	3 38.9	+80 48	7.8 ✓	–	6.9 {6.7} ✓ / 7.1 {7.0} 20 8.9 {7.7} 9.1 {7.9} 6.5 6.7 ✓
5 35 +71.3	324	5 35.4	+71 15	6.7 ✓	–	6.5 12 7.7 6.5 6.1 ✓

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			Type	No. Lines	K	Focus	Other Lines.
	11.4	9.9	III ?	2	K=H	1	—
	11.7	12.6	?	?	?	1	F.
	11.5	12.6	I	7	H	2	—
√	11.7	13.5	III III?	1 2	H K=H	1 1	F. —
	11.1	18.7	I	7.	H	2	F.
	11.8	18.7	I	6	H	2	F.
	11.3	19.3	I	5	K=.5H	1	—
	11.1	19.9	III	2	H	1	F.
	11.6	20.1	III	3	K=H	1	F.
	11.4	20.9	I	3.	H	1	—
	10.3	9.8	II?	2	K=H	1	—
√	10.4	12.3	II? II	2 2	K=H K=H	1 1	— —
	10.3	13.5	I	7	K=H	1	F.
√	10.4	15.4	II II	3 2	K=H K=H	1 1	F. —
	10.1	19.8	I	7	K=.5H	2	F.
	10.5	22.9	III	3	K=H	1	F.
	10.6	23.7	I	7	K=H	3	F.
	9.3	5.7	I	9	K=H	2	F.
	9.4	9.1	I	8	K=.2H	2	F.
	9.8	11.0	III	3	K=H	1	F.
	9.3	12.1	II	3	K=H	2	F.
?	9.0	12.4	II a	6?5	2. K=H?	1	smear.
	9.9	12.6	I	8	K=.2H	2	F.
	9.8	14.0	I	6	K=.2H	2	—
√	9.2	14.9	III III?	3 3	K=H K=H	1 1	F. F √
	9.0	16.0	I	7	H	2	F.
	9.3	19.8	II?	2	K=H	1	—
√	9.5	-22.5	III III	3 3	K=H K=H	1 1	F. F √

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	No.	R.A.	Dec.	Mag.		Mean 4 Br.				
5 21+71.6	313	5 20.8	+71 33	6.8	–	6.5 6.8	1.2	7.7 8.0	6.5 6.8	6.1 6.4
5 3+71.5	299	5 3.8	+71 33	6.8		6.5	1.2	7.7	6.5	6.1
5 0+61.7	766	5 59.8	+61 40	6.7	.	5.9	.8	6.7	5.5	5.5
5 5+81.5	183	5 5.5	+81 34	8.6	–	6.9 7.1	6.8 6.9 2.1	9.0 9.2	7.8 8.0	6.5 6.7
3 54+81.6	147	3 53.8	+81 36	7.5	.	6.2	2.1	8.3	7.1	5.8
3 56+81.3	150	3 55.7	+81 15	7.9	.	6.3	2.0	8.3	7.1	5.9
4 21+71.6	263	4 21.3	+71 35	8.2	–	6.9	1.3	8.2	7.0	6.5
3 37+81.5	134	3 37.6	+81 27	7.8	–	6.8 7.1	2.1	8.9 9.2	7.7 8.0	6.4 6.7
3 38+81.2	135	3 38.2	+81 9	7.8	–	6.6	2.0	8.6	7.4	6.2
4 10+71.5	250	4 10.9	+71 25	7.5	.	6.8	1.2	8.0	6.8	6.4
5 22+72.0	281	5 22.5	+72 6	8.2	–	6.9	1.3	8.2	7.0	6.5
5 6.0+72.2	265	5 5.8	+72 8	8.5	–	7.2	1.3 7.0	8.5 8.8	7.3 6.8	6.8
~~5 0+62.4~~	~~734~~	~~5 0.1~~	~~+62 30~~	~~6.7~~	~~–~~					
4 56+62.3	730	4 56.3	+62 17	7.0	–	6.4	.8	7.2	6.0	6.0
4 45+72.2	248	4 45.5	+72 11	8.4	–	6.6 6.4	1.3	7.9	6.7	6.2
4 16+72.2	227	4 16.8	+72 13	6.0	–	5.6	1.3	6.9	5.7	5.2
3 56+71.7	239	3 57.7	+71 44	6.3	–	6.3 6.6	1.3	7.6 7.9	6.4 6.7	5.9 6.2
2 49+80.9	97	2 49.6	+80 54	5.5	–	5.2	2.0	7.2	6.0	4.8
6 58+81.5	242	6 57.6	+81 30	6.3	–	5.3	2.1	7.4	6.2	4.9
6 14+82.3	177	6 13.8	+82 13	6.7	–	5.5	2.2	7.7	6.5	5.1
5 7+62.5	742	5 6.8	+62 30	6.0	–	6.8 7.0	8	7.6 7.8	6.4 6.6	6.4 6.6
5 30+82.7	152	5 30.2	+82 42	7.6	–	6.5	2.2	8.7	7.5	6.1
5 0+62.9	735	5 1.0	+62 55	7.5	–	6.5	.9	7.4	6.2	6.1
5 0+62.5	734	5 0.1	+62 30	6.7	–	6.3	.8	7.1	5.9	5.9
4 55+72.6	258	4 55.0	+72 33	7.9	–	6.4	1.3	7.7	6.5	6.0
4 50+62.9	722 723	4 50.0	+62 52	8.5 8.5	– ?	6.7 6.9	6.7 6.8	7.6 7.8	6.4 6.6	6.3 6.5
4 27+82.9	125	4 27.1	+82 56	8.5	.	6.0	2.3	8.3	7.1	5.6
3 30+82.3	101	3 30.5	+82 17	8.4	–	6.7	2.2	8.9	7.7	6.3
4 16+62.4	683	4 16.9	+62 22	7.9	–	7.0 7.2	6.7 7.0	7.8 8.0	6.6 6.8	6.6 6.8

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Plate 1857.

V	H	Type	No. Lines	K	Focus	Other lines.
8,3	10,2	II a? 675a	2	K=1+K=1+1	1	— Leeu
8,7	13,2	I	9	H	3	F.
8,1	13,3	I	5	H	1	F.
8,8	16,2	II a? 676	2	K=1,5H	1	—
8,3	17,4	III	1	H	1	F.
8,6	17,7	III ?	3	K=1,5H	3	F.
8,0	17,8	I	7	H	1	F.
8,7	20,3	II a 677	2	K=1,5H K=H	1	— —
7,3	6,7	III	3	K=H	2	F.
7,6	14,1	I	7	H	1	F.
7,5	14,2	I	10	H	3	F.
7,4	15,2	I	9	H	2	F.
7,7	17,7	I	9	H	4	F.
7,8	19,6	I	7	H	1	F.
7,9	20,3	I ?	3	H	1	—
7,5	21,9	II ?	2	K=H	1	—
? 6,3	7,6	I a	5	?	1	F. Leeu.
6,8	9,9	I ?	4	K=H	1	—
6,3	10,9	II a? 678	3	H	1	—
6,5	12,0	I	6	H	2	—
6,0	12,2	I	5	K=,5H	1	—
6,1	13,5	I	4	H	1	—
6,9	15,5	III	1	H	1	F.
6,6	20,8	I	7	H	2	F.
6,5	23,1	III	1	H	1	F.
5,5	13,7	II a 679	3	K=H	1	F.
5,7	15,9	I	7	K=,5H	1	F.
4,6	8,4	I	3	H	1	—

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	No.	R.A.	Dec.	Mag.				Mean 4 Br.
5 11 + 63.2	379	5 11.0	+ 63 14	7.0				7.0 7.9 7.9 6.7 6.6
5 0 + 73.1	280	5 0.4	+ 73 6	5.8	918	5.7	9-3	5.3 13 6.6 5.4 4.9
4 57 + 63.4	566	4 57.0	+ 63 23	7.0				6.7 9 7.6 6.4 6.3
4 23 + 83.0	121	4 24.2	+ 83 2	8.5				6.7 23 9.0 7.8 6.3
4 38 + 63.3	543	4 38.6	+ 63 15	5.8				6.7 / 7.0 9 7.6 6.4 / 7.9 6.7 6.3 / 6.6
3 58 + 82.9	113	3 58.5	+ 82 59	5.0				5.4 / 5.7 23 7.7 6.5 / 8.0 6.8 5.0 / 5.3
4 36 + 63.4	536	4 36.6	+ 63 22	7.0				6.5 9 7.4 6.2 6.1
4 26 + 62.9	693	4 26.2	+ 62 55	8.0				6.9 7.0 9 7.8 6.6 6.5
7 0 + 82.7	201	7 0.3	+ 82 40	5.5				5.7 / 6.0 22 7.9 6.7 / 8.2 7.0 5.3 / 5.6
5 0 + 83.7	141	5 0.6	+ 83 43	7.1				5.8 24 8.2 7.0 5.4
4 54 + 73.7	274	4 54.2	+ 73 45	5.5	890	5.5	6-6	4.7 14 6.1 4.9 4.3
4 46 + 73.8	265	4 46.4	+ 73 49	6.3	864	6.0	11-1	5.7 14 7.1 5.9 5.3
3 54 + 83.5	104	3 55.1	+ 83 26	5.0	684	5.4	14+2	4.4 24 6.8 5.6 4.0
3 24 + 83.1	91	3 24.8	+ 83 5	7.3				6.0 23 8.3 7.1 5.6
3 16 + 82.9	90	3 14.9	+ 82 52	8.2				6.5 23 8.8 7.6 6.1
3 52 + 73.2	212	3 53.6	+ 73 10	6.5				6.6 23 8.9 7.2 6.2
~~3 59 + 82.9~~	~~82~~	~~3 59.1~~	~~+ 82 60~~	~~7.5~~				
5 23 + 64.0	536	5 23.2	+ 64 3	6.7				6.0 9 6.9 5.7 5.6
5 24 + 73.9	298	5 24.4	+ 73 54	6.8				6.3 14 7.7 6.5 5.9
5 18 + 74.2	249	5 18.2	+ 74 12	7.0				6.5 14 7.9 6.7 6.1
5 9 + 74.2	242	5 9.8	+ 74 10	7.1				6.2 14 7.6 6.4 5.8
5 8 + 74.4	241	5 8.8	+ 74 24	7.1				6.5 14 7.9 6.7 6.1
4 59 + 74.4	238	4 58.8	+ 74 21	7.2				6.7 14 8.1 6.9 6.3
4 44 + 74.0	229	4 44.0	+ 74 3	6.1				6.6 / 7.0 14 8.0 / 8.4 6.8 / 7.2 6.2 / 6.6
4 23 + 63.9	515	4 22.9	+ 63 57	6.3	786	6.0	7-5	5.8 9 6.7 5.5 5.4
3 50 + 73.6	210	3 50.1	+ 73 34	6.4				6.6 / 6.9 14 8.0 / 8.3 6.8 / 7.1 6.2 / 6.5
4 57 + 64.7	500	4 55.7	+ 64 43	6.9				6.4 9 7.3 6.1 6.0
4 20 + 84.6	88	4 21.2	+ 84 36	7.7				6.2 26 8.8 7.6 5.8
5 20 + 64.9	534	5 20.6	+ 64 56	7.7				6.8 9 7.7 6.5 6.4

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V	H	Type	No. Lines	K	Foci	Other lines.
4.5	10.6	III	2	K=H	1	—
4.4	13.4	III III	1 3	H K=½H	1 1	F F
4.7	13.5	III	3	K=H	1	F.
? 4.4	17.0	II [a] 6803	3	K=H	2	F. diff.
4.9	19.9	III	3	K=H	2	F.
4.5	24.0	II	3	K=H	2	F.
3.0	7.0	I	6	H	2	—
3.9	14.4	I	8	H	2	F.
3.9	14.6	I	5	H	1	—
3.5	15.0	I	8	K=H	2	F.
3.5	17.2	I	8	K=√H	2	F.
2.7	7.8	I	.5	H	1	F.
2.4	14.2	I	7	H	2	F.
2.8	15.3	I	.6	H	1	F.
2.8	16.9	I	11?	H	4	F.
? 2.0	17.5	II [a] 6812		K=H	2	F.? diff.
2.8	20.5	I	.4	H	1	—
2.5	20.7	I	4	K=H	1	—

Plate 1069

22.7	6.1	I	7	K=√H	1	F.
22.4	12.2	I	6	H	1	—
22.8	22.1	I	6	H	2	F.
22.5	22.4	I	4	K=H	1	—
21.0	13.1	I	5	K=H	1	—
21.2	19.5	I	7	H	2	F.
21.6	20.6	I	4	K=H	1	—
21.0	7.3	I	4	H	1	—

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	No.	R. A.	Dec.	Mag.					Mean 4
6 20+84.8	135	6 20.9	+84 48	8.2	–				Bv. 6.5 6.8 9.1 7.9 6.1 ✓
5 20+85.2	81	5 20.4	+85 14	8.0	–				6.7 6.9 (6.8 7.0) 9.4 8.2 6.4
5 17+85.1	80	5 16.0	+85 6	6.0	–				6.7 6.9 27 9.4 8.2 6.3 ✓
3 52+85.2	63	3 52.4	+85 10	6.5	–				6.3 6.7 27 9.6 8.4 6.5
2 58+84.4	59	2 58.8	+84 23	6.0	–				6.3 6.7 27 9.0 7.8 5.9 ✓
4 7+64.8	433	4 7.1	+64 47	6.0	–				5.8 27 8.5 7.3 5.4 ✓
7 41+84.5	169	7 41.6	+84 28	6.0	1485 6.5 18+6				5.4 5.8 7.9 2.5 8.3 6.7 7.1 5.0 5.4 ✓
4 55+85.5	78	4 55.1	+85 32	7.0	.				6.2 9 7.1 5.9 5.8 ✓
4 50+75.5	208	4 50.5	+75 29	7.3	.				5.8 25 8.3 7.1 5.4 ✓
4 39+85.8	74	4 41.0	+85 45	6.0	–				5.6 28 8.4 7.2 5.2 ✓
4 29+75.7	189	4 29.4	+75 40	6.0	–				6.6 15 8.1 6.9 6.2 ✓
7 33+84.8	168	7 33.6	+84 47	7.8	.				5.9 28 8.7 7.5 5.5 ✓
4 54+76.3	190	4 54.3	+76 17	6.7	.				6.0 15 7.5 6.3 5.6 ✓
4 30+86.0	66	4 30.2	+86 4	8.0	.				6.5 26 9.1 7.9 6.1 ✓
4 39+66.1	358	4 39.6	+66 4	5.0					~~6.1 16 7.7 6.5~~
3 18+86.2	51	3 19.3	+86 11	6.0	–				6.7 29 9.6 8.4 6.3 ✓
4 2+75.7	173	4 2.4	+75 45	6.8	.				4.8 10 5.8 4.6 4.4 ✓
2 16+85.2	45	2 14.2	+85 10	8.6	–				~~5.9 29 8.8 7.4~~
									6.5 15 8.0 6.8 6.1 ✓
									~~6.7 27 9.4 8.2~~

105 / 9 = 13-16/9

Mean 7

6 11+70.6	401	6 11.7	+70 38	6.0	–				~~6.4 12 7.6 6.4~~
5 35+71.2	324	5 35.4	+71 15	6.7	..				6.7 12 7.9 6.7 6.0 ✓
4 34+70.7	322	4 34.4	+70 40	6.3	..				~~6.4 12 7.6 6.4~~
4 48+60.9	853	4 48.6	+60 31	7.0	–				~~6.8 8 7.6 6.4~~
5 27+61.9	866	5 27.1	+61 32	6.8	–				6.9 8 7.7 6.5 6.2 ✓
4 59+61.7	766	4 59.8	+61 40	6.7	.				6.5 8 7.3 6.1 5.8 ✓
4 43+71.3	~~285~~ 282	~~4 43.8~~ 4 42.8	~~+71 14~~ +71 23	~~8.5~~ 8.0	–				7.1 12 8.3 7.1 6.4 ✓
5 44+57.8	1128	5 44.8	+57 43	7.0	.				7.0 5 7.5 6.3 6.3 ✓

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V	H	Type	No. lines	K	Focus	Other lines.
19,5	10,3	I?	4	K=H	1	—
19,3	11,3	I	8	K=.2H	2	F
19,1	15,1	I	5	N	1	F
19,1	15,5	III III	1 2	N K=H	1 1	F F?
19,9	17,8	III	1	N	1	F
19,7	18,3	I	5	N	1	—
19,6	19,3	I	7	K=H	1	F
19,9	20,3	I	6	K=H	1	F
18,2	12,1	III III	1 2	N K=H	1 1	F —
18,2	14,3	I I	3 4	N K=H	1 1	— —
18,2	16,1	I I	4 4	N N	1 1	— —
18,7	17,4	I	8	N	3	F
18,8	19,0	I	5	K=H	1	F
18,7	20,0	I	7	N	1	F
17,8	11,7	~~II~~ ~~III~~ IIa? IIa?	1 2	N K=H	1 1	F F Sem
17,4	14,0	I	6	K=H	2	F
17,5	18,2	I	9	N	4	F
17,1	19,2	I	8	N	2	F
17,8	19,3	III	1	N	1	F
17,9	19,8	I	6	K=.2H	1	F
17,8	21,3	I	3	N	1	—
16,4	6,4	IIa 1682	7	K=H	1	F
16,3	6,9	III	5	K=2,0H	2	F
16,8	11,0	II?	2	K=H	1	—
16,2	10,4	III III	3 2	K=H K=H	1 1	F F?
16,5	13,6	III	1	N	1	F
16,0	13,7	II? 1682a IIa	3 2	K=H K=H	1 1	F F? Sem
16,8	14,1	I	8	N	2	F

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Many

	No.	R.A.	Dec.	Mag.			Br.				
5 48 +72.6	299	5 49.0	+72 37	8.0	–		7.1	1.3	8.4	7.2	6.4
5 35 +62.8	784	5 35.4	+62 44	6.5	–		6.3	.8	7.1	5.9	5.6
5 19 +53.0	915	5 19.0	+53 2	7.7	.		7.0	.6	7.6	6.4	6.3
5 16 +62.9	759	5 16.3	+62 56	6.0	–		6.8 / 7.2	6.8 / 7.3	7.7 / 8.1	6.5 / 6.9	6.1 / 6.5
5 6 +62.5	742	5 6.8	+62 30	6.0	–		6.9 / 7.2	.8	7.7 / 8.0	6.5 / 6.8	6.2 / 6.5
4 55 +72.6	258	4 55.0	+72 33	7.9	.		6.7	1.3	8.0	6.8	6.0
5 0 +62.5	734	5 0.1	+62 30	6.7	–		6.6	.8	7.4	6.2	5.9
4 56 +62.2	730	4 56.3	+62 17	7.0	–		6.8	.8	7.6	6.4	6.1
5 32 +63.2	602	5 32.1	+63 13	7.3	–		6.9 / 7.1	6.9 / 7.3	7.8 / 8.0	6.6 / 6.8	6.2 / 6.4
5 22 +63.3	592	5 22.2	+63 23	8.0	.		7.1	7.2	8.8	7.9	6.7
5 15 +53.4	906	5 15.7	+53 28	8.1	.		7.0	7.1	7.6	7.6	6.4
5 1 +73.1	280	5 0.4	+73 6	5.8	918 5.7 14+2		5.8	1.3	7.1	5.9	5.1
5 1 +62.9	735	5 1.0	+62 55	7.5	–		6.9	.9	7.8	6.6	6.2
5 3 +53.0	872	5 3.1	+53 2	6.5	921 6.2 10-2		6.6	.6	7.2	6.0	5.9
5 33 +63.5	604	5 33.6	+63 32	7.4			6.9 / 7.1	7.1	7.8 / 8.0	6.6 / 6.8	6.2 / 6.4
5 24 +73.9	298	5 24.4	+73 54	6.8	–		6.6	1.4	8.0	6.8	5.9
4 54 +73.8	274	4 54.2	+73 45	5.5	890 5.5 13+1		5.4	1.4	6.8	5.6	4.7
4 46 +73.8	265	4 46.4	+73 49	6.3	864 6.0 13+1		5.9	1.4	7.3	6.1	5.2
4 48 +73.5	264	4 46.2	+73 33	6.3	–		6.9 / 7.2	1.4	8.3 / 8.6	7.1 / 7.4	6.2 / 6.5
4 57 +63.4	566	4 57.6	+63 23	7.0	–		6.7	.9	7.6	6.4	6.0
4 58 +53.5	944	5 5.3	+53 38	8.0			7.1	.6	7.7	6.5	6.4
6 19 +73.8	341	6 19.6	+73 47	6.0	–		6.5 / 5.6 / 5.8	1.4 / .6	7.9 / 6.2 / 6.4	6.7 / 5.0 / 5.2	5.8 / 4.9 / 5.1
5 47 +54.3	970	5 47.6	+54 15	4.0	–		7.0	1.4	8.4	7.2	6.3
5 46 +74.0	311	5 46.6	+73 60	7.3	–		7.0 / 7.3	7.0 / 7.6	7.6 / 7.9	6.4 / 6.7	6.3 / 6.6
5 35 +54.5	942	5 35.7	+54 24	6.5	–		7.0 / 7.3	.6	7.6 / 7.9	6.4 / 6.7	6.3 / 6.6
5 24 +54.3	914	5 24.7	+54 18	6.0	–		6.9 / 7.2	6.9 / 1.4	8.3 / 8.6	7.1 / 7.4	6.2 / 6.5
5 27 +74.6	257	5 27.4	+74 32	7.2	–		5.9	.9	6.8	5.6	5.2
5 23 +64.0	536	5 23.8	+64 3	6.7							

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Plate 1069.

V	H	Type	No. lines	K	Focus	Other lines.
16,0	14,9	II a	2	K=H	K=H 1 1	— —
16,6	14,9	I	7	K=.8H	1	F.
16,2	17,4	I	6	H	1	F.
16,5	19,5	III	1	H	1	F.
15,4	11,5	I	6	H	1	F.
15,3	14,5	III	3	K=H	1	F.
15,0	14,6	II a?	683 3	2	K=H K=H	1 1 F. seen
15,3	19,9	II a	684 3		K=H	1 F. seen.
14,8	9,0	II a	684a 3	2	K=H K=H	1 1 F. seen
? 14,1	7,1	I d?	V	?		1 F. seen.
14,9	14,1	I	3	H	H K=H	1 1 — —
14,9	16,8	II? a	2	2	K=H K=H	1 1 — ~~seen~~
13,0	6,9	III	3	K=H		1 F.
? 13,5	7,7	I?	4	?		1 F. seen.
13,6	8,5	I	8	H		3 F.
13,6	9,2	I	7	K=.2H		2 F.
13,0	10,9	I	8	K=.2H		2 F.
13,5	11,4	II a	684b 3	2	K=H K=H	1 1 F. H? seen
13,8	11,5	III	3	K=H		1 F.
13,8	13,1	III	3	K=H		2 F.
13,7	13,4	III	2	K=H		1 —
13,4	17,2	I?	I 3	3	H H	1 1 — —
13,9	18,2	I	8	K=.2H		2 F.
13,6	20,3	III?	3	K=H		1 F.
13,1	20,7	I	9	K=.2H		3 F.
12,0	6,5	I	3	H		1 —
12,4	7,0	I?	I. 4	4'	H K=H	1 1 — —
12,5	7,5	II?	I! 2	2	K=H K=H	1 1 — —

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Many

	No.	R.A.	Dec.	Mag.								
5 18 +74.6	250	5	18.5	+74	35	7.5	–					
5 18 +74.2	249	5	18.2	+74	12	7.5	–					
5 58 +74.4	238	4	58.8	+74	21	7.2	.					
5 43 +74.0	229	4	44.0	+74	3	6.1	–					
5 32 +54.8	932	5	32.0	+54	46	7.0	.					
5 20 +74.9	534	5	20.6	+74	56	7.7						
	~~260~~	~~5~~	~~20.4~~	~~+74~~	~~57~~	~~6.5~~	–					
5 20 +74.9	252	5	20.4	+74	57	6.5						
	~~229~~	~~5~~	~~20.9~~	~~+75~~	~~14~~	~~8.0~~	–					
4 55 +64.8	500	4	55.7	+64	43	6.9	–					
5 47 +65.0	509	5	47.7	+65	2	7.3	–					
5 47 +55.2	1036	5	47.7	+55	18	6.5						
5 23 +65.0	482	5	23.2	+65	1	8.0	.					
5 2 +75.0	220	5	2.8	+75	0	7.5	–					
5 58 +65.7	517	5	58.3	+65	43	5.7	–					
5 45 +55.6	1032	5	45.3	+55	38	7.1						
5 42 +55.7	1027	5	42.7	+55	40	5.0	1079	5.3	10-2			
5 46 +65.5	507	5	46.8	+65	30	7.0	–					
5 34 +56.0	1058	5	34.3	+56	2	6.1	–					
5 36 +65.7	497	5	36.5	+65	42	7.0	–					
5 45 +75.6	247	5	45.2	+75	34	6.2	–					
5 28 +65.6	485	5	28.0	+65	38	6.0	–					
5 30 +75.7	236	5	30.4	+75	40	7.5	–					
4 58 +75.8	217	4	58.6	+75	46	7.6	.					
4 50 +75.4	208	4	50.5	+75	29	7.3	–					
4 33 +75.4	193	4	33.6	+75	27	7.1	–					
4 29 +75.7	189	4	29.4	+75	40	6.0	–					
6 1 +66.2	435	6	0.9	+66	11	8.0	.					
6 22 +75.8	263	6	22.9	+75	51	8.5	.					
6 18 +75.8	258	6	18.7	+75	49	7.6	–					

7.0	7.2	1.4	8.4	7.2	6.3
6.5	1.4	7.9	6.7		5.8
6.6	1.4	8.0	6.8		5.9
6.6 / 7.0	1.4	8.0 / 8.4	6.8 / 7.2		5.9 / 6.3
6.6	.6	7.2	6.0		5.9
6.6 / 7.0	.9	7.5 / 7.9	6.3 / 6.7		5.9 / 6.3
6.5	6.5 / 1.5	8.0	6.8		5.8
6.6	.9	7.5	6.3		5.9
7.0	7.0 / 7.9	7.9	6.7		6.3
6.7	.6	7.3	6.1		6.0
7.0	7.3 / 7.9	7.9	6.7		6.3
7.0	7.2	1.5	8.5	7.3	6.3
6.5 / 6.8	1.0	7.5 / 7.8	6.3 / 6.6		5.8 / 6.1
7.0	.6	7.6	6.4		6.3
5.7	.6	6.3	5.1		5.0
6.6	1.0	7.6	6.4		5.9
6.3	.6	6.9	5.7		5.6
6.6	6.7 / 1.0	7.6	6.4		5.9
6.6 / 6.9	1.5	8.1 / 8.4	6.9 / 7.2		5.9 / 6.2
6.5 / 6.8	1.0	7.5 / 7.8	6.3 / 6.6		5.8 / 6.1
6.8	1.5	8.3	7.1		6.1
7.1	7.2	1.5	8.6	7.4	6.4
6.3	1.5	7.8	6.6		5.6
6.7 / 6.9	1.5	8.2 / 8.4	7.0 / 7.2		6.0 / 6.2
5.8	1.5	7.3	6.1		5.1
7.0	1.0	8.0	6.8		6.3
7.0	7.3 / 1.5	8.5	7.3		6.3
7.0	7.1 / 1.5	8.5	7.3		6.3

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V	H	Type	No. lines	K	Focus	Other lines.	
12,7	10,1	III	3 2	K=H K=H	1 1	F, F1?	
12,1	11,9	III	3	K=H	1	F.	
? 12,6	13,0	II a	6853	K=H	1	F, em.	
12,8	14,4	I	5.	H	1	—	
12,4	14,5	I	6	K=.5H	1	—	
12,5	17,6	I	8	H	3	F.	
12,2	22,8	I?	9?	H	5	F.	
12,0	24,0	I	7	K=H	2	F.	
11,3	9,9	I	6	H	2	F	
11,2	10,3	III	III? 2 2	K=H K=H	1 1	— —	
11,8	10,7	III	III? 2 2	H K=H	1 1	F, —	
11,3	10,9	I	7	K=.5H	1	F.	
11,9	12,9	III	III 2 3	H K=H	1 1	F, F1	
11,4	13,0	II?	1	H	1	F.	
11,9	14,2	I	8	K=.2H	2	F.	
11,8	14,7	II	II 3 3	K=H K=H	1 1	F, F	
11,9	17,4	III	III 3 2	K=H K=H	1 1	F, F1?	
? 11,9	20,9	II a	686 3	K=H	2	F, em.	
? 11,4	21,0	II a	687 3	K=H	2	F, em.	
11,8	21,5	II	? 3	K=H	1	F.	
10,8	7,4	III	3	K=H	1	F.	
10,8	9,7	I	7	K=.2H	1	F.	
10,6	12,8	II	II? 2 2	K=H K=H	1 1	— —	
10,3	14,7	I	. 5	H	1	F.	
10,9	14,9	II	? 3	K=H	1	F.	
10,4	17,2	I	. 9	H	3	F.	
10,3	18,7	I	. 7	H	1	F.	
9,4	6,0	III	b? 6883	K=2,0H	2	F.	

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	No.	R.A.	Dec.	Mag.		Mean	
5 42 +66.1	413	5 42.9	+66 4	6.7	–	6.8 7.8 6.6	6.1
5 30 +56.5	1050	5 30.8	+56 31	6.5	–	6.6 7.2 6.0	5.9
5 26 +56.3	1044	5 26.9	+56 16	6.9	–	6.9 .6 7.5 6.3	6.2
5 22 +56.2	1035	5 22.1	+56 9	8.1	.	6.9 .6 7.5 6.3	6.2
5 21 +76.3	206	5 21.3	+76 22	8.3	–	6.8 1.6 8.4 7.2	6.1
4 54 +76.3	190	4 54.3	+76 17	6.7	.	5.6 1.6 7.2 6.0	4.9
4 39 +66.2	358	4 39.6	+66 4	5.0		4.6 1.0 5.6 4.4	3.9
4 2 +75.8	173	4 2.4	+75 45	6.8	–	6.0 1.5 7.5 6.3	5.3
5 38 +56.8	1065	5 38.2	+56 52	6.6	.	6.5 .7 7.2 6.0	5.8
5 58 +76.8	234	5 58.4	+76 52	7.5	–	6.9 6.9 8.5 7.3 / 7.1 7.1 8.7 7.5	6.2 6.4
5 54 +76.5	226	5 54.1	+76 31	7.5	–	6.9 6.9 8.5 7.3 / 7.0 7.0 8.6 7.4	6.2 6.3
5 34 +56.8	1059	5 34.6	+56 51	6.6	–	6.6 .7 7.3 6.1	5.9
5 29 +66.5	406	5 29.1	+66 33	7.8	–	6.9 6.8 7.9 6.7 / 7.2 7.0 8.2 7.0	6.2 6.5
5 34 +76.8	211	5 33.9	+76 49	8.1	–	6.9 1.6 8.5 7.3	6.2
5 22 +66.6	401	5 22.4	+66 36	7.0	–	6.0 1.0 7.0 5.8	5.3
5 19 +76.7	203	5 19.1	+76 40	7.8	–	7.0 7.2 1.6 8.6 7.4	6.3
5 5 +66.6	385	5 5.9	+66 34	6.8	–	6.5 6.6 7.5 6.3 / 6.6 6.8 7.0 7.6 6.4	5.8 5.9
4 26 +76.3	174	4 26.0	+76 19	6.3	–	6.2 1.6 7.8 6.6	5.5
4 46 +66.7	370	4 48.2	+66 37	7.0	–	6.3 1.0 7.3 6.1	5.6
4 20 +76.2	169	4 20.7	+76 14	8.0	–	6.9 1.6 8.5 7.3	6.2
6 23 +76.7	249	6 23.6	+76 43	7.5	–	6.9 7.0 1.6 8.5 8.6 7.3 7.4	6.2 6.3
5 45 +67.0	419	5 45.8	+66 60	7.0	–	6.5 1.0 7.5 6.3	5.8
5 29 +67.2	397	5 29.6	+67 13	8.5	–	7.1 7.3 1.0 8.1 6.9	6.4
5 19 +77.5	201	5 19.6	+77 26	8.3	.	6.8 1.6 8.4 7.2	6.1
5 20 +57.1	889	5 20.2	+57 7	6.6	–	6.8 .7 7.5 6.3	6.1
5 11 +57.4	879	5 11.1	+57 24	5.3	.	5.6 .7 6.3 5.1	4.9
4 59 +67.3	371	4 59.1	+67 17	7.0	.	6.6 1.0 7.6 6.4	5.9
6 38 +77.2	266	6 38.8	+77 9	4.7	–	5.8 7.4 6.2 / 6.2 1.6 7.8 6.6	5.1 5.5

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V	H	Type	No. Lines	K	Focus	Other Lines.
9.2	7.0	I	5	N	1	F.
9.3	15.1	I	6	K=.5H	1	F.?
9.4	15.9	I	9	K=.5H	2	F.
9.2	17.6	I	4	N	1	—
9.1	18.2	I	8	N	2	F.
9.7	18.9	II	3	K=H	1	F.
9.9	19.7	I	4	N	1	—
9.2	21.7	I	6	N	1	F.
8.3	8.6	III	3	K=H	1	F.
8.5	9.0	I	6	N	1	F.
8.2	9.5	I	7	N	2	F.
8.2	11.5	III	3	K=H	1	F.
8.7	15.0	IIa	689 2	K=H	1	—
8.8	15.4	I	6	N	1	F.
8.9	16.0	IIa	690 3	K=H	2	F. Neb
8.7	16.2	III	3	K=H	1	F
8.7	16.7	I	4	K=H	1	—
8.3	23.0	III	3	K=H	1	F.
9.0	23.5	I	5	K=H	1	F.
7.3	9.8	I	8	N	2	F.
? 7.1	16.5	IIa	691 3	K=1.2H	4	F. Neb.
7.3	19.9	I	5	K=H	1	F.
7.0	20.8	I	5	K=H	1	F.
7.4	21.6	I	9	N	3	F.
5.6	6.1	I	5	K=H	1	—
5.8	7.2	I	8	N	4	F.
? 5.1	9.1	IIa	692 3	K=1.2 H	3	F. Neb.
5.4	9.3	I	8	N	3	F.

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	No.	R. A.	Dec.	Mag.			Mean ? Br.				
6 30 +77.4	259	6 30.8	+77 22	7.8	.		6.8	16	8.4	7.2	6.1
5 17 +67.9	390	5 17.8	+67 53	7.0	–		6.6	11	7.7	6.5	5.9
5 7 +77.8	195	5 7.2	+77 50	7.0	–		5.9	17	7.6	6.4	5.2
5 5 +67.9	379	5 4.3	+67 49	7.3	.		6.9	11	8.0	6.8	6.2
5 6 +57.9	874	5 7.0	+57 57	6.5	.		6.4	17	8.1	6.9	5.7
4 39 +77.5	178	4 39.4	+77 31	7.5	–		6.9	17	8.6	7.4	6.2
4 32 +77.3	172	4 32.7	+77 18	7.8	.		6.8	16	8.4	7.2	6.1
4 43 +67.5	357	4 42.7	+67 33	7.0	.		6.6	10	7.6	6.4	5.9
6 18 +78.1	227	6 18.0	+78 7	6.0	–		6.4 / 6.8	17	8.1 / 8.5	6.9 / 7.3	5.7 / 6.1
6 14 +78.0	247	6 14.2	+77 60	7.3	.		6.5	17	8.2	7.0	5.8
6 11 +78.2	226	6 10.3	+78 17	7.3	.		6.3	17	8.0	6.8	5.6
5 37 +68.4	412	5 37.4	+68 25	6.2	–		6.6 / 6.8	11	7.7 / 7.9	6.5 / 6.7	5.9 / 6.1
5 15 +78.2	193	5 15.1	+78 15	7.7	–		6.8	17	8.5	7.3	6.1
5 11 +78.2	190	5 11.4	+78 12	7.7	.		6.5	17	8.2	7.0	5.8
5 6 +78.1	187	5 6.1	+78 8	7.0	–		6.4	17	8.1	6.9	5.7
5 3 +78.2	183	5 3.1	+78 16	6.8	–		6.4 / 6.7	17	8.1 / 8.4	6.9 / 7.2	5.7 / 6.0
4 58 +78.2	180	4 58.2	+78 11	8.0	–		6.8	17	8.5	7.3	6.1
3 59 +77.8	156	3 59.3	+77 42	7.0	–		6.6 / 6.8	17	8.3 / 8.5	7.1 / 7.3	5.9 / 6.1
4 33 +67.5	347	4 33.3	+67 29	7.3	–		6.6	10	7.6	6.4	5.9
5 39 +58.9	863	5 39.6	+58 54	6.3	.		6.3	7	7.0	5.8	5.6
4 59 +79.0	169	4 58.8	+79 3	5.2	–		5.3	18	7.1	5.9	4.6
4 50 +68.8	361	4 50.6	+68 46	6.3	–		6.6	11	7.7	6.5	5.9
4 15 +78.7	157	4 15.3	+78 41	7.5	–		6.5	18	8.3	7.1	5.8
4 53 +58.7 *	805	4 53.6	+58 49	6.0							
	804	4 53.6	+58 45	6.0	885 5.1 12 +0		5.6	7	6.3	5.1	4.9
6 50 +78.9	240	6 50.7	+78 59	6.7	–		6.5	18	8.3	7.1	5.8
6 2 +69.3	371	6 2.8	+69 22	4.7	1155 4.7 12 +0		4.8	11	5.9	4.7	4.1
6 21 +79.7	212	6 21.4	+79 42	5.5	–		5.6	19	7.5	6.3	4.9
5 42 +59.8	920	5 42.0	+59 50	5.7	1078 5.2 12 +0		5.7	7	6.4	5.2	5.0

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

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	V	H	Type	No. Lines	K	Focus	Other Lines.
	5,3	9,7	I	6	H	2	F.
?	5,8	10,8	IIa 693	3	K=H	1	F. anc.
	5,8	15,5	I	8	K=.2H	2	F.
	5,9	19,9	I	8	H	2	F.
	6,1	9,4	I	4	K=H	1	—
	6,6	10,0	III	1	H	1	F.
	6,3	11,6	I	4	H	1	—
2	6,0	19,2	III III'	3 2	K=H K=H 1		F. F?
	6,6	19,3	III	1	H	1	F.
	6,2	23,1	III	3	K=H	1	F.
	6,3	23,5	IIa? 694	6	K=H	1	F.
	4,2	11,7	I?	3	H	1	—
	4,0	12,7	I	5	K=.8H	1	—
	4,6	14,3	I	8	H	1	F.
	4,9	15,6	I	5	H	1	—
	4,9	16,2	I	7	K=.5H	1	F.
	4,4	22,1	IIIa? 695	3	K=1,5H	3	F.
	4,5	23,2	I	3	H	1	—
	3,1	18,2	IIIa. 696	3	K=H	2	F.
	3,3	20,1	I	4	K=H	1	—
	3,1	20,6	I	5	H	1	—
	3,3	20,9	IIIb 697	3	K=H	2	F.
	3,6	21,8	III	3	K=H	1	F.
	3,0	22,0	I	6	H	1	—
	3,1	22,3	I?	7	K=H	3	F.
	3,0	22,4	I?	3	H	1	—
	2,9	6,1	I	6	K=H	1	F.
	2,5	12,2	I	5	H	1	—

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Mean γ

	No.	R.A.	Dec.	Mag.			Br.				
6 15 +79.7	208	6 15.4	+79 41	6.3	1209	6.3 16+4	6.0	19	7.9	6.7	5.3
5 42 +69.6	350	5 42.8	+69 34	7.3			6.9	11	8.0	6.8	6.2
5 9 +79.7	173	5 9.0	+79 43	7.7			6.4	19	8.3	7.1	5.7
4 21 +79.4	130	4 21.7	+79 21	7.0			6.0	18	7.8	6.6	5.3
6 15 +79.2	209	6 15.8	+79 14	8.0			6.9	18	8.7	7.5	6.2
6 9 +79.1	202	6 9.2	+79 4	7.0			6.8 / 7.0	1.8	8.6 / 8.8	7.4 / 7.6	6.1 / 6.3
5 53 +79.3	196	5 53.0	+79 21	7.8			6.8	1.8	8.6	7.4	6.1
4 30 +79.4	155	4 30.5	+79 24	8.4			6.9 / 7.1	6.9 / 7.3 1.8	8.7 / 8.9	7.5 / 7.7	6.2 / 6.4
5 2 +59.2	857	5 2.3	+59 12	6.5			6.9 / 7.2	.7	7.6 / 7.9	6.4 / 6.7	6.2 / 6.5
3 50 +78.6	146	3 50.6	+78 38	7.2			6.6 / 7.0	1.8	8.4 / 8.8	7.2 / 7.6	5.9 / 6.3
3 47 +78.5	142	3 47.8	+78 32	8.0			6.5	1.8	8.3	7.1	5.8
5 54 +80.4	202	5 54.0	+80 24	7.8			6.7	19	8.6	7.4	6.0
5 28 +60.6	894	5 28.5	+60 32	7.0			6.9	.8	7.7	6.5	6.2
5 23 +70.2	362	5 22.4	+70 16	7.0			6.4	1.2	7.6	6.4	5.7
5 16 +60.1	884	5 16.9	+60 8	7.0			6.6	.8	7.4	6.2	5.9
5 10 +70.1	351	5 10.6	+70 6	6.7			6.5	1.2	7.7	6.5	5.8
4 50 +60.3	856	4 50.6	+60 13	5.0			5.3 / 5.6	.8	6.1 / 6.4	4.9 / 5.2	4.6 / 4.9
3 43 +79.4	125	3 43.7	+79 22	8.3			6.8	18	8.6	7.4	6.1
4 33 +80.9	155	4 33.4	+80 56	5.5			5.8 / 6.3	2.0	7.8 / 8.3	6.6 / 7.1	5.1 / 5.6
4 10 +80.6	140	4 11.4	+80 33	7.4			6.6	2.0	8.6	7.4	5.9
4 4 +80.6	134	4 4.2	+80 35	7.4			6.3	2.0	8.3	7.1	5.6
4 2 +80.5	133	4 2.0	+80 28	5.7			5.8 / 6.3	2.0	7.8 / 8.3	6.6 / 7.1	5.1 / 5.6
3 54 +80.2	127	3 53.8	+80 9	6.8			6.5 / 6.7	1.9	8.4 / 8.6	7.2 / 7.4	5.8 / 6.0
4 34 +70.7	322	4 34.4	+70 40	6.3			6.3	1.2	7.5	6.3	5.6
3 45 +80.3	125	3 46.0	+80 18	4.9			5.3	1.9	7.2	6.0	4.6
4 48 +60.8	853	4 48.6	+60 51	7.0			6.7	.8	7.5	6.3	6.0
6 11 +70.6	401	6 11.7	+70 38	6.0			6.3	1.2	7.5	6.3	5.6
5 35 +71.2	324	5 35.4	+71 15	6.7			6.6	1.2	7.8	6.6	

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Plate 1035.

V	H	Type	No. lines	K	Focus	Other lines.
22,6	6,3	I	v	N	1	—
22,3	14,0	II	2	K=H	1	—
22,3	21,3	I dr?	v	K=,vH	1	—
22,5	22,7	I	6	K=H	1	—
21,5	6,0	I I	v 3	N N	1 1	— —
21,3	7,6	II a	698 2	K=H	1	—
21,8	10,3	I	7	N	2	F.
21,1	21,8	I	7	K=,2H	2	F.
21,3	22,2	III	1	N	1	F.
20,3	7,3	I	6	N	2	F.
III ? 5.7, 6.1. ?	20,0	9,9	III b	699 3	K=H	3 F, neu.
20,6	16,9	I	4	N	1	—
20,7	20,1	I	v	N	1	—
20,7	21,1	I	4	N	1	—
21,0	21,6	I	6	K=H	1	—
19,4	9,4	I I	3 3	N N	1 1	— —
19,7	10,9	I	v	N	1	—
19,5	18,5	I	v	N	1	F.
18,8	7,5	I	7	N	3	F.
18,0	9,5	III	3	K=H	1	F.
18,2	11,2	II	2 2	K=H K=H	1	—
III ? 6.4, 6.8.	18,5	12,4	III b	700 3	K=H	1 F.
18,6	12,8	I	7	K=,2H	1	F.
18,3	13,2	I	7	N	2	F.
18,0	13,7	I I	3 3	N N	1 1	— —
18,5	19,7	I	8	K=,2H	2	F.
18,4	22,1	II a	701 3	K=H	1	F. neu.
18,3	22,7	II	3	K=H	1	F.

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Means

	No.	R.A.	Dec.	Mag.			Br.
7 2 +75.3	296	7 2.8	+75	20	7.0	.	6.7 1.5 8.2 7.0
6 1 +66.2	435	6 0.9	+66	11	8.0	–	6.9 1.0 7.9 6.4 6.1
5 34 +56.0	1058	5 34.3	+56	8	6.1	–	6.6 .6 7.2 5.7 5.8
4 50 +75.4	208	4 50.5	+75	29	7.3	–	6.6 1.5 8.1 6.6
6 28 +56.2	1140	6 28.8	+56	12	7.5	.	6.8 7.0 .6 7.4 5.9 6.0
6 23 +56.5	1134	6 23.8	+56	29	6.8	–	6.8 .6 7.4 5.9 6.0
6 14 +56.3	1125	6 14.2	+56	20	6.2	1198 5.4 16+2	6.4 .6 7.0 5.5 5.6
4 54 +76.3	190	4 54.3	+76	17	6.7	–	6.3 1.6 7.9 6.4 5.5
5 30 +56.5	1050	5 30.8	+56	31	6.5	–	6.9 7.5 6.0 6.1 / 7.1 .6 7.7 6.2 6.3
6 25 +57.0	1136	6 25.3	+56	59	6.2	1237 5.8 14+0	6.5 .7 7.2 5.7 5.7
6 38 +77.2	266	6 38.8	+77	9	4.7	–	5.8 7.4 5.9 5.0 / 6.3 1.6 7.9 6.4 5.5
5 45 +67.0	419	5 45.8	+66	60	7.0	.	6.7 1.0 7.7 6.2 5.9
5 38 +56.9	1065	5 38.2	+56	52	6.6	.	6.6 .7 7.3 5.8 5.8
5 34 +56.8	1059	5 34.6	+56	51	6.6	.	6.8 .7 7.5 6.0 6.0
5 22 +66.6	401	5 22.4	+66	36	7.0	–	6.4 1.0 7.4 5.9 5.6
6 25 +67.4	441	6 25.1	+67	26	7.9	.	7.0 7.2 1.1 8.1 6.6 6.2
6 30 +77.4	259	6 30.8	+77	22	7.8	.	6.7 1.7 8.4 6.9 5.9
5 20 +77.5	201	5 19.6	+77	26	8.3	.	6.8 1.7 8.5 7.0 6.0
6 36 +67.7	434	6 35.8	+67	44	5.2	1270 4.9 14+0	5.2 1.1 6.3 4.8 4.4
6 18 +58.2	932	6 18.2	+58	16	6.3	–	6.5 8.2 6.7 5.7 / 6.6 1.7 8.3 6.8 5.8
6 30 +78.2	233	6 31.2	+78	14	7.8	–	6.8 6.8 1.7 8.5 7.0 6.0
6 18 +78.1	227	6 18.0	+78	7	6.0	–	6.3 8.0 6.5 5.5 / 6.7 1.7 8.4 6.9 5.9
6 14 +78.0	247	6 14.2	+77	60	7.5	–	6.5 1.7 8.2 6.7 5.7
6 10 +78.3	226	6 10.5	+78	17	7.5	–	6.2 1.7 7.9 6.4 5.4
6 3 +68.3	435	6 2.7	+68	21	8.1	.	7.0 7.2 1.1 8.1 6.6 6.2
5 7 +77.9	195	5 7.2	+77	50	7.0	–	6.0 1.7 7.7 6.2 5.2
5 17 +67.9	390	5 17.8	+67	53	7.0	–	6.8 1.2 8.0 6.5 6.0
4 39 +77.5	178	4 39.4	+77	31	7.5	–	7.1 1.7 8.8 7.3 6.3

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Plate 1035.

	V	H	Type	No. Lines	K	Focus	After Lines.
	17.1	7.8	I	6	H	1	F.
?	17.9	8.0	II[a]	7023	K=H	1	F, sm.
	17.8	10.6	III	3	K=H	1	F.
	17.3	10.8	II[a]	7032	K=H	K=H 1 1	F, sm.
	17.7	10.9	II	1 2	H	K=H 1 1	— —
	17.0	13.1	I	4	H	K=H 1 1	— —
	17.4	13.5	II?	3	K=H	1	F
III 6.3, 6.7.	17.0	15.0	III	3	K=H	K=H 2 1	F. F
	17.7	18.3	III?	3	K=H	1	F.
	17.8	18.7	II	2	K=H	1	—
	17.9	19.1	I	6	H	1	—
	17.9	19.7	I	7	K=H	2	—
	17.7	19.9	III	1	H	1	F.
	16.1	7.4	I	9	H	3	F.
	16.8	8.1	III	1	H	1	F.
	16.3	9.5	I	8	K=.8H	2	F.
	16.0	11.9	I	6	H	2	F.
	16.7	12.5	I	10	H	4	F.
	16.3	12.8	I	4	K=H	1	—
	16.7	13.4	III ~~III~~	3 ~~2~~	K=H	~~K=H~~ 1 1	F. —
	16.1	13.8	I	10	H	4	F.
	16.0	15.0	I	4	H	1	—
	16.0	16.2	III	III 3	2	K=H	K=H 1 1 F. —
	16.8	19.5	I	8	H	2	F.
?	16.0	20.0	~~III~~ II[a]	7047	K=1.5H	4	F. sm.
	15.0	15.8	I	8	K=.5H	3	F.
	15.7	7.7	II[a]	7053	K=H	1	F.
	15.0	8.4	I	6	H	1	F.

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		No.	R.A.	Dec.	Mag.					Means Br.
7 4	+78.2	251	7 4.2	+78 19	7.0	.				6.5 1.7 8.2 6.7 5.7
7 0	+78.2	246	7 0.9	+78 10	7.0	–				6.9 1.7 8.6 7.1 6.1
6 14	+58.5	927	6 14.2	+58 30	6.0	–				6.5 7.2 5.7 5.7 / 6.9 .7 7.6 6.1 6.1
6 13	+58.8	923	6 13.8	+58 48	8.0	–				6.8 6.7 .7 7.5 6.0 6.0
6 12	+58.5	922	6 12.0	+58 30	7.6	–				7.1 6.9 .7 7.8 6.3 6.3
6 4	+58.8	912	6 4.8	+58 32	7.6	.				7.0 6.9 .7 7.7 6.2 6.2
6 3	+68.7	1136	6 3.9	+68 43	7.2	–				6.7 1.1 7.8 6.3 5.9
5 57	+58.9	897	5 57.2	+58 35	6.8	–				6.4 6.2 7.1 5.6 5.6 / 6.6 6.5 7.3 5.8 5.8
5 37	+68.4	1112	5 37.4	+68 25	6.2	–				6.5 7.6 6.1 5.7 / 6.6 1.1 7.7 6.2 5.8
5 15	+78.2	193	5 15.1	+78 15	7.7	–				6.9 1.7 8.6 7.1 6.1
5 11	+78.2	190	5 11.4	+78 12	7.7	–				6.6 1.7 8.3 6.8 5.8
5 6	+78.1	187	5 6.1	+78 8	7.0	–				6.3 1.7 8.0 6.5 5.5
5 3	+78.2	183	5 3.4	+78 16	6.8	–				6.7 1.7 8.4 6.9 5.9 / 7.0 8.7 7.2 6.2
38	69.0	394	38.0	+69 3	5.2	1279 5.1 8 – 6				
6 36	+67.7	~~1154~~	~~6 35.8~~	~~+67 44~~	~~5.0~~	~~1256 4.9 10 – 5~~				4.9 1.0 5.9 4.4 4.1
7 3	+78.6	250	7 3.2	+78 31	6.5	–				6.6 8.7 7.2 6.1 / 7.2 1.8 9.0 7.5 6.4
6 50	+79.0	240	6 50.7	+78 59	6.7	–				6.3 1.8 8.1 6.6 5.5
6 9	+59.4	964	6 9.2	+59 23	7.0	.				6.4 .7 7.1 5.6 5.6
6 6	+59.0	959	6 6.8	+59 3	5.0	1168 4.3 15 7.8 1				5.1 .7 5.8 4.3 4.3
6 15	+79.3	209	6 15.8	+79 14	8.0	–				7.0 1.8 8.8 7.3 6.2
6 9	79.1	202	6 9.2	+79 4	7.0					6.5 6.5 7.2 5.7 5.7 / 6.8 6.8 7.5 6.0 6.0
6 8	+59.2	~~193~~	~~6 8.2~~	~~+59 15~~	~~6.8~~	–				
6 3	+69.3	371	6 2.8	+69 22	7.7	1155 4.7 11.7 3				4.7 1.1 5.8 4.3 3.9
5 52	+79.3	196	5 53.0	+79 21	7.8	.				6.9 1.8 8.7 7.7 6.1
5 52	+59.4	937	5 52.3	+59 23	6.7	–				6.8 6.9 7.5 6.0 6.0 / 7.1 7.1 7.8 6.3 6.9
5 39	+58.9	863	5 39.6	+58 34	6.5	.				6.3 .7 7.0 5.5 5.5
4 58	+79.1	169	4 58.8	+79 3	5.2	–				5.3 1.8 7.1 5.6 4.5
6 33	+59.7	1015	6 33.4	+59 34	5.0	–				5.8 .7 6.5 5.0 5.0
7 10	+78.9	254	7 10.4	+78 61	6.8	–				6.9 1.8 8.7 7.2 6.1
6 23	+59.8	996	6 23.5	+59 46	7.0					6.7 .7 7.4 5.9 5.9

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Plate 183 ✓.

	V	H	Type	No. Lines	K	Focus	Other Lines.
	15.2	11.4	II	2	K=H	1	—
?	15.4	12.4	II @ 706	3	K=1.2 H	3	F, diff.
	15.4	12.9	I	8	Jl	2	F.
	15.7	13.6	II	2	K=H	1	—
	15.6	13.7	I	7	K=H	1	—
✓	15.7	14.1	I I	5 4	K=.5 H K=H	1 1	— —
	15.6	17.3	I	5	Jl	1	F.
	15.0	18.7	I	8	Jl	3	F.
	14.3	6.4	III	3	K=H	1	F.
✓	14.9	8.8	I? I	3 4	Jl Jl	1 1	— —
	14.1	10.0	I	7	Jl	1	F.
	14.0	12.6	III	3	K=H	1	F.
III ? 6.4, 6.8.	14.8	13.6	III	3	K=H	1	F.
	14.0	14.8	II	3	K=H	1	F.
✓	14.1	17.7	II a ? 707	3 2	K=H K=H	1 1	F, diff. F?
✓	14.6	20.4	III III	1 2	Jl K=H	1 1	F F?
	14.4	23.1	I	7	K=1.2 H	2	F.
	13.0	15.6	I	9	K=1.2 H	4	F.
✓	13.5	7.4	I I	3 4	Jl K=H	1 1	— —
	13.4	10.9	I?	4	K=K	1	—
✓	13.1	12.1	I I	3 3	Jl Jl	1 1	— —
	13.6	12.3	I	9	K=1.2 H	3	F.
	13.5	13.6	III	3	K=H	1	F.
	13.6	17.1	I	4	Jl	1	—
✓	13.2	19.0	I I	3 4	Jl K=H	1 1	— —
	13.9	20.6	I	6	Jl	2	F.
?	13.3	22.0	II @ 706	2	K=H	1	diff.
1.5	13.9	22.6	I	6	Jl	1	F.

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Mean 6

	No.	R.A.	Dec.	Mag.				Br.				
6 11 +59.8	968	6 11.6	+59	47	7.5	–		7.0	7	7.7	6.2	6.2
6 21 +79.7	212	6 21.4	+79	42	5.5	–		5.5	19	7.4	5.9	4.7
6 15 +79.7	208	6 15.4	+79	41	6.3	1209	6.3 16+2	6.0	19	7.9	6.4	5.2
6 8 +79.6	201	6 8.2	+79	34	7.3	–		7.0	19	8.9	7.4	6.2
6 3 +69.6	373	6 3.5	+69	36	6.8	–		6.7	11	7.8	6.3	5.9
6 1 +69.5	368	6 1.0	+69	30	7.0	–		6.9 6.8	11	8.0	6.5	6.1
5 42 +69.6	350	5 42.0	+69	34	7.3	.		6.6	11	7.7	6.2	5.8
5 42 +59.8	920	5 42.0	+59	50	5.7	1078	5.2 10-5 4	5.5	7	6.2	4.7	4.7
6 45 +69.8	398	6 43.8	+69	30	6.8	–		6.9 7.1	12	8.1 8.3	6.6 6.8	6.1 6.3
6 31 +69.8	389	6 31.4	+69	46	7.7	.		7.0 6.9	12	8.2	5.7	6.2
6 17 +60.3	971	6 17.4	+60	14	7.2	.		6.5	8	7.3	5.8	5.7
6 21 +80.4	217	6 20.9	+80	22	7.3	–		6.7 7.0	19	8.6 8.9	7.1 7.4	5.9 6.2
6 3 +60.0	938	6 2.7	+60	2	5.8	–		6.4 6.7	8	7.2 7.5	5.7 6.0	5.6 5.9
5 53 +80.4	202	5 54.0	+80	24	7.8	–		6.6	19	8.5	7.0	5.8
5 45 +60.3	915	5 45.7	+60	21	7.1	–		6.9 6.6	8	7.7	6.2	6.1
5 24 +69.9	339	5 24.0	+69	53	7.1	–		6.9 (6.8) 7.1 (7.2)		8.1 8.3	6.6 6.8	6.1 6.3
4 22 +79.3	150	4 21.7	+79	21	7.0	–		6.9	18	7.7	6.2	5.1
7 42 +79.8	265	7 41.9	+79	52	5.8	–		5.3	19	7.2	5.7	4.5
6 41 +70.2	427	6 41.2	+70	16	8.0	.		7.0 6.9	12	8.2	6.7	6.2
6 20 +70.6	406	6 20.4	+70	36	7.2	–		6.9	12	8.1	6.6	6.1
6 8 +60.8	951	6 8.9	+60	30	7.0	.		7.0 6.9	8	7.8	6.3	6.2
6 11 +70.6	401	6 11.7	+70	38	6.0	–		6.0	12	7.2	5.7	5.2
6 8 +80.7	218	6 8.6	+80	39	7.2	–		6.9 7.2	2.0	8.9 9.2	7.4 7.7	6.1 6.4
5 25 +80.5	181	5 25.4	+80	32	7.9	.		6.6	2.0	8.6	7.1	5.8
5 30 +70.7	368	5 30.8	+70	45	8.0	.		6.9 6.8	12	8.1	6.6	6.1
5 22 +70.3	362	5 22.4	+70	16	7.0	.		6.3	12	7.5	6.0	5.5
5 28 +60.5	894	5 28.5	+60	32	7.0	–		6.6	8	7.6	6.1	6.0
5 10 +70.1	351	5 10.6	+70	6	6.7	.		6.7	12	7.9	6.4	5.9

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Plate 1035.

	V	H	Type	Lines	K	Focus	Other Lines.
9.20 G.M.	12,6	6,4	III	1	N	1	F.
	12,1	7,0	III	3	K=2.0H?	2	F.
	12,5	9,8	III	3	K=H	1	F.
	12,9	10,8	I	1	N	1	—
	12,2	16,6	III III	3 2	K=H K=H	1 1	F. —
	12,3	18,2	I	8	K=.2H	2	F.
	11,3	8,3	~~I~~ II a	7.9	1	K=H	1 —
	11,4	8,5	~~V~~ III	3	K=H	1	F.
	11,7	9,2	III	3	K=H	2	F.
	11,4	10,2	I	10	N	4	F.
	11,0	10,6	III	3	K=H	1	F.
	11,1	12,3	III III	?1	2	N K=H	1 1 — F?
	11,8	13,2	III III	3	2	K=H K=H	1 2 F. F?
	11,2	16,7	I I	3	3	N N	1 1 — —
	11,4	19,8	II II	2	2	K=H K=H	1 1 — —
	11,3	20,4	III	3		K=H	1 F.
	11,9	20,9	III b.c.	7.10	3	K=H	2 F.
	11,7	21,2	III III	3	2	K=H K=H	1 1 F. F?
	11,8	22,9	I d?	.6		N	2 F.
	11,6	23,4	I	6		N	1 F.
?	11,7	23,7	III b.	7.11	3	K=1.5H	2 F. [illegible]
	10,1	7,1	II	2		K=H	1 —
	10,4	8,0	I	4		N	1 —
	10,5	12,4	I I	4	3	N N	1 1 — —
	10,5	13,5	I	9		K=.2H	3 F.
	10,9	19,1	~~II~~ III	?2	2	K=H K=H	1 1 — —
	10,6	19,2	II II	3	2	K=H K=H	1 1 F. —
	10,3	20,0	I	4		N	1 —

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1887phae..proj...837F

Means

		No.	R.A.	Dec.	Mag.		Pr.				
7	35 +80.3	240	7 33.8	+80 14	6.5	–	6.9 7.1	19	8.8 9.0	7.3 7.5	6.1 6.3 ✓
6	44 36 +71.0	430	6 44.9	+70 60	6.0	–	6.1 6.2	12	7.3 7.4	5.8 5.9	5.3 5.4 ✓
6	57 +80.8	230	6 57.4	+80 52	7.4	–	6.6 6.9	2.0	8.8 8.9	7.3 7.4	6.0 6.1 ✓
6	44 +80.7	227	6 44.8	+80 45	8.6	.	6.7	2.0	8.7	7.2	5.9 ✓
5	29 +81.3	194 ✓	5 29.6	+81 19	8.0 ✓	–	6.8 (6.8) 7.0 (7.0)	2.1	8.9 9.1	7.4 7.6	6.0 6.2 ✓
5	35 +71.2	324	5 35.4	+71 15	6.7	–	6.5	1.2	7.7	6.2	5.7 ✓
6	25 +61.6	896	6 25.4	+61 36	7.3	–	6.7	8	7.5	6.0	5.9 ✓
6	24 +61.6	893	6 24.5	+61 36	6.1	–	6.6 6.7	8	7.4 7.5	5.9 6.0	5.8 ✓ 5.9
7	9 +81.2	252	7 8.0	+81 11	7.0	–	6.4 6.5	2.0	8.4 8.5	6.9 7.0	5.6 5.7 ✓
6	58 +81.5	242	6 57.6	+81 30	6.3	.	5.5	2.1	7.6	6.1	4.7 ✓
6	23 +71.9	359	6 23.4	+71 52	6.0	–	6.5 6.7	1.3	7.8 8.0	6.3 6.5	5.7 ✓ 5.9
6	8 +61.8	878 ✓	6 8.7	+61 49	6.9 ✓	–	7.6 (6.9) 7.2 (7.0)	.8	7.8 8.0	6.3 6.5	6.2 6.4 ✓
6	4 +61.5	869 ✓	6 4.6	+61 32	5.5 ✓	–	6.6 (6.5) 7.0 (6.9)	.8	7.4 7.8	5.9 6.3	5.8 6.2 ✓
5	25 +81.7	192 ✓	5 25.8	+81 43	8.5 ✓		6.8 (6.8)	2.1	8.9	7.4	6.0 ✓
5	24 +71.5	314 ✓	5 24.0	+71 33	8.1 ✓	–	7.0 7.0	1.2	8.2	6.7	6.2 ✓
5	20 +71.6	313	5 20.8	+71 33	6.8	–	6.8 6.9	1.2	8.0 8.1	6.5 6.6	6.0 6.1 ✓
4	33 +80.9	155	4 33.4	+80 56	5.5	–	5.5 6.1	2.0	7.5 8.1	6.0 6.6	4.7 ✓ 5.5
5	31 +61.4	816 ✓	5 30.9	+61 23	6.5 ✓	–	6.9 (6.8) 7.0 (6.9)	.8	7.7 7.8	6.2 6.3	6.1 ✓ 6.2
4	10 +80.6	140	4 11.4	+80 33	7.4	.	6.3	2.0	8.3	6.8	5.5 ✓
4	4 +80.6	134	4 4.2	+80 35	7.4	.	6.2	2.0	8.2	6.7	5.4 ✓
4	2 +80.5	133	4 2.0	+80 28	5.7	–	6.0 6.3	2.0	8.0 8.3	6.5 6.8	5.2 ✓ 5.5
6	46 +71.9	378	6 46.6	+71 57	7.7	–	6.9	1.3	8.2	6.7	6.1 ✓
6	27 +62.0	867	6 27.2	+62 4	7.2	.	6.6	.8	7.4	5.9	5.8 ✓
6	12 +72.1	317 ✓	6 12.4	+72 6	8.2 ✓	.	7.1 7.1	1.3	8.4	6.9	6.3 ✓
6	18 +82.2	177	6 13.8	+82 13	6.7	–	5.9	2.2	8.1	6.6	5.1 ✓
5	28 +71.9	319 ✓	5 28.9	+71 51	8.0 ✓	–	7.0 (7.1) 7.1 (7.2)	1.1 1.3	8.3 8.4	6.8 6.9	6.2 ✓ 6.3
4	47 +82.0	137 ✓ 138	4 47.5 4 47.6	+82 4 +82 3	9.4 9.2	9 ✓ –	7.0 (7.2)	2.2 2.1	9.2 9.1	7.7 7.6	6.2 ✓ 6.2
5	22 +72.1	281	5 22.5	+72 6	8.2	. ✓	6.9	1.3	8.2	6.7	6.1 ✓

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April 11, 1887.

Plate 1035.

V	H	Type	Lines	K	Focus	Other lines.
10,8	20,8	I	3	H	1	—
10,7	22,0	I	7	K=H	1	F.
10,7	23,1	III?	3	K=H	1	F
10,1	23,6	I	4	K=H	1	—
9,8	9,0	I	r	H	1	F.
III 5H, 5.8, 6.8, ?	9,0	10,6	III bc 7/12	3	K=H	3	F. neu.
	9,6	15,9	I?	3	H	1	—
	9,4	16,2	II	3	K=H	1	F.
	9,2	19,9	I	7	H	2	F.
?	9,3	23,1	I d.	6	H	2	F. neu.
?	9,9	23,4	I d?	r	H	1	F. neu.
	8,1	15,9	III III 1, 2	1	H	K=H	1 1	F. F.?
	8,0	19,9	I	8	K=H	2	F.
	7,3	7,5	I	7	K=H	2	F.
?	7,2	11,6	II d 7/13	3	K=H	1	F. neu.
	7,2	17,6	I	7	?	2	F.
	7,3	21,4	III III? 3 3	K=H	K=H 2 3	3	F. F
	7,8	28,9 2	I	7	H	2	F.
	6,9	19,2	II a? 7/14	2	K=H	1	—
	6,4	21,2	I	8	H	4	F.
	6,3	22,3	I	6	H	1	F.
	6,3	23,4	I	8	K=H	3	F.
1 H0	3,6	16,9	I	4	H	1	—

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Means

		No.	R.A.	Dec.	Mag.		Br.				
4	30 +81.3	168	4 31.0	+81 23	8.5	.	6.8	2.1	8.9	7.4	6.0
5	27 +61.9	806	5 27.1	+61 32	6.8	–	6.7	8	7.5	6.0	5.9
5	3 +71.5	299	5 3.8	+71 33	6.8	–	6.7 / 6.9	1.2	7.9 / 8.1	6.4 / 6.6	5.9 / 6.1
3	55 +81.1	149	3 55.2	+81 3	8.3	–	6.8	2.0	8.8	7.3	6.0
7	18 +82.0	213	7 18.8	+82 0	7.5	.	6.6	2.1	8.7	7.2	5.8
7	0 +82.7	201	7 0.3	+82 41	5.5	–	6.0 / 6.4	2.2	8.2 / 8.6	6.7 / 7.1	5.2 / 5.6
5	49 +72.6	299	5 49.0	+72 37	8.0		7.0	1.3	8.3	6.8	6.2
5	30 +82.7	152	5 30.2	+82 42	7.6	–	6.7	2.2	8.9	7.4	5.9
5	35 +62.8	784	5 35.4	+62 44	6.5	.	6.3	.8	7.1	5.6	5.5
3	54 +81.6	147	3 54.8	+81 36	7.3	.	6.4	2.1	8.5	7.0	5.6
3	55 +81.3	150	3 55.7	+81 15	7.9	.	6.6	2.0	8.6	7.1	5.8
5	52 +63.4	630 √	5 52.8	+63 27	6.5 √	–	7.0 / 7.2	2.0 / 2.9	7.9 / 8.1	6.4 / 6.6	6.2 / 6.4
4	26 +82.9	123	4 27.1	+82 56	8.5	–	6.5	2.3	8.8	7.3	5.7
7	√6 +82.9	235	7 56.6	+82 52	6.5	–	6.0	2.2	8.2	6.7	5.2
~~5~~	~~46 +73.6~~	~~360~~	~~6 46.5~~	~~+73 37~~	~~7.5~~	~~–~~					
6	20 +73.8	340	6 19.6	+73 47	6.0	–	6.5	1.4	7.9	6.4	5.7
5	0 +83.7	141	5 0.6	+83 43	7.1		6.0	2.4	8.4	6.9	5.2
3	57 +82.9	113	3 58.5	+82 59	5.0		5.9 / 6.1	~~5.6~~ 5.7	7.3 / 7.5	5.8 / 6.0	5.1 / 5.3
~~5~~	~~6 +73.5~~	~~283~~	~~6 6.8~~	~~+72 33~~	~~6.3~~	~~–~~					
5	0 +73.1	280	5 0.4	+73 6	5.8	918 5.7 17 +2	6.1	1.3	7.4	5.9	5.3
5	24 +73.9	298	5 24.4	+73 34	6.8	–	6.9	1.4	8.3	6.8	6.1
3	55 +83.4	104	3 55.1	+83 26	5.0	684 5.4 23 +8	5.3	2.4	7.7	6.2	4.5
5	23 +64.0	536	5 23.2	+64 3	6.7	.	6.6	.9	7.5	6.0	5.8
4	54 +73.8	274	4 54.2	+73 45	5.8	–	6.0	1.4	7.4	5.9	5.2
4	55 +85.5	78	4 55.1	+85 32	7.0		6.5	1.5	8.0	6.5	5.7
~~5~~	~~46 +73.6~~	~~247~~	~~5 45.2~~	~~+73 34~~	~~6.2~~	~~.~~					

~~144~~ / 10 ; 17 - ~~13~~ / 10

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April 20, 1887.

Plate 1071.

	ν	H	Type	No. Lines	K	Focus	Other Lines
11	√0	21.1	12.0	III	1	31	1	F.
		21.3	13.6	III?	2	K=H	1	—
		21.5	17.1	III b 715	3	K=H	1	F.
		21.0	17.8	I	√	31	1	—
		21.8	18.2	I	4	31	1	—
		21.8	18.4	II	2	K=H	1	—
		20.0	10.4	I?	2	31	1	—
		19.3	10.8	I	6	K=.2H	2	F?
√	√	19.4	20.4	I	I √ 3 H ⌋	31 ⌋	K=H	11	— —
√	√	19.9	20.3	II a 716	2 ⌋ 2	K=H ⌋	K=H	11	— —
		18.9	6.1	I	4	K=H	1	—
		18.4	10.√	I	6	K=H	1	F.
		18.1	11.9	II	2	K=H	1	—
		18.1	12.1	III?	2	K=H	1	—
		18.4	17.2	III	2	K=H	1	—
		17.8	17.4	I?	8	K=H	2	F.
?		17.7	23.9	II a 717	3	K=H	2	F. diff.
		17.0	9.0	II	2	K=H	1	—
√	√	16.0	8.2	I	I √ 3 H ⌋	31 ⌋	K=H	11	— —
		16.3	10.5	I	5	K=H	1	—
		16.8	10.8	I	6	31	1	—
?		16.3	21.9	II a ? 718	2	K=H	1	F? diff.
		15.√	6.2	III	3	K=H	2	F.
Recorded above		15.9	8.2	I	3	H	1	—
		15.6	8.8	I	.4	31	1	—
		15.0	12.4	I	.√	31 ⌋	2	F?
√	√	15.2	18.1	II? II? ⌋	2 2 ⌋	K=H ⌋	K=H	11	— —
		14.4	11.7	I	.6	31	2	—

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Mean 1/

	No.	R.A.	Dec.	Mag.		Br.				
6 56+72.0	352	6 57.1	+72	3	6.4	6.9 / 7.1	1.3	8.2 / 8.4	7.1 / 7.3	6.5 / 6.7 ✓
6 47+71.9	378	6 46.6	+71	57	7.7	7.0	1.3	8.3	7.2	6.6 ✓
6 23+71.9	359	6 23.4	+71	52	6.0	6.7 / 6.9	1.3	8.0 / 8.2	6.9 / 7.1	6.3 / 6.5 ✓
6 27+62.0	867	6 27.2	+62	4	7.2	6.5	.8	7.3	6.2	6.1 ✓
6 25+61.6	896	6 25.4	+61	36	7.3	7.0	.8	7.8	6.7	6.6 ✓
6 24+61.6	893	6 24.3	+61	36	6.1	6.8	.8	7.6	6.5	6.4 ✓
6 59+62.5	913	6 59.1	+62	30	7.8	7.0	.8	7.8	6.7	6.6 ✓
6 54+52.9	1165	6 54.1	+52	57	6.7	6.5	.6	7.1	6.0	6.1 ✓
6 22+52.6	1097 ✓	6 22.4	+52	34	7.0 ✓	7.0	7.1.5	7.5	6.4	6.6 ✓
6 3+72.2	311 ✓	6 3.2	+72	12	6.3 ✓	7.0	7.4 1.3	8.3	7.2	6.6 ✓
7 19+62.8	933	7 18.4	+62	48	7.0	6.9	.8	7.7	6.6	6.5 ✓
~~7 9+73.4~~	~~3775~~	7 9.6	+73	20	7.2	6.5	1.4	7.9	6.8	6.1 ✓
~~7 9+73.4~~	~~3796~~	7 9.2	+73	20	7.8					
6 51+53.6	1094	6 50.9	+53	34	7.4	7.0	.6	7.6	6.5	6.6 ✓
6 58+73.6	366	6 58.2	+73	33	7.5	7.0 / 7.2	1.4	8.4 / 8.6	7.3 / 7.5	6.6 / 6.8 ✓
6 32+53.4	1056	6 32.5	+53	26	6.5	7.0 / 7.2	.6	7.6 / 7.8	6.5 / 6.7	6.6 / 6.8 ✓
6 19+73.8	340	6 19.6	+73	47	6.0	6.2	1.4	7.6	6.5	5.8 ✓
6 10+53.5	1008	6 10.0	+53	30	5.8	6.3	.6	6.9	5.8	5.9 ✓
7 20+73.9	381	7 20.9	+73	34	7.5	6.9	1.4	8.3	7.2	6.5 ✓
7 10+64.4	630 ✓	7 10.4	+64	24	7.5 !	6.9 6.9 ✓		9	7.8	6.7 6.5 ✓
7 11+74.5	324	7 10.8	+74	26	7.8	6.8	1.4	8.2	7.1	6.4 ✓
7 8+74.1	322	7 7.9	+74	7	7.5	6.6	1.4	8.0	6.9	6.2 ✓
5 46+73.9	311	5 46.6	+73	60	7.3	6.9	1.4	8.3	7.2	6.5 ✓
7 42+74.3	338	7 42.8	+74	18	5.2	6.4 / 6.7	1.4	7.8 / 8.1	6.7 / 7.0	6.0 / 6.3 ✓
7 1+54.7	1119	7 1.4	+54	42	6.8	6.8	.6	7.4	6.3	6.4 ✓
6 49+55.0	1155	6 49.4	+55	2	7.0	6.5	.6	7.1	6.0	6.1 ✓
6 24+64.9	593 ✓	6 24.1	+64	31	7.9	7.2 ✓	7.2 9	8.1	7.0	6.8 ✓
7 3+75.4	296	7 2.8	+75	20	7.0	6.3	1.5	7.8	6.7	5.9 ✓

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April 20, 1887.

Plate 1071.

τ	H	Type	Lines	K	Focus	Other lines.
14.4	14.0	II[a]	7193	K=H	2	F.
14.5	14.7	II[a]	7202	K=H K=H	1 1	— —
14.7	16.6	I? I	2 4	K=H K=H	1 1	— —
13.6	6.2	I	7	H	3	—
13.6	10.5	I	4	H	1	—
13.4	11.2	I	6	H	2	F.
13.3	13.2	I	I 4 H	H H	1 1	— —
? 13.5	16.0	II[a]	7214	K=H	2	neb.
14.0	19.0	I	I 4 4	K=H K=H	1 1	— —
13.2	21.3	III	2	H	1	F.
12.6	8.6	I	I 3 H	H K=H	1 1	— —
12.7	9.8	III	2	K=H	1	—
12.5	17.1	II?	II 2 2	K=H K=H	1 1	— —
12.5	17.7	I	I 3 H	H K=H	1 1	— —
12.5	17.9	II	II 2 2	K=H K=H	1 1	— —
? 12.0	19.3	II[a]	7222	K=H	1	F? neb.
12.1	22.0	I	5	H	2	F?
12.0	22.5	II?	2	K=H	1	—
12.5	23.0	III?	2	K=H	1	—
12.9	23.2	III	3	K=H	2	F.
12.5	23.2	II?	II 2 2	K=H K=H	1 1	— —
11.4	5.7	II	2	K=H	1	—
11.6	8.2	I	7	H	2	F.
? 11.0	14.7	III[b.c]	7233	K=H	3	F. bright neb.
11.7	16.4	III	2	K=H	1	—
11.5	17.4	I	I 5 H	H	1 1	— —
11.0	18.0	I	I 4 4	H K=H	1 1	— —
11.2	18.8	I	7	H	2	F?

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1887phae.proj...837F

Mean 4.

	No.	R.A.	Dec.	Mag.		Brc.
6 44 +75.4	281	6 44.7	+75 26	6.8	–	6.5 1.5 8.0 6.9 6.1
6 39 +75.4	273	6 39.0	+75 22	7.5	–	7.0 7.1 1.5 8.5 7.4 6.6
6 24 +75.2	264	6 23.9	+75 11	8.0	–	7.0 7.2 1.5 8.5 7.4 6.6
7 11 +55.7	1192	7 11.0	+55 33	5.5	1378 5.2 20+9	6.6 .6 7.2 6.1 6.2
7 12 +75.6	305	7 12.9	+75 36	8.0	.	6.9 1.5 8.4 7.3 6.5
7 7 +75.9	300	7 7.6	+75 52	7.7	.	6.5 1.6 8.1 7.0 6.1
6 48 +65.9	553	6 47.7	+65 57	7.5	.	6.9 6.9 1.0 7.9 6.8 6.5
6 36 +55.9	1122	6 36.1	+55 51	6.0	–	6.0 .6 6.6 5.5 5.6
6 26 +55.7	1097	6 25.6	+55 28	7.0	–	7.0 7.1 .6 7.6 6.5 6.6
5 45 +75.0	247	5 45.2	+75 34	6.2	–	6.7 8.2 7.1 7.1 1.5 8.6 7.5 6.3 6.7
7 10 +66.1	498	7 10.4	+66 5	7.3	.	6.9 7.1 1.0 7.9 6.8 6.5
7 20 +76.1	284	7 19.8	+76 6	7.3	–	7.0 8.3 7.4 6.6 7.1 1.5 8.6 7.5 6.7
6 28 +66.3	460	6 27.8	+66 19	7.0	–	6.9 6.9 1.0 7.9 6.8 6.5
6 12 +76.2	243	6 11.5	+76 12	8.5	.	7.0 6.9 1.6 8.6 7.5 6.6
6 24 +66.3	435	6 24.8	+66 17	7.5	–	7.2 7.4 1.0 8.2 7.1 6.8
6 23 +56.5	1134	6 23.8	+56 29	6.8	–	6.6 .6 7.2 6.1 6.2
6 14 +56.4	1125	6 14.2	+56 20	6.2	1198 5.4 10-1	5.8 .6 6.4 5.3 5.4
6 0 +66.2	433	6 0.9	+66 11	8.0	–	6.8 1.0 7.8 6.7 6.4
5 30 +75.7	236	5 30.4	+75 40	7.5	–	6.9 7.6 1.5 8.4 8.5 7.3 7.4 6.5 6.6
5 58 +65.8	517	5 58.3	+65 43	5.7	–	6.4 6.6 1.0 7.4 7.6 6.3 6.5 6.0 6.2
6 10 +56.0	1115	6 10.2	+56 3	7.8	–	7.0 6.8 .6 7.6 6.5 6.6
7 56 +76.3	307	7 55.9	+76 16	7.8	–	6.9 1.6 8.5 7.4 6.5
7 13 +66.7	502	7 13.0	+66 37	6.2	1385 6.2 10-1	6.2 1.0 7.2 6.1 5.8
6 39 +77.2	266	6 38.8	+77 9	4.7	–	5.5 6.0 1.6 7.1 7.6 6.0 6.5 5.1 5.6
6 24 +76.7	249	6 23.6	+76 43	7.5	–	6.9 7.0 1.6 8.5 8.6 7.4 7.5 6.5 6.6
6 30 +56.8	1143	6 30.6	+56 49	8.0	.	7.0 6.9 .7 7.7 6.6 6.6
6 28 +57.0	1139	6 28.4	+56 60	8.0	.	6.9 7.0 .7 7.6 6.5 6.5
6 25 +56.9	1136	6 25.3	+56 59	6.2	1237 5.8 7-4	5.8 .7 6.5 5.4 5.4

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Plate 1871.

K	H	Type	No. lines	K	Focus	No. lines.
10.6	11.2	III	2	K=H	1	—
10.2	13.7	III III	2 2	K=H K=H	1 1	— H ?
10.5	15.5	I	6	H	1	F.
10.6	16.3	III III	2 2	K=H K=H	2 2	— —
10.5	18.7	II II	2 2	K=H K=H	1 1	— —
10.5	21.9	II	2	K=H	1	—
10.6	22.8	III ? III	2 2	K=H ? K=H	1 1	— —
10.8	23.6	I	3	H	1	—
? 9.9	15.4	I b. 724	11	H	4	diff.
? 9.0	15.3	II a ~~III~~ 725	2	K=H	1	diff.
III ? 6.4, 6.7. 9.1	16.7	III b 726	3.	K=H	2	F.
9.1	17.1	I	4	H	1	—
8.8	8.6	I	9	K=.5H	2	F.
8.6	12.1	I	6	K=.2H	2	—
8.2	12.2	III	3	K=H	1	F.
9.0	12.4	II ?	2	K=H	1	—
8.3	13.7	III b.c. 727	3	K=H	3	F.
8.7	17.4	I	6	H	2,	—
8.8	19.2	II II	2 2	K=H K=H	1 1	— —
8.6	20.6	III b. 728	3	K=H	1	F.
8.0	21.6	III	3	K=H	1	F.
? 8.9	23.1	I d	4	H	1	diff.
7.4	8.2	III b. 729	3	K=H	2	F.
? 7.3	11.6	II a 730	2	K=H	1	diff.
7.5	13.5	I	7	K=H.	2	F.
7.4	15.0	I	12	H	4	F.
7.1	17.4	III	3	K=H	1	F
7.4	21.2	~~X~~ III	2	K=H	1	—

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	No.	R.A.	Dec.	Mag.						Mean 4.
7 11 +77.3	286	7 10.6	+77	14	7.4	–				B R.
6 45 +67.5	266	6 45.4	+67	30	7.0	–				6.9 6.9 8.5 7.4 6.5
6 30 +77.4	259	6 30.8	+77	22	7.8	.				7.1 1.6 8.7 7.6 6.7
6 34 +57.3	1004	6 34.4	+57	19	6.1	–				6.9 6.8 7.9 6.8 6.5
6 26 +57.3	988	6 26.0	+57	18	6.7	–				7.0 6.9 1.0 8.0 6.9 6.6
5 37 +76.9	211	5 33.9	+76	49	8.1	–				6.6 1.7 8.3 7.2 6.2
6 11 +57.0	963	6 10.8	+57	2	6.9	–				6.3 6.1 7.0 5.9 5.9
5 21 +76.4	206	5 21.3	+76	22	8.3	.				6.5 6.3 7.2 6.1 6.1
6 36 +67.7	454	6 35.8	+67	44	5.2	.				7.0 7.3 7.7 6.6 6.6
6 32 +78.2	234	6 31.8	+78	10	7.3	–				7.1 1.6 8.7 7.6 6.7
6 18 +78.1	227	6 18.0	+78	7	6.0	–				7.0 7.1 7.7 6.6 6.6
6 14 +78.0	247	6 14.2	+77	60	7.5	.				7.1 7.3 7.8 6.7 6.7
7 37 +77.9	303	7 37.0	+77	56	7.0	–				7.0 1.6 8.6 7.5 6.6
7 4 +78.3	251	7 4.2	+78	19	7.0	–				4.4 1.1 5.5 4.4 4.0
7 3 +78.6	250	7 3.2	+78	31	6.5	–				7.0 1.7 8.7 7.6 6.6
7.0 +78.2	246	7 0.9	+78	10	7.0	–				6.3 6.9 8.0 5.9 5.9
6 45 +58.6	982	6 45.7	+58	37	5.0	–				6.7 1.7 8.4 7.3 6.3
6 11 +78.3	226	6 10.5	+78	17	7.5	.				6.4 1.7 8.1 7.0 6.0
6 23 +58.2	943	6 23.6	+58	13	6.8	–				6.5 1.7 8.2 7.1 6.1
6 18 +58.3	932	6 18.2	+58	16	6.3	–				7.0 8.8 7.7 6.6
6 14 +58.5	927	6 14.2	+58	30	6.0	–				7.2 1.8 9.0 7.9 6.8
5 20 +77.5	201	5 19.6	+77	26	8.3	.				6.9 1.7 8.6 7.5 6.5
7 16 +68.8	480	7 15.8	+68	46	5.5	–				5.6 6.3 5.2 5.2
7 11 +78.9	254	7 10.4	+78	60	6.8	–				5.8 .7 6.5 5.4 5.4
6 50 +78.9	240	6 50.7	+78	59	6.7	–				6.2 1.7 7.9 6.8 5.8
6 38 +69.0	394	6 38.0	+69	3	5.2	1279 5.1 8-3				6.9 6.7 .7 7.6 6.5 6.5
6 8 +79.0	202	6 9.2	+79	4	7.0	–				6.8 7.5 6.4 6.4
6 4 +68.7	436	6 3.9	+68	43	7.2	✓				6.9 .7 7.6 6.5 6.5
										6.8 7.5 6.4 6.4
										7.0 .7 7.7 6.6 6.6
										6.7 1.7 8.4 7.3 6.3
										6.3 7.4 6.3 5.7
										6.6 1.1 7.7 6.6 6.2
										6.9 1.8 8.7 7.6 6.5
										6.4 1.8 8.2 7.1 6.0
										4.8 1.1 5.9 4.8 4.4
										6.8 8.6 7.5 6.4
										7.1 1.8 8.9 7.8 6.7
										7.0 8.1 7.0 6.6
										7.2 1.1 8.3 7.2 6.8

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Plate 1671.

	V	H	Type	No. lines	K	Other Focus lines.	
√√	7.6	21.8	II a	II 731 2	K=H	K=H 1	— F?
	7.2	22.9	II?	2	K=H	1	—
?	7.2	23.3	I d	3	H	1	neu.
?	7.0	23.9	II a?	7324	K=H	1	F neu.
	7.8	24.0	I d?	7	K=H	2	F.
?	6.2	14.8	II a?	7334	K=1.2H	2	F neu.
?	6.0	16.1	II a	7345	K=1.2H	3	F neu.
	6.3	16.5	I	11	K=1.2H	4	F.
	6.1	18.7	I	3	H	1	—
	6.0	21.2	I	9	H	4	F.
	6.7	23.3	I	8	H	4	F.
?	6.7	24.0	III b?	7352	K=H	1	neu.
	5.4	9.0	III b	736 2	K=H	1	—
	5.0	9.1	I	9	H	4	F.
	5.6	13.7	III	2	K=H	1	—
	5.9	16.7	I	8	K=1.2H?	2	F
	5.7	19.0	I	5	K=.5H	1	—
	5.6	21.0	I	5	K=H	1	—
	5.5	22.0	II	2	K=H	1	—
	5.9	22.7	I	5	H	2	—
?	5.2	23.8	II a?	7373	K=3.0H?	3	F neu.
?	4.6	7.5	I d?	5	?	1	F neu.
	4.3	9.8	III	1	H	1	—
	4.6	16.1	III	1	H	1	—
	4.2	18.3	III a	738 2	K=H	1	—
	4.6	20.4	I d?	5	H	1	—
?	4.4	22.4	I	5	?	1	neu.
	3.7	10.3	II	2	K=H	1	—

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Mean 4.

	No.	R. A.	Dec.	Mag.				Bre.				
6 13 +58.7	923	6 13.3	+58	40	8.8	–		7.0	6.9 .7	7.7	6.6	6.6
5 15 +78.3	193	5 15.1	+78	15	7.7	–		6.9	1.7	8.6	7.5	6.5
5 11 +78.2	190	5 11.4	+78	12	7.7	.		6.7	1.7	8.4	7.3	6.3
5 6 +78.1	187	5 6.1	+78	8	7.0	–		6.4	1.7	8.1	7.0	6.0
5 8 +77.8	195	5 7.2	+77	50	7.0	–		6.0	1.7	7.7	6.6	5.6
6 40 +59.6	1028	6 40.3	+59	37	6.0	–		6.4	.7	7.1	6.0	6.0
6 21 +79.7	212	6 21.4	+79	42	5.5	–		5.3	1.9	7.2	6.1	4.9
6 33 +59.6	1015	6 33.4	+59	34	5.0	–		5.2	.7	5.9	4.8	4.8
5 52 +79.4	196	5 53.0	+79	21	7.8	.		6.9	1.8	8.7	7.6	6.5
6 3 +69.3	371	6 2.8	+69	22	4.7	1155	4.7 11+0	4.7	1.1	5.8	4.7	4.3
6 7 +59.0	959	6 6.8	+59	3	5.0	1168	4.3 11+0	4.7	.7	5.4	4.3	4.3
5 3 +78.3	183	5 3.4	+78	16	6.8	–		6.8 / 7.0	1.7	8.5 / 8.7	7.4 / 7.6	6.4 / 6.6
7 3 +59.9	1065	7 3.2	+59	52	5.0	–		6.6 / 6.9	.7	7.3 / 7.6	6.2 / 6.5	6.2 / 6.5
7 42 +79.9	265	7 41.9	+79	52	5.8	1477	5.3 9-2	4.3	1.9	6.2	5.1	3.9
6 46 +69.9	398	6 45.8	+69	50	6.8	–		6.9 / 7.1	1.2	8.1 / 8.3	7.0 / 7.2	6.5 / 6.7
6 15 +79.7	208	6 15.4	+79	41	6.3	–		6.0	1.9	7.9	6.8	5.6
6 23 +59.6	996	6 23.5	+59	46	7.0	–		6.8	1.7	8.5	7.4	6.4
6 4 +69.7	373	6 3.5	+69	36	6.8	–		6.7	1.1	7.8	6.7	6.3
6 11 +59.8	968	6 11.6	+59	47	7.5	–		7.1	.7	7.8	6.7	6.7
6 9 +59.5	964	6 9.2	+59	25	7.0	.		6.5	.7	7.2	6.1	6.1
4 59 +79.0	169	4 58.8	+79	3	5.2	–		4.5	1.8	6.3	5.2	4.1
7 10 +60.2	1048	7 9.6	+60	9	6.5			6.7	.8	7.5	6.4	6.3
7 36 +80.3	240	7 35.8	+80	14	6.5	–		6.7 / 7.2	1.9	8.8 / 9.1	7.7 / 8.0	6.5 / 6.8
6 20 +80.3	217	6 20.9	+80	22	7.3	–		6.9 / 7.1	1.9	8.8 / 9.0	7.7 / 7.9	6.5 / 6.7
5 55 +80.4	202	5 54.0	+80	24	7.8	–		6.9	1.9	8.8	7.7	6.5
6 17 +60.2	971	6 17.4	+60	14	7.2	.		6.6	.8	7.4	6.3	6.2
5 9 +79.7	173	5 9.0	+79	43	7.7			6.5	1.9	8.4	7.3	6.1
7 33 +80.6	238	7 32.1	+80	37	6.5	–		6.4	2.0	8.4	7.3	6.0

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Plate 1071.

γ	H	Type	No. Lines	K	Focus	Other Lines,
3.6	13.1	III	2	2 K=H	K=H 1	— F?
3.4	13.9	III	2	K=H	1	—
3.8	14.1	I	4	N	1	—
3.8	19.3	I	8	K=1.2 H	2	F.
3.3	20.5	I?	2	K=H	1	—
2.9	12.4	III	2	K=H	1	—
2.4	13.2	I	5	K=1.2 H?	3	F?

Plate 1097.

21.7	16.2	I	5	K=H	1	—
20.9	8.1	I	3	N	1	—
18.8	23.1	I	6	K=1.2H?	2	F.
17.0	12.1	I	8	K=1.2H	3	—
17.5	15.5	III	3	K=H	1	F.
16.9	7.9	III	2	K=H	1	—
16.3	22.2	I	8	N	2	F.
17.2	24.0	III?	2	K=2.0H	2	F?
15.4	6.3	I	4	K=H	1	—
15.9	7.4	II a 739	3	K=H	1	F. em.
15.2	19.0	III b 740	3	K=H	1	F.
14.7	17.4	I	5	N	1	—
13.4	7.7	I	7	K=.5H	1	F.
13.6	10.6	I	3	N	1	—
13.5	13.7	I	4	K=H	1	—
12.7	20.4	III	1	N	1	—
9.7	15.1	I	3	N	1	—
8.9	11.8	I	3	N	1	—
8.5	16.2	I?	2	K=H	1	—

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Mean 4.

	No.	R.A.	Dec.	Mag.		Pos.			
6 49 +70.9	432	6 49.5	+70 57	6.5	–	6.8 6.9 7.0 6.8	1.2	8.0 8.0	6.9 6.9 6.4 6.7
6 44 +70.9	430	6 44.9	+70 60	6.0	–	7.1	1.2	8.3	7.2
6 45 +80.7	227	6 44.8	+80 45	8.6	.	6.9	2.0	8.9	7.8 6.5
6 12 +70.6	401	6 11.7	+70 38	6.0	–	6.0	1.2	7.2	6.1 5.6
5 25 +80.5	181	5 25.4	+80 32	7.9	–	7.0	2.0	9.0	7.9 6.6
7 8 +81.2	252	7 8.0	+81 11	7.0	–	6.4 6.6	2.0	8.4 8.6	7.3 7.5 6.0 6.2
6 58 +81.5	242	6 57.6	+81 30	6.3	–	5.4	2.1	7.5	6.4

+ 86/88 9-11/8

Not to be entered in catalogue until meas. of Pos. are corrected.

7 13 +66.6	502	7 13.0	+66 37	6.2	–	6.9	1.0	7.9	6.1
7 44 +56.8	1253	7 44.7	+56 33	7.0	.	7.0	.7	7.7	5.9
6 35 +67.7	434	6 35.8	+67 44	5.2	–	5.7	1.1	6.8	5.0
7 30 +59.0	1103	7 30.7	+59 2	5.0	–	5.4	.7	6.1	4.3
7 15 +68.8	480	7 15.8	+68 46	5.5	–	6.8 6.9	1.1	7.9 8.0	6.1 6.2
7 58 +68.9	524	7 58.3	+68 54	4.8	–	6.6 6.8	1.1	7.7 7.9	5.9 6.1
6 38 +69.0	394	6 38.0	+69 3	5.2	1279 5.1 18 +0	5.8	1.1	6.9	5.1
6 44 +58.6	982	6 44.7	+58 37	5.0	–	5.9 6.0	.7	6.6 6.7	4.8 4.9
7 53 +59.6	1136	7 53.9	+59 40	7.0	–	6.8	.7	7.5	5.7
7 49 +59.4	1130	7 49.2	+59 27	6.0	–	6.5	.7	7.2	5.4
7 3 +59.9	1065	7 3.2	+59 52	5.0	–	6.6 6.9	.7	7.3 7.6	5.3 5.8
7 9 +60.2	1048	7 9.6	+60 9	6.3	.	6.7	.8	7.5	5.7
7 49 +60.8	1105	7 49.3	+60 42	6.1	–	6.4	.8	7.2	5.4
7 37 +60.7	1084	7 37.6	+60 40	6.7	.	6.8	.8	7.6	5.8
7 24 +60.8	1069	7 24.8	+60 30	6.7	–	6.8	.8	7.6	5.8
6 44 +71.0	480	6 44.9	+70 60	6.0	–	6.8 7.0	1.2	8.0 8.2	6.2 6.4
7 18 +62.8	933	7 18.4	+62 48	7.0	.	6.9	.8	7.7	5.9
7 33 +63.2	733	7 33.3	+63 10	7.0	.	6.8	.9	7.7	5.9
7 9 +73.3	375	7 9.0	+73 20	7.2	+	7.1	1.4	8.5	6.7
	376	7 9.2	+73 20	7.8					

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Plate 1097.

r	H	Type	No. Lines	K	Focus	Other Lines.
7.9	8.2	III	2	K=H	1	—
6.6	11.5	III	1	H	1	—
6.4	11.8	I	3	H	1	—
6.5	23.0	II?	2	K=H	1	—
4.5	16.8	I?	4	K=H	1	—
3.9	7.0	I?	3	H	1	—
2.5	9.7	III	1	H	1	—
2.1	16.1	I	4	H	1	—

Plate 1119.

21.8	9.2	~~III~~ X	2	K=H	1	—
21.4	15.4	I	5	H	1	—
20.0	18.7	III b.g. 741	2	K=H	1	—
18.8	12.4	I	3	H	1	—
18.5	22.4	I	7	K=2H	2	F.
18.0	15.7	I	4	K=H	1	—
18.4	16.1	II?	2	K=H	1	—
17.4	14.9	III	2	K=H	1	—
17.9	20.5	III	1	H	1	—
17.3	21.1	I	4	H	1	—
17.1	23.3	II b 742	3	K=H	2	F.
16.5	7.2	III	3	K=H	1	F.
16.0	6.5	I	3	H	1	—
16.7	11.5	I	8	H	2	F.
16.7	16.9	I	4	H	1	—
16.3	21.5	I	8	H	3	F.
?	15.5	6.8	II α 743	2	K=H	1	nuc.
2° 20	15.0	12.3	I	8	H	4	F.

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	No.	R.A.	Dec.	Mag.					
7 49 +63.4	749	7 49.6	+63	28	6.0	–			
7 42 +74.3	338	7 42.8	+74	18	5.2	–			
7 33 +64.4	649	7 33.5	+64	23	7.1	.			
6 19 +73.8	340	6 19.6	+73	42	6.0	–			
7 2 +75.3	296	7 2.8	+75	20	7.0	–			
8 20 +75.2	342	8 19.8	+75	13	6.4	.			
8 1 +76.2	316	8 1.2	+76	11	6.0	–			
7 13 +66.6	502	7 13.0	+66	37	6.2	1385 6.2 17-1			

31/2 = 18, 3-1/2 = 1.0,

8 2 +76.2	310	8 1.2	+76	11	6.0	–			
7 13 +66.6	502	7 13.0	+66	37	6.2	1385 6.2 15-1			
6 38 +77.2	266	6 38.8	+77	9	4.7	–			
7 37 +77.9	303	7 37.0	+77	36	7.0	.			
6 35 +67.7	454	6 35.8	+67	44	5.2	–			
7 4 +78.3	251	7 4.2	+78	19	7.0	–			
7 0 +78.2	246	7 0.9	+78	10	7.0	–			
7 15 +68.7	480	7 15.8	+68	46	5.5	–			
6 18 +78.1	237	6 18.0	+78	7	6.0	–			
6 10 +78.2	226	6 10.5	+78	17	7.5	.			
6 44 +58.6	982	6 44.7	+58	37	5.0	–			
7 58 +68.8	524	7 58.3	+68	54	4.8	–			
8 39 +78.7	297	8 39.4	+78	42	6.9	.			
7 30 +59.0	1103	7 30.7	+59	2	5.0	1441 4.9 17+1			
6 50 +79.0	240	6 50.7	+78	59	6.7	.			
6 38 +69.0	394	6 38.0	+69	3	5.2	1279 5.1 17+1			
7 49 +59.4	1130	7 49.2	+59	27	6.0	–			
7 42 +79.8	265	7 41.9	+79	52	5.8	1477 5.3 16+0			

Br.

6.7	7.6	5.8	
6.9	7.8	6.0	.
6.9	8.3	6.5	
7.2	8.6	6.8	.
6.9	7.8	6.0	.
6.8	8.2	6.4 ✓	.
6.9	8.4	6.6	.
7.0	8.5	6.7	.
~~6.9~~	~~8.5~~	~~6.7~~	✓
~~7.2~~	~~8.8~~	~~7.0~~	.
~~6.5~~	~~7.5~~	~~5.7~~	✓
	7.9	6.9	.

Mean 19

6.7	8.3	6.7	5.7	✓
6.9	8.5	6.9	5.9	.
6.7	7.7	6.1	5.1	✓
6.3	7.9	6.3	5.3	✓
6.8	8.4	6.8	5.8	.
6.9	8.6	7.0	5.9	✓
5.8	6.9	5.3	4.8	✓
6.9	8.6	7.0	5.9	✓
7.1	8.8	7.2	6.1	✓
6.7	7.8	6.2	5.7	✓
7.0	8.1	6.5	6.0	.
6.8	8.5	6.9	5.8	✓
7.2	8.9	7.3	6.2	.
6.6	8.3	6.7	5.6	✓
6.1	7.6	6.0	5.1	✓
6.5	7.6	6.0	5.5	✓
6.8	7.9	6.3	5.8	.
7.1	8.9	7.3	6.1	✓
5.9	7.6	5.0	4.9	✓
6.7	8.5	6.9	5.7	✓
5.7	6.8	5.2	4.7	✓
6.8	7.5	5.9	5.8	✓
5.0	6.9	5.3	4.0	✓

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Plate 1119.

	V	H	Type	No. lines	K	Forms	Other lines.
8 45	15.7	20.8	III	1	K	1	—
?	14.1	8.2	III ?	2	K=H	1	— diff.
	14.6	16.7	I	6	K=.5H	1	—
	15.0	18.4	III	3	K=H	2	F.
?	14.9	19.3	II a	7443	K=1.2H	2	F, diff.
	14.7	19.8	I	1	H	2	—
?	14.6	22.0	I ?	2	K=H	1	diff.
	13.2	15.8	III II ?	1	H	1	—
	13.6	6.9	I ?	2	K	1	—
	13.1	7.1	I	4	H	1	—
	13.3	10.0	I	4	K	1	—
	13.7	12.2	II ?	2	K=H	1	—
?	13.6	13.2	III ? a	7445	3	K=H	1 F, diff.
	12.7	8.2	I	5	K=.5H	1	—
	13.1	13.1	I	3	H	1	—
	12.6	15.1	III	3	K=H	1	F.
	13.0	15.9	III	1	H	1	—
	12.6	19.8	III	2	K=H	1	—
	12.7	21.2	II ?	2	K=H	1	—
	11.8	11.2	I	4	K=H	1	—
	11.8	15.8	I	7	H	2	—
	10.8	7.6	I ?	5	K=H	1	—
	10.3	8.9	II ?	2	K=H	1	—
	10.6	10.9	I	3	H	1	—
	10.8	14.3	I	3	H	1	—
	10.6	17.6	III	1	H	1	F.
	10.6	19.2	II	1	H	1	—
	10.1	22.8	III	3	K=H	1	F.

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Mean 10

	No.	R.A.	Dec.	Mag.			Bv.				
6 9 +79.1	202	6 9.2	+79	4	7.0	-	7.0 / 7.3	1.8	8.8 / 9.1	7.2 / 7.5	6.0 / 6.3 ✓
7 55 +70.2	197	7 55.2	+70	8	6.5	-	6.9 / 7.2	1.2	8.1 / 8.4	6.5 / 6.8	5.9 ✓ / 6.2
7 9 +60.2	1048	7 9.6	+60	9	6.5	-	6.7	.8	7.5	5.9	5.7 ✓
7 3 +59.9	1065	7 3.2	+59	52	5.0	-	6.5 / 6.8	.7	7.2 / 7.5	5.6 / 5.9	5.5 / 5.8 ✓
6 21 +79.7	212	6 21.4	+79	42	5.5	-	5.7	1.9	7.6	6.0	4.7 ✓
6 15 +79.7	208	6 15.4	+79	41	6.3	1209 6.3 19+3	6.3	1.9	8.2	6.6	5.3 ✓
5 58.3 +79.3	196	5 53.0	+79	21	7.8	-	7.0	1.8	8.8	7.2	6.0 ✓
8 57 +79.8	300	8 57.6	+79	52	7.3	-	~~7.0~~ 7.1 ~~6.5~~	1.9	8.9	7.3	6.0 ✓
8 45 +79.9	294	8 45.2	+79	35	7.0			1.9	9.0	7.4	6.1
7 49 +60.7	1105	7 49.3	+60	42	6.1	1490 6.0 13-3	6.5	.8	7.3	5.7	5.5 ✓
7 37 +60.7	1084	7 37.6	+60	40	6.7	.	6.8	.8	7.6	6.0	5.8 ✓
7 31 +70.6	477	7 31.9	+70	33	6.8	-	7.2	1.2	8.4	6.8	6.2 ✓
7 31 +80.6	238	7 32.1	+80	37	6.5	-	6.5 / 6.7	2.0	8.5 / 8.7	6.9 / 7.1	5.5 / 5.7 ✓
8 33 +80.6	272	8 34.0	+80	34	7.3	-	6.7	2.0	8.7	7.1	5.7 ✓
7 24 +60.8	1069	7 24.8	+60	50	6.7	.	7.0	.8	7.8	6.2	6.0 ✓
7 8 +81.2	232	7 8.0	+81	11	7.0	-	6.5 / 6.9	2.0	8.5 / 8.9	6.9 / 7.3	5.5 / 5.9 ✓
6 57 +80.8	230	6 57.4	+80	52	7.4	-	7.0 / 7.3	2.0	9.0 / 9.3	7.4 / 7.7	6.0 / 6.3 ✓
6 44 +71.0	430	6 44.9	+70	60	6.0	-	6.5 / 7.0	1.2	7.7 / 8.2	6.1 / 6.6	5.5 / 6.0 ✓
5 54 +80.4	202	5 54.0	+80	24	7.8	-	7.1	1.9	9.0	7.4	6.1 ✓
7 38 +71.5	429	7 38.4	+71	27	6.8	-	6.9	1.2	8.1	6.5	5.9 ✓
6 57 +81.5	242	6 57.6	+81	30	6.3	.	~~5.8~~	2.1	7.9	6.3	4.8 ✓
8 49 +81.4	282	8 49.2	+81	24	6.7	-	6.1	2.1	8.2	6.6	5.1 ✓
8 35 +81.8	273	8 35.2	+81	49	7.6	-	7.1	2.1	9.2	7.6	6.1 ✓
7 40 +72.1	386 / ~~385~~	7 41.0 / ~~40.3~~	+72	3 / ~~13~~	7.3 / ~~7.0~~		7.1	1.3	8.4	6.8	6.1 ✓
7 18 +82.0	213	7 18.8	+82	0	7.5	.	6.9	2.1	9.0	7.4	5.9 ✓
6 57 +72.1	352	6 57.1	+72	3	6.4	-	6.9 / 7.4	1.3	8.2 / 8.7	6.6 / 7.1	5.9 / 6.4 ✓
6 46 +71.9	378	6 46.6	+71	37	7.7	-	7.0	1.3	8.3	6.7	6.0 ✓
6 23 +71.8	359	6 23.4	+71	32	6.0	+	6.5 / 6.9	1.3	7.8 / 8.2	6.2 / 6.6	5.5 / 5.9 ✓

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Plate 1119.

V	H	Type	Line	K	Focus	Other Lines.
9.0	6.4	III	l.c. 7463	K=H	3	F.
9.0	10.5	I	7	?	2	F. Recur
9.3	14.6	I	4	K=H	1	—
9.6	15.4	III	l.c. 7467	K=H	2	F.
9.9	18.6	I	7	K=.5H	2	F.
9.7	18.9	II?	2	K=H	1	—
8.6	7.6	III	3	K=H	1	F.
8.6	11.2	I	5	K=H	1	F.
8.2	15.6	I	4	K=H	1	—
8.0	20.9	II	2	K=H	1	—
7.0	7.2	I	4	K=H	1	—
7.6	7.6	III	3	K=H	1	F.
7.7	9.9	II?	2	K=H	1	—
6.3	8.1	II?	3	K=H	1	F.
6.2	11.1	III	3	K=H	1	F.
6.1	11.3	I	3	9H	1	—
6.0	13.2	I	7	K=.2H	2	F.
6.7	15.8	I	3	9H	1	—
6.4	22.5	I	6	K=H	2	F.
5.7	11.1	II	2	K=H	1	—
5.5	12.9	II	2	K=H	1	—
5.4	13.6	I	4	9H	1	—
5.4	21.4	I	5	K=H	1	—
4.8	10.4	I?	7	K=H	2	F.
4.3	16.3	I	5	K=.2H	1	—
4.0	8.5	III	2	K=H	1	—
3.5	6.6	I	5	K=H	1	—
3.6	12.2	II	2	K=H	1	—

III ? 5.7, 6.0, 7.0.

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Mean 10

	No.	R.A.	Dec.	Mag.		Br.				
9 15 +81.9	302	9 16.0	+81	58	4.3	_	5.4 / 6.0	2.1	7.5 / 8.1	5.9 / 6.5	4.4 / 5.0
8 20 +82.8	233	8 19.7 (20.8)	+82	44	7.0		6.4	2.2	8.6	7.0	5.4
7 18 +62.8	933	7 18.4	+62	48	7.0	_	6.9	.8	7.7	6.1	5.9
7 0 +82.7	208	7 0.3	+82	40	5.5	_	6.0 / 6.5	2.2	8.2 / 8.7	6.6 / 7.1	5.0 / 5.5
6 14 +82.2	177	6 13.8	+82	13	6.7	_	6.4	2.2	8.6	7.0	5.4
6 59 +62.5	913	6 59.1	+62	30	7.8	_	7.2	.8	8.0	6.4	6.2
8 4 +72.8	409	8 4.6	+72	51	6.2	_	6.9 / 7.2	1.3	8.2 / 8.5	6.6 / 6.9	5.9 / 6.2
7 32 +63.2	733	7 33.3	+63	10	7.0	_	6.7	.9	7.6	6.0	5.7
7 8 +73.4	375	7 9.0	+73	20	7.2		6.8	1.4	8.2	6.6	5.8
	376	7 9.2	+73	20	7.8						
5 30 +82.7	152	5 30.2	+82	42	7.6	_	6.9	2.2	9.1	7.5	5.9
9 19 +83.0	262	9 19.0	+83	0	7.3	_	6.6	2.3	8.9	7.3	5.6
7 49 +63.5	749	7 49.6	+63	28	6.0	_	6.6 / 6.9	9	7.5 / 7.8	5.9 / 6.2	5.6 / 5.9
8 36 +83.3	233	8 35.8	+83	17	7.0	_	6.4	2.3	8.7	7.1	5.4
9 11 +83.6	256	9 12.5	+83	33	7.2	_	6.5	2.4	8.9	7.3	5.5
7 42 +74.3	338	7 42.8	+74	18	5.2	_	6.7 / 7.1	1.4	8.1 / 8.5	6.5 / 6.9	5.7 / 6.1
7 33 +64.4	249	7 33.5	+64	23	7.1	.	6.9	9	7.8	6.2	5.9
7 41 +84.4	169	7 41.6	+84	28	6.0	_	5.5	2.5	7.7	6.1	4.5
7 7 +74.2	322	7 7.9	+74	7	7.5	.	7.0	1.4	8.4	6.8	6.0
6 19 +73.8	340	6 19.6	+73	47	6.0	_	6.6	1.4	8.0	6.4	5.6
8 24 +84.4	186	8 23.1	+84	25	8.0	_	7.1	2.5	9.6	8.0	6.1
~~	Defect in plate. Not found on Chart					_	7.2				6.2
7 32 +83.8	168	7 33.6	+84	47	7.8	_	6.5	2.6	9.1	7.5	5.5
5 1 +83.7	141	5 0.6	+83	43	7.1	_	6.2	2.4	8.6	7.0	5.2
8 44 +84.8	196	8 44.3	+84	45	6.0	_	6.0	2.6	8.6	7.0	5.0
7 2 +75.3	296	7 2.8	+75	20	7.0	_	6.7	1.5	8.2	6.6	5.7
8 4 +75.2	334	8 4.6	+75	17	6.5	_	7.0 / 7.2	1.5	8.5 / 8.7	6.9 / 7.1	6.0 / 6.2
8 20 +75.2	342	8 19.8	+75	13	6.4	_	6.4	1.5	7.9	6.3	5.4
8 12 +85.6	128	8 12.7	+85	33	7.5	✓	7.0	2.8	9.8	8.2	6.0

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Plate 1119.

τ	π	Type	No. lines	K	Focus	Other lines.
3.8	18.5	II	2	K=H	1	—
3.3	24.4	I d?	6	N	3	F. faint
2.5	7.5	I	8	K=2H	2	F.
2.2	9.2	III	3	K=H	1	F.
2.4	19.5	I	v	N	2	F.
1.8	15.5	I	4	N	1	F.
1.6	19.6	I	1	N	1	F?

Plate 1229.

22.2	8.9	III	3	K=H	2	F.
21.8	15.2	I	4	N	1	—
21.0	7.2	II	2	K=H	1	—
20.5	18.3	III b,c 7483		K=H	3	F.
19.2	7.4	III?	2	K=H	1	—
19.2	12.1	I	4	K=H	2	—
19.7	19.2	II a 749	2	K=H	1	seen
19.0	22.1	I	9	N	4	F.
18.5	15.4	I	4	N	1	—
18.4	18.7	II	2	K=H	1	—
18.2	20.1	III b 750	2	K=H	1	—
18.2	20.6	I	3	N	1	—
17.3	9.0	III	2	K=H	1	—
17.2	11.2	I	6	?	4	F?
17.7	14.7	III	3	K=H	1	F.
17.3	14.8	II II?	2	K=H	1	—
17.2	16.6	I	6	K=1.8H	2	F.
17.7	20.8	I	v	N	2	—
18.0	21.3	III	III	2 2	K=H K=H	1 1 — —

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		No.	R.A.		Dec.	Mag.		
6	44 +75.5	281	6	44.7	+75	26		–
3	55 +83.4	104	3	55.1	+83	26		
10	6 +85.0	234	10	7.8	+84	59	5.0	–
8	1 +76.2	310	8	1.2	+76	11	6.0	–
4	51.5 +85.5	78	4	55.1	+85	32	7.0	.
		502	7	13.0	+66	37	6.2	
7	14 +66.8	~~503~~	7	13.6	+66	47	7.3	.
4	40 +85.7	74	4	41.0	+85	45	6.0	863 6.4 ~~30 +14~~

97/6 5-4/6

8	1 +76.2	310	8	1.2	+76	11	6.0	
7	13 +66.7	502	7	13.0	+66	37	6.2	1385 6.2 13 -2
		~~503~~	7	13.6	+66	47	7.3	
7	44 +56.9	1253	7	44.7	+56	53	7.0	–
6	39 +77.2	266	6	38.8	+77	9	4.7	–
8	18 +77.5	337	8	18.4	+77	30	7.2	–
7	37 +77.9	303	7	37.0	+77	56	7.0	–
6	30 +77.4	259	6	30.8	+77	22	7.8	–
6	36 +67.7	454	6	35.8	+67	44	5.2	1270 4.9 14 -1
7	4 +78.3	251	7	4.2	+78	19	7.0	.
6	32 +78.2	234	6	31.8	+78	10	7.3	–
6	18 +78.1	227	6	18.0	+78	7	6.0	–
6	14 +78.0	247	6	14.2	+77	60	7.5	.
8	11 +78.7	287	8	10.6	+78	41	6.8	–
7	31 +59.0	1103	7	30.7	+59	2	5.0	
7	16 +68.8	480	7	15.8	+68	46	5.5	–
7	10 +78.9	254	7	10.4	+78	60	6.8	–
6	50 +78.9	240	6	50.7	+78	59	6.7	–
6	10 +78.3	226	6	10.2	+78	17	7.3	.
		237	6	6.4	+77	58	7.7	?
6	6 +78.0	~~234~~	6	5.9	+78	2	7.8	–

Mean 10

Br.

7.2 (1.5 8.7 7.1) . 6.2 ✓
5.2 2.4 7.6 6.0 . 4.2 ✓
~~5.8~~ ~~2.1~~ ~~7.8~~ . ✓
~~6.6~~ ~~8.2~~ 6.6 ✓
~~6.8~~ ~~1.1~~ 6.7 .
~~6.4~~ ~~2.8~~ 7.6 ✓ .
~~6.6~~ ~~1.0~~ 7.0 6.0 . ✓
~~8.6~~ 2.8 7.4 7.8 . ✓

Mean 7

6.4 } 8.2 } 6.5 } 5.7 ✓
6.7 } 1.6 8.3 } 6.8 } . 6.0 }
6.5 1.0 7.5 6.0 . 5.8 ✓
7.0 .7 7.7 6.2 . 6.3 ✓
5.7 } 7.3 } 5.8 } 5.0 ✓
6.2 } 1.6 7.8 } 6.3 } . 5.5 }
7.0 } 8.7 } 7.2 } 6.3 ✓
7.2 } 1.7 8.9 } 7.4 } . 6.5 }
6.6 1.7 8.3 6.8 . 5.9 ✓
7.0 1.7 8.7 7.2 . 6.3 ✓
5.2 1.1 6.3 4.8 . 4.5 ✓
6.8 1.7 8.5 7.0 . 6.1 ✓
7.1 1.7 8.8 7.3 . 6.4 ✓
6.5 } 8.2 } 5.7 } 5.8 ✓
7.0 } 1.7 8.7 } 7.2 } . 6.3 ✓
6.7 1.7 8.4 6.9 . 6.0 ✓
6.8 } 8.6 } 7.1 } 6.1 ✓
7.1 } 1.8 8.9 } 7.4 } . 6.4 }
5.5 .7 6.2 4.7 . 4.8 ✓
6.6 } 7.7 } 6.2 } 5.9 ✓
7.0 } 1.1 8.1 } 6.6 } . 6.3 }
6.9 1.8 8.7 7.2 . 6.2 ✓
6.6 1.8 8.4 6.9 . 5.9 ✓
6.5 1.7 8.2 6.7 . 5.8 ✓
7.3 } ~~7.0~~ } ~~8.4~~ } ~~7.2~~ } 6.3 ✓
7.5 } 1.7 8.7 } 7.5 } . 6.6 }
7.3 } 9.0 } 7.5 }

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Plate 1229.

	r	H	Type	No. lines	K	Focus	Other lines.
	17.6	23.0	~~III~~	3	K=H	3	F.
	16.5	6.2	~~II~~ I ?	~~4~~ 4	K=H	1	—
?	16.0	6.5	~~II~~ a	751 2	K=H	2	F? nebs.
	16.9	7.0	~~III~~	3	K=H	2	F.
	16.2	11.8	~~II~~	2	K=H	1	—
	16.1	20.4	~~III~~	2	K=H	1	—
	16.5	21.3	~~I~~	8	?	4	F.
	15.1	10.9	~~II~~ ?	2	K=H	1	—
	15.5	12.0	~~I~~	9	H	4	F.
	15.4	18.0	~~III~~	3	K=H	2	F.
?	15.3	19.0	~~II~~ a	752 3	K=H	3	neb.
	15.1	19.5	~~I~~	5	H	2	F?
√	15.0	21.7	~~II~~ ? II	√ 2	2 K=H	K=H 1 1	— —
	15.2	23.8	~~I~~	4	K=H	2	F?
	14.0	6.5	~~II~~ ?	2	K=H	1	—
	14.5	7.9	~~II~~ II? ?	2	K=H	1	—
?	14.0	12.9	~~II~~ a ?	753 3	K=H	2	F. neb.
	14.9	16.4	~~I~~	5	K=H	1	F.
	13.5	6.7	~~I~~	6	K=H	2	F.
	13.2	7.9	~~I~~	4	K=H	1	—
	13.8	9.6	~~I~~	4	K=H	1	—
	13.6	12.7	~~I~~	4	H	1	—
	13.0	14.8	~~III~~	3	K=H	1	F.
	13.5	15.6	~~III~~ ?	2	K=H	1	—
	13.6	16.6	~~II~~	1	H	1	—
	13.9	18.7	~~III~~	2	K=H	1	—
	13.0	19.5	~~III~~	3	K=H	1	F.
10 30	16.3	20.8	~~III~~ ?	2	K=H	1	—

11.17 a.m. The reading of this plate is continued in Book 16, p. 4.

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Maan 4.

	No.	R.A.	Dec.	Mag.			Br.				
6 44+78.6	482	6 44.7	+38	37.	5.0	–	5.8 / 6.0	.7	6.5 / 6.7	5.0 / 5.2	5.1 / 5.3 ✓
8 39+78.7	297	8 39.4	+78	42	6.9	–	6.7	1.8	8.5	7.0	6.9 ✓
7 49+59.5	1130	7 49.2	+59	27	6.0	–	6.3	.7	7.0	5.5	5.9 ✓
7 58+68.9	524	7 38.3	+68	54	4.8	–	6.1 / 6.5	1.1	7.2 / 7.6	5.7 / 6.1	5.4 ✓ / 5.8
7 32+69.5	438	7 31.9	+69	30	7.2	–	7.0	1.1	8.1	6.6	6.3 ✓
6 9+79.0	202	6 9.2	+79	4	7.0	–	6.9 / 7.3	1.8	8.7 / 9.1	7.2 / 7.6	6.2 ✓ / 6.6 ✓
6 38+69.0	394	6 38.0	+69	3	5.2		5.1	1.1	6.2	4.7	4.4 ✓
7 54+79.9	269	7 54.0	+79	56	7.8	–	7.0	1.9	8.9	7.4	6.3 ✓
7 42+79.9	265	7 41.9	+79	52	5.8	1477 5.3 14+1	4.8	1.9	6.7	5.2	4.1 ✓
7 3+59.9	1065	7 3.2	+59	52	5.0	–	6.5 / 6.9	.7	7.2 / 7.6	5.7 / 6.1	5.8 ✓ / 6.3
6 21+79.7	212	6 21.4	+79	42	5.5	–	5.7	1.9	7.6	6.1	5.0 ✓
6 15+79.7	208	6 15.4	+79	41	6.3	1209 6.3 19+4	6.3	1.9	8.2	6.7	5.6 ✓
5 53+70.3	390	5 54.2	+70	15	8.3	–	7.1	1.2	8.3	6.8	6.4 ✓
6 40+59.6	1028	6 40.3	+59	37	6.0	–	6.4	.7	7.1	5.6	5.7 ✓
8 45+79.9	294	8 45.4	+79	35	7.0	–	6.8	1.9	8.7	7.2	6.1 ✓
7 55+70.1	497	7 35.2	+70	8	6.3	–	6.9	1.2	8.1	6.6	6.2 ✓
7 32+80.6	238	7 32.1	+80	37	6.3	–	6.6	2.0	8.6	7.1	5.9 ✓
7 10+60.2	1048	7 9.6	+60	9	6.5	–	6.6	.8	7.4	5.9	5.9 ✓
7 49+60.7	1105	7 49.3	+60	42	6.1	–	6.4	.8	7.2	5.7	5.7 ✓
8 34+80.6	272	8 34.0	+80	34	7.3	–	6.5	2.0	8.5	7.0	5.8 ✓
7 38+60.7	1084	7 37.6	+60	40	6.7	–	6.8	.8	7.6	6.1	6.1 ✓
7 24+60.9	1069	7 24.8	+60	50	6.7	.	6.9	.8	7.7	6.2	6.2 ✓
7 8+81.2	252	7 8.0	+81	11	7.0	–	6.5 / 6.8	2.0	8.5 / 8.8	7.0 / 7.3	5.8 / 6.1 ✓
6 58+80.9	230	6 57.4	+80	32	7.4	–	6.9 / 7.0	2.0	8.9 / 9.0	7.4 / 7.5	6.2 ✓ / 6.3
6 44+80.7	227	6 44.8	+80	45	8.6	–	7.0	2.0	9.0	7.5	6.3 ✓
6 21+80.4	217	6 20.9	+80	22	7.3	–	7.0 / 7.3	1.9	8.9 / 9.2	7.4 / 7.7	6.3 / 6.6 ✓
6 9+80.6	210	6 8.6	+80	39	7.2	–	6.5 / 7.0	2.0	8.5 / 9.0	7.0 / 7.5	5.8 / 6.3 ✓
5 55+82.4	202	5 54.0	+80	24	7.8	✓ –	6.9 / 7.0	1.9	8.8 / 8.9	7.3 / 7.4	6.2 ✓ / 6.3

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