

KG
11365
831

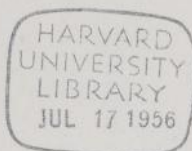
HENRY DRAPER MEMORIAL

*Reductions of
Photographic Observations
No. 6*

K G 11365. 829



KG 11365. 829



Index.

Plate 686 Page 4 Letter G. Plate 492 Page 54 Letter F.

" 703	" 4	G.	~~74~~ " 684	" 54	" "
" 724	" 4	"	" 650	" 56	" "
" 740	" 6	"	" 649	" 58	" "
" 704	" 6	"	" 948	" 64	" "
" 749	" 10	"	" 669	" 64	" "
" 899 ^v	" 12	"	" 283	" 68	" "
" 848	" 12	"	" 858	" 74	" "
" 744+80	" 14	"	" 827	" 74	" "
" 860	" 16	"			
" 863	" 16	"			
" 856	" 18	"			
" 850	" 18	"			
" 849 ^v	" 20	"			
" 842	" 20	"			
" 916	" 22	"			
" 915	" 26	"			
" 831	" 30	"			
" 788 ^v	" 30	"			
" 786	" 32	"			
" 790 ^v	" 32	"			
" 772	" 36	F.			
" 801	" 36	"			
" 943	" 38	"			
" 944	" 38	"			
" 893	" 40	"			
" 735	" 44	"			
" 668	" 48	"			
" 503	" 54	"			

Sept. 21, 1886.
Plate 686 Cont

V	H	Type	Lines	K	Focus	Lines	Other	V	H	V	H
6.6	19.6	I	✓	X7	N	1	F	3.3	39.2	14.8	9.4
5.3	7.3	I		X8	N	3	F	2.6	14.6	15.5	34.0
2.6	17.2	I		X5	N	1		1.3	34.4	16.8	14.2
~~2.2~~	~~18.5~~	~~III?~~		~~X2~~	~~K=H~~	~~1~~	<del></del>	~~1.1~~	~~37.0~~	~~17.0~~	~~11.6~~
Amt. of Fog. due to moon & clouds.								Amt. of Fog. due to chemicals.			
8.0				6.9				7.0			

Plate 703.

21.0	5.9	I	✓	X5	XK=H	2	-	10.5	11.8	2.6	58.2				
17.9	12.2	I	✓	X5	N	1	-	9.0	24.4	4.1	45.6				
17.2	15.6	IIa?	✓	X3	K=H	2	F Leon	8.6	31.2	4.5	38.8				
16.7	18.7	I	✓	X6	N	2	F	8.4	37.4	4.7	32.6				
15.0	14.1	I	✓	X5	N	1	-	7.5	28.2	5.6	41.8				
✓	✓	10.0	15.5	I	I	✓	X4	N	K=H	1	-	5.0	31.0	8.1	39.0
9.2	19.0	III	✓	3	K=H	2	F	4.6	38.0	8.5	32.0				
6.6	6.8	I	✓	4	XK=H	1	-	3.3	13.6	9.8	56.4				
6.0	14.5	I	✓	X10	K=2H	3	F	3.0	29.0	10.1	41.0				
5.0	12.0	I?	✓	X6	XK=H	1	-	2.5	24.0	10.6	46.0				
4.5	21.2	I	✓	X8	N	3	F	2.2	42.4	10.9	27.6				
4.4	18.9	I	✓	X5	N	1	-	2.2	37.8	10.9	32.2				

Amt. of Fog. due to moon & clouds.

Amt. of Fog. due to chemicals.

8.2 7.5 Plate 724.

7.5 7.5

17.0	10.8	IIa?	✓	3	K=H	1	Pecon	8.5	21.6	9.5	68.7
16.9	12.8	I	✓	4	N	1	-	8.4	25.6	9.6	64.7
16.7	12.9	I	✓	7	K=H	2	F	8.4	25.8	9.6	64.5
16.7	16.4	I	✓	✓	XK=.5H	1	-	8.4	32.8	9.6	57.5
15.0	22.1	I?	✓	4	XK=H	1	-	7.5	44.2	10.5	46.1
13.0	10.0	I	✓	5	N	1	F1	6.5	20.0	11.5	70.3
11.5	15.7	I	✓	7	K=.2H	3	F1	5.8	31.4	12.2	58.9
11.9	20.0	I	✓	4	N	1	-	6.0	40.0	12.0	50.3
10.8	17.8	I?	✓	2	N	1	Bright	5.4	15.6	12.6	74.7

Mean 12.

No.	R.A.	DEC.	MAG.	H.	V.	Red. to 1900.	Br.	Br.
✓ 3523	20 8.7	+14 50	5.1	✓ 47.9	18.1	20 $9.6 + 14$ 34 ✓	63	5.1 ✓
✓ 3624	34.1	+15 29	4.0	✓ 48.7	18.1	20 $35.0 + 15$ 33 ✓	53	4.1 ✓
✓ 3552	14.0	-13 9	4.7	✓ 48.4	8.1	20 $15.1 - 13$ 5 ✓	66	5.4 ✓
~~3516~~	~~20 5.8~~	~~-12 58~~	~~6.0~~	~~4~~	~~8.1~~	~~20 6.9 - 12 54~~ amitter		

Mean 10

No.	R.A.	DEC.	MAG.	H.	V.	Red. to 1900.	Br.	Br.
✓ 3712	20 59.2	-17 43	4.3	✓ 71.0	12.8	21 $0.3 - 17$ 37 ✓	63	5.3 ✓
✓ 3664	45.8	-5 57	5.5	✓ 70.2	13.0	20 $46.8 - 5$ 53 ✓	65	5.5 ✓
✓ 3638	39.0	-25 42	4.3	✓ 70.2	12.9	20 $40.2 - 25$ 37 ✓	63	5.3 ✓
✓ 3609	32.6	-15 23	5.3	✓ 70.0	13.0	20 $33.7 - 15$ 19 ✓	63	5.3 ✓
✓ 3651	41.9	+5 34	5.5	✓ 70.1	13.1	20 $42.9 + 5$ 39 ✓	64	5.4 ✓
✓ 3639	39.2	-21 57	5.8	✓ 70.2	13.0	20 $40.2 - 21$ 52 ✓	69	5.8 ✓
✓ 3608	32.1	-1 31	4.4	✓ 70.1	13.1	20 $33.2 - 1$ 28 ✓	64	5.4 ✓
✓ 3706	57.6	-20 20	5.2	✓ 71.2	13.0	20 $58.8 - 20$ 15 ✓	67	5.7 ✓
✓ 3647	41.2	-9 56	3.8	✓ 70.2	3.1	20 $42.3 - 9$ 31 ✓	69	5.9 ✓
✓ 3666	46.2	-9 26	4.8	✓ 70.2	3.1	20 $47.3 - 9$ 22 ✓	48	3.8 ✓
✓ 3592	27.5	+10 54	4.1	✓ 69.9	13.1	20 $28.1 + 10$ 38 ✓	66	5.6 ✓
✓ 3607	32.1	+10 58	5.3	✓ 69.9	13.2	20 $33.0 + 11$ 1 ✓	54	4.4 ✓

Mean 12

No.	R.A.	DEC.	MAG.	H.	V.	Red. to 1900.	Br.	Br.
✓ 3735	21 8.7	+9 31	4.6	✓ 30.3	18.0	21 $9.6 + 9$ 36 ✓	65	5.3 ✓
✓ 3727	21 4.7	+9 34	5.9	✓ 30.3	18.0	21 $5.6 + 9$ 38 ✓	68	5.6 ✓
✓ 3726	21 4.5	+9 39	4.8	✓ 30.3	18.0	21 $5.4 + 9$ 44 ✓	63	5.1 ✓
✓ 3706	20 57.6	-20 20	5.2	✓ 90.4	18.1	20 $58.8 - 20$ 15 ✓	67	5.5 ✓
✓ 3666	20 46.2	-9 26	4.8	✓ 90.4	8.1	20 $47.3 - 9$ 22 ✓	66	5.4 ✓
✓ 3743	21 11.2	-18 29	5.4	✓ 31.2	8.0	21 $12.3 - 18$ 23 ✓	66	5.4 ✓
✓ 3712	20 59.2	-17 43	4.3	✓ 90.6	8.1	21 $0.3 - 17$ 37 ✓	54	4.2 ✓
✓ 3680	20 49.9	+12 7	5.4	✓ 89.9	18.1	20 $50.9 + 12$ 11 ✓	68	5.6 ✓
✓ 3756	21 15.6	-17 21	4.4	✓ 31.2	8.0	21 $16.7 - 17$ 13 ✓	68	5.6 ✓

Sept 21. 1886

Plate 724.

γ	H	Type	^{no.} Lines	K	Focus	^{other} Lines	γ	H	γ	H	
✓ 9.0	19.6	I?	I 244	~~X~~ K=H	1	K=H 1	-	4.5	39.2	13.5	51.1
8.1	22.4	I	✓ 5	~~X~~ 5	N	1	-	4.0	44.8	14.0	45.5
6.7	10.3	I	✓ 8	~~X~~ K=5H2		F		3.4	20.6	14.6	69.7
8.5	18.7	II?	✓ 3	~~X~~ K=H	1	F	-	4.2	37.4	13.8	52.9

Amt. of Fog. due to moon & clouds.

Amt. of Fog. due to chemicals.

6.8

6.5

Plate 739

7.0

15.8	7.4	I	✓ 3	N	1	-	-	7.9	14.8	5.3	74.3
15.2	12.6	I	✓ 8	XK=24.2	-	-	-	7.6	25.2	5.6	63.9
15.3	14.8	I	✓ 7	N	2	-	-	7.6	29.6	5.6	59.5
14.6	21.2	II?	✓ 3	XK=H	1	-	-	7.3	42.4	5.9	46.7
14.0	17.5	I?	✓ 4	XK=H	1	-	-	7.0	35.0	6.2	54.1
11.9	16.1	I	✓ 7	N	2	-	-	6.0	32.2	7.2	56.9
10.7	12.7	I?	✓ 6	XK=H	1	-	-	5.4	25.4	7.8	63.7
10.8	9.5	II?	✓ 4	K=H	1	-	-	5.4	19.0	7.8	70.1
10.5	6.9	I	✓ 6	N	3	-	-	5.2	13.8	8.0	75.3
10.4	9.6	I?	✓ 3	N	1	-	-	5.2	19.2	8.0	69.9
9.4	15.4	I	✓ 5	XK=H	1	-	-	4.7	30.8	8.5	58.3
8.4	14.9	III?	✓ 3	K=H?	2	-	-	4.2	29.8	9.0	59.3

Amt. of Fog. due to moon & clouds.

Amt. of Fog. due to chemicals.

8.2

7.3

Plate 707

7.3

22.1	17.8	I	✓ 5	XK=H	1	-	-	11.0	35.6	2.1	14.9
20.5	10.2	IIa?	✓ 2	XK=H	1	-	-	10.2	20.4	2.9	30.1
20.2	15.6	I	✓ 8	K=H	3	-	-	10.1	31.2	3.0	19.3
18.6	17.8	I	✓ 9	XK=H	1	-	-	9.3	35.6	3.8	14.9
17.0	20.0	I?	✓ 2	N	1	-	-	8.5	40.0	4.6	10.5
15.8	8.7	I	✓ 9	N	1	-	-	7.9	17.4	5.2	33.1
14.3	11.1	I	✓ 6	N	2	-	-	7.2	22.2	5.9	28.3
13.5	16.3	I?	✓ 4	XK=H	1	-	-	6.8	32.6	6.3	17.9
✓ 12.0	11.2	I?	✓ 2	3	XK=H	1	-	6.0	22.4	7.1	28.1

Mean 12

Red of ~~the~~ $\rightarrow$ B.M.
V. Stars to 1900.

No.	R.A.	DEC.	MAG.	H.	V.	Stars to 1900.
✓ 3682	20 51.0	-16 29	6.0	90.2	8.0	2.0 52.1 - 16 25. ✓
✓ 3664	20 45.8	-5 57	5.5	90.6	8.0	2.0 46.8 - 5 53. ✓
✓ 3739	21 9.8	+4 45	4.1	30.4	8.2	2.1 10.8 + 4 50. ✓
✓ 3693	20 53.1	+3 50	5.4	90.5	8.0	2.0 54.1 + 3 54. ✓

cov.
Br. Bu
7.27.3 60 ✓
6.7 55 ✓
5.8 46 ✓
6.9 57 ✓

Mean 12

✓ 3948	22 14.4	+5 11	5.2	29.2	13.1	2.0 15.4 + 5 17. ✓
✓ 3913	22 4.1	+5 36	3.8	29.3	13.2	2.0 5.1 + 5 43. ✓
✓ 3901	22 0.0	-14 27	4.3	29.6	13.2	2.2 1.0 - 14 22. ✓
✓ 3864	21 46.8	-14 7	5.2	89.2	13.2	2.1 47.8 - 14 1. ✓
✓ 3881	21 54.1	+6 9	6.0	89.1	13.2	2.1 55.1 + 6 14. ✓
✓ 3889	21 57.1	-2 44	4.7	89.3	13.3	2.1 58.2 - 2 39. ✓
✓ 3915	22 4.2	-12 9	5.4	29.6	13.2	2.2 5.3 - 12 3. ✓
Dir 8726	22 9.1	-2 19	6.3	28.1	13.1	2.2 11.4 - 2 6. ✓
✓ 3950	22 15.5	-1 59	4.1	29.3	13.2	2.2 16.5 - 1 53. ✓
Dir 5726	22 9.1	-2 19	6.3	29.0	12.9	2.2 11.4 - 2 6. ✓
Pegasus 2942	22 9.8	+7 56	6.3	29.0	13.1	2.2 11.4 + 7 50. ✓
✓ 3896	21 58.6	-1 29	5.2	89.4	13.2	2.1 59.7 - 1 24. ✓
✓ 3899	21 59.6	-0 54	3.2	89.4	13.3	2.2 0.7 - 0 49. ✓

cov.
Br. Bu
6.6 54 ✓
5.3 41 ✓
5.6 44 ✓
6.6 54 ✓
6.9 57 ✓
6.0 48 ✓
6.3 51 ✓
7.1 59 ✓
5.4 42 ✓
7.3 61 ✓
6.6 54 ✓
5.6 44 ✓
5.7 43 ✓

Mean 14

✓ 3319	19 14.7	-18 4	3.9	50.3	12.9	19 15.7 - 18 2. ✓
✓ 3380	19 30.4	-7 18	4.9	50.8	12.9	19 31.5 - 7 15. ✓
✓ 3343	19 19.4	+2 53	3.5	50.6	13.0	19 20.4 + 2 55. ✓
✓ 3321	19 14.8	-16 11	4.7	50.4	13.1	19 16.0 - 16 9. ✓
✓ 3295	19 10.6	+4 38	5.4	50.6	13.1	19 11.6 + 4 39. ✓
✓ 3394	19 33.3	+5 8	5.0	50.7	13.0	19 34.3 + 5 11. ✓
Dir 3373	19 29.4	-25 56	4.6	51.6	12.8	19 30.6 - 25 53. ✓
Dir 4866	19 29.1	-25 56	4.6	51.6	12.8	19 30.6 - 25 53. ✓
3370	19 28.7	-24 59	5.8	50.9	12.9	19 29.7 - 24 53. ✓
3331	19 18.0	-24 44	5.1	50.6	12.1	19 19.1 - 24 43. ✓
✓ 3332	18.2	-24 12	6.9	50.8	12.6	
✓ 3368	28.2	+7 8	4.7	50.6	13.1	19 29.2 + 7 10. ✓

cov.
Br. Bu
8.5 51 ✓
6.8 54 ✓
5.4 40 ✓
6.6 52 ✓
7.1 57 ✓
6.9 55 ✓
6.6 52 ✓
7.0 56 ✓
7.0 56 ✓

Sept. 21, 1886.

Plate 407.

V	H	Type	Lines	K	Focus	Lines	V.	H	V.	H
9.3	10.1	I	✓	A7	N	2	F-	4.6	20.2	8.5 30.3
8.5	18.2	I	✓	X5	N	1	F-	4.2	36.4	8.9 14.1
6.7	23.5	I?	✓	X6	XK=H	2	F-	3.4	47.0	9.7 3.5
6.1	15.2	I?	✓	X4	XK=H	1	-	3.0	30.4	10.1 20.1

Mean 14

No.	R.A.	DEC.	MAG.	H.	V.	Red. of H.A. stars to 1900.	By.	Cor. By.	
✓ 3381	19 30.5	-1 33	4.3	✓ 507	13.0	19 31.6 -1 31	5.7	43	✓
✓ 3317	" 14.4	-1 7	5.6	✓ 50.8	13.1	19 15.5 -1 3	6.7	53	✓
3270	" 2.6	-21 13	3.1	49.6 * 12.2	19 3.8 -21 11		5.4	40	✓
~~Aquila~~	~~25.42~~	~~3.4~~	~~0 38~~	~~6.6~~	~~50.4~~	~~12.8 19 4.7 -0 31~~			
✓ 3349	20.4	+0 6	4.8	✓ 50.8	3.1	19 21.4 +0 9	6.9	55	✓

April 9, '88 Centre of Plate changes one degree
in declination for this exposure.

Ant. of Fog. due to moon & clouds. 6.3 6.2 Ant. of Fog. due to chemicals. 8.0

November 18, 1886

Plate 749

		Type Lines		Focus Lines		Other		V.	H.	V.	H.
III?	18.2	19.6	I	57	XK=.5H	F	seen	9.1	39.2	4.1	51.2
	16.8	8.4	IIa?	8	XK=H	F	seen	8.4	16.8	4.8	73.6
III?	14.5	17.6	I	5	XK=H	F	seen	7.2	35.2	6.0	55.2
	14.3	20.5	III?	9	XK=H	F	seen	7.2	41.0	6.0	49.4
III?	12.8	8.5	I	6	XK=H	F	seen	6.4	17.0	6.8	73.4
	12.4	9.8	III	8	XK=H	F	seen	6.2	19.6	7.0	70.8
III?	12.3	10.0	II?	7	XK=H	F	seen	6.2	20.0	7.0	70.4
	12.0	10.5	I	4	XK=H	F	seen	6.0	21.0	7.2	69.4
III?	13.3	21.8	IIa?	3	XK=H	F	seen	6.6	43.6	6.6	46.8
	12.8	20.8	I?	4	XK=H	F	seen	6.4	41.6	6.8	48.8
III?	12.7	16.1	I?	2	XK=H	F	seen	6.4	32.2	6.8	58.2
	12.5	16.1	I	2	XK=H	F	seen	6.2	38.2	7.0	58.2
III?	11.0	18.6	I	4	XK=H	F	seen	5.5	37.2	7.7	53.2
	10.1	20.9	III?	9	XK=H	F	seen	5.0	41.8	8.2	48.6
III?	9.0	12.7	I	10	XK=H	F	seen	4.5	25.4	8.7	65.0
	9.4	22.7	I	12	XK=.2H	F	seen	4.7	45.4	8.5	45.0
III?	8.6	16.1	I?	4	XK=H	F	seen	4.3	32.2	8.9	58.2
	8.7	23.1	I	3	XK=H	F	seen	4.4	46.2	8.8	44.2
III?	7.3	14.3	I	9	XK=H	F	seen	3.6	28.6	9.6	61.8
	6.6	21.0	I	5	XK=H	F	seen	3.3	42.0	9.9	48.4
III?	5.5	12.0	I	4	XK=H	F	seen	2.8	24.0	10.4	66.4
	5.1	22.1	IIa?	9	XK=H	F	seen	2.6	44.2	10.6	46.2
III?	4.4	19.8	I	8	XK=H	F	seen	2.2	39.6	11.0	50.8
	3.5	21.2	I	4	XK=H	F	seen	1.8	42.4	11.4	48.0
III?	3.5	5.6	I	9	XK=H	F	seen	1.8	11.2	11.4	79.2
	17.0	17.3	I?	3	XK=H	F	seen	8.5	34.6	16.7	55.8
III?	7.8	22.3	II?	2	XK=H	F	seen	3.9	44.6	9.3	45.8
	16.8	18.5	II	3	XK=H	F	seen	8.4	17.0	4.8	73.4

Mean 12

Red of 20.4

No. R.A. DEC. MAG. H. V. Stars to 1900.

	3456	19	51.1	-15	49	5.0	90.3	13.3	19	52.2	-15	45	✓	6.5	5.3	✓	
	3554	20	14.3	-15	10	3.4			20	15.4	-15	85	✓			✓	
	~~3553~~	~~20~~	~~14.0~~	~~-15~~	~~10~~	~~3.4~~	~~30.8~~	~~13.2~~	~~20~~	~~15.1~~	~~-15~~	~~6~~	✓			✓	
	3476	19	55.3	-13	53	5.3	90.5	13.2	19	56.4	-13	53	✓	8.9	4.7	✓	
	3450	19	49.4	+6	6	4.0	90.4	13.3	19	50.4	+6	10	✓	6.7	5.5	✓	
	2852	20	14.0	-13	9	4.7	31.0	13.2	20	15.1	-13	5	✓	5.8	4.6	✓	
	3538	20	11.4	-12	55	3.8	31.0	13.3	20	12.5	-12	51	✓	5.9	4.7	✓	
	3537	20	11.0	-12	53	4.5	31.0	13.3	20	12.1	-12	49	✓	6.1	4.9	✓	
	3538	20	11.4	-12	55	3.8	31.0	13.3	20	12.5	-12	51	✓	5.9	4.7	✓	
	3537	20	11.0	-12	53	4.5	31.0	13.3	20	12.1	-12	49	✓	6.1	4.9	✓	
Capricornus	6ua	20	9.5	-12	43	6.8	30.5	13.3	20	10.9	-12	41	✓	6.5	5.3	✓	
	3439	19	47.0	-3	25	5.7	90.6	13.2	19	48.1	-3	22	✓	7.1	6.9	5.7	✓
	3439	19	47.0	-3	25	5.7	90.6	13.2	19	48.1	-3	22	✓	6.7	5.5	✓	
aquila	96ua	19	48.6	+6	49	6.6	90.2	13.2	19	49.5	+6	51	✓	6.9	5.7	✓	
	3492	19	58.8	-13	6	6.5	91.0	13.2	19	59.9	-12	57	✓	7.0	6.8	5.8	✓
	3489	19	58.3	+6	57	5.6	90.5	13.4	19	59.2	+7	0	✓	6.9	5.7	✓	
	3489	19	58.3	+6	57	5.6	90.5	13.4	19	59.2	+7	0	✓	6.9	5.7	✓	
aquila	102ua	19	53.2	-2	18	7.0	90.4	13.2	19	54.5	-2	16	✓	7.0	6.9	5.7	✓
	3444	19	48.5	+8	9	4.9	90.3	13.2	19	49.4	+8	13	✓	6.6	5.4	✓	
	3444	19	48.5	+8	9	4.9	90.3	13.2	19	49.4	+8	13	✓	6.9	5.7	✓	
	3514	20	5.1	-1	11	3.4	30.5	13.3	20	6.2	-1	7	✓	4.8	3.6	✓	
	3429	19	44.9	+8	33	1.0	90.3	13.3	19	45.9	+8	33	✓	4.0	3.8	✓	
Aquila	106ua	19	58.0	-1	3	6.1	90.2	13.3	19	59.3	-1	2	✓	7.2	7.2	6.0	✓
	3427	19	44.2	-11	4	5.6	90.4	13.3	19	45.3	-11	1	✓	6.9	5.7	✓	
	3427	19	44.2	-11	4	5.6	90.4	13.3	19	45.3	-11	1	✓	6.9	5.7	✓	
Capricornus	1ua	20	1.7	-10	25	6.4	30.3	13.2	20	3.1	-10	23	✓	6.8	5.6	✓	
	3445	19	48.5	+0	3	5.6	90.5	3.3	19	49.7	+0	1	✓	6.6	5.4	✓	
	3518	20	6.5	+0	30	6.2	30.5	3.3	20	7.5	+0	34	✓	6.9	5.7	✓	
	3436	19	46.4	+0	42	3.9	90.6	3.3	19	47.3	+0	44	✓	6.2	5.0	✓	
	3453	19	50.4	+11	6	5.4	90.3	13.3	19	51.5	+11	10	✓	6.6	5.4	✓	
	3441	19	48.1	-8	32	5.3	90.5	3.3	19	49.2	-8	30	✓	6.7	5.5	✓	
	3574	20	20.4	-18	36	5.2	31.6	3.2	20	21.6	-18	32	✓	6.9	5.7	✓	
Aquila	104ua	19	55.6	-5	20	6.7	90.1	13.2	19	56.9	-5	16	✓	7.2	7.3	6.1	✓
Aquila	88ua	19	45.3	+9	19	6.7	89.9	13.2	19	46.5	+9	23	✓	7.2	7.2	6.0	✓
	3553	20	14.0	-15	10	-			20	15.2	-15	6	✓	7.0	7.0	✓	

Ant. of Fog. due to moon & clouds. 6.8 6.7 Ant. of Fog. due to chemicals. 7.8

December 10, 1886

Plate 899

V	H	Type	Lines	K	Focus	Lines	V	H	
20.0	14.5	I	X8	N	1	-	10.0	29.0	
19.1	12.9	I?	X4	K=H	1	-	9.6	25.6	
14.1	20.9	I	X4	NK=H	1	-	7.0	41.8	
14.0	15.4	I	5	6	N	1	2	7.0	30.8
12.9	21.2	I	4	N	1	-	6.4	42.4	
12.8	9.7	I	X8	N	2	-	6.4	19.4	
12.7	11.4	III?	X3	K=H	2	F	6.4	22.8	
11.0	18.5	I	X3	H	NK=H	1	1	5.5	37.0
10.5	6.9	II?	X9	K=H	1	F	5.2	13.6	
10.0	18.1	II	3	X	K=H	1	F seen	5.0	36.2
8.0	20.6	I?	3	N	1	-	4.0	41.2	
7.9	11.2	I?	3	N	1	-	4.0	22.4	
6.8	7.7	I	X6	N	1	F	3.4	15.4	
5.5	13.7	IIa?	X9	K=H	1	F seen	2.8	27.4	
5.0	14.5	I	X5	N	1	-	2.5	29.0	
5.0	16.6	I	X10	N	3	F	2.5	33.2	
4.2	23.0	I	X4	K=H	1	-	2.1	46.0	

Ant. of Fog. due to moon & clouds. 8.8 8.2

Ant. of Fog. due to chemicals. 8.4

Plate 878

16.8	4.9	I?	✓	X6	XK=H	1	F ₁	8.4	10.8	9.8	72.6
16.0	8.5	I	✓	X6	N	2	F ₂	8.0	17.0	10.2	71.4
15.9	9.5	III?	✓	X2	XK=H	1	-	8.0	17.0	10.2	69.4
11.2	8.6	III?	✓	3	XK=H	1	F ₁	5.6	17.2	12.6	71.2
10.1	15.2	I	✓	X6	N	1	-	5.0	30.4	13.2	58.0
9.7	15.3	I		4	N	1	-	4.8	30.6	13.4	57.8
9.4	19.9	I	✓	X9	K=2H	2	F ₁	4.7	39.8	13.5	48.6
7.5	14.4	I	✓	X11	XK=2H	4	F ₁	3.8	29.4	14.4	39.0

1 star {

1 star

This plate rejected. as it was found to be useless. Only two exposures were made, it was impossible to

Mean 6

identify those, with either Atlas or Capricornus

	No.	R.A.	Dec.	Mag.	H	V	Red. to 1900	Br.	Bu.	cov.
22 30-12.3	3915	22	4.2	-12	9	5.4	22 5.3 -12 3	6.2	5.6	✓
22 64-21.8	3930	22	7.7	-21	40	5.5	22 8.8 -21 34	6.7	6.1	✓
21 50.0-9.3	1332a	21	51.0	-9	10	6.7	21 52.3 -8 55	6.9	6.2	✓
22 10-19.2	3911	22	2.4	-19	6	5.8	22 3.6 -19 1	6.4	6.2	✓
21 50.0+11.4	3873	21	31.1	+11	32	5.5	21 51.3 -18 22	6.5	6.2	✓
22 12.6-8.6	3946	22	13.9	-8	25	5.4	22 14.9 -8 19	6.1	5.5	✓
22 9.4-8.5	3940	22	10.5	-8	23	4.3	22 11.3 -8 17	5.9	5.3	✓
21 54.5-17.7	1012a	21	55.6	-17	34	6.5	21 57.0 -17 30	6.9	6.2	✓
22 12.9-17.5	3963	22	20.0	-17	21	5.1	22 21.1 -17 15	6.8	6.2	✓
21 55.7-7.2	3888	21	57.0	-7	6	5.6	21 58.0 -7 1	6.7	6.2	✓
21 50.5-6.1	3879	21	31.8	-6	0	6.2	21 53.0 -5 34	6.9	6.3	✓
22 9.5-6.1	3943	22	10.9	-5	59	5.9	22 11.9 -5 53	7.0	6.4	✓
22 16.5-5.6	3957	22	17.9	-5	26	5.8	22 18.9 -5 21	6.5	5.9	✓
22 47-14.9	1202a	22	5.7	-14	48	6.4	22 7.1 -14 44	6.7	6.1	✓
22 3.0+5.5	3913	22	4.1	+5	36	3.8	22 5.1 +5 43	6.5	5.9	✓
21 58.5-14.6	3901	22	0.0	-14	27	4.3	22 1.0 -14 22	5.0	4.4	✓
21 45.4-14.2	3864	21	46.8	-14	7	5.2	21 47.8 -14 1	6.5	5.9	✓

Mean 18

	No.	R.A.	Dec.	Mag.	H	V	Red. to 1900	Br.	Bu.	cov.
4124	23	12.7	-10	15	6.1	28.5	23 13.8 -10 10	7.0	5.2	✓
4119	23	11.7	-9	50	4.5	28.7	23 12.7 -9 44	6.5	4.7	✓
4109	23	9.6	-9	44	4.5	28.6	23 10.6 -9 38	7.0	5.2	✓
4114	23	10.9	+2	38	3.8	28.1	23 11.9 +2 44	6.6	4.8	✓
4077	22	67.8	+3	10	4.6	88.2	22 38.7 +3 17	6.5	4.7	✓
4047	22	48.3	-16	28	3.4	88.1	22 49.4 -16 21	6.2	4.4	✓
4080	22	68.8	+14	34	2.6	88.2	22 39.8 +14 40	4.8	3.0	✓

Amt. of Fog. due to moon & clouds.
 8.0 7.4

 Amt. of Fog. due to chemicals.
 8.0

December 10, 1886.

 Plate 444 + 480.

		Type		Lines		K Focus		Other Lines.				Type		Lines		K Focus		Other Lines.	
V	H	V	H	V	H	V	H	V	H	V	H	V	H	V	H	V	H	V	H
17.7	19.8	I		45		N	2					8.8	39.6	4.4	57.3				
16.5	8.6	III		53		XK=5H	3					8.2	17.2	5.0	73.7				
14.0	17.9	I		54		K=H	1					7.0	35.8	6.2	55.1				
III? 5.7, 6.0	14.0	20.7	III	3290	53	K=H	2					7.0	41.4	6.2	49.5				
	13.0	22.0	I	54		XK=H	1					6.5	44.0	6.7	46.9				
	12.5	21.0	I	54		N	1					6.2	42.0	7.0	48.9				
	12.2	15.3	I	53		N	1					6.1	30.6	7.1	60.3				
III? 5.8, 6.0	12.0	10.2	III	3291	53	K=H	2					6.0	20.4	7.2	70.5				
	12.0	9.3	III	53		K=H	2					6.0	18.6	7.2	72.3				
	12.5	8.7	I	57		N	2					6.2	17.4	7.0	73.5				
	10.0	21.1	III?	2		XK=H	1					5.0	42.2	8.2	48.7				
	8.7	12.9	I	512		XK=2H	5					4.4	25.8	8.8	65.1				
	9.5	22.9	I?	512		XK=2H	5					4.8	45.8	8.4	45.1				
	7.0	14.5	I?	3		N	1					3.5	29.0	9.7	61.9				
	6.5	21.2	I	55		XK=H	1					3.2	42.4	10.0	48.5				
	6.2	22.7	IIa?	3292	2	XK=H	1					3.1	45.4	10.1	46.5				
✓ 5.5	14.2	IX I?	34		N	K=H	1					2.9	28.4	10.3	62.5				
	5.0	22.4	III?	3293	53	XK=H	1					2.5	44.8	10.7	46.1				
	4.3	20.0	I	54		N	2					2.2	40.0	11.0	50.9				
	3.5	21.5	I	54		XK=H	2					1.8	43.0	11.4	47.9				
	8.5	23.3	I?	3		N	1					4.2	46.6	9.0	44.3				
✓ 19.2	19.9	III	III	2	2	K=H	K=H	1				9.6	39.8	8.6	51.1				

Mean 10

No.	R.A.	Dec.	Mag.	H	V	Red. of H.A. & D.H.		B ₂	B ₁	B ₀
						Stars to 1900.				
3456	19 57.1	- 15 49	6.0	90.7	13.0	19 52.2	15 45	6.5	5.5	✓
3554	20 14.3	- 15 10	6.4	91.5	13.0	20 15.4	15 6	6.3	4.3	✓
3476	19 55.3	- 13 58	6.8	91.1	13.0	19 56.4	13 55	6.7	5.7	✓
3450	19 49.4	+ 6 6	4.0	90.8	13.1	19 50.4	+ 6 10	5.7	4.7	✓
3469	19 47.0	- 3 25	6.7	91.0	13.1	19 48.1	- 3 36	5.9	4.9	✓
DM. 4661	19 47.6	+ 6 46	7.0	89.6	13.0	19 48.3	+ 6 53	6.9	5.9	✓
3492	19 58.8	+ 13 0	6.5	89.4	13.1	19 59.9	+ 12 57	7.1	6.1	✓
DM 4667	19 59.6	+ 7 10	7.8	90.2	13.3	20 13	+ 7 18	7.1	6.1	✓
3538	20 11.0	- 12 53	4.5	91.4	13.1	20 12.1	- 12 49	6.8	4.8	✓
3535	20 11.4	- 12 55	3.8	90.0	13.1	20 12.5	- 12 51	6.5	5.5	✓
3552	20 14.0	- 13 9	4.7	91.4	13.0	20 15.1	- 13 5	6.0	5.0	✓
3444	19 48.5	+ 8 9	4.9	90.7	13.2	19 49.4	+ 8 13	6.7	5.7	✓
3514	20 5.1	- 1 11	3.4	90.9	13.2	20 6.2	- 1 7	7.1	6.1	✓
3429	19 44.9	+ 8 33	1.0	90.7	13.4	19 45.9	+ 8 35	4.5	3.5	✓
Capricornus 1 u.a.	20 1.7	- 10 25	6.4	90.7	13.1	20 3.1	- 10 23	7.1	6.1	✓
3445	19 48.5	+ 0 6	6.6	90.9	13.2	19 49.7	+ 0 1	6.6	5.6	✓
3432	19 45.3	+ 10 7	6.2	90.7	13.2	19 46.2	+ 10 10	6.8	5.8	✓
3507	20 2.9	+ 10 22	6.0	91.3	13.3	20 3.8	+ 10 11	7.0	6.0	✓
3436	19 46.4	+ 0 42	3.9	91.2	13.2	19 47.3	+ 0 44	6.4	5.4	✓
3453	19 50.4	+ 11 6	5.4	90.4	13.3	19 51.5	+ 11 10	6.7	5.7	✓
3441	19 48.1	- 8 32	5.3	91.1	13.3	19 49.2	- 8 30	6.5	5.5	✓
3427	19 44.2	- 11 4	5.6	90.8	13.1	19 45.3	- 11 1	6.7	5.7	✓
3459	19 51.6	- 26 31	5.0	91.4	13.1	19 52.9	- 26 28	7.0	6.0	✓

Ant. of Fog due to moon & clouds.
8.2 8.0

Ant. of Fog due to chemicals.
8.3

December 17, 1886.
Plate 860.

	V	H	Type	No. Lines	K	Focus	Other Lines	V	H	V	H
8 50	19.5	16.6	I	81	N	3	F ₁	9.6	32.2	8.2	10.5
	18.5	12.2	I	46	N	2	F ₁	9.2	24.4	8.4	24.3
	17.0	9.7	I	88	N	3	F ₁	8.5	19.4	9.3	29.3
	16.8	13.0	IIa?	43	K=H	3	F ₂ seen	8.4	26.0	9.4	22.7
	15.4	6.6	I	48	N	4	F ₁	7.7	13.2	0.1	36.5
✓ X	14.0	22.7	IIa?	21	K=H	1	seen	7.0	45.4	0.8	3.3
	14.0	14.7	II?	52	N	2	F ₁	7.0	29.4	0.8	19.3
	12.7	16.4	Ib	6	N	2	seen	6.4	32.8	1.4	15.9
	12.7	17.4	I	5	K=5H	1	—	6.4	34.8	1.4	13.9
	12.6	19.0	III?	3	K=H	1	F ₁	6.3	38.0	1.5	10.7
	6.8	15.6	I	45	N	1	—	3.4	30.8	4.4	17.9
	5.2	17.1	I	5	N	1	—	2.6	34.2	5.2	14.5
	4.5	22.2	I	47	N	0	F ₁	2.2	44.4	5.6	4.3
	4.9	24.1	I	46	K=H	1	—	2.4	48.2	5.4	0.5

Ant. of Fog due to moon & clouds.
7.8 7.2

Ant. of Fog due to chemicals.
7.2

	V	H	Type	No. Lines	K	Focus	Other Lines	V	H	V	H
	15.0	12.4	I	5	N	1	—	7.5	24.8	0.5	44.3
	15.0	13.0	I	4	K=H	1	—	7.5	26.0	0.5	43.1
	14.5	14.9	I	5	K=H	1	—	7.2	29.8	0.8	39.3
	13.8	15.8	I	5	N	1	—	6.9	31.6	1.1	37.5
	13.7	16.7	I	7	K=5H	2	—	6.8	33.4	1.2	35.7
	13.0	11.2	I	4	N	1	—	6.5	22.4	1.5	46.7
	13.0	16.9	III	3	K=H	1	—	6.5	33.8	1.5	35.3
	13.0	19.6	I?	4	K=H	1	—	6.5	39.2	1.5	29.9
	12.0	6.4	I	6	N	2	—	6.0	12.8	2.0	56.3
	6.5	16.5	I	6	N	2	—	3.2	33.0	4.8	36.1
	6.0	17.8	IIa	14	K=H	2	seen	3.0	35.6	5.0	33.5
	5.8	17.9	I	4	K=H	1	—	2.9	35.8	5.1	33.3

Mean 12

No.	R.A.	Dec.	Mag.	H	V	Red. of stars to 1900	Cor. P. Br.
3960	22 15.5	-1 59	4.1	48.7	17.6	22 16.5 - 1 53	5.3 4.1
3975	22 24.3	-11 17	4.8	48.7	17.9	22 25.4 - 11 12	6.5 5.3
3994	22 29.2	-0 44	4.2	48.6	17.8	22 30.2 - 0 38	5.7 4.5
3970	22 22.7	-0 38	3.8	48.7	17.8	22 23.7 - 0 32	5.6 4.4
4013	22 35.5	+10 12	3.6	48.7	17.9	22 36.4 + 10 19	5.3 4.1
31 u.a.	22 29	-28 54	6.5	48.3	8.1	22 4.5 - 28 50	7.0 7.0
Piscis Austrinus 3941	22 2.4	-19 6	5.8	47.8	7.9		5.5 4.7
3960	22 19.1	+0 46	4.6	48.5	7.8	22 20.2 + 0 52	5.9 4.7
3951	22 15.6	+11 36	5.1	48.4	18.0	22 16.6 + 11 42	6.0 4.8
3946	22 13.9	-8 25	5.4	48.7	8.0	22 14.9 - 8 19	6.5 5.3
3940	22 10.5	-8 23	4.3	48.5	7.9	22 11.5 - 8 17	6.5 5.3
3957	22 17.9	-5 26	5.8	48.7	8.0	22 18.9 - 5 21	6.8 5.6
3948	22 14.4	+5 11	5.2	48.6	7.8	22 15.4 + 5 17	6.6 5.4
3913	22 4.1	+5 36	3.8			22 5.1 + 5 43	5.2 4.0
3914	22 4.1	-4 29	5.8	48.5	7.7		5.2 4.0
3901	22 0.0	-14 27	4.3	48.2	8.0	22 1.0 - 14 22	6.5 5.3

Mean 11

No.	R.A.	Dec.	Mag.	H	V	Red. of stars to 1900	Cor. P. Br.
4213	23 45.2	-19 34	5.3	70.0	7.9	23 46.2 - 19 28	6.3 6.4
4207	23 43.3	+0 25	6.1	69.3	7.9	23 44.4 + 0 30	6.7 6.7
4196	23 39.6	-19 20	5.4	69.6	7.9	23 40.8 - 19 14	6.6 6.6
4195	23 38.0	-18 57	5.3	69.6	7.9	23 39.0 - 18 50	6.5 6.5
4188	23 35.9	+1 7	4.7	69.3	7.9	23 37.0 + 1 14	6.0 6.0
4221	23 46.9	+1 25	6.3	69.3	7.9	23 48.0 + 1 32	6.6 6.6
4187	23 35.5	-18 29	4.8	69.3	8.0	23 36.6 - 18 22	6.5 6.5
4170	23 30.3	+1 26	5.6	69.5	7.9	23 31.4 + 1 33	6.7 6.7
4252	23 37.6	-18 0	4.6	70.4	8.0	23 38.7 - 17 53	6.1 6.2
4190	23 36.5	-15 12	4.7	69.5	8.0	23 37.5 - 15 5	6.1 6.1
4180	23 32.8	+4 59	4.3	69.4	8.0	23 34.7 + 5 6	6.3 6.3
4178	23 33.6	-14 53	5.2	69.4	8.0	23 34.6 - 14 46	6.7 6.7

December 17, 1886.
Plate 863.

V	H	Type	Lines	K	Focus	Other Lines.	V	H	V	H
3.6	8.1	I	✓ $\phi 1$	$K=H$	✓	—	1.8	16.2	6.2	52.9
3.0	6.8	I	✓ $\phi 3$	✓	✓	—	1.5	13.6	6.5	55.5

Ant. of Fog. due to moon & clouds.

Ant. of Fog. due to chemicals.

8.2 7.9 Plate 856.

8.1

15.6	17.7	I	✓ $\phi 6$	✓	2	—	7.6	35.4	7.8	17.0
15.0	18.4	I	✓ $\phi 8$	✓	4	—	7.5	36.8	8.1	15.6
15.0	21.0	I	✓ $\phi 5$	✓	1	—	7.5	42.0	8.1	10.4
13.5	8.7	I	✓ $\phi 7$	✓	2	—	6.6	17.4	8.8	35.0
13.1	13.1	I	✓ 3	✓	1	—	6.6	26.2	9.0	26.2
12.5	11.6	I	✓ $\phi 8$	✓	3	F	6.2	23.2	9.4	29.2
12.4	14.8	II a	✓ $\phi 2$	$K=H$	3	seen	6.2	29.6	9.4	22.8
11.7	8.2	III b	✓ $\phi 2$	$K=H$	4	F bright seen	5.8	16.4	9.8	36.0
10.8	8.4	I	✓ $\phi 9$	✓	4	—	5.4	16.8	0.2	35.6
9.5	16.6	II?	✓ 2	$K=H$	2	F?	4.8	33.2	0.8	19.2
8.0	5.8	II?	✓ 2	$K=H$	1	—	4.0	11.6	1.6	40.8
8.0	18.2	I	✓ 6	✓	2	—	4.0	36.4	1.6	16.0
7.3	13.8	I	✓ $\phi 5$	✓	1	—	3.6	27.6	2.0	24.8
6.0	22.2	II a?	✓ $\phi 3$	$K=H$	2	F seen	3.0	44.4	2.6	8.0
3.5	14.2	I?	✓ 2?	✓	1	—	1.8	28.4	3.8	24.0

Ant. of Fog. due to moon & clouds.

Ant. of Fog. due to chemicals.

8.2 8.0 Plate 850.

8.2

17.5	4.1	I?	✓ 3	✓	1	—	8.8	14.2	9.3	75.6
16.6	8.6	I?	✓ $\phi 5$	✓	1	—	8.3	17.2	9.8	72.6
15.8	9.2	I	✓ 6	✓	2	—	7.9	18.4	0.2	71.4
15.6	10.2	III?	✓ $\phi 2$	$K=H$	1	—	7.8	20.4	0.3	69.4
12.9	15.5	I	✓ 3	✓	1	—	6.4	31.0	1.7	58.8
12.8	21.7	II?	✓ 2	$K=H$	1	—	6.4	43.4	1.7	46.4
9.3	20.6	I	✓ $\phi 9$	$K=2.2A$	3	—	4.6	41.2	3.5	48.6

Mean 11

No.	R.A.	Dec.	Mag.	H	V	Red. of H.A. & D.M.	Stars to 1900.	Br.	Br.	Br.
4238	23 53.1	+6 12	4.2	69.3	8.0	23 54.2 + 6 19	✓	5.0	6.2	6.2 0 6.2 4.9
4245	23 55.7	-3 42	5.1	69.3	7.8	23 56.7 - 3 35	✓	18+5.7	6.8	6.9 0 6.9 3.6
3952	22 15.8	+27 44	4.9	51.2	35.5	22 16.7 + 27 50	✓	7	Mean 9	
~~DM 4904~~	~~22 16.3~~	~~-22 20~~	~~7.5~~	~~5.7~~	~~15.5~~	~~22 16.3 - 22 20~~	~~✓~~			
~~DM 4240~~	~~22 17.1~~	~~-1 56~~	~~7.5~~	~~52.5~~	~~15.9~~	~~22 17.1 - 1 56~~	~~✓~~			
~~Aquarius 233 11.2~~	~~22 17.5~~	~~-22 27~~	~~6.8~~	~~52.9~~	~~15.4~~			5.7	4.8	✓
3950	22 15.5	-1 59	4.1	52.3	15.5	22 16.5 - 1 53	✓	5.0	4.1	✓
DM 4834	22 8.8	+7 50	7.0	50.8	15.3	22 11.0 + 8 3	✓	6.8	5.9	✓
~~Aquarius 128 11.2~~	~~22 10.1~~	~~-2 13~~	~~6.4~~	~~52.1~~	~~15.3~~	~~22 11.4 - 2 9~~	~~✓~~			
4013	22 36.1	+28 40	4.9	53.5	35.5	22 37.0 + 28 48	✓	5.9	5.0	✓
~~DM 5975~~	~~22 36.4~~	~~-10 62~~	~~7.0~~	~~52.8~~	~~15.9~~	~~22 37.3 - 10 38~~	~~✓~~			
DM 4389	22 24.9	+28 18	6.7	51.1	35.4	22 27.0 + 29 2	✓	7.0	6.1	✓
~~DM 6261~~	~~22 26.5~~	~~-21 27~~	~~6.7~~	~~53.0~~	~~15.2~~	~~22 27.3 - 21 13~~	~~✓~~			
3994	22 29.2	-0 44	4.2	52.4	15.5	22 30.2 - 0 38	✓	5.4	4.5	✓
3970	22 22.7	-0 38	3.8	52.3	15.6	22 23.7 - 0 32	✓	5.4	4.5	✓
~~DM 2020~~	~~22 37.4~~	~~+29 36~~	~~3.1~~	~~53.8~~	~~35.4~~	~~22 38.3 + 29 32~~	~~✓~~			
~~Aquarius 173 11.2~~	~~22 36.4~~	~~-0 24~~	~~7.0~~	~~52.8~~	~~15.4~~	~~22 37.7 - 0 20~~	~~✓~~			
~~Aquarius 4018~~	~~22 37.1~~	~~-19 28~~	~~4.8~~	~~53.5~~	~~6.3~~			5.7	4.8	✓
4013	22 35.5	+10 12	3.6	52.3	15.6	22 36.4 + 10 19	✓	5.2	4.3	✓
3960	22 19.1	+0 46	4.6	52.3	5.6	22 20.3 + 0 52	✓	5.9	5.0	✓
4024	22 40.9	+11 33	4.2	52.3	15.6	22 41.7 + 11 40	✓	6.5	5.6	✓
3951	22 15.6	+11 36	5.1	52.0	15.6	22 16.6 + 11 42	✓	6.3	5.4	✓
3979	22 24.5	+31 57	5.5	52.1	35.5	22 25.5 + 32 4	✓	6.5	5.6	✓
~~DM 6140~~	~~22 26.2~~	~~-18 16~~	~~7.8~~	~~52.6~~	~~6.4~~	~~22 27.0 - 18 1~~	~~✓~~			
3917	22 4.7	+32 35	4.4	49.1	35.6	22 5.3 + 32 42	✓	6.1	5.2	✓
~~DM 5433~~	~~22 7.3~~	~~-7 27~~	~~7.7~~	~~51.7~~	~~5.6~~	~~22 9.7 - 7 14~~	~~✓~~			
3976	22 23.9	+3 49	5.3	52.3	5.6	22 24.9 + 3 55	✓	7.7	6.8	✓
4139	23 16.7	-20 45	4.1	30.9	18.0	23 17.7 - 20 39	✓	6.8		✓
~~DM 6587~~	~~23 15.3~~	~~-20 54~~	~~4.6~~	~~29.5~~	~~17.9~~	~~23 17.7 - 20 29~~	~~✓~~			
~~DM 24100~~	~~23 17.1~~	~~-0 24~~	~~6.4~~	~~31.3~~	~~18.4~~					
4124	23 12.7	-10 15	5.1	29.9	18.1	23 13.8 - 10 10	✓	6.6		✓
4119	23 11.7	-9 50	4.5	30.1	8.1	23 12.7 - 9 44	✓	6.0		✓
4109	23 9.6	-9 44	4.5	30.0	8.1	23 10.6 - 9 38	✓	6.9	5.1	✓
4081	22 58.9	-8 20	5.4	89.9	8.1	22 59.9 - 8 14	✓	7.0		✓
4040	22 46.4	-8 13	3.8	89.8	8.2	22 47.4 - 8 7	✓	6.8	7.2	✓
4047	22 48.3	-16 28	3.4	89.5	8.1	22 49.4 - 16 21	✓	5.6		✓

Ant. of Fog. due to moon & clouds. 7.5 6.5 Ant. of Fog. due to chemicals. 6.6

December 17, 1886.
Plate 849.

V	H	Type	Lines	N	Focus	Other	V	H	V	H
15.0	12.8	I	✓ 57	N	4	F	7.5	25.6	5.6	4.4
15.0	15.0	I	✓ 32	N	2	—	7.5	30.0	5.6	0.0
13.8	17.8	I?	✓ 2	N	1	—	6.9	35.6	6.2	54.4
11.8	16.4	IIa?	3301 52	XK=H	2	Seen	5.9	32.8	7.2	57.2
10.5	13.0	I	✓ 49	N	1	—	5.2	26.0	7.9	4.0
10.1	7.2	I	✓ 57	N	2	F	5.0	14.4	8.1	15.6
9.2	15.6	I?	✓ 3	N	1	—	4.6	31.2	8.5	58.8
8.2	15.1	III	bc? 3302 53	XK=H	2	F bright seen	4.1	30.2	9.0	59.8
4.5	16.2	I?	✓ 3	N	1	—	2.2	32.4	0.9	57.6
3.3	19.3	I	✓ 3	N	1	—	1.6	38.6	1.5	51.4

Ant. of Fog. due to moon & clouds.

Ant. of Fog. due to chemicals.

6.0

6.0

Plate 842.

8.0

20.6	19.5	II?	✓ 3	XK=H	1	F	10.3	39.0	2.8	11.0
17.6	18.5	III?	✓ 3	XK=H	1	F	8.8	37.0	4.3	13.0
17.5	16.9	II	✓ 49	XK=H	1	F	8.8	33.8	4.3	16.2
16.5	7.1	I	✓ 8	XK=H	2	F	8.2	14.2	4.9	35.8
16.1	8.1	IIa?	3303 53	XK=H	1	Seen	8.0	16.2	5.1	33.8
15.9	8.5	I	✓ 4	XK=H	1	—	8.0	17.0	5.1	33.0
14.8	14.0	III	✓ 2	XK=H	1	F	7.4	28.0	5.7	22.0
14.5	20.4	I	✓ 4	N	1	—	7.2	40.8	5.9	9.2
13.0	7.1	IIa?	3304 32	XK=H	1	Seen	6.5	14.2	6.6	35.8
12.5	22.7	II?	✓ 43	XK=H	1	F	6.2	45.4	6.9	4.6
11.0	19.3	I?	✓ 4	XK=H	1	—	5.5	38.6	7.6	11.4
10.0	11.1	I	✓ 3	N	1	—	5.0	22.2	8.1	27.8
10.0	22.0	I	✓ 7	N	1	F	5.0	44.0	8.1	6.0
10.0	23.0	III?	✓ 2	XK=H	1	—	5.0	46.0	8.1	4.0
9.4	11.8	I	✓ 5	N	2	—	4.7	23.6	8.4	26.4
8.9	15.2	III?	✓ 3	XK=H	1	F	4.4	30.4	8.7	19.6

Mean 14

No.	R.A.	Dec.	Mag.	H	V	Red. of H.A.	Star to 1900.	Br.	Br.
3913	22	4.1 + 5	36	3.8	29.7	13.1	22 5.7 + 5 48	5.1	37
3901	22	0.0 - 14	27	4.3	30.0	13.1	22 1.0 - 14 22	6.1	47
3881	21	54.1 + 6	9	6.0	89.7	13.1	21 55.1 + 6 14	6.9	5.5
3889	21	57.1 - 2	44	4.7	89.9	13.2	21 58.2 - 2 39	6.0	4.6
3915	22	4.2 - 12	9	5.4	30.2	13.0	22 5.3 - 12 3	6.8	5.4
3950	22	15.5 - 1	59	4.1	29.9	13.0	22 16.5 - 1 38	5.9	4.5
3896	21	58.6 - 1	29	5.2	89.8	13.1	21 59.7 - 1 24	6.9	5.5
3899	21	59.6 - 0	54	3.2	89.8	13.2	21 0.7 - 0 49	5.7	4.3
3891	21	57.4 + 10	49	5.8	89.8	13.0	21 58.5 + 10 34	6.9	5.5
3875	21	57.1 + 11	32	5.5	89.7	13.1	21 52.0 + 11 36	6.8	5.4

Mean 12

4114	23	10.9 + 2	38	3.8	49.9	12.9	23 11.9 + 2 44	6.7	5.5
4126	23	13.2 - 5	46	5.7	50.2	13.0	23 14.2 - 5 41	6.9	5.7
4137	23	16.4 - 15	42	5.3	50.2	13.1	23 17.4 - 15 36	7.0	5.8
4190	23	36.5 - 15	12	4.7	50.7	13.0	23 37.5 - 15 5	6.7	5.5
4180	23	33.8 + 4	59	4.2	50.0	13.0	23 34.7 + 5 6	6.2	5.0
4178	23	33.6 - 14	53	5.2	49.8	13.1	23 34.6 - 14 46	6.3	5.1
4178	23	33.6 - 14	53	5.2	50.6	13.1	23 34.6 - 14 46	6.6	5.4
4180	23	33.8 + 4	59	4.3	50.8	13.0		6.5	5.3
4149	23	21.9 + 5	43	4.4	49.9	13.1	23 22.9 + 5 49	6.8	5.6
4108	23	9.3 - 4	8	5.6	50.1	13.1	23 10.4 - 4 3	6.5	5.3
Pisces.	40	22	35.6 + 6	34	5.9	49.8	23 36.9 + 6 38	6.9	5.7
4096	23	3.5 - 23	6	4.9	48.9	13.1	23 4.6 - 23 0	6.8	5.6
4117	23	11.4 - 12	22	6.3	50.0	12.9	23 12.5 - 12 15	7.0	5.8
4161	23	27.9 - 1	55	5.9	50.1	13.1	23 29.0 - 1 48	7.0	5.8
4102	23	5.7 + 8	4	5.1	49.7	13.1	23 6.7 + 8 10	6.8	5.6
4093	23	3.0 - 21	49	3.6	49.0	13.2	23 4.1 - 21 43	6.6	5.4
4095	23	3.5 + 8	2	5.4	49.5	13.0		6.9	5.7
4157	23	27.0 - 21	34	4.7	50.6	13.1	23 28.0 - 21 28	6.5	5.3
4148	23	19.7 - 21	18	4.4	50.1	13.1	23 21.8 - 21 12	6.9	5.7

December 17, 1886. Plate 842.

Lake 842.							Other				
V	H	Type	Lines	K	Focus	Lines.	V	H	V	H	
7.8	16.7	III	N	43	J	X ^J K=H 2	-	3.9	33.4	9.2	16.6
6.9	18.7	I	I	49	J	N 2	-	3.4	37.4	9.7	12.6
6.0	19.2	I	J	49	J	N J 2	-	3.0	38.4	10.1	11.6
5.0	22.9	I	V	44	J	X ^J K=H 1	-	4.0	45.8	9.1	4.2
5.9	20.3	III?	J	28	J	X ^J K=H 1	-	3.0	40.6	10.1	9.4
5.1	14.7	I	J	46	J	N J 2	-	2.6	29.4	10.5	20.6
4.0	7.1	I	J	46	J	N 1	-	2.0	14.2	11.1	35.8
4.0	6.5	II?	J	42	J	X ^J K=H 1	-	2.0	13.0	11.1	37.0

Amt. of Fog. due to moon & clouds.

Amt. of Fog. due to chemicals.

5.5 5.5 Plate 916.

8.0

23.4	15.0	I	J	46	J	N J 2	-	11.7	30.0	0.8	20.7
22.5	20.1	III	J	3305	2	K=H	-	11.2	30.5	1.3	10.5
22.4	7.4	II?	J	42	J	2K=H 2	-	11.2	14.8	1.3	35.9
21.8	10.2	I?	J	34	J	XK=H 1	-	10.9	20.4	1.6	30.3
21.3	20.0	III?	J	23	J	K=H 1	-	10.7	40.0	1.8	10.7
20.4	17.0	I	J	34	J	N J K=H 1	-	10.2	34.0	2.3	16.7
19.6	19.9	III	J	3306	3	12	Seen	7.8	39.8	2.7	10.9
20.2	17.8	III	J	22	J	K=H 1	-	10.1	35.6	2.4	15.1
18.9	19.8	II?	J	22	J	XK=H 1	-	9.4	39.6	3.1	11.1
19.0	21.4	III	J	43	J	XK=H 1	-	9.5	42.8	3.0	7.9
18.8	23.2	I?	J	44	J	XK=H 1	-	9.4	46.4	3.1	4.3
17.3	18.9	IIa?	J	3307	2	XK=H 2	Seen	8.6	37.8	3.9	12.9
17.0	15.2	Ia?	J	3308	2	XK=H 1	Seen	8.5	30.4	4.0	20.3
16.5	17.3	I	J	47	J	XK=H 3	-	8.2	34.6	4.3	16.1
16.4	17.9	I	J	45	J	N J K=H 1	-	8.2	35.8	4.3	14.9
15.7	7.5	I	J	47	J	N 3	-	7.8	15.0	4.7	35.7
15.0	8.5	IIa?	J	3309	3	K=H 3	Seen	7.5	17.0	5.0	33.7
15.0	8.9	I	J	46	J	XK=H 2	-	7.5	17.8	5.0	32.9
15.5	18.3	III	J	3	J	2K=H 2	-	7.8	36.6	4.7	14.1
15.6	23.5	I	J	44	J	XK=H 1	-	7.8	47.0	4.7	3.7
13.6	14.4	III	J	3310	3	XK=H 3	Seen	6.8	28.8	5.7	21.9
16.1	13.9	III	J	22	J	K=H 1	-	8.0	27.8	4.5	22.9

III? 5.7, 6.0

Mean 12

No.	R.A.	Dec.	Mag.	H	V	Red. of Star to 1900.	Br	Bv	cov.
4139	23 16.7	-20 45	4.1	50.1	13.2	23 17.7 - 20 39	6.3	5.1	✓
4124	23 12.7	-10 15	5.1	50.1	13.2	23 13.8 - 10 10	6.2	5.0	✓
4119	23 11.7	-9 50	4.5	50.1	3.2	23 12.7 - 9 44	5.7	4.5	✓
4097	23 4.0	+9 11	5.3	49.6	13.2	23 3.0 + 9 17	6.6	5.4	✓
4109	23 9.6	-9 44	4.5	50.2	3.3	23 10.6 - 9 38	6.6	5.4	✓
4146	23 20.8	+0 36	5.0	50.2	3.2	23 21.8 + 0 40	6.4	5.2	✓
4188	23 35.9	+1 7	4.7	50.1	3.1	23 37.0 + 1 14	6.5	5.3	✓
4195	23 38.0	-18 57	5.3	51.0	3.0	23 39.0 - 18 50	7.0	5.8	✓

Mean 5

Aquarius	4146	23 20.8	+0 36	5.0	50.8	12.3	23 21.8 + 0 40	✓	6.0	5.5	✓
	4113	23 10.7	-8 22	5.2	50.9	12.8	23 11.7 - 8 17	✓	6.5	5.0	✓
	4188	23 35.9	+1 7	4.7	50.7	12.3	23 37.0 + 1 14	✓	6.9	5.0	✓
Aquarius	4170	23 30.3	+1 26	5.6	50.7	12.3	23 31.4 + 1 33	✓	6.5	5.0	✓
Pisces	22 04.2	23 10.5	-7 51	6.8	50.5	12.9	23 11.8 - 7 44	✓	7.0	5.5	✓
	23 04.2	23 16.5	+2 8	7.0	50.5	12.3	23 17.5 + 2 12	✓	6.9	5.0	✓
	4114	23 10.9	+2 38	3.8	50.7	12.4	23 11.9 + 2 44	✓	6.6	5.1	✓
	4133	23 14.9	-27 39	5.9	50.5	12.5	23 16.0 - 27 32	✓	6.8	5.0	✓
Am.	62 54	23 9.9	-16 58	6.5	49.5	12.4	23 12.3 - 16 43	✓	6.8	5.0	✓
	4106	23 8.1	-6 41	6.4	50.9	12.8	23 9.2 - 6 35	✓	6.4	5.0	✓
Aquarius	214 04.2	23 4.2	-6 38	6.9	50.6	12.8	23 5.5 - 6 34	✓	6.7	6.4	✓
	4126	23 13.2	-5 46	5.7	51.0	12.8	23 14.2 - 5 41	✓	6.3	5.8	✓
Am.	62 91	23 19.4	-16 3	7.0	49.8	12.5	23 21.8 - 15 48	✓	7.0	6.5	✓
Am.	62 96	23 20.4	-16 6	6.8	60.8	12.4	23 22.8 - 15 51	✓	7.0	6.5	✓
	4137	23 16.4	-15 42	5.3	51.0	12.5	23 17.1 - 15 36	✓	6.1	5.6	✓
Aquarius	229 04.2	23 14.9	-5 21	6.7	50.7	12.8	23 16.2 - 5 17	✓	6.8	6.3	✓
	4190	23 36.5	-15 12	4.7	51.5	12.6	23 37.3 - 15 5	✓	5.5	5.0	✓
	4180	23 33.8	+4 59	4.3	50.8	12.5	23 34.7 + 5 6	✓	6.6	6.1	✓
	4178	23 33.6	-14 53	5.2	50.4	12.6	23 34.6 - 14 46	✓	6.2	5.7	✓
	4130	23 14.3	+4 43	5.1	50.9	12.5	23 15.3 + 4 50	✓	6.4	5.9	✓
Aquarius	213 04.2	23 3.2	-15 11	6.8	50.2	12.6	23 4.5 - 15 7	✓	6.7	6.6	✓
	4149	23 21.9	+5 43	4.4	50.7	12.5	23 22.9 + 5 49	✓	5.9	5.4	✓
	4152	23 23.2	-5 11	6.3	51.0	12.8	23 24.4 - 5 5	✓	7.0	7.3	✓

December 17, 1886.
Plate 916.

Date 9/16										Other									
V	H	Type	Lines	K	Focus	Lines	V	H	V	H	V	H	V	H	V	H			
13.9	16.2	II	3310a	2	12	XK=H	1	—	seen	7.0	32.4	5.5	18.3						
14.0	20.8	I		7	N	2	F	—		7.0	41.6	5.5	9.1						
13.5	19.0	III		9	XK=H	2	F	—		6.8	38.0	5.7	12.7						
13.0	12.1	I?		4	4	XK=H	1	—		6.5	24.2	6.0	26.5						
12.8	9.9	III?		9	XK=H	1	F	—		6.4	19.8	6.1	30.9						
11.9	12.1	I		4	XK=H	1	—			6.0	24.2	6.5	26.5						
11.8	7.5	I		6	N	2	—			5.9	15.0	6.6	35.7						
11.5	23.2	IIa?	3311	3	XK=H	2	seen			5.8	46.4	6.7	4.3						
11.0	19.0	I?		4	3	XK=H	1	—		5.5	38.0	7.0	12.7						
9.5	11.4	I?		4	5	XK=H	2	—		4.8	22.8	7.7	27.9						
9.2	13.0	I		3	N	1	—			4.6	26.0	7.9	24.7						
10.0	16.6	I		4	XK=H	1	—			5.0	33.2	7.5	17.5						
10.0	8.3	III		2	2	K=H	1	—		5.0	16.6	7.5	34.1						
10.1	19.7	I		4	5	N	2	—		5.0	39.4	7.5	11.3						
8.5	12.3	I		9	N	3	F	—		4.2	24.6	8.3	26.1						
8.9	22.5	I		7	N	3	—			4.4	40.0	8.1	5.7						
9.0	23.5	III	3312	3	XK=H	3	seen			4.5	47.0	8.0	3.7						
8.0	15.7	III	3313	3	XK=H	2	seen			4.0	31.4	8.5	19.3						
7.0	8.5	I		5	N	1	—			3.5	17.0	9.0	33.7						
6.8	17.1	III	3314	3	XK=H	3	seen			3.4	34.2	9.1	16.5						
6.0	19.1	I		9	N	3	F	—		3.0	38.2	9.5	12.5						
6.7	23.3	I		8	N	3	F	—		3.4	46.6	9.1	4.1						
5.2	19.6	I		10	N	3	F	—		2.6	39.2	9.9	11.5						
5.0	20.6	III	3315	3	XK=H	2	F	—		2.5	41.2	10.0	9.5						
4.7	15.1	I		10	N	3	F	—		2.4	30.2	10.1	20.5						
3.5	7.4	I		6	XK=H	3	—			1.8	14.6	10.7	35.9						
3.0	7.0	I		5	N	1	—			1.5	14.0	11.0	36.7						
3.9	6.2	IIa?	3316	2	XK=H	1	seen			2.0	12.4	10.5	38.3						
4.9	15.0	II?	IIa	2	K=H	1	—			2.4	30.0	10.1	20.7						

Mean 5

cor.

Br. Be

	No.	R.A.	Dec.	Mag.	H	V	Red. of star	star to 1900.		Br.	Re	
DM	5165	26	17.0	+ 5	24	7.8	49.4	12.4	23	19.3	+5 37	✓
	4108	23	9.3	- 4	8	5.6	50.9	12.9	23	10.4	-4 3	✓
	4125	23	12.8	- 14	7	5.2	50.6	12.7	23	13.8	-14 0	✓
Pisces	34 ua	23	26.5	- 3	42	6.6	50.7	12.8	23	27.5	-3 38	✓
	4172	23	31.4	- 13	44	5.6	51.2	12.7	23	32.5	-13 36	✓
DM	6428	23	25.7	- 13	25	6.3	49.9	12.6	23	28.0	-13 10	✓
Pisces	33 ua	23	25.8	+ 6	24	6.7	50.0	12.4	23	27.1	+6 28	✓
Pisces	40 ua	23	35.6	+ 6	34	5.9	50.6	12.5	23	36.9	+6 38	✓
	4096	23	3.5	- 23	6	4.9	49.9	12.7	23	4.6	-23 0	✓
DM	6468	23	11.5	- 12	38	7.2	49.5	12.5	23	13.9	-12 43	✓
DM	5009	23	12.5	+ 7	12	7.3	50.6	12.7	23	14.0	+7 27	✓
	4161	23	27.9	- 1	55	5.9	50.7	12.9	23	29.0	-1 48	✓
aquarius	242 ua	23	25.2	- 22	2	6.3	51.2	12.6	23	26.5	-22 56	✓
	4185	23	34.9	- 12	21	6.1	51.5	12.6	23	36.0	-12 14	✓
Aquarius	233 ua	23	17.5	- 22	27	6.8	50.7	12.6	23	18.5	-22 23	✓
	4117	23	11.4	- 12	22	6.3	50.8	12.6	23	12.5	-12 15	✓
	4157	23	27.0	- 21	34	4.7	51.6	12.6	23	28.0	-21 28	✓
	4102	23	5.7	+ 8	4	5.1	50.7	12.5	23	6.7	+ 8 10	✓
	4093	23	3.0	- 21	49	3.6	50.0	12.7	23	4.1	-21 43	✓
	4145	23	19.7	- 21	18	4.4	57.1	12.7	23	20.8	-21 12	✓
	4179	23	33.7	+ 9	1	6.2	50.7	12.5	23	34.8	+ 9 8	✓
	4139	23	16.7	- 20	45	4.1	50.9	12.6	23	17.7	-20 39	✓
	4124	23	12.7	- 10	15	5.1	50.9	12.8	23	13.8	-10 10	✓
	4297	23	4.0	+ 9	11	5.3	50.6	12.6	23	5.0	+ 9 17	✓
	4119	23	11.7	- 9	50	4.5	50.9	2.8	23	12.7	- 9 44	✓
	4109	23	9.6	- 9	44	4.5	50.8	2.8	23	10.6	- 9 38	✓
	4146	23	20.8	+ 0	36	5.0	51.0	3.0	23	21.8	+ 0 42	✓
	4145	23	19.7	- 21	18	4.4	49.7	12.4				✓
	4188	23	35.9	+ 1	7	4.7	50.7	2.9	23	37.0	+ 1 14	✓
	4195	23	38.0	- 18	57	5.3	52.0	2.5	23	39.0	-18 50	✓
DM	6600	23	32.7	- 19	6	5.8	50.7	2.4	23	34.0	-19 50	✓
	4195	23	38.0	- 18	57	5.3	50.4	3.0				✓
	4196	23	39.8	- 19	20	5.4	52.2	2.7	23	40.8	-19 11	✓
DM	6506	23	38.5	- 19	29	5.0	50.9	2.5				✓
Pisces	28 ua	23	20.8	+ 0	26	6.6	50.8	2.8	23	22.1	+ 0 34	✓

Ant. of Fog. due to moon & clouds. 5.7 5.6 Ant. of Fog. due to chemicals. 7.8

December 17, 1886.
Plate 915.

		V	H	Type	Lines	K	Focus	Other	Lines	V	H	V	H
III?	5.8, 6.0, 6.8	21.0	11.6	III	43	XK=H	1	F		10.5	23.2	1.9	46.2
		19.8	16.3	IIa?	42	XK=H	1	seen		9.9	32.6	2.5	36.8
		19.8	17.5	I	48		3	-		9.9	35.0	2.5	34.4
✓	✓ 18.8	11.5	I?	I	46	XK=H	1	F		9.4	23.0	3.0	46.4
	18.1	5.8	I		48	XK=H	3	F		9.0	11.6	3.4	57.8
✓	✓ 18.4	10.8	III	III	32	XK=H	1	F		8.8	21.6	3.6	47.8
	17.5	10.8	I		41		5						
	17.0	18.4	I		44	XK=H	1	-		8.5	36.8	3.9	32.6
	17.2	22.8	IIa?		42	XK=H	2	seen		8.6	45.6	3.8	23.8
	16.6	23.9	III?		43	XK=H	2	F		8.3	47.8	4.1	21.6
✓	✓ 16.3	15.3	I?	I	45	XK=H	1	F		8.2	30.6	4.2	38.8
✓	✓ 16.5	11.8	IIa?	IIa	42	XK=H	1	seen		8.2	23.6	4.2	45.8
✓	✓ 16.0	10.3	II?	III	32	XK=H	1	-		8.0	20.6	4.4	48.8
	15.2	22.6	I?		44	XK=H	1	-		7.6	45.2	4.8	24.2
	14.5	19.1	III?		43	XK=H	1	F		7.2	38.2	5.2	31.2
	14.0	14.2	I		48		2	F		7.0	28.4	5.4	41.0
	13.1	13.3	III	hc?	43	XK=H	2	F bright		6.6	26.6	5.8	42.8
✓	✓ 13.0	16.9	I?	I	3	XK=H	1	F		6.5	33.8	5.9	35.6
✓	✓ 13.2	17.4	I?	I	45	XK=H	1	F		6.6	34.8	5.8	34.6
✓	✓ 12.5	9.4	I	XI	42	XK=H	1	-		6.2	18.8	6.2	50.6
	13.4	5.6	III?		43	XK=H	1	F		6.7	11.2	5.7	58.2
✓	✓ 11.5	8.0	I?	I	44	XK=H	1	-		5.8	16.0	6.6	53.4
	11.4	8.5	I		47		1	F		5.7	17.0	6.7	52.4
✓	✓ 10.9	8.8	III?	III	42	XK=H	1	-		5.4	17.6	7.0	51.8
✓	✓ 11.0	14.5	IIa	IIa	42	XK=H	1	seen		5.5	29.0	6.9	40.4
✓	✓ 9.0	8.4	I	IX	42	XK=H	1	-		4.5	17.4	7.9	52.0
	9.2	11.4	I		47		2	F		4.6	22.8	7.8	46.6
	8.5	10.2	I		47		3	F		4.2	20.4	8.2	49.0
	7.5	20.5	IIa		42	XK=H	2	seen		3.8	41.0	8.6	28.4
✓	✓ 8.0	22.2	I	I	44	XK=H	1	-		4.0	44.4	8.4	25.0
	8.0	23.0	III		2	XK=H	1	-		4.0	46.0	8.4	23.4

Mean 6

	No.	R.A.	Dec.	Mag.	H	V	Red. of 20.22 + 0.711		Br.	B ₁	B ₂	B ₃	B ₄	B ₅	B ₆	B ₇	B ₈	B ₉	B ₁₀	B ₁₁	B ₁₂	B ₁₃	B ₁₄	B ₁₅	B ₁₆	B ₁₇	B ₁₈	B ₁₉	B ₂₀	B ₂₁	B ₂₂	B ₂₃	B ₂₄	B ₂₅	B ₂₆	B ₂₇	B ₂₈	B ₂₉	B ₃₀	B ₃₁	B ₃₂	B ₃₃	B ₃₄	B ₃₅	B ₃₆	B ₃₇	B ₃₈	B ₃₉	B ₄₀	B ₄₁	B ₄₂	B ₄₃	B ₄₄	B ₄₅	B ₄₆	B ₄₇	B ₄₈	B ₄₉	B ₅₀	B ₅₁	B ₅₂	B ₅₃	B ₅₄	B ₅₅	B ₅₆	B ₅₇	B ₅₈	B ₅₉	B ₆₀	B ₆₁	B ₆₂	B ₆₃	B ₆₄	B ₆₅	B ₆₆	B ₆₇	B ₆₈	B ₆₉	B ₇₀	B ₇₁	B ₇₂	B ₇₃	B ₇₄	B ₇₅	B ₇₆	B ₇₇	B ₇₈	B ₇₉	B ₈₀	B ₈₁	B ₈₂	B ₈₃	B ₈₄	B ₈₅	B ₈₆	B ₈₇	B ₈₈	B ₈₉	B ₉₀	B ₉₁	B ₉₂	B ₉₃	B ₉₄	B ₉₅	B ₉₆	B ₉₇	B ₉₈	B ₉₉	B ₁₀₀	B ₁₀₁	B ₁₀₂	B ₁₀₃	B ₁₀₄	B ₁₀₅	B ₁₀₆	B ₁₀₇	B ₁₀₈	B ₁₀₉	B ₁₁₀	B ₁₁₁	B ₁₁₂	B ₁₁₃	B ₁₁₄	B ₁₁₅	B ₁₁₆	B ₁₁₇	B ₁₁₈	B ₁₁₉	B ₁₂₀	B ₁₂₁	B ₁₂₂	B ₁₂₃	B ₁₂₄	B ₁₂₅	B ₁₂₆	B ₁₂₇	B ₁₂₈	B ₁₂₉	B ₁₃₀	B ₁₃₁	B ₁₃₂	B ₁₃₃	B ₁₃₄	B ₁₃₅	B ₁₃₆	B ₁₃₇	B ₁₃₈	B ₁₃₉	B ₁₄₀	B ₁₄₁	B ₁₄₂	B ₁₄₃	B ₁₄₄	B ₁₄₅	B ₁₄₆	B ₁₄₇	B ₁₄₈	B ₁₄₉	B ₁₅₀	B ₁₅₁	B ₁₅₂	B ₁₅₃	B ₁₅₄	B ₁₅₅	B ₁₅₆	B ₁₅₇	B ₁₅₈	B ₁₅₉	B ₁₆₀	B ₁₆₁	B ₁₆₂	B ₁₆₃	B ₁₆₄	B ₁₆₅	B ₁₆₆	B ₁₆₇	B ₁₆₈	B ₁₆₉	B ₁₇₀	B ₁₇₁	B ₁₇₂	B ₁₇₃	B ₁₇₄	B ₁₇₅	B ₁₇₆	B ₁₇₇	B ₁₇₈	B ₁₇₉	B ₁₈₀	B ₁₈₁	B ₁₈₂	B ₁₈₃	B ₁₈₄	B ₁₈₅	B ₁₈₆	B ₁₈₇	B ₁₈₈	B ₁₈₉	B ₁₉₀	B ₁₉₁	B ₁₉₂	B ₁₉₃	B ₁₉₄	B ₁₉₅	B ₁₉₆	B ₁₉₇	B ₁₉₈	B ₁₉₉	B ₂₀₀	B ₂₀₁	B ₂₀₂	B ₂₀₃	B ₂₀₄	B ₂₀₅	B ₂₀₆	B ₂₀₇	B ₂₀₈	B ₂₀₉	B ₂₁₀	B ₂₁₁	B ₂₁₂	B ₂₁₃	B ₂₁₄	B ₂₁₅	B ₂₁₆	B ₂₁₇	B ₂₁₈	B ₂₁₉	B ₂₂₀	B ₂₂₁	B ₂₂₂	B ₂₂₃	B ₂₂₄	B ₂₂₅	B ₂₂₆	B ₂₂₇	B ₂₂₈	B ₂₂₉	B ₂₃₀	B ₂₃₁	B ₂₃₂	B ₂₃₃	B ₂₃₄	B ₂₃₅	B ₂₃₆	B ₂₃₇	B ₂₃₈	B ₂₃₉	B ₂₄₀	B ₂₄₁	B ₂₄₂	B ₂₄₃	B ₂₄₄	B ₂₄₅	B ₂₄₆	B ₂₄₇	B ₂₄₈	B ₂₄₉	B ₂₅₀	B ₂₅₁	B ₂₅₂	B ₂₅₃	B ₂₅₄	B ₂₅₅	B ₂₅₆	B ₂₅₇	B ₂₅₈	B ₂₅₉	B ₂₆₀	B ₂₆₁	B ₂₆₂	B ₂₆₃	B ₂₆₄	B ₂₆₅	B ₂₆₆	B ₂₆₇	B ₂₆₈	B ₂₆₉	B ₂₇₀	B ₂₇₁	B ₂₇₂	B ₂₇₃	B ₂₇₄	B ₂₇₅	B ₂₇₆	B ₂₇₇	B ₂₇₈	B ₂₇₉	B ₂₈₀	B ₂₈₁	B ₂₈₂	B ₂₈₃	B ₂₈₄	B ₂₈₅	B ₂₈₆	B ₂₈₇	B ₂₈₈	B ₂₈₉	B ₂₉₀	B ₂₉₁	B ₂₉₂	B ₂₉₃	B ₂₉₄	B ₂₉₅	B ₂₉₆	B ₂₉₇	B ₂₉₈	B ₂₉₉	B ₃₀₀	B ₃₀₁	B ₃₀₂	B ₃₀₃	B ₃₀₄	B ₃₀₅	B ₃₀₆	B ₃₀₇	B ₃₀₈	B ₃₀₉	B ₃₁₀	B ₃₁₁	B ₃₁₂	B ₃₁₃	B ₃₁₄	B ₃₁₅	B ₃₁₆	B ₃₁₇	B ₃₁₈	B ₃₁₉	B ₃₂₀	B ₃₂₁	B ₃₂₂	B ₃₂₃	B ₃₂₄	B ₃₂₅	B ₃₂₆	B ₃₂₇	B ₃₂₈	B ₃₂₉	B ₃₃₀	B ₃₃₁	B ₃₃₂	B ₃₃₃	B ₃₃₄	B ₃₃₅	B ₃₃₆	B ₃₃₇	B ₃₃₈	B ₃₃₉	B ₃₄₀	B ₃₄₁	B ₃₄₂	B ₃₄₃	B ₃₄₄	B ₃₄₅	B ₃₄₆	B ₃₄₇	B ₃₄₈	B ₃₄₉	B ₃₅₀	B ₃₅₁	B ₃₅₂	B ₃₅₃	B ₃₅₄	B ₃₅₅	B ₃₅₆	B ₃₅₇	B ₃₅₈	B ₃₅₉	B ₃₆₀	B ₃₆₁	B ₃₆₂	B ₃₆₃	B ₃₆₄	B ₃₆₅	B ₃₆₆	B ₃₆₇	B ₃₆₈	B ₃₆₉	B ₃₇₀	B ₃₇₁	B ₃₇₂	B ₃₇₃	B ₃₇₄	B ₃₇₅	B ₃₇₆	B ₃₇₇	B ₃₇₈	B ₃₇₉	B ₃₈₀	B ₃₈₁	B ₃₈₂	B ₃₈₃	B ₃₈₄	B ₃₈₅	B ₃₈₆	B ₃₈₇	B ₃₈₈	B ₃₈₉	B ₃₉₀	B ₃₉₁	B ₃₉₂	B ₃₉₃	B ₃₉₄	B ₃₉₅	B ₃₉₆	B ₃₉₇	B ₃₉₈	B ₃₉₉	B ₄₀₀	B ₄₀₁	B ₄₀₂	B ₄₀₃	B ₄₀₄	B ₄₀₅	B ₄₀₆	B ₄₀₇	B ₄₀₈	B ₄₀₉	B ₄₁₀	B ₄₁₁	B ₄₁₂	B ₄₁₃	B ₄₁₄	B ₄₁₅	B ₄₁₆	B ₄₁₇	B ₄₁₈	B ₄₁₉	B ₄₂₀	B ₄₂₁	B ₄₂₂	B ₄₂₃	B ₄₂₄	B ₄₂₅	B ₄₂₆	B ₄₂₇	B ₄₂₈	B ₄₂₉	B ₄₃₀	B ₄₃₁	B ₄₃₂	B ₄₃₃	B ₄₃₄	B ₄₃₅	B ₄₃₆	B ₄₃₇	B ₄₃₈	B ₄₃₉	B ₄₄₀	B ₄₄₁	B ₄₄₂	B ₄₄₃	B ₄₄₄	B ₄₄₅	B ₄₄₆	B ₄₄₇	B ₄₄₈	B ₄₄₉	B ₄₅₀	B ₄₅₁	B ₄₅₂	B ₄₅₃	B ₄₅₄	B ₄₅₅	B ₄₅₆	B ₄₅₇	B ₄₅₈	B ₄₅₉	B ₄₆₀	B ₄₆₁	B ₄₆₂	B ₄₆₃	B ₄₆₄	B ₄₆₅	B ₄₆₆	B ₄₆₇	B ₄₆₈	B ₄₆₉	B ₄₇₀	B ₄₇₁	B ₄₇₂	B ₄₇₃	B ₄₇₄	B ₄₇₅	B ₄₇₆	B ₄₇₇	B ₄₇₈	B ₄₇₉	B ₄₈₀	B ₄₈₁	B ₄₈₂	B ₄₈₃	B ₄₈₄	B ₄₈₅	B ₄₈₆	B ₄₈₇	B ₄₈₈	B ₄₈₉	B ₄₉₀	B ₄₉₁	B ₄₉₂	B ₄₉₃	B ₄₉₄	B ₄₉₅	B ₄₉₆	B ₄₉₇	B ₄₉₈	B ₄₉₉	B ₅₀₀	B ₅₀₁	B ₅₀₂	B ₅₀₃	B ₅₀₄	B ₅₀₅	B ₅₀₆	B ₅₀₇	B ₅₀₈	B ₅₀₉	B ₅₁₀	B ₅₁₁	B ₅₁₂	B ₅₁₃	B ₅₁₄	B ₅₁₅	B ₅₁₆	B ₅₁₇	B ₅₁₈	B ₅₁₉	B ₅₂₀	B ₅₂₁	B ₅₂₂	B ₅₂₃	B ₅₂₄	B ₅₂₅	B ₅₂₆	B ₅₂₇	B ₅₂₈	B ₅₂₉	B ₅₃₀	B ₅₃₁	B ₅₃₂	B ₅₃₃	B ₅₃₄	B ₅₃₅	B ₅₃₆	B ₅₃₇	B ₅₃₈	B ₅₃₉	B ₅₄₀	B ₅₄₁	B ₅₄₂	B ₅₄₃	B ₅₄₄	B ₅₄₅	B ₅₄₆	B ₅₄₇	B ₅₄₈	B ₅₄₉	B ₅₅₀	B ₅₅₁	B ₅₅₂	B ₅₅₃	B ₅₅₄	B ₅₅₅	B ₅₅₆	B ₅₅₇	B ₅₅₈	B ₅₅₉	B ₅₆₀	B ₅₆₁	B ₅₆₂	B ₅₆₃	B ₅₆₄	B ₅₆₅	B ₅₆₆	B ₅₆₇	B ₅₆₈	B ₅₆₉	B ₅₇₀	B ₅₇₁	B ₅₇₂	B ₅₇₃	B ₅₇₄	B ₅₇₅	B ₅₇₆	B ₅₇₇	B ₅₇₈	B ₅₇₉	B ₅₈₀	B ₅₈₁	B ₅₈₂	B ₅₈₃	B ₅₈₄	B ₅₈₅	B ₅₈₆	B ₅₈₇	B ₅₈₈	B ₅₈₉	B ₅₉₀	B ₅₉₁	B ₅₉₂	B ₅₉₃	B ₅₉₄	B ₅₉₅	B ₅₉₆	B ₅₉₇	B ₅₉₈	B ₅₉₉	B ₆₀₀	B ₆₀₁	B ₆₀₂	B ₆₀₃	B ₆₀₄	B ₆₀₅	B ₆₀₆	B ₆₀₇	B ₆₀₈	B ₆₀₉	B ₆₁₀	B ₆₁₁	B ₆₁₂	B ₆₁₃	B ₆₁₄	B ₆₁₅	B ₆₁₆	B ₆₁₇	B ₆₁₈	B ₆₁₉	B ₆₂₀	B ₆₂₁	B ₆₂₂	B ₆₂₃	B ₆₂₄	B ₆₂₅	B ₆₂₆	B ₆₂₇	B ₆₂₈	B ₆₂₉	B ₆₃₀	B ₆₃₁	B ₆₃₂	B ₆₃₃	B ₆₃₄	B ₆₃₅	B ₆₃₆	B ₆₃₇	B ₆₃₈	B ₆₃₉	B ₆₄₀	B ₆₄₁	B ₆₄₂	B ₆₄₃	B ₆₄₄	B ₆₄₅	B ₆₄₆	B ₆₄₇	B ₆₄₈	B ₆₄₉	B ₆₅₀	B ₆₅₁	B ₆₅₂	B ₆₅₃	B ₆₅₄	B ₆₅₅	B ₆₅₆	B ₆₅₇	B ₆₅₈	B ₆₅₉	B ₆₆₀	B ₆₆₁	B ₆₆₂	B ₆₆₃	B ₆₆₄	B ₆₆₅	B ₆₆₆	B ₆₆₇	B ₆₆₈	B ₆₆₉	B ₆₇₀	B ₆₇₁	B ₆₇₂	B ₆₇₃	B ₆₇₄	B ₆₇₅	B ₆₇₆	B ₆₇₇	B ₆₇₈	B ₆₇₉	B ₆₈₀	B ₆₈₁	B ₆₈₂	B ₆₈₃	B ₆₈₄	B ₆₈₅	B ₆₈₆	B ₆₈₇	B ₆₈₈	B ₆₈₉	B ₆₉₀	B ₆₉₁	B ₆₉₂	B ₆₉₃	B ₆₉₄	B ₆₉₅	B ₆₉₆	B ₆₉₇	B ₆₉₈	B ₆₉₉	B ₇₀₀	B ₇₀₁	B ₇₀₂	B ₇₀₃	B ₇₀₄	B ₇₀₅	B ₇₀₆	B ₇₀₇	B ₇₀₈	B ₇₀₉	B ₇₁₀	B ₇₁₁	B ₇₁₂	B ₇₁₃	B ₇₁₄	B ₇₁₅	B ₇₁₆	B ₇₁₇	B ₇₁₈	B ₇₁₉	B ₇₂₀	B ₇₂₁	B ₇₂₂	B ₇₂₃	B ₇₂₄	B ₇₂₅	B ₇₂₆	B ₇₂₇	B ₇₂₈	B ₇₂₉	B ₇₃₀	B ₇₃₁	B ₇₃₂	B ₇₃₃	B ₇₃₄	B ₇₃₅	B ₇₃₆	B ₇₃₇	B ₇₃₈	B ₇₃₉	B ₇₄₀	B ₇₄₁	B ₇₄₂	B ₇₄₃	B ₇₄₄	B ₇₄₅	B ₇₄₆	B ₇₄₇	B ₇₄₈	B ₇₄₉	B ₇₅₀	B ₇₅₁	B ₇₅₂	B ₇₅₃	B ₇₅₄	B ₇₅₅	B ₇₅₆	B ₇₅₇	B ₇₅₈	B ₇₅₉	B ₇₆₀	B ₇₆₁	B ₇₆₂	B ₇₆₃	B ₇₆₄	B ₇₆₅	B ₇₆₆	B ₇₆₇	B ₇₆₈	B ₇₆₉	B ₇₇₀	B ₇₇₁	B ₇₇₂	B ₇₇₃	B ₇₇₄	B ₇₇₅	B ₇₇₆	B ₇₇₇	B ₇₇₈	B ₇₇₉	B ₇₈₀	B ₇₈₁	B ₇₈₂	B ₇₈₃	B ₇₈₄	B ₇₈₅	B ₇₈₆	B ₇₈₇	B ₇₈₈	B ₇₈₉	B ₇₉₀	B ₇₉₁	B ₇₉₂	B ₇₉₃	B ₇₉₄	B ₇₉₅	B ₇₉₆	B ₇₉₇	B ₇₉₈	B ₇₉₉	B ₈₀₀	B ₈₀₁	B ₈₀₂	B ₈₀₃	B ₈₀₄	B ₈₀₅	B ₈₀₆	B ₈₀₇	B ₈₀₈	B ₈₀₉	B ₈₁₀	B ₈₁₁	B ₈₁₂	B ₈₁₃	B ₈₁₄	B ₈₁₅	B ₈₁₆	B ₈₁₇	B ₈₁₈	B ₈₁₉	B ₈₂₀	B ₈₂₁	B ₈₂₂	B ₈₂₃	B ₈₂₄	B ₈₂₅	B ₈₂₆	B ₈₂₇	B ₈₂₈	B ₈₂₉	B ₈₃₀	B ₈₃₁	B ₈₃₂	B ₈₃₃	B ₈₃₄	B ₈₃₅	B ₈₃₆	B ₈₃₇	B ₈₃₈	B ₈₃₉	B ₈₄₀	B ₈₄₁	B ₈₄₂	B ₈₄₃	B ₈₄₄	B ₈₄₅	B ₈₄₆	B ₈₄₇	B ₈₄₈	B ₈₄₉	B ₈₅₀	B ₈₅₁	B ₈₅₂	B ₈₅₃	B ₈₅₄	B ₈₅₅	B ₈₅₆	B ₈₅₇	B ₈₅₈	B ₈₅₉	B ₈₆₀	B ₈₆₁	B ₈₆₂	B ₈₆₃	B ₈₆₄	B ₈₆₅	B ₈₆₆	B ₈₆₇	B ₈₆₈	B ₈₆₉	B ₈₇₀	B ₈₇₁	B ₈₇₂	B ₈₇₃	B ₈₇₄	B ₈₇₅	B ₈₇₆	B ₈₇₇	B ₈₇₈	B ₈₇₉	B ₈₈₀	B ₈₈₁	B ₈₈₂	B ₈₈₃	B ₈₈₄	B ₈₈₅	B ₈₈₆	B ₈₈₇	B ₈₈₈	B ₈₈₉	B ₈₉₀	B ₈₉₁	B ₈₉₂	B ₈₉₃	B ₈₉₄	B ₈₉₅	B ₈₉₆	B ₈₉₇	B ₈₉₈	B ₈₉₉	B ₉₀₀	B ₉₀₁	B ₉₀₂	B ₉₀₃	B ₉₀₄	B ₉₀₅	B ₉₀₆	B ₉₀₇	B ₉₀₈	B ₉₀₉	B ₉₁₀	B ₉₁₁	B ₉₁₂	B ₉₁₃	B ₉₁₄	B ₉₁₅	B ₉₁₆	B ₉₁₇	B ₉₁₈	B ₉₁₉	B ₉₂₀	B ₉₂₁	B ₉₂₂	B ₉₂₃	B ₉₂₄	B ₉₂₅	B ₉₂₆	B ₉₂₇	B ₉₂₈	B ₉₂₉	B ₉₃₀	B ₉₃₁	B ₉₃₂	B ₉₃₃	B ₉₃₄	B ₉₃₅	B ₉₃₆	B ₉₃₇	B ₉₃₈	B ₉₃₉	B ₉₄₀	B ₉₄₁	B ₉₄₂	B ₉₄₃	B ₉₄₄	B ₉₄₅	B ₉₄₆	B ₉₄₇	B ₉₄₈	B ₉₄₉	B ₉₅₀	B ₉₅₁	B ₉₅₂	B ₉₅₃	B ₉₅₄	B ₉₅₅	B ₉
--	-----	------	------	------	---	---	-----------------------	--	-----	----------------	----------------	----------------	----------------	----------------	----------------	----------------	----------------	----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	----------------

December 17, 1886.

Plate 915.

		No.		Type	Lines	K	Focus	Lines	Other		V	H	V	H
	7.5	22.4	I	✓	6	1	N	1	✓	F	38	45.4	8.6	24.0
✓	7.2	13.9	II	✓	65	✓	K=H	K=H	1	F	36	27.8	8.8	41.6
	6.5	11.7	II?	✓	27	8	K=H	3		F	32	23.4	9.2	46.0
	6.5	20.3	I	✓	8	✓	N	3		F	32	40.6	9.2	28.8
	6.4	23.6	II	✓	33	2	K=H	3		F	32	47.2	9.2	22.2
✓	5.2	13.1	IIa	✓	2	2	K=H	K=H	1	seen	26	26.2	9.8	43.2
	4.6	17.1	I	✓	10	✓	N	5		F	23	34.2	10.1	35.2
	4.0	10.5	I	✓	5	✓	K=H	1			20	21.0	10.4	48.4
	2.6	8.4	II?	✓	2	✓	K=H	1			13	16.8	11.1	52.6
✓	2.3	9.5	I	✓	4	✓	N	11			12	19.0	11.2	50.4
	1.9	14.5	?	✓	0	✓	N	2			10	29.0	11.4	40.4
	2.6	16.6	I	✓	4	✓	N	1			13	33.2	11.1	36.2
	2.9	19.5	I	✓	5	✓	N	1			14	39.0	11.0	30.4
III 2 6.5, 6.8.	3.7	16.4	III	✓	2	✓	K=H	1			18	32.8	10.6	36.6
✓	3.7	16.5	I	✓	3	✓	N	11			18	33.0	10.6	36.4
12 0	4.4	16.0	III?	✓	2	✓	K=H	1			22	32.0	10.2	37.4
	15.5	7.2	II	✓	2	✓	K=H	1			78	14.4	4.6	55.0
	12.0	22.2	I	✓	3	✓	K=H	1			6.0	44.4	6.4	25.0
	12.2	8.4	III	✓	2	✓	K=H	1			6.1	16.8	6.3	52.6

Mean 6

No.	R.A.	Dec	Mag.	H	V	Red. of mean Δ m.	stars to 1900.	Br.	Br.
78 ✓									
3987 ✓	22 24.3	- 11 17	4.8 ✓	69.7	12.5	22 25.4	- 11 12 ✓	5.6	5.0 ✓
4029 ✓	22 42.2	- 11 11	6.3 ✓	70.0	12.4	22 43.2	- 11 5 ✓	6.6	6.1 ✓
4039 ✓	22 46.3	+ 9 13	6.3 ✓	69.7	12.4	22 47.3	+ 9 18 ✓	6.0	5.4 ✓
3994 ✓	22 29.2	- 0 44	4.2 ✓	69.8	12.5	22 30.2	- 0 38 ✓	5.1	4.5 ✓
3970 ✓	22 22.7	- 0 38	3.8 ✓	69.9	12.6	22 23.7	- 0 32 } ? ✓	5.4	4.8 ✓
DM 5111 ✓	22 42.3	+ 9 44	6.6 ✓	68.5	12.3	22 42.5	+ 9 58 ✓	6.8	6.2 ✓
4013 ✓	22 35.5	+ 10 12	3.6 ✓	69.7	12.5	22 36.4	+ 10 19 ✓	4.5	3.9 ✓
Pisces 3 u.a. ✓	22 43.6	+ 0 24	6.3 ✓	69.6	2.4	22 44.9	+ 0 28 ✓	6.7	6.1 ✓
4062 ✓	22 53.2	+ 11 5	6.9 ✓	70.0	12.4	22 54.2	+ 11 12 ✓	6.8	6.2 ✓
DM 4906 ✓	22 49.6	+ 11 4	6.9 ✓	68.6	12.3	22 51.5	+ 11 18 ✓	6.9	6.9 ✓
4024 ✓	22 40.7	+ 11 33	4.2 ✓	69.7	12.6	22 41.7	+ 11 40 ✓		
Aquarius 174 u.a. ✓	22 36.5	- 8 58	6.6 ✓	69.7	2.3	22 37.8	- 8 54 ✓	6.8	6.2 ✓
DM 4781 ✓	22 29.4	+ 10 58	7.2 ✓	68.4	12.4	22 31.5	+ 11 12 ✓	6.6	6.0 ✓
4018 ✓	22 37.1	- 19 28	4.8 ✓	69.9	2.3	22 38.2	- 19 21 ✓	6.6	6.0 ✓
DM 4912 ✓	22 35.6	+ 0 27	7.5 ✓	68.6	2.2	22 37.7	+ 0 41 ✓	7.0	6.4 ✓
DM 6068 ✓	22 35.5	- 9 4	7.0 ✓	68.5	2.7	22 37.9	- 9 50 ✓	6.8	6.8 ✓
DM 4805 ✓	22 36.5	+ 10 12	7.3 ✓	68.5	12.4	22 38.7	+ 10 26 ✓	7.0	6.4 ✓
Aquarius 202 u.a. ✓	22 55.0	- 5 23	6.1 ✓	69.4	12.4	22 56.3	- 5 15 ✓	7.2	7.0 6.4
Aquarius 155 u.a. ✓	22 24.8	- 3 33	6.6 ✓	69.2	12.4	22 26.1	- 3 25 ✓	7.2	7.1 6.5
" 198 u.a. ✓	22 53.0	- 13 44	6.6 ✓	69.8	12.4	22 54.3	- 13 36 ✓	7.3	7.2 } 6.6 } 7.6 7.5 } 6.9 }

DM + 95111 Precision for 45 years has been applied
as .2^m instead of 2.2^m. R.A. should be 44.5^m
This causes an error in the D.C.

M.F. Sept. 1, 1893

Ant. of Fog. due to moon & clouds. 6.8 6.6 Ant. of Fog. due to chemicals. 8.0

December 28, 1886.

Plate 831.

		No.		Type	Lines	K	Focus	Lines	Other			
V	H								V.	H.	V.	H.
20.1	15.4	I?	✓	34	✓	N	1	-	40.0	30.8	42	36.8
17.9	16.2	III	✓	33 24	✓	N	2	Bright seen	9.0	32.4	52	36.2
18.0	19.7	I?	✓	34	✓	N	1	-	9.0	39.4	52	29.2
16.5	20.0	I?	✓	33	✓	N	2	F	8.2	40.0	6.0	28.6
15.1	17.4	I?	✓	33	✓	N	1	-	7.6	34.8	6.6	35.8
15.8	16.1	I?	✓	32	✓	N	1	-	7.2	13.4	7.0	55.2
14.5	6.4	I?	✓	33	✓	N	1	-	7.2	26.2	7.0	42.4
14.5	13.1	I?	✓	3	✓	N	1	-	6.6	19.6	7.6	49.0
13.3	9.8	I	✓	36	✓	N	1	-	6.6	39.4	7.6	29.2
13.3	19.7	I	✓	37	✓	N	2	F	6.1	29.6	8.1	34.0
12.2	14.8	I	✓	5	✓	N	1	-	5.6	15.6	8.6	53.0
11.2	7.8	I?	✓	3	✓	N	1	-	5.5	37.2	8.7	31.4
11.0	18.6	I	✓	39	✓	N	3	F	4.9	30.6	9.8	38.0
9.8	15.3	I	✓	310	✓	N	3	F	4.6	29.4	9.8	39.2
9.2	14.7	I	✓	38	✓	N	1	-	4.3	18.6	9.9	23.0
8.6	22.8	II	✓	3	✓	N	2	F	2.6	11.6	11.6	57.0
6.3	17.1	I?	✓	32	✓	N	1	-	2.4	24.4	11.8	44.2
5.2	5.8	I	✓	35	✓	N	1	-	2.2	39.0	12.0	29.6
4.7	12.2	I?	✓	33	✓	N	1	-				
4.3	19.5	I?	✓	33	✓	N	1	-				

Ant. of Fog. due to moon & clouds.

8.3

8.2

Plate 788.

Ant. of Fog. due to chemicals.

8.3

19.5	20.1	I	✓	6	✓	N	2	-	9.8	40.2	8.4	30.2
19.1	12.8	II	✓	13	✓	N	5	Flare	9.6	25.6	8.6	44.8
18.0	18.1	I	✓	34	✓	N	1	-	9.0	36.2	9.2	34.2
18.1	13.4	IIa?	✓	32	✓	N	1	seen	9.0	26.8	9.2	43.6
16.2	11.1	I	✓	4	✓	N	1	-	8.1	22.2	10.1	48.2
16.0	12.7	II?	✓	32	✓	N	1	-	8.0	25.4	10.2	45.0
15.5	15.0	III	✓	33 25	✓	N	3	Bright seen	7.8	30.0	10.4	40.4
14.8	12.2	II?	✓	3	✓	N	2	F	7.4	24.4	10.8	46.0

Mean 18

No.	R.A.	DEC.	MAG.	H.	V.	Red. of D.H.H. Stars to 1900
21 38.8 - 12.1	3846	21 40.1 - 11 55	5.4			21 41.2 - 11 49 ✓
	3839	21 38.7 + 14 14	6.1	6.5	24.2	21 39.3 + 9 25 ✓
21 37.0 + 9.2	3836	21 38.0 + 9 20	2.4			
	3826	21 36.3 + 5 8	5.5	6.8	14.1	21 32.5 - 0 51 ✓
21 30.0 - 1.1	3810	21 31.4 - 0 56	6.2			
	3805	21 30.0 - 4 31	5.8	6.8	14.0	
	3809	21 30.4 - 2 0	4.5			
21 29.0 - 20.2	3808	21 28.8 - 14 6	8.0	68.6	14.1	21 31.3 - 12 51 ✓
	3805	21 29.0 - 4 31	5.8	69.0	13.7	21 31.5 - 19 53 ✓
	3824	21 36.0 - 19 24	4.7			21 37.1 - 19 20 ✓
21 34.5 - 19.6	3844	21 33.0 - 3 10	7.4	67.8	14.4	21 35.3 - 2 58 ✓
	3891	21 37.4 + 10 49	5.8			21 38.5 + 10 54 ✓
21 56.2 + 10	3881	21 55.8 - 2 6	6.3	69.2	14.4	21 58.1 - 2 38 ✓
	6176	21 43.6 - 19 18	6.6			21 46.1 - 19 6 ✓
21 43.6 - 19.3	6087	21 41.8 - 16 24	6.5	68.0	13.8	21 44.2 - 12 12 ✓
	3875	21 57.1 + 11 32	5.5			21 52.0 + 11 36 ✓
21 49.8 + 11.3	5668	21 50.8 - 2 31	8.4	70.4	14.1	21 53.1 - 2 18 ✓
	3811	21 31.4 - 8 24	4.8			21 32.5 - 8 18 ✓
21 29.9 - 8.6	6014	21 29.6 - 12 6	7.7	68.9	14.5	21 31.9 - 11 54 ✓
	3851	21 41.1 + 2 8	5.6			21 42.1 + 2 14 ✓
21 39.9 + 2.1	3846	21 40.1 - 11 55	5.4	69.7	14.2	
	3886	21 55.2 + 12 33	5.6			21 56.2 + 12 38 ✓
21 54.2 + 12.4	3878	21 52.0 - 21 45	6.4	67.6	13.8	
	3818	21 33.4 - 17 12	3.8			21 34.6 - 17 7 ✓
21 32.1 - 17.3	3810	21 31.4 - 0 56	6.2	68.6	14.6	
	3848	21 40.4 - 16 40	3.0			21 41.6 - 16 34 ✓
21 39.0 - 16.8	3836	21 38.3 + 9 20	2.4	68.9	14.2	
	5827	21 40.0 - 6 35	6.2			21 42.4 - 6 23 ✓
21 40.0 - 6.7	6206	21 39.6 - 20 14	7.5	69.0	14.4	21 42.1 - 20 2 ✓
	3793	21 25.2 - 6 6	3.1			21 24.3 - 19 35 ✓
21 23.9 - 6.2	6107	21 21.8 - 19 44	6.5	67.4	14.5	21 26.2 - 19 1 ✓
	3826	21 36.3 + 5 8	5.5			21 37.3 + 5 13 ✓
	3701	22 0.0 - 14 27	4.3			22 37.8 - 14 22 ✓
21 58.4 - 14.6	6061	21 56.2 - 18 6	8.2	67.8	4.1	21 58.7 - 18 19 ✓
	3864	21 46.8 - 14 7	5.2			21 47.8 - 14 1 ✓
21 45.5 - 14.2	4946	21 44.0 + 11 57	7.7	68.4	14.4	21 46.2 + 12 9 ✓
	3612	21 31.7 + 6 5	5.9			21 32.8 + 6 10 ✓
21 34.4 + 5.9	5701	21 30.0 - 8 30	8.0	69.0	3.7	21 32.7 - 8 16 ✓
	6829	21 29.9 - 17 51	7.8	68.9	4.4	

Br. Br.

71 5.3 ✓	✓
60 4.2 ✓	✓
65 4.7 ✓	✓
72 5.4 ✓	✓
64 4.6 ✓	✓
69 5.1 ✓	✓
70 4.3 ✓	✓
71 8.3 ✓	✓
72 5.4 ✓	✓
70 5.2 ✓	✓
64 4.6 ✓	✓
68 5.0 ✓	✓
71 5.3 ✓	✓
60 4.2 ✓	✓
5.5 3.7 ✓	✓
72 3.5.5 ✓	✓
69 4.1 ✓	✓
70 4.3 ✓	✓
68 5.0 ✓	✓
69 5.1 ✓	✓
70 5.2 ✓	✓

Mean 13

3381	19 30.5 - 1 33	4.3	70.7	18.2	19 31.6 - 1 31 ✓
3429	19 41.9 + 8 33	1.0	70.5	18.2	19 43.9 + 8 33 ✓
3398	19 34.6 - 0 54	5.5	70.8	18.1	19 35.6 - 0 51 ✓
3427	19 44.2 - 11 4	5.6	71.0	17.9	19 45.3 - 11 1 ✓
3445	19 48.5 + 10 3	5.6	70.7	8.1	19 49.7 + 0 1 ✓
3432	19 45.3 + 10 7	5.2	70.7	18.1	19 46.2 + 10 10 ✓
3418	19 40.6 + 10 19	2.8	70.6	18.1	19 41.5 + 10 20 ✓
3436	19 46.4 + 0 42	3.9	70.8	8.1	19 47.3 + 0 44 ✓

Ca. Br.

6.2 4.9 ✓	✓
4.0 3.7 ✓	✓
70 5.7 ✓	✓
71 5.8 ✓	✓
68 5.5 ✓	✓
69 5.6 ✓	✓
68 4.5 ✓	✓
64 5.1 ✓	✓
65 5.2 ✓	✓

December 28, 1886.

Plate 788.

r	H	Type	r_0 Lines	K	Focus	Colours	Lines	V	H	V	H
14.0	10.1	I	5	N	2	—	7.0	20.2	11.2	50.2	
13.2	11.4	I	4	N	2	—	6.6	22.8	11.6	47.6	
13.1	16.8	II	~~X2~~	$K=H$	1	—	6.6	33.6	11.6	36.8	
12.4	17.0	I?	~~X5~~	$XK=H$	1	—	6.2	34.0	12.0	36.4	
11.0	20.2	I	6	N	2	—	5.5	40.4	12.7	30.0	
10.0	15.8	I	4	N	1	—	5.0	31.6	13.2	38.8	
10.0	19.0	I?	I 3	4 N	$K=H$	1	—	5.0	38.0	13.2	32.4
9.8	23.1	I?	I 4	3	$XK=H$	1	—	4.9	46.2	13.3	24.2
9.1	17.5	I?	~~X5~~	$XK=H$	1	—	4.6	35.0	13.6	35.4	
9.1	17.6	I	~~X4~~	$K=H$	1	—	4.6	35.2	13.6	35.2	
7.9	10.2	I	5	N	1	—	4.0	20.4	14.2	50.0	
7.8	17.2	I	3	N	1	—	3.9	34.4	14.3	36.0	
6.2	18.8	I	~~X6~~	N	X	1	—	3.1	37.6	15.1	32.8
4.1	10.7	III?	~~X3~~	$K=H$	2	Feen	2.0	21.4	16.2	49.0	

Ant. of Fog. due to moon & clouds. Ant. of Fog. due to chemicals.

8.1 8.0 Plate 686. 786.

8.1

21.0	17.4	I	5	N	1	—	10.2	34.8	2.7	34.5	
19.0	10.8	I	~~X7~~	$XK=2H$	3	—	9.5	21.6	3.7	47.7	
9.9	10.0	I	~~X5~~	K line?	2	—	5.0	20.0	8.2	49.3	
8.9	22.4	I	~~X7~~	N	1	—	4.4	44.8	8.8	24.5	
7.8	11.4	I?	~~X2~~	N	1	—	3.9	22.8	9.3	46.5	
7.7	20.1	I	7	N	3	—	3.8	40.2	9.4	29.1	
7.5	23.3	I?	~~X6~~	$K=H$	3	—	3.8	46.6	9.4	22.7	
6.0	16.4	I	~~X9~~	N	4	—	3.0	33.4	10.2	35.9	
3.1	14.1	IIa?	~~X3~~	$K=H$	2	Feen	1.6	28.2	11.6	41.1	

Ant. of Fog. due to moon & clouds.

Ant. of Fog. due to chemicals.

7.9 7.8 Plate 790.

8.0

20.5	8.4	I	~~X7~~	$K=H$	2	F	10.2	16.3	2.9	32.8	
------	-----	---	---------------	-------	---	---	------	------	-----	------	--

Mean 13

No.	R.A.	DEC.	MAG.	H.	V.	Red. of β γ δ ϵ ζ η θ ι κ λ μ ν ξ π ρ σ τ υ ϕ χ ψ ω stars to 1900	Col. Br. Br.													
3453	19	50.4	+11	6	5.4	70.6	18.1	19	51.5	+11	10	65	5.2	✓	✓					
3441	19	48.1	-8	32	5.3	70.9	8.1	19	49.2	-8	30	66	5.3	✓	✓					
~~DM 4019~~	~~19~~	~~45.6~~	~~+11~~	~~16~~	~~6.5~~	~~68.1~~	~~17.9~~	~~19~~	~~47.4~~	~~+11~~	~~23~~	~~69~~	~~5.6~~		✓					
3406	19	36.9	+11	32	5.4	70.5	18.1	19	37.9	+11	36	69	5.6	✓	✓					
DM 3964	19	36.4	+11	62	6.9	69.4	18.1	19	37.5	+11	58	70	5.7	✓	✓					
3380	19	30.4	-7	18	4.9	70.8	8.2	19	31.5	-7	15	62	4.9	✓	✓					
3413	19	39.0	+13	1	6.1	70.6	18.0	19	39.9	+13	4	69	5.6	✓	✓					
6742	19	32.6	+3	6	6.4	70.6	8.1	19	33.9	+3	8	71.0	5.7	✓	✓					
~~3396~~	~~19~~	~~33.5~~	~~-16~~	~~34~~	~~5.6~~	~~71.8~~	~~8.4~~					71.6	5.6	✓	✓					
4044	19	23.4	+3	9	9.5	69.6	8.1	19	25.6	+3	14	71.6	5.6	✓	✓					
DM 4043	19	23.6	+6	8	7.0	69.5	8.0	19	25.5	+3	12	67	5.4	✓	✓					
3400	19	35.5	+13	33	5.9	70.5	18.2	19	36.3	+13	35	67	5.4	✓	✓					
~~3403~~	~~19~~	~~35.7~~	~~-16~~	~~24~~	~~5.0~~	~~70.9~~	~~8.2~~					DM 4098	19	34.4	+13	29	67	5.4	✓	✓
3403	19	35.7	-16	24	5.0	70.9	8.2	19	36.8	-16	21	67	5.4	✓	✓					
3400	19	35.5	+13	33	5.9	70.7	18.2					67	5.4	✓	✓					
3456	19	51.1	-15	49	5.0	71.5	8.2	19	52.2	-15	45	67	5.4	✓	✓					
3405	19	36.7	-15	45	5.5	71.1	8.1	19	37.8	-15	42	70	5.7	✓	✓					
3394	19	33.3	+5	8	5.0	70.9	8.2	19	34.7	+5	11	66	5.2	✓	✓					
3450	19	49.4	+6	6	4.0	70.8	8.1	19	50.4	+6	10	63	5.0	✓	✓					

Mean 15

4007	22	34.0	-27	40	4.1	68.8	12.8	22	35.2	-27	33	66	5.1	✓
~~DM 4748~~	~~22~~	~~62.6~~	~~+6~~	~~22~~	~~9.7~~	~~67.6~~	~~13.4~~	~~22~~	~~34.8~~	~~+3~~	~~36~~	~~54~~	~~3.9~~	✓
~~4007~~	~~22~~	~~34.0~~	~~-27~~	~~40~~	~~4.1~~									
4047	22	48.3	-16	28	3.4	69.9	13.0	22	49.7	-16	21	64	4.9	✓
4051	22	49.2	+8	11	5.0	69.2	13.2	22	50.3	+8	17	65	5.0	✓
3978	22	24.3	-11	17	4.8	69.1	13.1	22	25.7	-11	12	70	5.5	✓
4039	22	46.3	+9	13	5.3	69.1	13.1	22	47.3	+9	18	55	4.0	✓
3994	22	29.2	-0	44	4.2	69.4	13.1	22	30.7	-0	38	58	4.3	✓
3970	22	22.7	-0	38	3.8	69.3	13.2	22	23.9	-0	32	47	3.2	✓
3971	22	22.7	-0	38	3.8	69.3	13.2	22	23.9	-0	32	63	4.8	✓
4013	22	35.5	+10	12	3.6	68.9	13.2	22	36.4	+10	19	63	4.8	✓
4024	22	40.7	+11	33	4.2	68.9	13.2	22	41.7	+11	40	63	4.8	✓
3818	21	33.4	-17	12	3.8	50.2	13.0	21	34.6	-17	7	63	4.8	✓

December 28, 1886.
Plate 490.

Male 490.						Cathar					
V	H	Type	^{no.} Ledges	K	Focus	Lines	V.	H.	V.	H.	
18.5	12.2	III	³⁵²⁸ bc	X ⁵	K=1.2H	3	F ^{light} F ^{center}	9.2	24.4	39	252
16.7	19.8	I	✓	X ⁶	X K=H	2	F	8.4	39.6	47	100
13.5	16.2	I	✓	5	N	2	-	6.8	32.4	63	172
13.0	16.1	I	✓	4	X K=H	1	-	6.5	32.2	66	174
12.0	15.1	III	✓	X ³	K=H	2	F	6.0	39.2	71	194
10.8	14.1	I?	✓	2	X K=H	1	-	5.4	28.2	77	214
4.3	20.3	IIa?	¹⁸³²⁹	X ²	X K=H	1	acc	3.6	40.6	95	90
7.0	22.4	I	✓	X ⁴	X K=H	1	-	3.5	44.8	96	4.8
6.1	10.1	I?	✓	X ⁶	X K=H	2	F	3.0	20.2	101	294
3.0	19.1	I?	✓	X ³	N	1	-	1.5	38.2	116	114
4.5	5.6	III?	✓	3	X K=H	1	F	3.8	11.2	93	384

No.	R. A.	DEC.	MAG.	H.	V.	Red. to 1900.	Br.	
3795	21 25.2	-6 6	3.1	49.6	13.1	21 26.3 - 6 1	5.6	✓
3739	21 9.8	+4 45	4.1	49.4	13.2	21 10.8 + 4 50	6.3	✓
3765	21 16.9	+6 18	4.9	49.3	13.1	21 17.9 + 6 23	6.5	✓
3770	21 17.6	-13 23	5.4	49.3	13.1	21 18.7 - 13 18	6.8	✓
3779	21 19.8	-22 06	3.8	50.0	13.1	21 21.0 - 22 50	6.4	✓
3783	21 21.9	-22 20	4.5	50.1	13.1	21 23.1 - 22 14	6.9	✓
3735	21 8.7	+9 31	4.6	49.3	13.1	21 9.6 + 9 36	6.5	✓
3726	21 4.5	+9 39	4.8	49.3	13.1	21 5.4 + 9 44	6.6	✓
~~3727~~	~~21 4.7~~	~~+9 31~~	~~5.9~~	~~49.5~~	~~13.1~~			
3809	21 30.4	-20 0	4.5	50.6	3.0	21 31.3 - 19 55	6.4	✓
3743	21 11.2	-18 29	5.4	49.4	3.0	21 12.3 - 18 25	7.0	✓
3836	21 38.3	+9 20	2.4	49.5	13.1	21 39.3 + 9 25	5.4	✓

Reading of F plates. Continued from Vol. 4.

Amt. of Fog. due to sun & clouds.
8.6

December 31, 1886

Amt. of Fog. due to chemicals.
8.6

Plate 742. (F)

V	H	Type	Lines	K	Focus	Other	V	H	V	H
19.1	16.4	I?	34	K=H	1	—	9.6	32.8	36.5	15.9
17.4	17.2	I	45	N	2	J	8.7	34.4	34.4	14.3
16.0	10.9	III ²⁴⁵⁸	3	K=H	1	F _{sun}	8.0	21.8	36.1	27.1
14.5	22.3	I?	45	N	1	—	7.2	44.6	38.9	4.1
13.8	13.9	I	5	K=H	1	—	6.9	27.8	36.2	20.9
13.0	13.3	I	5	N	1	—	6.5	26.6	36.6	22.1
11.9	22.5	I	46	N	1	F _J	6.0	46.0	37.1	3.7
11.0	18.3	II ²⁴⁵⁹ a?	3	K=H	3	F _{sun}	5.5	36.6	37.6	12.1
9.5	13.4	I	5	K=H	1	—	4.8	26.8	38.3	21.9
8.5	17.2	I	8	K=2H	3	F _J	4.2	34.4	38.9	14.3
8.1	15.8	I	5	N	1	—	4.0	31.6	39.1	17.1
8.5	6.9	I	7	N	2	F _J	4.2	13.8	38.9	34.9
7.3	11.4	I	4	N	1	—	3.6	22.8	39.5	26.9
6.3	9.7	I	4	N	1	—	3.2	19.4	39.9	29.3
6.0	22.5	I?	5	N	1	—	3.0	46.0	40.1	3.7
4.7	8.6	I	6	N	2	—	2.4	17.2	40.7	31.5

Amt. of Fog. due to moon & clouds.
8.2Amt. of Fog. due to chemicals.
8.2

Plate 801. (F)

17.5	6.8	III ²⁴⁶⁰	2	K=H	1	—	8.8	13.6	29.3	76.5
16.7	11.2	III ²⁴⁶¹ b?	3	K=H	3	F _{high}	8.4	22.4	29.7	66.7
16.5	13.1	I	6	N	2	—	8.2	26.2	29.9	62.9
15.5	23.0	III ²⁴⁶² b?	3	K=H	1	F _{sun}	7.8	46.0	30.3	43.1
13.0	7.8	I?	3	N	1	—	6.5	15.6	31.6	73.5
11.8	7.6	I	4	N	1	—	6.9	15.2	32.2	73.9
12.1	12.3	I	4	N	1	—	6.0	24.6	32.1	64.5
11.1	20.0	I ²⁴⁶² b?	3	K=H	4	—	5.6	40.0	32.5	49.1
9.0	22.4	II ²⁴⁶² b?	3	K=1.5H?	3	F _{high}	4.5	44.8	33.6	44.3
7.5	9.2	I	8	N	2	—	3.8	18.4	34.3	70.7

12650

0.1 5.9

0.1 6.5

0.2 6.5

0.1 5.8

0.2 7.1

0.2 5.8

0.2 7.3

0.1 7.0

0.2 6.4

0.1 6.6

0.1 7.0

0.1 5.6

No.	R.A.	Dec.	Mag.	H	V	H'	R.d. of D.H. stars to 1900	Br.	Cor. Br.
3750	21 14.1	+ 43 26	5.0	46.9	53.0	48.7	21 14.8 + 43 31	6.6	5.0
~~3760~~	~~21 16.6~~	~~+ 23 22~~	~~5.5~~	~~48.4~~	~~56.0~~	~~48.7~~			
3747	21 13.0	+ 34 24	4.4	47.4	46.1	48.2	21 13.8 + 34 28	5.8	4.2
3807	21 29.5	+ 46 4	4.2	66.3	63.1	49.1	21 30.2 + 46 9	6.5	4.9
3765	20 57.0	+ 45 41	5.2	101.6	52.9		20 57.6 + 45 46	6.8	5.2
DM 4076	21 0.1	+ 26 27	6.3	44.7	63.6	46.4	21 0.1 + 26 32	6.5	4.9
3781	21 20.9	+ 46 12	6.6	48.7	60.1	48.0	21 21.6 + 46 17	6.8	5.2
3784	21 22.4	+ 36 36	6.1	49.0	46.1	48.3	21 23.2 + 36 41	6.4	4.8
3761	20 55.7	+ 47 3	4.6	100.7	53.0		20 56.4 + 47 8		
DM 4178	21 0.9	+ 37 28	7.5	45.7	43.5	49.1	21 2.7 + 37 39	6.3	4.7
3741	21 10.0	+ 37 32	6.9	46.6	46.0	47.9	21 10.8 + 37 36	5.6	4.0
3786	21 22.6	+ 48 19	6.3	49.4	60.1	48.3	21 23.3 + 48 24	6.7	5.1
3746	21 12.7	+ 38 53	4.3	47.1	46.1	48.1	21 13.5 + 38 58	5.7	4.1
3764	21 16.4	+ 49 0	6.4	47.0	66.0	47.6	21 16.8 + 49 6	6.9	5.3
3866	21 42.4	+ 48 45	4.4	56.2	63.0	60.6	21 43.1 + 48 51	5.6	4.0
3804	21 28.7	+ 49 25	6.7	61.6	63.0	49.0	21 29.4 + 49 30	7.1	5.5
3814	21 32.1	+ 39 52	6.1	61.6	46.1	49.0	21 32.9 + 39 57	6.9	5.3
3448	21 58.7	+ 49 46	6.2	103.7	62.6	48.7	21 59.4 + 49 59		
DM 4322	21 1.0	+ 30 1	7.0	46.0	63.0	48.0	21 2.9 + 30 12	6.9	5.3
3678	20 54.6	+ 50 0	5.5	99.6	53.0	104.9	20 55.3 + 50 4	6.2	4.6
3863	21 67.8	+ 50 38	4.9	66.0	66.0	50.4	21 38.6 + 50 44		
3761	21 16.5	+ 19 17	4.3	30.1	28.1	28.0	21 17.5 + 19 23	6.7	5.6
3762	21 7.8	+ 29 44	6.5	30.2	68.1	29.2	21 8.7 + 29 49	7.1	6.0
3724	21 3.6	+ 29 43	6.6	29.6	37.9	29.3	21 4.4 + 29 48	5.8	4.2
3643	20 40.7	+ 30 17	4.3	86.7	38.1	88.9	20 41.6 + 30 21	5.7	4.6
3761	21 14.8	+ 21 32	6.0	30.4	28.0	29.4	21 15.7 + 21 37	6.5	5.4
3760	21 16.6	+ 32 6	6.1	31.6	38.0	29.2	21 17.1 + 32 11	6.8	5.7
4485	21 4.0	+ 21 52	7.5				21 6.0 + 21 53	7.0	5.9
DM 4486	21 4.0	+ 21 52	6.5	28.6	27.9	28.2	21 6.0 + 21 53	7.1	6.0
DM 3974	20 46.1	+ 32 18	6.7	86.1	67.9	87.7	20 47.9 + 32 22	7.0	5.9
3648	20 41.4	+ 33 31	2.7	86.2	38.0	88.7	20 42.1 + 33 36	7.0	5.9
3747	21 16.0	+ 34 24	4.4	31.4	38.2	29.4	21 13.8 + 34 28	7.1	6.0

Mean 16

Mean 11

December 31, 1886,

Plate 801. (F)

V	H	Type	No. of lines	K	Focus	Other Lines
4.0	21.6	I	5 ~~8~~ 7	N	2	-
2.9	20.5	III?	2	~~X~~ $K=H$	1	-

Amt. of Fog due to num. & clouds.

7.0

Plate 943. (F)

19.5	16.0	II?	2 ~~1~~ 1	~~X~~ $K=H$	3	-
18.8	18.1	I	5 ~~8~~ 7	N	3	- $\tilde{F}$
15.9	14.9	I	2 ~~5~~ 5	N	1	-

Amt. of Fog. due to num. & clouds.

8.0

Plate 944. (F)

22.5	17.3	I	5 ~~8~~ 7	N	2	-
22.5	18.2	I?	4	~~X~~ $K=H$	1	-
21.5	16.0	I	6 ~~7~~ 7	N	2	-
20.5	14.9	I	6 ~~7~~ 7	N	2	- $\tilde{F}$
19.7	10.9	I	5 ~~10~~ 10	N	4	- $\tilde{F}$
19.1	21.0	II?	2 ~~X~~ 2	$K=H$	1	-
18.5	8.5	I?	4 ~~X~~ 4	$K=H$	1	-
18.5	12.5	I	5 ~~X~~ 5	$K=H$	1	-
18.0	17.2	I	6	$K=2H$	1	-
17.6	10.2	I	4 ~~X~~ 9	N	5	- $\tilde{F}$
17.5	11.2	I	6 ~~7~~ 7	N	2	- $\tilde{F}$
17.7	23.7	I?	5 ~~X~~ 4	$K=H$	1	-
17.0	21.7	I	5 ~~X~~ 5	$K=H$	1	-
16.6	18.2	I	5 ~~6~~ 6	N	2	-
16.0	17.8	I	5 ~~5~~ 1	$K=H$	1	-
16.5	12.9	I	5 ~~X~~ 6	N	2	-
16.5	9.5	II?	3 ~~X~~ 3	N	11	-
16.0	10.4	I	5 ~~X~~ 5	N	1	-
15.4	18.2	I	5 ~~X~~ 5	N	2	-

V H V H

20 43.2 66.1 46.9

14 41.0 66.7 48.1

Amt. of Fog. due to chemicals.

6.5

9.8 32.0 22.6 19.5

9.4 36.2 23.0 16.3

8.0 29.8 24.4 21.7

Amt. of Fog. due to chemicals.

8.0

11.2 34.6 41.3 76.5

11.2 36.4 41.3 76.7

10.8 32.0 41.7 78.1

10.2 29.8 42.3 80.3

9.8 21.8 42.7 82.3

9.6 42.0 42.9 68.1

9.2 17.0 46.6 96.1

9.2 26.0 46.6 86.1

9.0 34.4 46.6 76.7

8.8 20.4 46.7 89.7

8.8 22.4 46.7 87.7

8.8 47.4 46.7 62.7

8.6 43.4 44.0 66.7

8.3 36.4 44.2 70.7

8.0 35.6 44.5 74.6

8.2 25.8 44.6 84.6

8.2 19.0 44.6 91.1

8.0 20.8 44.6 89.6

7.7 36.4 44.6 76.7

$\frac{1}{2} \cos \delta$

0.1 5.9

0.0 5.7

0.1 6.9

0.1 6.1

0.3 6.1

0.7 4.8

0.7 5.1

No.	R.A.	Dec.	Mag.	K	V	H'	Rad. of Diff. stars to 1900	Br.	Cr.
✓ 6565	20	42.7	+ 36 3	4.6	✓ 86.9	38.0	88.6	20	43.5 + 36 8 ✓
✓ 6668	20	47.0	+ 26 38	4.7	✓ 88.0	28.0	89.2	20	47.8 + 26 43 ✓
✓ 4143	23	19.4	+ 22 45	4.6	✓ 61.4	32.6	51.6	23	20.4 + 22 51 ✓
✓ 4162	23	14.7	+ 26 5	4.7	✓ 60.9	32.6	51.5	23	15.7 + 23 11 ✓
✓ 4148	23	21.7	+ 24 31	6.0	✓ 61.5	32.6	51.5	23	22.7 + 24 37 ✓
4136	23	16.1	+ 31 9	5.4	✓ 50.7	42.4		23	17.0 + 31 16 ✓
✓ 4129	23	14.2	+ 41 26	6.1	✓ 48.6	32.6	49.7		
✓ 4123	23	12.7	+ 41 7	6.0	✓ 49.1	32.6	50.7	23	13.7 + 41 13 ✓
4142	23	19.0	+ 31 43	5.5	✓ 51.0	42.5		23	19.9 + 31 50 ✓
DM 4904	23	17.5	+ 31 36	6.0	✓ 49.8	42.4	50.1	23	22.0 + 31 50 ✓
✓ 4147	23	21.3	+ 42 15	5.8	✓ 61.1	32.4	51.0	23	22.3 + 42 21 ✓
✓ 4176	23	32.3	+ 42 36	4.3	✓ 54.1	32.4	52.0	23	33.2 + 42 43 ✓
✓ 4107	23	4.9	+ 42 55	5.9	✓ 46.9	32.6	50.2	23	5.8 + 43 0 ✓
DM 4747	23	37.6	+ 42 56	6.6	✓ 54.6	32.1	51.0	23	39.8 + 43 11 ✓
DM 4489	23	26.9	+ 46 6	6.9	✓ 51.9	32.3	50.6	23	29.1 + 43 21 ✓
DM 4440	23	13.9	+ 43 20	6.3	✓ 48.3	32.3		23	16.0 + 43 35 ✓
✓ 4132	23	14.7	+ 26 5	4.7	✓ 49.1	32.1	49.5		
4183	23	34.5	+ 43 40	4.4	✓ 54.9	32.5		23	35.7 + 43 47 ✓
DM 4522	23	36.3	+ 46 31	4.9	✓ 56.9	32.3	51.0	23	35.5 + 43 46 ✓
DM 4508	23	30.5	+ 43 37	6.3	✓ 52.9	32.4		23	32.7 + 43 52 ✓
✓ 4166	23	29.9	+ 26 56	6.7	✓ 52.3	32.7	51.6		
DM 4378	23	56.2	+ 43 17	6.1	✓ 103.6	52.1	47.8	23	58.2 + 43 31 ✓
DM 4375	23	55.6	+ 46 48	6.2	✓ 103.0	52.6	9.5	23	57.9 + 44 3 ✓
DM 4399	23	1.5	+ 46 46	6.5	✓ 46.7	32.3	49.6	23	36.4 + 44 1 ✓
DM 4899	23	12.4	+ 34 0	6.4	✓ 48.8	42.3		23	14.6 + 34 15 ✓
✓ 4118	23	11.6	+ 44 31	6.5	✓ 48.2	32.8	50.0		
DM 4378	23	12.2	+ 44 21	6.8	✓ 47.8	52.4	49.4	23	14.3 + 44 36 ✓
DM 4393	23	11.1	+ 44 42	6.5	✓ 46.7	32.9			
DM 4440	23	26.7	+ 44 16	6.5	✓ 52.5	32.4	51.3	23	28.9 + 44 31 ✓
DM 4948	23	25.3	+ 34 10	6.5	✓ 51.1	42.4	50.3	23	27.5 + 34 25 ✓
DM 4530	23	35.1	+ 43 58	6.8	✓ 54.1	52.2		23	36.3 + 44 13 ✓
DM 4979	23	32.6	+ 34 9	7.2	✓ 51.6	42.4	49.7	23	34.8 + 34 24 ✓
DM 4467	23	33.1	+ 44 16	7.0	✓ 53.9	52.3		23	33.3 + 44 31 ✓
DM 4972	23	31.4	+ 34 13	6.5	✓ 52.2	42.2	50.6	23	33.6 + 34 28 ✓
DM 4373	23	11.1	+ 44 42	6.5	✓ 47.5	52.4	48.5	23	13.2 + 44 59 ✓

5.8	4.7	✓
7.0	5.6	✓
7.3	6.2	✓

6.2	✓
5.7	✓
6.8	✓

Memo.

✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Mugab.

December 31, 1886.
Plate 944. (H)

V	H	Type	Lines	K	Focal	Cathode	V	H	V	H
13.1	5.9	I?	$\sqrt{2}$ $\sqrt{2463}$	N	1	-	6.6	11.8	46.9	98.6
13.3	8.4	III	$\sqrt{3}$ $\sqrt{2464}$	$K=H$	2	-	6.6	16.8	46.9	96.6
13.5	11.3	III	$\sqrt{3}$ $\sqrt{2464}$	$K=H$	3	-	6.8	22.6	46.9	89.6
13.4	14.1	I	$\sqrt{4}$ $\sqrt{5}$	N	1	-	6.7	28.2	46.8	81.9
13.5	16.0	I?	$\sqrt{5}$	$K=H$	1	-	6.8	32.0	46.9	78.1
12.5	7.9	I?	$\sqrt{5}$ $\sqrt{7}$	$K=H$	2	-	6.2	15.8	46.6	94.6
12.8	9.6	I?	$\sqrt{4}$ $\sqrt{5}$	$K=N$	1	-	6.4	19.2	46.1	90.9
12.5	10.1	I	$\sqrt{4}$ $\sqrt{5}$	N	1	-	6.2	20.2	46.6	89.9
13.1	19.1	I	$\sqrt{3}$ $\sqrt{5}$	N	1	-	6.6	38.2	46.9	71.9
14.0	21.8	I	$\sqrt{4}$	$K=H$	1	-	7.0	43.6	46.6	66.6
11.0	9.9	I?	$\sqrt{4}$	$K=H$	1	-	6.5	19.8	47.0	90.6
10.0	17.5	II	$\sqrt{3}$ $\sqrt{2465}$	$K=H$	2	-	6.0	35.0	47.5	76.1
9.1	17.4	III	$\sqrt{3}$ $\sqrt{2465}$	$K=H$	1	-	4.6	34.8	47.9	76.6
9.0	13.6	III	$\sqrt{2}$ $\sqrt{2465}$	$K=H$	1	-	4.5	27.2	48.0	82.9
8.0	13.4	III	$\sqrt{2}$	$K=H$	1	-	4.0	26.8	48.5	86.6
7.7	15.5	I?	$\sqrt{4}$ $\sqrt{5}$	N	1	-	3.8	31.0	48.9	79.1
8.4	18.0	III	$\sqrt{3}$ $\sqrt{2466}$	$K=H$	1	-	4.2	36.0	48.6	74.1
7.2	10.3	I?	$\sqrt{4}$ $\sqrt{5}$	$K=H$	1	-	3.6	20.6	48.9	89.6
7.5	19.7	I	$\sqrt{3}$ $\sqrt{2466}$	$K=H$	3	-	3.8	39.4	48.7	70.7
7.6	21.3	II	$\sqrt{3}$ $\sqrt{2466}$	$K=H$	1	-	3.8	42.6	48.7	67.6
7.2	21.7	I	$\sqrt{3}$ $\sqrt{2466}$	N	1	-	3.6	43.4	48.9	66.7
6.0	12.1	I	$\sqrt{6}$	N	2	-	3.0	24.2	49.5	86.9
5.5	11.1	I	$\sqrt{6}$	N	2	-	2.8	22.2	49.7	87.9
5.0	19.0	I?	$\sqrt{3}$ $\sqrt{2466}$	N	1	-	2.5	38.0	60.0	72.1

Amts. of Fog. due to sun + clouds.

Amts. of Fog. due to chemicals.

Plate 1893. (H)

18.5	16.8	I	$\sqrt{5}$ $\sqrt{6}$	$K=H$	1	-	9.2	33.6	38.9	37.0
17.0	19.9	I	$\sqrt{5}$ $\sqrt{6}$	N	2	-	8.5	39.6	39.6	30.6

$\frac{1}{2} \cos \delta$

	No.	R.A.	Dec.	Mag.	H	V	H'	Red. of B.H. stars to 1900	Mean b	Cor. Br.	Cor. Br.
	~~4204~~	~~23~~	~~46.6 + 36~~	~~46~~	~~69~~	~~66.4~~	~~42.4~~	~~57.8~~	~~23~~	~~44.6 + 35~~	~~23~~
	4197	23	40.1 + 46	46	65	66.9	62.4	52.9	23	41.1 + 45	52
	4174	23	31.7 + 46	48	40	64.3	62.6	52.1	23	32.6 + 45	56
DM.	4241	23	22.5 + 45	40	70	60.7	62.4	49.1	23	24.6 + 45	55
DM.	5024	23	17.7 + 35	34	65	49.7	42.4	50.3	23	19.7 + 35	49
DM.	4169	23	40.4 + 46	1	65	56.2	52.2		23	42.6 + 46	16
	~~4202~~	~~23~~	~~41.2 + 56~~	~~47~~	~~69~~	~~67.0~~	~~63.2~~	~~50.7~~			
	4184	23	34.7 + 36	3	64	60.9	42.4	57.9	23	35.6 + 36	9
DM.	4127	23	34.2 + 46	3	70	64.4	62.2	57.4	23	36.4 + 46	18
DM.	4179	23	8.3 + 45	45	71	46.5	62.4	49.0	23	10.7 + 45	0
DM.	4147	23	0.7 + 45	18	65	44.3	52.3		23	2.7 + 45	33
	~~4090~~	~~23~~	~~2.2 + 46~~	~~44~~	~~67~~	~~46.6~~	~~62.4~~	~~50.0~~			
DM.	5098	23	32.9 + 36	51	65	62.7	42.4	50.7	23	35.7 + 37	6
	4151	23	14.7 + 37	31	68	49.7	42.5	50.7	23	16.7 + 37	38
	4125	23	18.9 + 47	58	63	48.7	62.6	50.3	23	14.8 + 48	4
DM.	4856	23	23.6 + 37	51	65	50.8	42.3		23	25.8 + 38	6
	~~4163~~	~~23~~	~~24.6 + 67~~	~~66~~	~~63~~	~~61.7~~	~~62.4~~	~~60.4~~			
	4154	23	26.5 + 38	34	63	52.3	42.6	51.6	23	26.3 + 38	42
DM.	5499	23	19.0 + 38	33	74	50.0	42.4		23	21.0 + 38	48
DM.	4036	23	18.5 + 48	67	75	49.5	62.6	49.5	23	20.5 + 49	6
	4120	23	12.2 + 48	22	49	48.2	62.6	50.2	23	13.7 + 48	28
DM.	4127	23	34.4 + 48	46	65	65.0	62.3	51.8	23	36.6 + 48	50
	4104	23	7.1 + 48	46	47	46.5	62.6	49.7	23	8.0 + 48	51
	4091	23	2.3 + 48	39	69	44.9	62.4	49.1	23	3.2 + 48	45
DM.	4945	23	3.1 + 38	40	68	46.3	42.3		23	5.2 + 38	55
	~~4086~~	~~23~~	~~1.6 + 58~~	~~47~~	~~60~~	~~44.7~~	~~62.4~~	~~57.4~~			
	4165	23	28.8 + 39	34	66	53.0	42.6	51.7	23	29.7 + 39	42
	4177	23	33.3 + 49	48	53	55.3	52.6		23	34.3 + 49	55
DM.	4180	23	32.1 + 49	40	67	64.3	62.6	51.5	23	34.3 + 49	55
DM.	4071	23	7.6 + 49	60	65	45.6	62.3	48.8	23	9.6 + 50	5

01 b.3

02 b.0

DM.	4127	23	34.4 + 48	46	65	68.0	67.9	69.2	23	36.6 + 48	50
	4165	23	28.8 + 39	34	65	68.6	48.1	70.8	23	29.7 + 39	42

December 31, 1882.
Plate 893. (F)

V	H	Type	Lines	K	Focus	Other Lines	V	H	V	H
16.8	18.8	I	5	K=H	1	—	8.4	37.6	39.7	33.0
16.5	17.6	I	8	N	3	—	8.2	35.2	39.9	35.4
15.6	11.1	I	5	K=H	1	—	7.8	22.2	40.3	48.2
15.0	15.1	~~I~~ II	2	K=H	1	—	7.5	30.2	40.6	40.4
14.3	14.0	~~I~~ IIa	2	K=H	1	seen	7.2	28.0	40.9	42.6
13.5	13.4	I	3	N	1	—	6.8	26.8	41.3	43.8
13.2	8.6	I	7	K=5H	2	—	6.6	17.2	41.5	33.4
12.8	9.6	I	7	N	2	—	6.4	19.2	41.7	31.4
12.5	18.3	I	5	N	1	—	6.2	36.6	41.9	34.0
12.2	11.4	~~I~~ IIa	2	K=H	1	seen	6.1	22.8	42.0	47.8
11.8	9.2	I	5	N	1	—	5.9	18.4	42.2	32.2
11.3	16.2	~~I~~ II	6	N	2	—	5.6	32.4	42.5	38.2
11.0	18.3	I	11	N	4	—	5.5	36.6	42.6	34.0
11.5	22.4	I	5	N	2	—	5.8	44.8	42.3	25.8
10.4	11.4	I	5	K=H	1	—	5.2	22.8	42.9	47.8
10.0	15.9	I	5	N	1	—	5.0	31.8	43.1	38.8
9.6	19.8	I	5	N	1	—	4.8	39.6	43.3	31.0
9.1	14.0	~~I~~ II	2	K=H	1	—	4.6	28.0	43.5	42.0
9.0	17.5	I	10	N	4	—	4.5	35.0	43.6	35.6
8.7	18.5	I	7	N	2	—	4.4	37.0	43.7	33.6
9.0	21.9	I	4	K=H	1	—	4.5	43.8	43.6	26.8
8.0	15.1	I	4	N	1	—	4.0	30.2	44.1	40.4
8.0	16.8	I	4	N	1	—	4.0	33.6	44.1	37.0
7.0	8.4	I	5	K=H	1	—	3.5	17.4	44.6	33.2
7.0	10.2	I	6	N	2	—	3.5	20.4	44.6	30.2
6.0	11.6	I	9	N	3	—	3.0	26.2	45.1	47.4
6.1	12.2	~~I~~ IIa	2	K=H	1	seen	3.0	24.4	45.1	46.2
6.5	18.7	~~I~~ I?	3	N	1	—	3.2	37.4	44.9	33.2

Mean 6

No.	R.A.	Dec.	Mag.	H	V	H'	Rad. of Int. stars to 1900	B. Per.
DM. 4166	23 28.4 + 49 61	7.2	66.0	67.9	68.7	23 30.5 + 49 46	✓ -	6.5 7.1 6.9 .5 7.4 6.6
4177	23 33.3 + 49 48	6.3	68.6	68.0	70.3	23 34.3 + 49 53	✓ 2.0 + 1.7	5.5 5.8 .5 7.3 6.3
DM. 4208	23 52.2 + 50 2	7.2	74.4	67.8	71.5	23 54.5 + 50 17	✓ -	6.5 7.1 6.9 .5 7.4 6.6
DM. 4147	23 69.8 + 50 26	7.4	70.0	67.9	70.1	23 42.0 + 50 41	✓ -	6.6 7.2 7.0 .5 7.5 6.7
DM. 4166	23 46.2 + 50 49	6.8	71.2	68.0	70.4	23 45.4 + 51 4	✓ -	6.3 6.9 6.6 .5 7.1 6.3
DM. 4881	23 44.3 + 41 16	6.7	71.1	48.1	70.3	23 46.5 + 41 31	✓ 8	6.6 7.2 7.0 .3 7.3 6.3
4267	23 55.5 + 41 26	6.9	75.7	48.0	72.4	23 59.3 + 41 33	✓ DM. 4933 23 57.2 + 41 18	0.1 5.9 6.5 6.4 .3 6.7 5.9
4244	23 55.6 + 41 42	6.1	74.3	48.1	72.0	23 56.6 + 41 49	✓ 4	4.5 7.6 6.2 .3 6.5 5.7
DM. 4826	23 61.3 + 41 42	7.0	67.9	47.9	69.6	23 33.5 + 41 57	✓ -	6.2 6.8 6.7 .3 7.0 6.2
4231	23 51.0 + 41 59	6.0	73.8	48.1		23 52.0 + 42 6	✓ -	6.2 6.8 6.5 .3 6.8 6.0
DM. 4902	23 49.7 + 41 51	6.0	72.7	47.9	71.0	23 52.0 + 42 6	✓ -	6.0 6.6 6.5 .3 6.8 6.0
DM. 4926	23 66.7 + 41 67	6.6	74.1	47.8	71.1	23 58.0 + 42 18	✓ -	5.9 6.5 6.4 6.3 6.9 6.1
DM. 6603	23 66.4 + 52 21	6.5	68.8	67.0	69.8	23 38.6 + 52 36	✓ -	6.1 6.7 6.6 .5 7.1 6.3
4176	23 62.6 + 42 36	4.6	68.9	48.1	70.6	23 33.0 + 42 43	✓ 9	6.2 6.8 6.6 .3 6.9 6.1
4147	23 21.3 + 42 15	6.8	66.1	48.0	69.9	23 22.3 + 42 21	✓ 7	6.3 6.9 6.7 .3 7.0 6.2
DM. 6675	23 61.9 + 52 46	7.3	74.7	68.0	71.8	23 54.2 + 53 1	✓ -	6.1 6.7 6.6 .5 7.1 6.3
DM. 4747	23 37.6 + 42 66	6.6	69.4	47.9	69.9	23 39.8 + 43 11	✓ -	6.2 6.8 6.6 .3 6.9 6.1
DM. 4489	23 26.9 + 43 6	6.9	66.6	47.9	69.1	23 29.1 + 43 21	✓ -	6.3 6.9 6.7 .3 7.0 6.2
DM. 6268	23 46.4 + 53 24	6.7	71.4	68.0	70.6	23 45.8 + 53 39	✓ -	6.6 7.2 7.0 .6 7.6 6.8
4183	23 64.5 + 43 40	4.4	69.8	48.2	70.8	23 32.4 + 43 47	✓ 8	4.3 4.9 4.8 .4 5.2 4.4
DM. 4508	23 60.5 + 43 67	6.3	67.6	48.0	69.7	23 32.7 + 43 52	✓ -	5.3 5.9 6.0 .4 6.4 5.6
DM. 3151	23 17.0 + 53 14	7.0	60.8	57.7		23 19.0 + 53 29	✓ -	6.1 6.7 6.8 .6 7.4 6.6
DM. 4441	23 22.9 + 43 9	7.5	66.7	47.7	70.4	23 25.0 + 43 24	✓ -	6.3 6.9 6.9 .6 7.5 6.7
DM. 6044	23 69.8 + 54 4	7.6	70.0	68.1	70.1	23 42.0 + 54 19	✓ -	6.2 6.8 6.8 .4 7.2 6.4
DM. 4530	23 35.1 + 43 58	6.8	68.7	48.0		23 37.3 + 44 13	✓ -	6.0 6.6 6.5 .4 7.2 6.4
DM. 4473	23 65.1 + 44 11	6.6	68.7	48.2	69.8	23 37.3 + 44 26	✓ -	6.0 6.6 6.5 .4 7.2 6.4
DM. 4660	23 67.8 + 44 26	6.6	76.2	47.9	71.6	23 0.0 + 44 40	✓ -	6.0 6.6 6.5 .4 7.2 6.4
4242	23 64.6 + 44 65	6.1	75.0	48.1	72.2	23 55.7 + 44 42	✓ 7	5.8 6.4 6.2 .6 6.8 6.0
4267	23 62.0 + 55 5	5.0	76.2	68.1	73.3	23 53.9 + 55 12	✓ 8	5.4 5.2 .6 5.8 5.0
4262	23 61.2 + 55 3	6.5	76.6	68.0	73.2	23 52.7 + 55 9	✓ -	5.8 6.4 6.2 .6 6.8 6.0
DM. 3006	23 27.3 + 54 41	7.3	64.7	57.9		23 29.7 + 54 56	✓ -	6.4 7.0 7.0 7.6 6.8
DM. 4467	23 60.6 + 44 65	7.8	67.7	48.1	69.8	23 32.5 + 45 10	✓ -	

December 31, 1886.

Plate 893. (F)

V	H	Type	Lines	K	Focus	Lines	V	H	V	H	Notes
5.1	7.0	~~II~~ ^{as} ~~1455~~ ²	~~X~~	~~K=H~~	1	Reen	2.6	14.0	45.5	66.6	
4.7	12.1	I	⁸⁴	~~X~~ ^{K=H}	1	—	2.4	24.2	45.9	46.4	
4.7	18.4	~~III~~ ⁶² ~~1456~~ ²	~~X~~	~~K=H~~	3	Reen	2.4	36.8	45.9	63.6	
4.0	14.9	~~I~~ ⁶ ~~1457~~ ⁶	~~X~~	N	1	—	2.0	29.8	46.1	40.6	

Ant. of Fog. due to moon & clouds.

Ant. of Fog. due to chemicals.

Continuation
of plate from
vol. 4. page 160

7.4 Plate 735 (F)

7.0

19.5	6.4	I?	³⁴	~~X~~ ^{K=H}	1	—	9.8	12.8	26.2	68.4	
18.6	8.1	I	³⁶	~~X~~ ^{K=H}	1	—	9.3	16.2	26.7	65.0	
17.7	14.7	I	³⁵	~~X~~ ^{K=H}	2	—	8.8	29.4	24.2	21.8	
17.2	13.8	~~III~~ ²⁴⁶⁷	³³	~~X~~ ^{K=H}	2	Reen.	8.6	27.6	24.4	26.6	
17.3	20.0	I	³⁷	N	2	F	8.6	40.0	24.4	11.2	
16.8	23.3	I	³⁵	N	1	F	8.4	46.6	24.6	4.6 -1.2	
16.5	16.8	I?	³⁵	~~X~~ ^{K=H}	2	—	8.2	36.6	24.8	17.6 -0.1	
16.0	18.9	~~II~~	³⁴	~~X~~ ^{K=H}	1	—	8.0	37.8	26.0	16.4 -0.8	
16.1	20.6	~~III~~ ³³	³³	~~X~~ ^{K=H}	1	F	8.0	41.2	26.0	10.0	
15.4	17.0	I?	³⁴	~~X~~ ^{K=H}	1	—	7.7	34.0	26.3	17.2	
14.9	20.5	I?	³⁵	~~X~~ ^{K=H}	1	—	7.4	41.0	26.6	10.2 -1.1	
14.5	11.4	I	³⁴	N	1	—	7.2	22.8	26.8	28.4 +0.9	
14.4	15.2	I	³⁴	N	1	—	7.2	30.4	26.8	20.8 0	
14.0	16.4	I	³⁸	N	4	F	7.0	32.8	26.0	18.4	
13.5	9.9	~~III~~	³	~~X~~ ^{K=H}	1	F	6.8	19.8	26.2	31.4	
13.5	12.6	~~III~~ ?	³³	~~X~~ ^{K=H}	1	F	6.8	26.2	26.2	26.0 +0.6	
13.0	13.2	I	³⁵	~~X~~ ^{K=H}	1	—	6.5	26.4	26.6	24.8 +0.2	
12.5	15.9	I	³⁶	~~X~~ ^{K=H}	1	F	6.2	31.8	26.8	19.4	
12.6	16.1	I	³⁶	N	2	F	6.3	32.2	26.9	19.0	
12.5	21.8	I	³⁵	~~X~~ ^{K=H}	1	—	6.2	43.6	26.8	7.6 -0.9	
13.0	21.5	~~II~~ ²⁴⁶⁸ ~~33~~	³³	~~X~~ ^{K=H}	1	Reen	6.5	46.0	26.6	8.2	
12.5	24.0	~~II~~ ?	³³	~~X~~ ^{K=H}	1	F	6.2	48.0	26.8	3.2	
15.1	10.9	~~III~~ ?	²²	~~X~~ ^{K=H}	1	—	7.6	21.8	25.4	29.4	

No.	R.A.	Dec.	Mag.	μ	ν	H'	Rad. of H' stars to 1900	Gr. Br.	Br.	Br.					
13	0	4.1	+ 45 24	4.9	18.1	48.0	0 5.1 + 45 31	✓	5.7	6.3	6.2	4	6.6	3.8	
DM 4363	23	48.3	+ 45 33	6.7	17.2	48.0	23 50.6 + 45 48	✓	✓	6.3	6.9	6.8	4	7.2	6.4
DM 4088	23	48.8	+ 45 36	7.8	17.0	48.0	23 51.0 + 45 51	✓	✓	5.1	5.7	5.4	4	6.1	5.3
✓ 4174	23	51.7	+ 45 48	4.0	68.6	48.2	23 32.6 + 45 56	✓	✓	5.5	6.1	6.3	4	6.7	3.9
DM 4169	23	40.4	+ 46 1	6.5	70.2	48.0	23 42.6 + 46 16	✓	✓	6.3	6.9	6.8	4	7.2	6.4
									6.3	8.2	7.3	12	4-6	8	
									8	9	9				
									Mean 3						
✓ 6416	19	39.0	+ 13 1	6.1	51.8	22.8	19 39.9 + 13 4	✓	✓	6.2	6.5	6.0			
✓ 6400	19	36.5	+ 13 36	5.9	51.7	22.9	19 36.5 + 13 35	✓	✓	5.7	6.0	6.0			
✓ 6356	19	22.0	+ 14 2	6.2	51.4	22.8	19 23.0 + 14 4	✓	✓	5.7	6.0	6.3			
✓ 6357	19	23.7	+ 24 23	4.7	51.3	23.0	19 24.6 + 24 28	✓	✓	5.4	5.7	5.7			
✓ 6298	19	11.0	+ 14 20	5.4	51.0	22.9	19 11.9 + 14 22	✓	✓	5.5	5.8	5.8			
DM 6650	19	2.0	+ 24 30	6.5	48.6	32.9	19 3.9 + 24 34	✓	✓	6.3	6.6	6.6			
DM 3896	19	16.5	+ 14 39	6.5	50.1	22.8	19 18.6 + 14 44	✓	✓	6.2	6.5	6.5			
DM 6706	19	11.5	+ 24 59	7.8	49.3	33.0	19 13.4 + 25 4	✓	✓	6.6	6.9	6.9			
✓ 6293	19	9.8	+ 14 52	5.5	51.0	22.9	19 10.8 + 14 54	✓	✓	6.4	6.7	6.7			
DM 3800	19	15.5	+ 25 20	7.0	49.5	33.0	19 17.0 + 25 25	✓	✓	6.5	6.8	6.9			
✓ 6324	19	16.2	+ 34 58	6.1	50.2	42.7		✓	✓	6.5	6.8	6.9			
DM 6757	19	7.9	+ 25 31	6.9	48.9	32.9	19 9.7 + 25 35	✓	✓	6.3	6.6	6.6			
DM 6875	19	28.0	+ 25 45	6.5	50.8	36.0	19 29.9 + 25 51	✓	✓	6.5	6.8	6.8			
DM 6827	19	19.7	+ 25 49	7.5	50.1	36.0	19 21.6 + 25 54	✓	✓	6.5	6.8	6.9			
✓ 6329	19	17.9	+ 26 2	5.0	50.7	36.0	19 18.7 + 26 4	✓	✓	4.7	5.0	5.0			
✓ 6688	19	31.9	+ 16 12	5.6	51.7	26.0	19 32.8 + 16 14	✓	✓	6.1	6.4	6.4			
DM 6576	19	26.4	+ 26 19	6.5	50.6	36.1	19 27.2 + 26 24	✓	✓	6.4	6.7	6.7			
DM 6873	19	26.8	+ 16 25	6.7	50.2	22.9	19 25.8 + 16 30	✓	✓	6.1	6.4	6.4			
✓ 6368	19	19.4	+ 16 43	6.6	51.2	22.9	19 20.3 + 16 46	✓	✓	6.3	6.6	6.6			
✓ 6667	19	19.0	+ 16 43	6.0	51.2	23.0	19 19.8 + 16 45	✓	✓	6.6	6.9	6.8			
DM 3476	19	6.1	+ 16 36	7.0	49.7	22.8	19 8.1 + 16 40	✓	✓	6.2	6.5	6.5			
DM 3474	19	5.6	+ 26 30	7.4	48.6	33.0	19 7.4 + 26 34	✓	✓	5.7	6.0	6.0			
✓ 6280	19	6.7	+ 26 4	7.4	49.7	32.6	19 7.5 + 26 6	✓	✓	6.0	6.3	6.3			
✓ 6266	19	1.6	+ 16 41	5.9	49.6	22.9	19 3.5 + 16 43	✓	✓	6.1	6.4	6.4			
3375	19	30.0	+ 15 21	6.0	57.8	23.0	19 30.8 + 15 24	✓	✓	7.0	7.3	7.3			

December 31, 1886.
Plate 435. (F)

		V	H	Type	Lines	K	Focus	Lines	V	H	V	H	Correc.
		11.7	7.9	I	44	$K=H$	1	—	6.8	15.8	27.2	35.4	+1.6
		11.5	8.1	III?	43	$K=H$	2	— F	6.8	16.2	27.2	35.0	+0.7
		12.0	9.5	IIa?	42	$K=H$	1	—	6.0	19.0	27.0	32.2	+0.6
		12.0	11.0	IIa?	43	$K=H$	1	—	6.0	22.0	27.0	29.2	+0.9
		11.6	19.4	I	46	$K=H$	2	—	6.8	38.8	27.2	12.4	-0.9
		10.5	8.6	II	43	$K=H$	3	— F	6.2	17.2	27.8	34.0	+0.9
Troctans superposed.		10.8	12.9	I?	410	$K=5H$	5	F Bright.	6.4	26.8	27.6	25.4	+0.6
		11.0	13.2	I I	44	$K=H$	1	—	6.6	26.4	27.5	24.8	+0.2
		10.8	14.3	I	44	N	1	—	6.4	28.6	27.6	22.6	+0.1
		10.5	15.7	I	45	N	2	F	6.2	31.4	27.8	19.8	-0.2
		10.9	17.2	II	42	$K=H$	1	—	6.4	34.4	27.6	16.8	-0.2
		10.7	19.4	II	43	$K=H$	1	F	6.4	38.8	27.6	12.4	-1.0
		10.5	19.8	I	44	N	1	—	6.2	39.6	27.8	11.6	-1.1
		9.5	7.5	I	44	N	1	—	4.8	15.0	28.2	36.2	+0.8
		9.2	9.6	I?	44	$K=H$	1	—	4.6	19.2	28.4	32.0	+0.6
		10.0	12.2	III?	42	$K=H$	1	—	6.0	24.4	28.0	26.8	+0.9
		9.1	12.5	I P I	44	$K=H$	1	—	4.6	25.0	28.4	26.2	+0.6
		9.0	15.0	I?	43	N	1	—	4.6	30.0	28.5	21.2	0
		9.0	23.5	I	47	$K=H$	2	F	4.6	47.0	28.5	4.2	-2.1
		7.9	7.5	I?	44	$K=H$	1	—	4.0	15.0	29.0	36.2	+1.9
		8.0	10.0	I	46	N	2	F	4.0	20.0	29.0	31.2	+1.3
		7.8	11.0	IIa?	43	$K=H$	2	F	3.9	22.0	29.1	29.2	+1.0
		7.5	15.7	I	48	N	3	F	3.8	31.4	29.2	19.8	-0.2
		7.7	18.6	I	5	N	1	—	3.6	37.2	29.4	14.0	-0.5
		7.0	4.2	I	49	N	3	F	3.6	22.4	29.5	28.8	+0.5
III? 6.5, 6.8.		6.9	15.5	III	43	$K=H$	1	F	3.4	31.0	29.6	20.2	-0.1
		6.5	15.8	I?	44	N	1	—	3.2	31.6	29.8	19.6	-0.1
		6.7	16.8	I I	45	N	1	—	3.4	33.6	29.6	17.6	-0.3

V2058.

Mean 3

No.	R.A.	Dec.	Mag.	H	V	H'	Red. of D.H. Star No 1900	Cor. Br. Br.	
Dm. 3471	19 36.0 + 27 6	7.1	61.8	62.4	60.2	19 37.8 + 27 9	✓	6.0 6.3	✓
3402	19 35.7 + 17 12	4.4	61.9	63.0	61.2	19 36.5 + 17 15	✓	5.1 5.4	✓
Dm. 3926	19 31.6 + 16 56	6.9	60.6	62.9	60.0	19 33.6 + 17 2	✓	6.2 6.5	✓
Dm. 3694	19 29.1 + 26 64	6.9	61.1	62.9	60.2	19 30.9 + 27 0	✓	6.1 6.4	✓
3299	19 11.1 + 27 15	6.6	49.9	66.0	60.8	19 11.9 + 27 17	✓	6.0 6.3	✓
3699	19 34.7 + 17 44	4.6	61.9	62.9	61.2	19 35.6 + 17 47	✓	5.0 5.3	✓
3662	19 26.9 + 27 46	6.0	61.7	66.1	61.2	19 26.7 + 27 45	✓	4.0 4.3	✓
Dm. 3987	19 26.9 + 17 26	7.0	60.3	62.9	60.1	19 25.9 + 17 28	✓	6.7 6.8	✓
Dm. 3976	19 21.6 + 17 66	6.6	60.2	63.0	60.1	19 23.6 + 17 38	✓	6.5 6.8	✓
Dm. 3677	19 18.6 + 27 48	7.0	60.0	63.0	60.2	19 20.4 + 27 53	✓	6.6 6.9	✓
Dm. 3946	19 16.6 + 17 29	7.0	60.0	62.9	60.2	19 17.6 + 17 34	✓	6.5 6.8	✓
3301	19 11.2 + 27 13	6.2	50.0	63.1	61.0	19 12.0 + 27 45	✓	6.2 6.5	✓
Dm. 3614	19 10.2 + 27 40	6.2	49.0	66.1	60.0	19 22.0 + 27 45	✓	6.2 6.5	✓
Dm. 3607	19 9.2 + 27 42	7.2	48.8	62.9	49.9	19 11.0 + 27 46	✓	6.2 6.5	✓
Dm. 4204	19 65.9 + 18 8	7.0	60.9	62.9	60.1	19 37.9 + 18 14	✓	6.5 6.8	✓
Dm. 4168	19 31.5 + 18 16	7.0	60.7	62.9	60.1	19 33.5 + 18 22	✓	6.7 7.0	✓
Dm. 3421	19 26.3 + 27 68	8.0	60.7	63.0	60.0	19 28.1 + 28 4	✓	6.7 7.0	✓
Dm. 3673	19 26.8 + 28 25	8.2	60.8	63.0	60.2	19 27.6 + 28 31	✓	6.8 7.1	✓
Dm. 3628	19 20.0 + 28 29	8.0	60.0	63.0	60.0	19 21.8 + 28 34	✓	6.7 7.0	✓
3267	19 1.9 + 28 26	6.5	48.9	62.9	61.0	19 2.7 + 28 28	✓	5.5 5.8	✓
Dm. 3447	19 37.0 + 28 69	7.2	62.0	66.0	60.1	19 38.8 + 29 5	✓	6.5 6.8	✓
Dm. 3670	19 31.4 + 29 1	6.6	61.4	63.0	60.1	19 33.2 + 29 7	✓	5.9 6.0	✓
3677	19 30.1 + 29 12	6.4	62.1	63.1	61.1	19 30.9 + 29 14	✓	5.6 5.9	✓
3642	19 19.4 + 29 26	4.9	60.8	63.2	61.0	19 20.2 + 29 26	✓	4.9 5.0	✓
Dm. 3975	19 12.5 + 19 21	6.8	49.7	63.0	60.2	19 14.5 + 19 26	✓	6.3 6.6	✓
3672	19 29.3 + 19 31	6.0	61.7	63.0	61.2	19 31.2 + 19 33	✓	4.8 5.1	✓
3647	19 20.2 + 19 34	6.2	61.2	63.0	61.3	19 21.1 + 19 37	✓	6.0 6.3	✓
Dm. 4004	19 18.4 + 19 39	7.2	60.0	62.8	60.1	19 20.4 + 19 44	✓	6.7 7.0	✓
Dm. 3568	19 16.0 + 29 38	7.2	49.6	63.0	49.9	19 17.8 + 29 43	✓	6.9 7.2	✓

* Spectra of two stars superimposed on Plate. Measure of brightness, continued

December 31, 1886.

Plate 435. (F)

Kale 433, (24)							Other					
V	H	Type	No. of Lines	K	Focus	Lines	V	H	V	H	Barrel	
6.4	9.1	III	2474	X 3	1.5	2	-F _{arm}	3.2	18.2	29.8	36.0 +0.3	
6.0	13.6	I	✓	X 6	N	1	-F _i	3.0	27.2	30.0	24.0 +0.2	
6.0	14.3	I	✓	X 5	K ₂ H	1	-	3.0	28.6	30.0	22.6 +0.1	
6.0	15.0	I	✓	X 5	N	1	-	3.0	30.0	30.0	21.2 0	
6.4	15.2	I	✓	X 7	N	2	-F _i	3.2	30.0	29.8	21.2 0	
6.0	15.5	I	✓	X 7	N	1	-F _i	3.0	31.0	30.0	20.2 0	
6.0	16.3	I	✓	X 6	N	1	-F _i	3.0	32.6	30.0	18.6 0	
5.1	7.5	I	✓	X 5	N	1	-	2.6	15.0	30.4	36.2 +2.1	
4.5	12.4	I	✓	4	N	1	-	2.2	24.8	30.8	26.4 +0.4	
4.5	18.3	I	✓	4	N	1	-	2.2	36.6	30.8	14.6 -0.9	
3.6	19.8	I	✓	X 9	N	3	-F _i	1.8	39.6	31.2	11.6 -0.7	
3.9	20.2	I	✓	X 8	K _{2.5} H	1	-F _i	2.0	40.4	31.0	10.8 -0.7	
3.9	21.0	I	✓	X 6	N	1	-	2.0	42.0	31.0	9.2 -1.7	
3.1	21.5	I	✓	X 5	N	1	-	1.6	43.0	31.4	8.2 -0.9	
5.1	22.1	IIa?	2475	X 2	K ₂ H	1	-sum	2.6	44.2	30.4	7.0 -2.1	
✓	X 2.0	17.6	I	✓	4	N	1	-	1.0	35.2	32.0	16.0 -0.4
24	17.2	I	✓	X 4	N	1	-	1.2	34.4	31.8	16.8 -0.7	

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

6.9 Plate 668. (F)

8.5

22.9	9.4	I	✓	5 6	N	1	-	11.4	18.8	26.6	51.7	+0.6
21.5	16.6	I	✓	5 4	N	1	-	10.8	35.2	27.2	37.3	-0.4
21.5	17.5	III	2476	3	K=H	1	F _{sum}	10.8	35.0	27.2	35.5	-0.3
20.8	8.1	I	✓	5 6	N?	2	-	10.4	16.2	27.6	54.3	+1.6
20.5	17.9	III?	3	K=H	2	F _i	10.2	35.8	27.8	34.7	-0.3	
20.5	21.5	IIa?	2477	3	K=H?	3	F _{sum}	10.2	46.0	27.8	27.5	-1.6
19.5	13.0	IIa?	2478	3	K=H	1	F _{sum}	9.8	26.0	28.2	44.5	+0.6
19.5	14.4	III?	3	K=H	2	F _i	9.8	28.8	28.2	41.7	+0.1	
19.5	16.8	I	✓	3 4	K=H	1	-	9.8	35.6	28.2	36.7	-0.2

III 6.3, 6.5, 7.2.

1/2 cos d.

No.	R.A.	Dec.	Mag.	H	V	H'	Red. of DM stars to 1900	Cor. Br.	Br.				
✓ 3697	19	64.6 + 29	56	4.9	62.6	66.1	62.5	19 34.5 + 29 56	✓	5.5 5.75	5.8 6.0	✓	✓
DM. 4039	19	26.0 + 19	59	7.0	50.2	26.0	50.0	19 25.0 + 20 4	✓	5.8	6.1	✓	✓
DM. 4028	19	21.6 + 19	57	7.4	50.2	26.0	50.1	19 23.6 + 20 2	✓	6.5	6.8	✓	✓
DM. 4019	19	20.2 + 19	58	6.6	50.2	26.0	50.2	19 22.2 + 20 3	✓	6.2	6.5	✓	✓
✓ 6651	19	21.0 + 19	52	6.4	51.0	26.1	51.0	19 21.9 + 19 54	✓	5.5	5.8	✓	✓
DM. 4009	19	19.1 + 19 50	6.6	50.1	26.0	50.1	19 21.1 + 20 5	✓	5.8	6.1	✓	✓	✓
DM. 4000	19	17.5 + 19	59	6.5	50.1	26.0	50.1	19 19.5 + 20 4	✓	6.0	6.3	✓	✓
DM. 3906	19	67.5 + 30 20	6.2	52.5	32.9	50.4	19 39.3 + 30 26	✓	5.9	6.2	✓	✓	✓
DM. 4176	19	26.8 + 20 58	7.0	50.6	22.8	50.2	19 27.5 + 20 44	✓	6.5	6.8	✓	✓	✓
DM. 3502	19	12.4 + 30 46	6.9	49.0	66.0	49.9	19 14.1 + 30 50	✓	6.4	6.7	✓	✓	✓
✓ 6600	19	11.1 + 21 11	4.7	50.7	26.0	51.4	19 11.9 + 21 13	✓	4.8	5.1	✓	✓	✓
3 294	19	10.1 + 21 1	5.8	50.5	23.0	51.2	19 11.0 + 21 3	✓	5.8	6.1	✓	✓	✓
DM. 4088	19	9.0 + 20 59	6.0	49.4	26.0	50.1	19 10.9 + 21 3	✓	5.8	6.1	✓	✓	✓
✓ 6282	19	7.2 + 31 5	6.7	49.2	66.1	50.9	19 7.9 + 31 7	✓	6.0	6.3	✓	✓	✓
✓ 6286	19	7.5 + 21 21	5.8	50.5	26.0	67.3	19 8.3 + 21 2.3	✓	6.2	6.5	✓	✓	✓
DM. 3442	19	3.8 + 30 20	7.0	48.0	32.9	50.1	19 5.5 + 30 24	✓	6.7	7.0	✓	✓	✓
DM. 3440	19	14.2 + 21 6.4	6.7	49.4	22.9	49.8	19 16.6 + 21 59	✓	6.6	6.6	✓	✓	✓
DM. 3550	19	14.9 + 31 50	7.0	49.6	66.0	50.0	19 16.6 + 31 55	✓	✓	✓	✓	✓	✓

Mean 7

DM. 3462	19	62.3 + 16	29	6.3	71.1	27.9	70.5	19 53.2 + 16 31	✓	✓	✓	✓	✓
DM. 3471	19	66.0 + 27	6	7.1	69.2	67.8	69.6	19 37.8 + 27 9	✓	6.2	6.9	✓	✓
DM. 3402	19	66.7 + 17	12	4.4	70.7	28.0	71.0	19 36.5 + 17 15	✓	5.6 5.8	6.2 6.5	✓	✓
DM. 3481	19	66.2 + 27	26	4.9	72.4	27.8	70.8	19 52.0 + 27 29	✓	5.4	6.1	✓	✓
DM. 3699	19	64.7 + 17	44	4.6	70.5	27.9	70.8	19 35.6 + 17 47	✓	5.3 5.45	6.0 6.1	✓	✓
DM. 3622	19	26.9 + 27	46	6.0	68.9	67.9	70.5	19 26.7 + 27 45	✓	4.5	5.2	✓	✓
DM. 3493	19	44.1 + 28	6	6.8	70.1	67.9	69.6	19 45.9 + 28 12	✓	6.1	6.8	✓	✓
DM. 3421	19	42.0 + 18	14	6.7	70.8	28.0	70.7	19 42.9 + 18 17	✓	5.2 5.5	5.9 6.2	✓	✓
DM. 4204	19	66.9 + 18	8	7.0	69.5	27.9	69.7	19 37.9 + 18 14	✓	6.3	7.0	✓	✓

* Spectra of two stars superimposed in Plate. Measure of brightness, combined light of both.

December 31, 1886.

Plate 668. (F)

V	H	Type	No. of Lines	K	Focus	Other Lines	V	H	V	H	Correc.
18.3	13.7	I	48	N	2	-F	9.2	27.4	28.8	46.1	+0.2
17.9	16.1	I?	24	$K=H$	1	-	9.0	32.2	29.0	38.6	-0.2
17.5	9.0	III	24	$K=H$	2	-F bright 2cm	8.8	18.0	29.2	62.6	+0.8
17.8	18.6	I?	25	$K=H$	1	-	8.9	37.2	29.1	66.6	-0.9
17.5	19.6	I	25	N	1	-F	8.8	39.2	29.2	61.6	-1.2
17.0	20.5	I	28	N	2	-	8.6	41.0	29.6	29.6	-0.7
16.0	10.7	I	4	N	1	-	8.0	21.4	30.0	49.1	+1.2
15.9	11.6	IIa?	2480	$K=H$	1	- 2cm	8.0	23.2	30.0	47.3	+0.4
16.5	12.7	I? I	23	$K=H$	1	-	8.2	25.4	29.8	46.1	+0.6
16.1	12.8	I I	26	$K=H$	1	-	8.0	25.6	30.0	44.9	+0.3
16.2	17.6	III?	23	$K=H$	2	-F	8.1	35.2	29.9	66.6	-0.7
15.2	15.9	I	26	N	2	-F	7.6	31.8	30.4	38.7	-0.6
15.8	22.9	I?	24	N	1	-	7.9	45.8	30.1	24.7	-0.9
13.9	6.8	II?	22	$K=H$	1	-	7.0	16.6	31.0	66.9	+1.2
14.1	7.8	I	35	N	1	-	7.0	16.6	31.0	64.9	+1.9
14.0	8.2	II?	22	$K=H$	1	-	7.0	16.4	31.0	64.1	+1.9
14.5	9.2	I	27	N	2	-F	7.2	18.4	30.8	62.1	+1.7
14.6	9.9	I? I	25	$K=H$	1	-	7.6	19.8	30.7	60.7	+1.6
14.5	21.6	I?	24	N	1	-	7.2	46.2	30.8	27.3	-0.9
13.9	20.3	I?	24	$K=H$	1	-	7.0	40.6	31.0	29.9	-1.6
12.9	8.9	I	51	N	1	-	6.4	17.8	31.6	62.7	+1.8
12.5	19.1	I	24	N	1	-	6.2	38.2	31.8	32.3	-0.7
11.5	12.6	I	2481	N	3	-F 2cm	6.8	25.2	32.2	46.6	+0.4
11.7	16.0	I	27	$K=H$	2	-	6.8	32.0	32.2	38.6	-0.6
11.5	16.2	I	25	N	1	-	6.8	32.4	32.2	38.1	-0.2
11.7	17.8	I?	3	N	1	-	6.8	36.6	32.2	34.9	-0.6
11.5	19.6	I	27	N	1	-F	6.8	39.2	32.2	31.6	-0.8
10.5	8.9	I?	26	$K=H$	1	-F	6.2	17.6	32.6	62.7	+0.9

$\frac{1}{2} \cos \delta$

00 5.7

01 6.7

00 5.6

01 6.1

00 5.3

01 6.6

	No.	R.A.	Dec.	Mag.	α	γ	H'	Rad. of D.H. starts to 1900	Mean γ	Br.	Br.
	6424	19 46.7 + 18 61	6.0	71.1	28.0	70.9	19 44.5 + 18 53	✓	✓ 5.0	5.7	✓
DM	6447	19 67.0 + 28 69	7.2	69.2	38.0	69.4	19 38.8 + 29 5	✓	✓ 6.3	7.0	✓
	6466	19 66.4 + 19 10	6.6	71.4	28.0	70.6	19 54.3 + 19 13	✓	✓ 5.2	5.9	✓
									✓ 5.7	6.4	✓
DM	6670	19 61.4 + 29 1	6.8	68.6	67.9	69.5	19 33.2 + 29 7	✓	✓ 6.1	6.8	✓
	6677	19 60.1 + 29 12	6.4	69.1	68.0	70.3	19 30.9 + 29 14	✓	✓ 5.9	6.6	✓
	6672	19 29.6 + 19 61	6.0	70.6	28.0	71.0	19 30.2 + 19 33	✓	✓ 4.9	5.6	✓
DM	6802	19 49.6 + 29 49	6.9	70.7	37.6	69.5	19 51.1 + 29 56	✓	✓ 6.0	6.7	✓
	4176	19 47.0 + 19 58	7.5	70.7	28.0	69.8	19 49.0 + 20 5	✓	✓ 6.1	6.8	✓
DM	4196	19 47.0 + 19 68	7.2	70.2	28.0	69.8	19 49.0 + 20 5	✓	✓ 6.1	6.8	✓
									✓ 6.3	7.0	✓
DM	4177	19 44.5 + 19 40	7.5	69.9	27.9	69.6	19 46.5 + 19 47	✓	✓ 6.1	6.8	✓
DM	4175	19 44.4 + 19 51	7.5	70.0	27.9	69.7	19 46.4 + 19 58	✓	✓ 5.5	6.2	✓
	6697	19 64.6 + 29 66	4.9	69.8	68.0	70.5	19 33.5 + 29 56	✓	✓ 5.7	6.4	✓
DM	6706	19 67.6 + 30 20	6.2	69.3	67.9	69.6	19 39.3 + 30 26	✓	✓ 5.6	6.3	✓
DM	4069	19 26.0 + 19 69	7.0	68.8	27.9	69.7	19 25.0 + 20 4	✓	✓ 5.8	6.5	✓
DM	3875	19 58.5 + 30 50	7.4	72.1	37.8	70.9	20 0.3 + 30 57	✓	✓ 6.3	7.0	✓
DM	4066	19 67.4 + 21 6	6.6	71.0	28.1	69.8	19 59.4 + 21 13	✓	✓ 5.8	6.5	✓
DM	3862	19 66.2 + 30 46	7.0	71.8	67.7	69.9	19 58.0 + 30 50	✓	✓ 6.1	6.8	✓
DM	3863	19 66.2 + 30 50	6.9	71.6	67.8	69.7	19 57.0 + 30 57	✓	✓ 5.3	6.0	✓
	4471	19 66.9 + 30 69	6.4	72.6	67.8	70.6	19 54.7 + 30 42	✓	✓ 5.7	6.4	✓
DM	4351	19 50.7 + 20 37	6.8	70.5	27.9	69.0	19 52.7 + 20 44	✓	✓ 6.3	7.0	✓
DM	3818	19 61.0 + 30 34	6.6	70.8	27.9	69.3	19 52.8 + 30 41	✓	✓ 6.3	7.0	✓
DM	4176	19 26.8 + 20 68	7.0	69.0	27.8	69.9	19 27.8 + 20 44	✓	✓ 6.3	7.0	✓
DM	3622	19 27.6 + 30 66	6.9	67.9	67.9	69.4	19 29.1 + 31 2	✓	✓ 6.0	6.7	✓
DM	3876	19 64.0 + 31 26	6.9	71.8	67.8	70.0	19 58.8 + 31 33	✓	✓ 6.3	7.0	✓
DM	3849	19 60.9 + 21 40	6.8	69.1	27.9	69.6	19 32.8 + 21 46	✓	✓ 4.6	5.3	✓
	6466	19 46.9 + 22 18	6.0	71.1	28.1	70.7	19 46.7 + 22 21	✓	✓ 5.8	6.5	✓
	6409	19 68.1 + 32 9	6.8	70.1	38.0	70.4	19 38.9 + 32 11	✓	✓ 6.1	6.8	✓
DM	6784	19 67.2 + 22 9	7.0	69.6	28.0	69.8	19 39.1 + 22 15	✓	✓ 6.5	7.2	✓
DM	3506	19 33.1 + 32 5	7.5	68.7	37.9	69.3	19 34.8 + 32 11	✓	✓ 5.8	6.5	✓
DM	6767	19 66.0 + 22 7	6.7	70.6	27.9	71.1	19 36.9 + 22 13	✓	✓ 5.7	6.4	✓
DM	6741	19 29.9 + 22 16	6.5	69.1	28.1	69.9	19 31.8 + 22 22	✓			✓
	6472	19 64.0 + 22 46	6.7	71.8	28.0	70.9	19 54.8 + 22 50	✓			✓

December 31, 1886
Plate 668. (F)

V	H	Type	Lines	K	Focus	Lines	V	H	V	H	Correc.
9.1	14.4	II ^a	²⁴⁸² 83	K=H	2	-F	46	28.8	33.4	41.7	+0.2
9.1	17.4	I	45	N	1	-	46	34.8	33.4	35.7	-0.4
9.5	20.8	I	4	N	1	-	48	41.6	33.2	28.9	-1.8
8.5	11.5	I	10	N	3	-F	42	26.0	33.8	47.6	+0.6
8.0	11.0	I	8	N	2	-F	40	22.0	34.0	48.5	+0.7
8.4	15.5	I	6	K=H	2	-	42	31.0	33.8	39.5	-0.2
8.6	17.2	I	5	K=H	1	-	43	34.4	33.7	36.1	-0.4
8.4	15.5	I	5	K=H	1	-	42	31.0	33.4	39.5	-0.1
7.5	20.5	I	88	N	3	-F	38	41.0	34.2	29.5	-1.9
6.8	7.6	I?	4	K=H	1	-	34	15.2	34.6	55.3	+1.3
7.0	7.7	I?	5	N	1	-	35	16.4	34.5	55.1	+1.3
6.5	10.3	III ^b	²⁴⁸³ 3	K=H	2	-F _{even}	32	20.6	34.8	49.9	+1.7
4.5	14.7	I	45	N	1	-	22	29.4	35.8	41.1	+0.2
4.0	20.7	I	45	N	1	-	20	41.4	36.0	29.1	-2.2
3.7	22.6	I	6	N	1	-F	18	45.2	36.2	25.3	-3.1
2.7	18.6	I	56	N	1	-	14	37.2	36.6	33.3	-1.5
2.5	8.9	I	45	N	1	-	12	17.8	36.8	52.7	+2.6
4.1	10.2	I?	35	N	1	-	20	20.4	36.0	50.1	+1.8
5.1	15.9	III?	3	K=H	1	-F	26	31.8	35.4	38.7	-0.2
6.6	14.6	I? I	3	N	1	-	33	29.2	34.7	41.3	+0.2
3.2	8.6	I?	3	N	1	-	16	17.2	36.4	53.3	+2.6
5.9	14.2	II ^a	²⁴⁸³ 2	K=H	1	-	30	28.4	35.0	42.1	

Recorded above

III? 5.8, 6.1.

$\frac{1}{2} \cos \delta$ Red. of δ to 1900Mean γ

Cor. Br.

No.	R.A.	Dec.	Mag.	H	V	H'	Red. of δ to 1900	Cor. Br.	Br.
3420	19 41.8 + 33 27	5.0	70.6	38.0	70.4	19 42.6 + 33 30	✓	5.5	6.2
DM 3733	19 34.5 + 26 23	6.2	69.6	28.0	69.7	19 36.4 + 23 29	✓	6.0	6.7
DM 3487	19 26.8 + 33 10	7.0	67.4	36.0	69.2	19 27.5 + 33 16	✓	6.2	6.9
3443	19 48.4 + 26 46	4.7	71.4	28.0	70.6	19 49.2 + 23 50	✓	4.5	5.2
3447	19 49.4 + 24 0	5.6	71.4	28.0	70.7	19 50.3 + 24 4	✓	5.3	6.0
DM 3572	19 38.4 + 33 49	6.7	69.4	38.0	69.6	19 40.1 + 33 55	✓	5.6	6.3
DM 3547	19 34.3 + 33 66	6.5	68.7	37.9	69.1	19 36.0 + 33 44	✓	5.7	6.4
DM 3760	19 39.3 + 23 36	6.2	70.3	27.8	70.4	19 41.2 + 23 41			
3666	19 27.4 + 34 12	4.8	68.4	38.0	70.3	19 28.1 + 34 14	✓	4.6	5.3
3488	19 36.9 + 24 36	5.4	72.1	28.0	70.9	19 37.8 + 24 39	✓	5.5	6.2
3486	19 36.7 + 24 28	5.9	72.1	28.0	70.8	19 37.3 + 24 31	✓	5.6	6.3
3460	19 31.8 + 34 46	4.0	72.4	38.0	70.0	19 32.6 + 34 49	✓	5.1	5.8
3787	19 40.4 + 35 44	8.0	69.8	38.0	69.6	19 42.1 + 35 50	?	5.3	6.0
DM 3786	19 40.3 + 35 46	7.0	69.7	38.0	69.8	19 42.0 + 35 51	?	5.6	6.3
3664	19 26.4 + 36 37	5.8	67.8	38.0	70.0	19 27.1 + 36 1	✓	5.9	6.6
3662	19 21.8 + 36 5	5.1	67.0	37.9	70.1	19 22.6 + 36 7	✓	5.1	5.8
3687	19 31.5 + 36 41	6.0	68.7	38.1	70.2	19 32.2 + 36 43	✓	5.8	6.5
3479	19 36.5 + 36 46	5.2	73.3	37.9	70.8	19 36.2 + 36 46	✓		
DM 3878	19 31.4 + 36 32	6.4	71.8	37.9	70.0	19 33.1 + 36 59	✓	5.8	6.5
3412	19 38.7 + 26 29	5.4	70.5	28.1	70.7	19 39.6 + 26 32	✓	6.3	7.0
3702	19 40.5 + 34 40	9.0	69.7	38.0	69.5	19 42.3 + 34 46	?	6.2	6.9
DM 3791	19 40.4 + 34 40	6.6	69.6	38.0	69.4	19 42.1 + 34 46	?	6.2	6.9
3885	19 53.4 + 36 10	5.7	72.6	37.8	70.0	19 54.1 + 36 12	?	6.2	6.9
DM 3886	19 53.4 + 36 12	7.0	72.6	37.8	70.0	19 54.1 + 36 12	?	6.2	6.9
DM 3806	19 54.6 + 36 39	5.8	71.8	36.2	68.9	19 56.2 + 36 46			
DM 3972	19 41.7 + 25 2	6.2	70.1	28.0		19 43.6 + 25 8		7.2	7.2

Amt. of Fog. due to moon & clouds. 7.6 Amt. of Fog. due to chemicals. 6.4

Jan. 4, 1887.
Plate 503. (F)

V	H	Type	Lines	K	Focus	Other	V	H	V	H	
22.0	13.0	I	✓	23	✓	N	✓	1	—	11.0	26.0
20.2	13.9	I	✓	25	✓	K=H	✓	1	—	10.1	27.6
12.5	12.7	I?	✓	24	✓	K=H	✓	1	—	6.2	25.4
11.5	11.2	II ²⁴⁸⁴ a?	✓	3	✓	N=H	✓	2	F [✓] sum	6.8	22.4
11.0	14.7	III?	✓	23	✓	K=H	✓	2	F [✓]	6.6	29.4
9.0	10.3	I	✓	26	✓	N	✓	2	—	4.6	20.6
7.8	22.9	II?	✓	2	✓	K=H	✓	1	—	6.9	45.8
6.5	23.7	I	✓	28	✓	N	✓	5	F [✓]	6.2	47.4
5.0	12.1	I	✓	25	✓	K=H	✓	1	—	2.6	24.2
2.5	13.1	I	✓	23	✓	N	✓	1	—	1.2	26.2
2.0	15.2	I	✓	24	✓	N	✓	1	—	1.0	30.4
2.5	15.9	II?	✓	22	✓	K=H	✓	1	—	1.2	31.6
1.9	6.2	I?	✓	22	✓	N	✓	5	—	1.0	12.4

Amt. of Fog. due to moon & clouds. 7.5 Amt. of Fog. due to chemicals. 6.3

22.9	15.6	I?	✓	3	✓	N	✓	1	—	11.4	31.2	11.6	17.1
22.8	20.2	I	✓	27	✓	K=2H	✓	4	—	11.4	40.4	11.3	7.9
14.5	22.4	I?	✓	24	✓	K=H	✓	1	—	7.2	44.8	16.6	6.6
13.3	20.3	I	✓	7	✓	N	✓	4	—	6.6	40.6	16.1	7.7
10.5	10.4	I?	✓	23	✓	N	✓	1	—	6.2	20.6	17.5	27.5
8.5	9.9	II?	✓	22	✓	K=H	✓	1	—	4.2	19.8	18.5	28.6
3.1	20.2	I	✓	29	✓	K=2H	✓	4	F-✓	1.6	40.4	21.1	7.9

Amt. of Fog. due to moon & clouds. 7.8 Amt. of Fog. due to chemicals. 6.8

21.5	21.1	I?	✓	25	✓	K=H	✓	1	—	10.8	42.2	22.2	46.9
19.5	13.8	II?	✓	26	✓	N	✓	2	F- ~~sum~~	9.8	27.6	23.2	61.6
18.5	19.9	I	✓	27	✓	N	✓	2	F- ~~sum~~	9.2	39.8	23.8	49.3
18.1	19.4	I	✓	25	✓	K=H	✓	1	—	9.0	38.8	24.0	50.3

	No.	R.A.	Dec.	Mag.	JD	Y	H'	Red. to 1900	Br
12 22.0 + 26.7	2116	12	22.8	+ 26 34	3.2	✓		12 23.8 + 26 27 } ? ✓	6.9 ✓
	2117	12	22.9	+ 26 35	3.2	✓		12 23.9 + 26 28 } ? ✓	6.9 ✓
12 19.9 + 27.6	2111	12	21.0	+ 27 29	3.1	✓		12 22.8 + 27 22 . ✓	6.7 ✓
12 22.0 + 21.7	2119	12	23.7	+ 21 34	3.7	✓		12 24.7 + 21 27 . ✓	6.9 ✓
12 27.0 + 42.2	2133	12	28.0	+ 42 1	4.3	✓		12 29.0 + 41 53 . ✓	6.4 ✓
12 17.0 + 52.4	2102	12	18.2	+ 52 12	3.0	✓		12 19.2 + 52 7 . ✓	6.3 ✓
12 27.8 + 23.5	2136	12	28.9	+ 23 17	4.9			12 29.9 + 23 10 . ✓	6.6 ✓
11 54.8 + 43.8	2054	11	56.0	+ 43 43	5.1	✓		11 57.1 + 43 36 . ✓	6.3 ✓
11 46.0 + 54.5	2036	11	47.5	+ 54 32	2.6	✓		11 48.6 + 54 13 . ✓	6.4 ✓
12 23.9 + 25.4	2135	12	23.0	+ 25 13	3.3	✓		12 26.0 + 25 7 . ✓	6.8 ✓
	2116	12	22.8	+ 26 34	3.2	✓		12 23.8 + 26 27 } ? ✓	6.9 ✓
12 22.0 + 26.7	2117	12	22.9	+ 26 35	3.2	✓		12 23.9 + 26 28 } ? ✓	6.9 ✓
12 17.1 + 26.8	2103	12	18.3	+ 26 46	3.1	✓		12 19.3 + 26 39 . ✓	6.7 ✓
12 15.4 + 26.7	2098	12	16.5	+ 26 31	4.8	✓		12 17.5 + 26 24 . ✓	6.7 ✓
12 47.9 + 56.8	2191	12	48.7	+ 56 37	1.9			12 49.6 + 56 30 . ✓	6.5 ✓

1969	11	17.7	+ 11 11	4.0	48.9	22.6	48.9	11 18.7 + 11 5 . ✓	6.8 ✓
1949	11	7.7	+ 21 11	2.8	48.1	22.6	48.8	11 8.8 + 21 5 . ✓	6.8 ✓
1968	11	2.4	+ 25 20	5.6	47.2	22.6	48.7	11 3.5 + 25 12 . ✓	7.0 ✓
1961	11	7.9	+ 16 5	3.5	48.5	22.7	49.0	11 9.0 + 15 39 . ✓	4.9 ✓
1998	11	28.5	+ 17 27	5.7	49.3	22.6	48.9	11 29.5 + 17 21 . ✓	6.8 ✓
2001	11	60.0	+ 28 26	6.8	49.8	22.6	48.5	11 31.0 + 28 20 . ✓	7.0 ✓
1949	11	7.7	+ 21 11	2.8	48.1	22.6	48.8	11 8.8 + 21 5 . ✓	4.6 ✓

3466	19	45.9	+ 22 18	5.0	88.1	36.1	88.9	19 46.7 + 22 21 . ✓	5.7 ✓
3500	19	1.7	+ 23 16	6.6	89.3	36.1	89.1	19 2.5 + 23 19 . ✓	5.1 ✓
3443	19	48.4	+ 23 46	4.7	88.2	36.0	89.0	19 49.2 + 23 50 . ✓	4.6 ✓
3449	19	49.4	+ 24 0	5.6	88.2	36.0	89.0	19 50.3 + 24 4 . ✓	5.6 ✓

Jan. 4, 1887.
Plate 684. (F.)

V	H	Type	Line	K	Focus	Other	Line	V	H	V	H	Notes
17.2	16.1	I a?	²⁴⁸⁶ 2	~~K=H~~	1	-	sun	8.6	32.2	24.4	66.9	-0.2
17.0	15.9	I a?	²⁴⁸⁷ 2	~~K=H~~	1	-	sun	8.5	³ 11.8	24.5	⁵ 77.3	-0.2
16.5	10.4	I	56	N	2	-	F	8.2	20.8	24.8	68.3	+0.3
15.6	9.9	I	57	N	2	-	F	7.8	19.8	25.2	69.3	+0.6
14.8	15.6	I	55	N	1	-	F	7.4	31.2	25.6	67.9	-0.1
13.9	11.4	I	4	~~K=H~~	1	-		7.0	22.8	26.0	66.3	+0.8
13.0	12.1	I	55	N	1	-		6.5	24.2	26.5	64.9	+1.2
13.1	18.4	I	4	N	1	-		6.6	36.8	26.4	62.3	-0.3
11.5	16.3	I	57	~~K=H~~	3	-		5.8	32.6	27.2	68.5	-0.3
11.2	19.7	III X	23	~~K=H~~	1	-	F	5.6	69.4	27.4	69.7	+1.2
9.5	10.4	I	55	~~K=H~~	2	-	F	4.8	20.8	28.2	68.3	+1.2
9.7	21.2	I?	³ 2	N	1	-		4.8	42.4	28.2	46.7	-1.5
9.5	23.2	III	3	~~K=H~~	1	-	F	4.8	46.4	28.2	42.7	-0.6
8.0	17.5	III ²⁴⁸⁸ to	3	~~K=H~~	2	-	Flight	4.0	38.6	29.0	63.5	-0.4
8.5	22.4	I	56	~~K=H~~	2	-	F	4.2	44.8	28.8	44.3	-0.8
5.0	17.2	I	4	N	1	-		2.5	34.4	30.5	54.7	-0.7

Ant. of Fog. due to moon & clouds.

Ant. of Fog. due to chemicals.

7.3 Plate 650. (F.)

7.2

18.6	6.3	I?	3	N	1	-	9.3	12.6	33.9	47.6	+4.7
19.4	11.1	I?	3	N	1	-	9.7	22.2	33.3	38.0	+1.3
19.5	22.5	I	57	N	3	-	9.8	48.0	33.2	18.2	-2.6
18.5	13.6	I?	23	N	1	-	9.2	27.2	33.8	36.0	+0.6
17.9	13.0	I?	55	~~K=H~~	1	-	9.0	26.0	34.0	34.2	+1.1
17.3	9.7	I?	55	~~K=H~~	1	-	8.6	19.4	34.4	40.8	+1.8
17.4	16.2	I	34	N	1	-	8.7	32.4	34.3	27.8	-0.4
16.5	15.1	I	4	~~K=H~~	1	-	8.2	30.2	34.8	30.0	-0.2
16.6	18.4	I	57	N	2	-	8.3	36.8	34.9	26.4	-1.2
15.9	11.4	I	56	N	1	-	8.0	22.8	35.0	37.4	+2.0

$\frac{1}{2} \cos \delta$

Mean 9

[illegible]

Mean if

DM. 2861	17	$66.6 + 46$	26	7.2	66.2	52.7	61.5	17	$55.0 + 43$	26	✓	6.2	6.6
DM. 2944	17	$69.0 + 66$	18	6.5	61.2	46.0	59.9	17	$40.6 + 33$	17	✓	6.2	6.6
2890	17	$12.9 + 66$	14	4.9	67.9	46.0	60.5	17	$13.6 + 33$	13	✓	4.9	5.3
DM. 2777	17	$66.7 + 46$	42	7.0	60.9	62.9	60.1	17	$35.1 + 43$	40	✓	6.2	6.6
DM. 2745	17	$65.2 + 44$	6	6.8	61.2	66.1	60.1	17	$36.5 + 44$	4	✓	6.1	6.5
DM. 3050	17	$42.6 + 34$	20	6.5	62.0	42.9	60.2	17	$41.2 + 34$	19	✓	5.8	6.2
DM. 2989	17	$26.8 + 34$	263	6.5	69.2	46.1	59.6	17	$28.4 + 34$	21	✓	6.3	6.7
DM. 2996	17	$29.6 + 34$	60	7.0	69.8	46.0	60.0	17	$31.2 + 34$	48	✓	6.3	6.7
2923	17	$22.4 + 34$	49	6.0	69.2	46.1	44.3	17	$32.3 + 34$	47	✓	5.6	6.0
DM. 2588	17	$69.9 + 46$	6	7.2	62.7	52.1	60.1	17	$41.2 + 45$	5	✓	5.9	6.3

Jan. 4, 1887.
Plate 650. (F)

V	H	Type	Lines	K	Fogues	Other	V	H	V	H	Correc.
15.7	6.8	I?	36	$K=H$		-	7.8	13.6	35.2	46.6	+4.8
14.7	6.2	I?	24	N		- F?	7.4	12.4	35.6	47.8	+5.3
15.0	19.9	I?	34	N		-	7.5	39.6	35.5	20.4	-2.9
14.0	13.0	I	2489	N		- F	7.0	26.0	36.0	34.2	+1.2
12.0	22.9	III	2490	$K=H$	3	F	6.0	45.8	37.0	14.4	-3.3
11.5	6.4	II	2491	$K=H$	2	- F	5.8	12.8	37.2	47.4	+3.7
11.6	19.4	I	811	N	5	-	5.8	38.8	37.2	21.4	-1.8
11.1	21.8	I	84	N	4	F	5.6	43.6	37.4	16.6	-2.6
11.5	14.6	III	82	$K=H$	1	-	5.8	29.2	37.2	31.0	+0.2
10.7	10.4	I	5	N	1	-	5.4	20.8	37.6	39.4	+3.0
10.1	15.2	I	34	$K=H$	1	-	5.0	30.4	38.0	29.8	+0.1
9.4	17.2	I	2492	$K=H$	3	-	4.7	34.4	38.3	25.8	-1.4
9.4	19.3	I	2493	$K=H$	1	-	4.7	38.6	38.3	21.6	-1.8
9.1	9.5	II?	2	$K=H$	1	-	4.6	19.0	38.4	41.2	+3.7
8.9	13.9	III	2493	$K=H$	1	- F	4.4	27.8	38.6	32.4	+0.8
7.3	15.1	IIa?	2	$K=H$	1	- seen	3.6	30.2	39.4	30.0	-0.1
6.5	12.9	I	45	N	1	-	3.2	25.8	39.8	34.4	+1.5
6.0	22.0	I	35	$K=H$	1	-	3.0	44.0	40.0	16.2	-3.3
4.5	9.9	I	57	N	2	- F	2.2	19.8	40.8	40.4	+3.7
4.1	14.9	II	2494	$K=H$	1	-	2.0	29.8	41.0	30.4	+0.1
3.0	7.6	III	38	$K=H$	3	- F	1.5	15.2	41.5	45.0	+5.6
3.7	22.9	II?	2495	$K=H$	1	-	1.8	45.8	41.2	14.4	-5.8

Ant. of Fog. due to moon & clouds. Ant. of Fog. due to chemicals.

6.8

Plate 649. (F)

7.5

21.0	8.1	IIa?	2495	$K=H$	1	- seen	10.5	16.2	12.6	44.8	+1.1
21.8	17.2	II	2496	$K=H$	1	- seen	10.9	34.4	12.2	26.6	-0.1
21.6	18.1	I	34	$K=H$	1	-	10.8	36.2	12.3	24.8	-0.1
20.6	15.8	I	2497	$K=H$	5	- F	10.6	31.6	12.8	29.4	0

12008.

No.	R.A.	Dec.	Mag.	H	V	H'	Red of H.H. Slansky 1900	Con. Br. Br.	Mean 4
DM 2626	17 52.5 + 45	1 6.7	66.1	52.8	61.3	17 53.8 + 45	1	✓ 6.1	6.5
DM 2627	17 52.6 + 45	2 6.6	66.2	52.9	61.4	17 53.9 + 45	23	✓ 6.1	6.4
30201	17 55.4 + 45	28 6.1	67.8	52.9	62.5	17 56.0 + 45	28	✓ 5.8	6.2
DM 2635	17 54.7 + 46	28 6.4	67.2	52.9	61.7	17 55.0 + 45	28	✓ 6.4	6.8
DM 2621	17 16.7 + 46	26 6.6	66.6	52.9	58.4	17 17.0 + 45	23	✓ 3.6	4.0

0.2 4.2

2959	17 66.1 + 46	4 6.9	62.1	66.1	60.9	17 36.6 + 46	3	✓ 4.9	5.3
2885	17 10.9 + 46	6.7 6.4	56.7	46.0	60.0	17 11.5 + 36	23	✓ 5.4	5.8
3004	17 52.1 + 67	16 4.0	64.9	46.1	61.2	17 52.8 + 37	15	✓ 5.4	5.8
2914	17 19.6 + 67	16 4.1	58.4	46.1	60.2	17 20.2 + 37	14	✓ 4.2	4.6

0.1 4.7

0.1 5.3

2873	17 13.5 + 67	25 4.9	57.1	46.0	59.9	17 14.2 + 37	24	✓ 4.8	5.2
DM 2908	17 60.7 + 67	24 6.5	59.9	46.2	59.7	17 32.2 + 37	22	✓ 6.4	6.8
2983	17 43.9 + 47	3.9 6.3	64.7	53.0	61.7	17 44.4 + 47	39	✓ 6.1	6.5
DM 2669	17 46.2 + 47	4.1 6.2	64.0	66.1	61.0	17 44.4 + 47	40	✓ 6.7	7.1
2533	17 29.0 + 48	1 9.3	59.4	56.0	59.3	17 30.2 + 47	58	✓ 5.4	5.8
DM 2662	17 29.0 + 48	0 7.6	59.4	56.0	59.3	17 30.2 + 47	58	✓ 6.2	6.6

0.2 6.7

2926	17 26.6 + 48	22 5.8	58.0	56.1	59.4	17 24.1 + 48	20	✓ 6.1	6.5
DM 2506	17 16.6 + 48	20 6.3	55.2	53.0	57.0	17 17.8 + 48	17	✓ 5.9	6.3
2917	17 20.0 + 48	43 6.4	58.6	46.4	60.4	17 47.5 + 48	26	✓ 6.2	6.6
DM 2681	17 46.3 + 48	27 6.5	66.6	56.0	61.6	17 34.0 + 48	38	✓ 6.6	7.0
2954	17 53.6 + 48	40 5.5	61.3	63.1	60.5	17 37.3 + 49	50	✓ 6.0	6.4

DM 2658	17 29.4 + 49	28 6.8	59.6	56.1	59.7	17 30.5 + 49	26	✓ 5.9	6.3
2678	17 36.2 + 49	52 6.5	62.0	53.1	60.6	17 33.7 + 49	31	✓ 5.1	5.5
DM 2668	17 62.6 + 49	63 7.0	58.4	52.8	56.9	17 9.1 + 49	53	✓ 6.8	7.2
DM 2601	17 8.0 + 49	56 6.2	52.0	52.9	53.3	17 13.9 + 40	4	✓ 4.6	5.0
DM 3126	17 12.4 + 40	7 7.2	56.4	46.1	59.7	17 46.7 + 50	48	✓ 5.2	5.6

0.2 5.7

2989	17 46.2 + 50	50 5.2	66.0	66.0	62.6	17 31.5 + 40	59	✓ 6.5	6.9
DM 2856	17 30.1 + 41	1 6.7	59.9	43.0	59.8	17 54.3 + 51	31	✓ 6.5	6.9
2943	17 29.3 + 41	20 5.9	59.1	46.3	59.0	17 58 + 50	58	✓ 6.2	6.6
3009	17 53.8 + 51	30 2.4	69.0	56.0	63.4	17 27.6 + 12	1	✓ 6.3	6.7
DM 2178	17 4.7 + 51	2 6.5	54.6	52.8	56.3	17 30.3 + 12	38	✓ 6.5	6.9

2988	17 46.8 + 22	20 6.9	62.0	62.6	60.9	17 46.8 + 22	21	✓ 6.1	6.5
DM 3241	17 26.6 + 12	3 6.7	59.9	22.9	60.0	17 25.7 + 12	1	✓ 6.3	6.7
DM 3264	17 26.6 + 12	3 6.5	59.8	22.8	59.9	17 30.3 + 12	38	✓ 6.5	6.9
2944	17 29.4 + 12	39 2.2	61.0	22.9	61.0			✓ 6.5	6.9

Jan. 4, 1887.
Plate 649 (F)

V	H	Type	Lines	K	Focus.	Other	V	H	V	H	Comp.
19.8	20.4	I	$\$4$	$K=H$			99	40.8	13.2	20.2	-0.8
19.5	15.7	I	$\$4$	$K=H$			98	61.4	13.3	29.6	0
19.1	13.8	II?	$\$2$	$K=H$			96	29.6	13.5	33.4	+0.1
18.2	11.2	II	$\$2$	$K=H$			91	22.4	14.0	38.6	+0.3
18.1	12.3	II	$\$2$	$K=H$			90	24.6	14.1	36.4	+0.5
18.3	14.9	II	$\$3$	$K=H$			92	29.8	13.9	31.2	0
18.2	21.5	I?	$\$3$				91	43.0	14.0	18.0	-1.1
17.1	14.2	I	$\$7$				86	28.4	14.5	32.6	+0.2
17.0	11.2	I?	$\$6$	$K=H$			85	22.4	14.6	38.6	+0.3
17.1	11.6	II	$\$3$	$K=H$			86	23.2	14.5	37.8	+0.7
17.1	11.7	II?	$\$3$	$K=H$			86	23.4	14.5	37.6	+0.3
16.8	8.5	II?	$\$3$	$K=H$			84	17.0	14.7	44.0	+1.1
16.7	21.8	I	$\$8$				84	43.6	14.7	17.4	+1.2
15.6	12.7	I	$\$6$				78	26.4	15.3	35.6	+0.2
15.1	8.4	I	$\$6$	$K=H$			76	16.8	15.5	44.2	+1.3
16.0	24.4	I	$\$9$				80	48.8	15.1	12.2	+1.8
14.6	9.1	III	$\$3$	$K=H$			73	18.2	15.8	42.8	+1.2
14.4	10.1	II	$\$2$	$K=H$			72	20.2	15.9	40.8	+0.9
14.0	12.3	II	$\$3$	$K=H$			70	24.6	16.1	36.4	+0.3
14.5	20.8	I	$\$7$				72	41.6	15.9	19.4	-0.6
14.6	22.1	I	$\$9$				73	44.2	15.8	16.8	-1.6
13.6	17.2	III	$\$3$	$K=H$			68	34.4	16.3	26.6	-0.5
13.6	6.1	II	$\$3$	$K=H$			68	12.2	16.3	48.8	+1.8
13.1	20.7	I	$\$7$				66	41.4	16.5	19.6	-0.6
13.0	20.1	II	$\$3$	$K=H$			65	40.2	16.6	20.8	-0.6
13.3	16.3	III	$\$3$	$K=H$			66	32.6	16.5	28.4	-0.2
13.0	16.4	I	$\$4$	$K=H$			65	32.8	16.6	28.2	-0.3
13.0	15.9	II	$\$3$	$K=H$			65	31.8	16.6	29.2	-0.1

$\frac{1}{2} \cos \delta$

	No.	R.A.	Dec.	Mag.	H	V	H'	Red. of H-H'	Mean 4	Cor.	Br.	Br.
								stars to 1900				
	2910	17 19.1 + 23 5	5.8	69.9	36.0	60.7	17 19.9 + 23 3	✓	✓	6.0	6.4	✓
DM?	3397	17 27.4 + 13 16	6.5	59.1	23.1	59.1	17 27.8 + 13 14	✓	✓	6.6	7.0	6.9
DM	3400	17 28.4 + 13 14	7.7	59.8	23.0	59.8	17 30.3 + 13 13	✓	✓	6.3	6.7	✓
DM	3421	17 32.3 + 13 25	6.5	69.9	23.0	59.8	17 34.4 + 13 23	✓	✓	6.4	6.8	6.9
DM	3444	17 37.7 + 13 52	7.2	60.1	23.0	59.8	17 39.8 + 13 51	✓	✓	6.2	6.6	✓
DM	3460	17 35.9 + 22 50	7.7	60.5	32.8	60.0	17 37.8 + 23 48	✓	✓	6.2	6.6	✓
DM	3412	17 30.0 + 13 55	6.7	59.8	23.1	59.8	17 32.1 + 13 53	✓	✓	6.6	7.0	✓
DM	3091	17 15.8 + 23 50	7.7	58.8	32.9	59.9	17 17.7 + 23 47	✓	✓	5.4	5.8	✓
	2952	17 32.6 + 24 23	5.8	61.0	36.0	60.9	17 33.4 + 24 22	✓	✓	6.1	6.5	✓
	2970	17 38.8 + 14 28	6.1	61.2	26.0	60.9	17 39.7 + 14 28	✓	3329	17 37.7 + 14 29	✓	✓
	2966	17 38.4 + 24 23	6.0	61.6	36.0	60.9	17 39.3 + 24 22	✓	✓	6.1	6.5	✓
	2965	17 37.9 + 14 21	6.2	61.3	26.0	61.0	17 38.8 + 14 20	✓	3321	17 36.8 + 14 22	✓	✓
DM	3264	17 44.1 + 24 30	7.1	61.1	32.9	60.0	17 45.9 + 24 29	✓	✓	6.4	6.8	✓
	2904	17 16.0 + 24 36	5.6	59.6	36.0	58.4	17 16.8 + 24 36	✓	✓	5.2	5.6	✓
	2958	17 36.7 + 16 14	6.3	61.1	23.0	60.9	17 36.6 + 15 13	✓	3248	17 34.6 + 15 15	✓	✓
DM	3357	17 44.4 + 26 20	7.0	61.2	32.9	60.9	17 46.2 + 25 19	✓	✓	6.2	6.6	✓
	2880	17 10.1 + 24 59	3.4	58.9	36.0	57.1	17 11.0 + 24 57	✓	✓	4.1	4.5	✓
	2984	17 44.0 + 26 40	5.4	62.2	36.0	61.0	17 44.7 + 26 40	✓	✓	5.8	6.2	✓
DM	3344	17 40.8 + 26 49	7.0	61.0	36.0	60.1	17 42.6 + 25 48	✓	✓	6.5	6.9	6.8
	2961	17 36.6 + 16 2	5.7	61.2	26.0	60.9	17 37.4 + 16 0	✓	✓	5.7	6.1	✓
	2912	17 19.1 + 15 46	6.1	60.7	22.9	61.3	17 20.0 + 15 43	✓	3179	17 18.0 + 15 46	✓	✓
	2902	17 15.3 + 26 39	6.4	59.5	32.9	61.1	17 16.1 + 25 37	✓	3245	17 14.3 + 25 40	✓	✓
	2933	17 25.9 + 26 12	4.3	60.3	36.0	60.8	17 26.7 + 26 11	✓	✓	5.6	6.0	✓
	3000	17 50.6 + 26 5	5.6	62.8	32.9	61.0	17 51.4 + 26 4	✓	✓	5.7	6.1	✓
	2911	17 19.1 + 16 26	5.8	60.5	26.0	61.1	17 20.0 + 16 25	✓	3174	17 18.0 + 16 28	✓	✓
DM	3186	17 19.1 + 16 32	6.5	59.3	26.0	59.9	17 20.1 + 16 29	✓	✓	5.6	6.0	✓
	2940	17 28.3 + 16 26	5.4	60.9	26.0	61.1	17 29.2 + 16 25	✓	3132	17 27.2 + 16 27	✓	✓
DM	3038	17 26.6 + 26 33	7.0	59.4	36.1	59.9	17 28.4 + 26 31	✓	✓	6.4	6.8	✓
DM	3220	17 28.0 + 16 37	6.8	59.8	26.1	59.9	17 30.0 + 16 35	✓	✓	6.1	6.5	✓

Jan. 4, 1887.
Plate 649. (F)

Place 649. (4)							other					
V	H	Type	Lines	K	Focus	Lines	V	H	V	H	bar.	
12.0	19.3	I?	5	K=H	2	- F	60	686	17.1	21.4	-0.5	
11.5	12.2	II	3	4	N K=H 1	=	58	244	17.3	36.6	+0.3	
10.7	9.8	I	5	7	N	3	- F	54	196	17.7	41.4	+0.6
10.5	10.1	III	4	3	K=H	4	- F	52	202	17.9	40.8	+1.2
10.7	12.1	I? I	4	4	K=H 1	-	54	242	17.7	36.8	+0.6	
10.5	11.6	I? I	3	4	N K=H 1	-	52	232	17.9	37.8	+0.4	
11.0	23.7	I	6	N	2	- F	55	474	17.6	13.6	-0.9	
9.0	16.6	I	8	K=H	3	- F	45	332	18.6	27.8	-0.4	
9.8	22.6	III?	3	K=H	1	- F	49	452	18.2	16.8	-0.8	
9.5	22.1	I	3	N	1	-	48	442	18.3	16.8	-1.8	
8.2	9.6	I	5	N	1	-	41	192	19.0	41.8	+0.6	
8.0	9.8	I	3	3	N	1	-	40	196	19.1	41.4	+1.3
7.5	9.0	I	6	N	2	- F	38	180	19.3	46.0	+0.7	
7.3	8.5	III	2	K=H	1	-	36	170	19.5	44.0	+1.7	
7.0	11.9	II?	3	K=H	1	- F	35	238	19.6	37.2	+0.8	
7.5	16.3	II?	3	K=H	2	- F	38	326	19.3	28.4	-0.2	
5.9	19.4	I	5	N	2	- F	60	388	20.1	22.2	-0.6	
4.5	14.4	I	5	K=H	1	-	22	288	20.9	32.2	+0.2	
4.0	15.0	I	5	N	1	-	20	300	21.1	31.0	0	
2.9	10.5	II?	2	K=H	1	-	14	20.0	21.9	40.0	+1.3	
5.0	9.2	III	2	K=H	1	-	25	184	20.6	42.6	+0.8	

$\frac{1}{2} \cos \delta$

00 5.9

00 6.1

0.160

00 6.2

00 5.7

00 6.4

No.	R.A.	Dec.	Mag.	H	V	H'	Rad. of H ⁺ stars to 1900	Cor. Br.	Br.
~~DM. 3241~~	~~17 19.4 + 17 13~~	~~6.4~~	~~58.8~~	~~33.0~~	~~59.3~~	~~17 22.0 + 28 57~~	~~✓~~	~~✓~~	~~6.1~~
~~DM. 2849~~	~~17 20.2 + 27 0~~	~~6.5~~	~~58.0~~	~~26.0~~	~~58.5~~	~~17 21.4 + 17 0~~	~~✓~~	~~✓~~	~~6.1~~
DM. 3312	17 35.8 + 17 18	7.0	60.2	26.1	59.9	17 37.8 + 17 16	✓	✓	6.5 6.9 6.9
2977	17 41.8 + 17 47	5.7	61.4	26.2	60.8	17 42.7 + 17 46	✓	✓	5.5 5.9 5.9
2976	17 41.8 + 27 48	6.5	62.0	36.0	60.8	17 42.6 + 27 48	✓	✓	4.3 4.8 4.8
DM. 2870	17 36.3 + 27 42	7.1	60.5	36.1	59.9	17 38.1 + 27 40	✓	✓	6.3 6.7 6.7
DM. 3389	17 36.8 + 17 46	8.0	60.1	26.0	59.7	17 38.9 + 17 44	✓	✓	6.7 7.1 7.1
2889	17 12.8 + 17 27	5.9	60.2	22.9	61.1	17 13.7 + 17 26	✓	✓	5.7 5.7 5.7
2936	17 27.1 + 28 29	5.6	60.3	36.0	60.7	17 27.9 + 28 29	✓	✓	5.5 5.9 5.9
2900	17 15.0 + 18 11	5.1	60.2	26.1	61.0	17 15.9 + 18 10	✓	✓	6.3 6.7 6.7
DM. 2722	17 16.7 + 28 10	7.1	57.9	36.0	59.7	17 15.5 + 28 7	✓	✓	6.4 6.8 6.8
DM. 3464	17 41.2 + 18 57	6.5	60.4	26.1	59.8	17 43.2 + 18 56	✓	✓	6.1 6.5 6.5
DM. 2831	17 41.6 + 28 59	7.5	61.2	36.0	59.9	17 43.4 + 28 58	✓	✓	6.7 7.1 7.1
2982	17 46.6 + 19 17	6.0	61.6	26.1	60.9	17 44.5 + 19 17	✓	✓	5.8 6.2 6.2
2987	17 45.7 + 29 22	5.7	62.7	36.0	61.0	17 46.5 + 29 21	✓	✓	6.3 6.7 6.7
DM. 3091	17 37.0 + 29 30	6.5	60.8	36.0	60.0	17 38.7 + 29 28	✓	✓	6.3 6.7 6.7
2939	17 28.1 + 19 21	6.4	60.7	26.2	60.9	17 29.1 + 19 20	✓	✓	5.7 6.2 6.2
2922	17 21.6 + 20 12	5.4	60.4	26.2	61.0	17 22.5 + 20 10	✓	✓	5.3 5.7 5.7
2950	17 32.0 + 30 52	5.7	60.8	36.1	60.6	17 32.8 + 30 51	✓	✓	5.9 6.3 6.3
2948	17 30.9 + 21 5	5.8	60.9	26.1	60.9	17 31.7 + 21 4	✓	✓	6.0 6.4 6.4
2974	17 41.1 + 31 33	6.5	62.1	36.0	60.8	17 41.9 + 31 33	✓	✓	6.4 6.8 6.8
2981	17 43.3 + 20 36	5.7	61.7	26.1	60.9	17 44.1 + 20 36	✓	✓	6.4 6.8 6.8

Mean 4

Ant. of Frg. due to moon & clouds. 8.5 Ant. of Frg. due to chemicals. 8.5

January 8, 1887.

Plate 668. (F)

V	H	Type	Lines	K	Focus	Lines	V	H	V	H	Baran.
203	13.9	III ¹	✓	X3	✓	K ₂ H ¹	102	27.8	22.2	22.9	0
19.2	15.7	IIa ¹	✓	3	✓	K=H	9.6	31.4	22.8	19.3	-0.2
187	17.8	I	✓	X8	✓	K=2H?	9.4	35.6	23.0	15.1	-0.5
159	14.6	I	✓	5	✓	N	8.0	29.2	24.4	21.5	+0.1
12.5	9.9	I ²	✓	X5	✓	K=H	6.2	19.8	26.2	30.9	+0.5
8.9	12.8	III ²	✓	X2	✓	K=H/K=H1	4.4	25.6	28.0	25.1	
9.4	9.4	I	✓	X6	✓	N	4.7	19.4	27.7	31.3	+0.6
9.5	12.7	I	✓	X6	✓	K ₂ .5H	4.8	25.4	27.6	25.3	+0.5

Ant. of Frg. due to moon & clouds. 6.8 Ant. of Frg. due to chemicals. 7.2

Plate 669. (F)

22.3	8.8	I?	✓	X4	✓	N	11.2	17.6	46.9	51.8	+2.6
22.4	12.0	IIa?	✓	X3	✓	K=H	11.2	24.0	46.9	45.4	+1.8
21.9	15.0	II?	✓	2	✓	K=H	11.0	30.0	47.1	39.4	0
22.5	18.4	I?	✓	X4	✓	N	11.2	36.8	46.9	32.6	-1.3
20.7	11.9	IIa?	✓	X3	✓	K=H	10.4	26.8	47.7	45.6	+1.9
20.1	9.4	II?	✓	2	✓	K=H	10.0	18.8	48.1	50.6	+2.3
20.0	7.8	I	✓	4	✓	N	10.0	15.6	48.1	53.8	+3.2
19.5	9.8	II?	✓	2	✓	K=H	9.8	19.6	48.3	49.8	+2.2
19.2	12.6	III ¹	✓	2	✓	K=H	9.6	25.2	48.5	44.2	
19.6	10.5	I	✓	X9	✓	N	9.8	21.0	48.3	48.4	+1.8
20.0	13.7	I	✓	X6	✓	N	10.0	27.4	48.1	42.0	+0.8
19.6	17.9	I	✓	X5	✓	N	9.8	35.8	48.3	33.6	+1.2
19.2	18.9	I?	✓	3	✓	N	9.6	37.8	48.5	31.6	+1.7
19.0	19.2	I?	✓	X4	✓	N	9.5	38.4	48.6	31.0	+1.8
16.5	9.0	III	✓	X3	✓	K=H	8.2	18.0	49.9	51.4	+4.2
16.0	7.2	I?	✓	X4	✓	N	8.0	14.4	50.1	55.0	+5.6
16.0	10.0	I	✓	X7	✓	N	8.0	20.0	50.1	49.4	+2.3
15.8	10.6	II?	✓	2	✓	K=H	7.9	21.2	50.2	48.2	+2.0
15.0	10.6	I	✓	X6	✓	N	7.5	21.2	50.6	48.2	+6.2

Recorded above.

1/2 COS 0.

00 5.3

0.1 6.5

00 5.8

No.	R.A.	Dec.	Mag.	H	V	#	Rad. of H.H. stars to 1900	Bz.
4151	23 23.1 + 12 6	4.6	50.9	22.3	50.9	23	24.1 + 12 12	6.5
4143	23 19.4 + 22 45	4.6	50.8	32.4	51.0	23	20.4 + 32 51	5.6
4132	23 14.7 + 23 5	4.7	50.3	32.5	50.8	23	15.7 + 23 11	5.8
4148	23 21.7 + 24 31	6.0	50.9	32.5	50.8	23	22.7 + 24 37	6.4
4173	23 31.6 + 16 10	6.3	51.4	22.4	50.9	23	32.6 + 16 17	6.8
4155	23 25.5 + 28 0	6.7	51.1	32.4		23	26.5 + 28 7	7.2
4175	23 31.9 + 17 46	5.4	57.6	22.5	50.7	23	32.9 + 17 51	7.3
DM 4568	23 24.5 + 27 36	6.3	49.9	32.4	49.4	23	26.7 + 27 51	6.8
4135	23 26.6 + 28 0	6.7	50.9	32.8	50.4			6.7

Mean 8

02 6.7 X

0.1 5.8

0.1 5.9

02 6.6

3479	19 55.5 + 36 43	5.2	73.1	47.9	70.5	19	56.2 + 36 46	5.6	6.4
3442	19 48.4 + 46 43	5.6	72.4	57.9	70.6	19	49.8 + 46 47	5.6	6.4
3417	19 39.9 + 37 4	5.0	69.9	48.1	69.9	19	40.7 + 37 7	5.7	6.5
3687	19 31.5 + 36 41	6.0	68.3	47.9	69.6	19	32.2 + 36 43		
3448	19 48.7 + 47 39	5.8	72.5	68.0	70.6	19	49.2 + 47 41	5.0	5.8
DM 3703	19 56.3 + 37 43	6.7	72.1	47.7	69.8	19	54.9 + 37 50	5.8	6.6
3499	20 0.9 + 47 53	6.0	16.5	57.9	13.3	20	16.5 + 47 57	5.7	6.5
DM 3896	19 59.9 + 38 4	6.8	76.5	48.1	72.3	20	1.5 + 38 12		
DM 3832	19 52.3 + 38 4	6.8	71.9	47.9	69.7	19	53.9 + 38 11	6.2	7.0
3435	19 46.4 + 38 25	5.5	71.6	48.0	69.7	19	47.0 + 38 27	6.3	7.1
3468	19 51.6 + 38 10	4.7	72.6	48.0	70.8	19	52.3 + 38 13	4.9	5.7
DM 3758	19 42.3 + 38 3	6.1	76.7	48.0	76.9	19	42.7 + 38 9	5.4	6.2
3425	19 44.0 + 47 38	6.2	71.4	57.6	70.6				
DM 3677	19 31.9 + 38 4	6.5	67.7	47.9	66.5	19	33.5 + 38 10	5.8	6.6
DM 2905	19 27.0 + 48 16	7.0	64.8	57.9	63.1	19	28.3 + 48 22	6.2	7.0
DM 3660	19 28.6 + 38 28	6.6	67.0	48.0	65.2	19	30.2 + 38 34	6.1	6.9
3486	19 58.0 + 49 46	6.2	76.0	58.0	71.8	19	58.5 + 49 49	5.4	6.2
DM 6196	20 3.0 + 49 49	6.7	17.4	57.8	11.8	20	4.3 + 49 57	5.7	6.5
3464	19 56.1 + 40 3	5.6	76.1	48.0	70.8	19	53.7 + 40 6	6.0	6.8
DM 2989	20 4.6 + 50 10	6.8	18.8	68.2	10.2	20	5.9 + 50 18	5.0	5.8
DM 3948	19 50.7 + 40 1	7.5	63.0	47.9	69.9	19	52.3 + 40 8		
DM 3969	19 50.6 + 39 48	6.8	71.8	47.9	67.6	19	52.4 + 40 8	6.3	7.1
3465	19 56.4 + 50 35	6.3	74.6	58.1	71.4	19	54.0 + 50 38	5.6	6.4

January 6, 1887.
Plate 669. (F)

r	H	Type	Lines	K	Focus	Lines	r	H	r	H	Lines
15.0	11.1	I?	I	3	5	1	7.5	22.2	50.6	49.2	+2.8
15.6	12.6	I?	I	5	7	2	7.8	25.2	50.3	44.2	+1.2
16.9	14.3	I?	I?	3	4	1	8.4	28.6	49.9	40.8	+0.5
16.6	16.0	I	I	5	5	1	8.3	32.0	49.8	39.4	+0.4
16.3	15.9	I	I	6	6	2	8.2	31.8	49.9	39.6	-0.4
15.4	15.3	IIa	2511	3	3	2	7.8	30.6	50.3	38.8	-0.2
15.3	15.5	I	I	6	5	2	7.6	31.0	50.6	38.4	-0.2
16.3	17.1	IIa	2512	3	3	3	8.2	34.2	49.9	35.2	-1.4
16.0	18.7	III?	III	3	2	1	8.0	37.4	50.1	32.0	-2.7
16.0	21.2	I	I	6	6	2	8.0	42.4	50.1	29.0	-4.4
14.0	11.4	II?	II	2	2	1	7.0	22.8	50.1	46.6	+1.7
14.1	14.6	IIa	2513	2	2	2	7.0	35.2	51.1	34.2	-1.9
13.9	18.7	I	I	5	5	1	7.0	37.4	51.1	32.0	-1.8
12.5	9.9	I	I	6	6	2	6.2	19.8	51.9	49.6	+2.6
12.0	11.0	I	I	9	9	3	6.0	22.0	52.1	47.4	+3.2
12.0	12.1	I?	I	4	5	1	6.0	24.2	52.1	45.2	+2.2
12.8	18.6	I	I	5	5	1	6.4	37.2	51.9	32.2	-1.8
13.1	19.0	I	I	11	11	4	6.6	38.0	51.5	31.4	-3.1
12.0	18.5	I	I	9	9	2	6.0	37.0	52.1	32.4	-1.7
12.0	19.6	I	I	7	7	2	6.0	39.2	52.1	30.2	-3.6
11.6	17.3	III?	III	2	2	1	5.8	34.6	52.3	34.8	-1.7
11.2	16.4	I	I	8	8	3	5.6	33.4	52.5	36.0	-0.8
11.0	12.5	IIa	2514	3	3	1	5.5	25.0	52.6	44.4	+1.8
10.2	4.8	IIa	2515	3	3	2	5.1	15.6	53.0	53.8	+6.7
10.5	22.4	I?	I	4	4	1	5.2	45.4	52.9	24.0	-4.2
9.5	22.6	IIa	2516	3	3	3	4.8	48.2	53.3	24.2	-6.0
8.8	18.3	II?	II	6	6	1	4.4	36.6	53.7	32.8	-1.8
9.2	13.0	I	I	4	4	1	4.6	26.0	53.5	43.4	+1.6

V2 COSD.

01.65

03.63

03.58

03.52

03.61

03.63

02.58

	No.	R.A.	Dec.	Mag.	H	V	H	Red. of D.H. start 16 1900	Mean 8 Gr. Br. Br.
DM. 2920	19	51.0 + 50 27	7.3	7.32	67.9	70.4	19	52.2 + 50 34	6.4 7.2 7.2
3467	19	46.5 + 40 18	6.6	7.17	48.1	70.5	19	47.2 + 40 20	5.2 6.0
DM. 3905	19	40.9 + 39 32	7.3	69.5	47.9	69.0	19	42.3 + 39 38	6.3 7.1 7.0
DM. 3101	19	42.6 + 49 39	6.5	71.2	58.0	70.7	19	43.8 + 44 46	6.2 7.0 6.8
DM. 6876	19	66.7 + 69 41	6.9	68.7	46.0	68.3	19	38.3 + 39 47	5.6 6.4 6.0 + 39 55
3408	19	34.9 + 69 58	6.1	69.7	48.2	70.1	19	38.5 + 40 1	5.3 6.1
3410	19	38.7 + 50 15	5.8	69.3	48.0	69.5	19	39.2 + 50 17	5.7 6.5 6.7
DM. 3866	19	39.9 + 40 22	6.3	70.5	48.2	70.7	19	41.4 + 40 28	4.7 5.5
DM. 3856	19	38.0 + 40 23	6.7	69.0	48.0	69.2	19	39.5 + 40 29	5.9 6.7 6.7
3410	19	68.7 + 50 15	6.4	69.7	57.8	69.9	19	33.7 + 50 0	6.2 7.0 6.9
3696	19	63.2 + 49 57	4.6	67.4	68.2	68.8	19	28.7 + 50 6	5.7 6.5
DM. 3034	19	27.5 + 49 50	6.0	64.9	68.0	67.6	19	20.8 + 50 5	5.8 6.6 6.8
DM. 2994	19	19.6 + 49 50	6.6	62.0	68.0	66.4	19	31.8 + 51 1	6.2 7.0 6.9
DM. 3461	19	48.7 + 40 59	6.6	71.5	48.0	69.8	19	31.0 + 41 13	5.2 6.0
3684	19	61.2 + 50 59	6.6	66.4	68.0	68.3	19	56.6 + 51 47	4.7 5.5
DM. 6697	19	29.5 + 41 7	7.4	66.9	48.1	68.9	19	53.1 + 52 11	6.3 7.1 7.0
3480	19	56.1 + 51 46	6.0	73.9	57.9	73.3	19	46.6 + 52 2	5.7 6.5
3470	19	63.9 + 41 66	6.6	76.7	48.1	71.1	19	36.0 + 41 42	4.1 4.9
3466	19	62.5 + 62 7	4.8	74.6	68.1	71.3	19	36.4 + 42 11	5.2 6.0
DM. 2706	19	48.4 + 51 56	7.0	72.6	67.9	70.4	19	35.0 + 52 7	6.3 7.1 7.0
DM. 6698	19	29.5 + 41 36	7.0	66.7	48.0	68.5	19	32.5 + 52 17	5.7 6.5
3665	19	26.7 + 51 28	6.9	64.7	68.1	67.5	19	36.2 + 42 35	4.8 5.6
3682	19	60.8 + 42 8	6.2	67.8	48.1	69.5	19	48.2 + 52 45	6.2 7.0
3661	19	24.5 + 62 5	6.7	66.7	68.1	67.3	19	3.6 + 53 51	5.7 6.5
DM. 2463	19	61.4 + 62 11	6.3	66.0	68.0	67.7	19	19.8 + 42 26	6.1 6.9
3401	19	65.6 + 42 62	6.6	69.0	48.1	69.8	19	14.8 + 53 11	4.6 5.4
3440	19	47.6 + 62 41	6.0	72.6	68.2	70.8	19	36.5 + 43 43	5.7 6.5
6509	20	6.1 + 62 49	6.7	18.7	67.9	13.0	20	46.6 + 53 31	5.7 6.5
DM. 3325	19	18.4 + 42 41	6.5	63.8	57.9	68.0	19		
3646	19	20.2 + 42 9	6.0	66.6	68.4	69.8	19		
3616	19	14.6 + 63 9	6.9	69.5	68.0	66.5	19		
DM. 3290	19	60.1 + 46 37	6.5	66.7	48.0	68.5	19		
DM. 2303	19	46.5 + 63 24	7.1	71.5	68.0	69.9	19		

January 8, 1887.
Plate 669. (F)

r	H	Type	Lines	K	Focus	Lines	r	H	V	H
8.0	13.2	$\Pi a?$	$\times 2$	$K=H$	1	- L_{sun}	4.0	26.4	64.1	43.0 +1.5
7.6	21.6	I	$\times 6$	N	2	- F	3.6	43.2	64.3	26.2 -3.7
7.5	17.6	III	$\times 3$	$K=H$	2	- F	3.6	35.2	64.3	34.2 -1.5
7.0	16.0	$\Pi a?$	$\times 3$	$K=H$	2	- F_{sun}	3.5	32.0	64.6	37.4 -0.8
6.7	14.6	I	$\times 12$	$K=2H$	5	- F_{sun}	3.4	29.2	64.7	40.2 +0.3
5.2	9.5	I	$\times 4$	$K=H$	1	-	2.6	19.0	55.5	60.4 +3.3
5.8	16.0	$\Pi a?$	$\times 3$	$K=H$	2	- F_{sun}	2.9	32.0	55.2	37.4 -0.6
4.5	18.2	I	$\times 5$	N	1	-	2.2	36.4	55.9	26.0 -2.5
3.3	6.3	I	$\times 7$	$K=5H?$	3	-	1.6	12.6	56.5	56.8 +7.8
4.0	18.5	$\Pi?$	$\times 2$	$K=H$	1	-	2.0	27.0	56.1	62.4 -2.0
3.5	11.1	I	$\times 6$	$K=2H$	2	-	1.8	22.2	56.3	47.2 +3.6
2.8	12.2	$\Pi a?$	$\times 12$	$K=H$	1	- L_{sun}	1.4	24.4	56.7	45.0 +1.7
3.5	18.3	I	$\times 4$	$K=H$	1	-	1.8	36.6	56.3	32.8 +2.6

Ant. of Fog. due to moon & clouds. Ant. of Fog. due to chemicals

6.3 Plate 283. (F)

7.3

22.8	13.2	III?	$\times 2$	$K=H$	1	-	11.4	26.4	24.0	66.9 +0.4
22.4	18.0	I	$\times 6$	N	2	-	11.2	36.0	24.2	57.3 +1.7
22.0	17.6	$\Pi a?$	$\times 3$	$K=H$	2	- F_{sun}	11.0	35.2	24.4	56.1 -0.1
21.5	21.4	I?	$\times 2$	N	1	-	10.8	42.8	24.6	50.5 -3.7
20.8	8.2	$\Pi a?$	$\times 3$	$K=H$	2	- F_{sun}	10.4	16.4	26.0	76.9 +6.9
21.0	9.7	I?	$\times 3$	N	1	-	10.5	19.4	24.9	73.9 +0.8
20.7	10.1	III?	$\times 3$	$K=H$	1	- F	10.4	20.2	26.0	73.1 +2.8
20.8	14.8	III?	$\times 3$	$K=H$	3	- F_{bright}	10.4	29.6	26.0	63.7 +0.1
19.7	13.2	I	$\times 7$	N	2	-	9.6	26.4	26.6	66.9 +0.1
19.0	9.2	I?	$\times 4$	N	1	-	9.5	18.4	26.9	74.9 +2.1
17.6	10.6	I	$\times 8$	N	3	- F	8.8	21.2	26.6	72.1 +0.9
17.1	11.1	I	$\times 5$	$K=H$	1	-	8.6	22.2	26.8	71.1 +1.4
17.6	14.5	I	$\times 11$	N	4	- F	8.8	29.0	26.6	64.3 +0.2

III? 5.2, 5.5, 6.5

1/2 cosd.

Mean 8

	No.	R.A.	Dec.	Mag.	H	V	H'	Red. of R.A. stars to 1900	Gr. Br.	Br.
	DM. 3261	19 44.4 + 44 0	7.5	70.8	48.0	69.3	19 45.8 + 44 7	✓	5.9	6.7
	DM. 2226	19 46.0 + 54 6	6.6	69.4	58.0	67.9	19 44.0 + 54 10	✓	5.5	6.3
	DM. 2123	19 16.4 + 34 7	6.4	59.6	57.9	63.3	19 17.4 + 34 12	✓	5.4	6.2
	3364	19 22.4 + 44 46	6.6	65.6	48.6	69.3		✓	5.7	6.5
	3392	19 32.9 + 44 26	6.2	68.1	48.2	66.6	19 33.6 + 44 29	✓	5.5	6.3
	3404	19 36.1 + 54 41	6.7	68.1	58.2	68.9	19 36.4 + 54 44	✓	5.8	6.6
02.42	3419	19 41.2 + 44 50	6.0	70.4	48.2	70.1	19 41.9 + 44 53	✓	5.0	5.8
	3478	19 55.5 + 45 27	6.7	74.6	48.0	71.2	19 56.2 + 45 30	✓	5.7	6.5
	3407	19 37.2 + 45 14	6.1	69.2	48.1	69.8	19 37.7 + 45 17	✓	5.6	6.4
	DM. 2213	19 27.5 + 55 50	6.6	63.9	58.0	66.7	19 28.5 + 55 56	✓	5.4	6.2
03.5.8	3532	20 10.6 + 56 12	4.4	26.2	67.8	14.4	20 11.1 + 56 16	✓	6.1	6.9
	DM. 2213	19 27.5 + 55 50	6.2	64.5	57.8	66.5	19 28.5 + 55 56	✓	5.6	6.4
	DM. 2250	19 27.3 + 56 20	6.9	64.3	58.3	66.3	19 28.3 + 56 26	✓	5.4	6.2
03.6.7	DM. 2324	20 2.1 + 55 55	6.5	19.1	57.9	20	3.1 + 56 3	✓	5.4	6.2
	3469	19 53.8 + 56 22	6.1	76.0	58.2	73.4	19 54.3 + 56 26	✓	6.1	6.9
	3442	19 48.4 + 46 43	6.6	72.8	48.1	71.1	19 49.0 + 46 47	✓	5.4	6.2
	DM. 2250	19 27.3 + 56 20	6.9	63.9	58.1	66.9	19 28.2 + 56 26	✓	6.1	6.9
	DM. 2261	19 30.9 + 56 9	6.7	67.4	58.0	64.9	19 31.3 + 56 15	✓	5.4	6.2

Mean 5

02.6.0	198	1 7.3 + 26 56	4.6	66.7	66.6	63.6	1 8.3 + 24 3	✓	5.1	5.9
	169	0 56.4 + 44 6	6.7	89.4	66.2	87.7	0 54.4 + 44 10	✓	5.5	6.0
	168	0 58.8 + 14 18	6.7	94.0	25.3	94.1	1 39.8 + 14 24	✓	5.2	5.7
	163	0 46.6 + 44 20	6.7	86.4	55.1	90.1	0 40.7 + 44 27	✓	6.5	7.0
	228	1 20.5 + 44 47	4.8	66.9	55.2	63.9	1 21.6 + 44 54	✓	5.8	6.3
	DM. 290	1 14.8 + 44 34	7.5	34.2	55.1		1 17.0 + 44 48	✓	6.1	6.6
	DM. 224	1 13.0 + 14 6.7	7.2	62.4	25.5	62.1	1 15.4 + 15 11	✓	5.5	6.0
	214	0 16.6 + 44 64	4.9	65.5	55.3	62.7	1 16.4 + 45 0	✓	6.4	6.9
	186	1 6.0 + 64 6.7	2.2	62.6	45.4	62.5	1 4.1 + 35 5	✓	5.5	6.0
06.0	DM. 202	1 7.8 + 15 60	5.9	64.2	25.3	64.7	1 8.8 + 15 36	✓	5.5	6.0
	260	1 13.1 + 35 45	6.7	33.5	45.3		1 17.6 + 35 59	✓	6.4	6.9
	DM. 241	1 16.1 + 36 8	7.3	34.5	45.6	32.4	1 18.6 + 36 22	✓	4.7	5.2
01.5.3	209	1 12.9 + 26 38	4.7	64.1	35.4	63.2	1 13.9 + 26 45	✓	6.1	6.6
	DM. 220	1 10.6 + 36 38	6.5	62.8	45.2	61.4	1 13.1 + 36 52	✓	4.3	4.8
02.5.0	182	1 2.5 + 46 36	4.6	61.5	55.4	61.3	1 3.7 + 46 42	✓		

January 19, 1887.

Plate 283. (F)

γ	H	Type	Lines	K	Focus	Other	γ	H	γ	H	Correc.
17.4	16.7	I?	$\checkmark$	$\checkmark$ 35	$K=H$	1	-	87	63.4	26.7	69.9 -1.1
17.5	21.1	I	$\checkmark$	$\checkmark$ 4	$K=H$	1	-	8.8	42.2	26.6	61.1 -1.3
17.5	23.5	I	$\checkmark$	$\checkmark$ 7	$K=H$	2	-	8.8	47.0	26.6	46.3 -6.3
16.6	9.1	I	$\checkmark$	$\checkmark$ 7	N	2	- F $\checkmark$	8.3	18.2	27.1	76.7 +2.4
16.6	14.1	I	$\checkmark$	$\checkmark$ 8	N	2	- F $\checkmark$	8.3	28.2	27.1	66.7 +0.3
15.9	12.2	I	$\checkmark$	$\checkmark$ 6	N	1	- F $\checkmark$	8.0	24.4	27.4	68.9 +1.7
16.0	15.6	I	$\checkmark$	$\checkmark$ 4	N	1	-	8.0	61.2	27.4	62.1 -0.2
16.0	22.9	II?	$\checkmark$ 25 24	$\checkmark$ 3	$K=H$	2	- F $\checkmark$ cum	8.0	45.8	27.4	47.5 -1.8
15.0	19.8	I	$\checkmark$	$\checkmark$ 7	$K=2H$	4	- F $\checkmark$	7.5	69.6	27.9	63.7 -2.0
14.8	21.3	I?	$\checkmark$	$\checkmark$ 4	$K=H$	1	-	7.4	42.6	28.0	60.9 -4.1
15.0	22.8	I	$\checkmark$	$\checkmark$ 6	N	3	- F $\checkmark$	7.5	46.6	27.9	47.7 -5.2
14.1	6.1	I?	$\checkmark$	$\checkmark$ 2	N	1	-	7.0	12.2	28.4	81.1 +2.2
13.6	4.4	II?	$\checkmark$	$\checkmark$ 2	$K=H$	2	- F $\checkmark$ cum	6.8	14.8	28.6	78.5 +0.8
13.7	7.5	II?	$\checkmark$ 25 25	$\checkmark$ 3	$K=H$	1	-	6.8	15.0	28.6	78.3 +0.2
14.0	11.8	II?	$\checkmark$	$\checkmark$ 2	$K=H$	1	-	7.0	26.6	28.4	69.7 +2.0
13.9	14.4	I	$\checkmark$	$\checkmark$ 4	N	1	-	7.0	28.8	28.4	64.5 +0.3
13.5	22.4	I	$\checkmark$	$\checkmark$ 5	N	2	-	6.8	44.6	28.6	48.5 -0.8
13.0	11.7	I	$\checkmark$	$\checkmark$ 6	N	1	-	6.5	26.4	28.9	69.9 +1.4
13.0	12.8	I?	$\checkmark$	$\checkmark$ 3	N	1	-	6.5	26.6	28.9	67.7 +1.0
13.0	15.1	II	$\checkmark$	$\checkmark$ 2	$K=H$	2	-	6.5	60.2	28.9	66.1 0
13.0	15.2	I?	$\checkmark$	$\checkmark$ 4	N	1	-	6.5	60.4	28.9	62.9 0
12.8	17.2	IIa?	$\checkmark$ 25 26	$\checkmark$ 2	$K=H$	1	- cum	6.4	64.4	29.0	68.9 -0.6
12.0	14.1	III	$\checkmark$ 25 27	$\checkmark$ 3	$K=H$	2	- F $\checkmark$ cum	6.0	28.2	29.4	66.1 +0.2
11.4	7.7	I?	$\checkmark$	$\checkmark$ 5	$K=H$	1	- F $\checkmark$	5.7	16.4	29.7	77.9 +3.4
11.6	12.5	I?	$\checkmark$	$\checkmark$ 4	N	1	-	6.7	26.0	29.7	68.6 +0.3
11.0	12.9	I?	$\checkmark$	$\checkmark$ 5	$K=H$	1	- F $\checkmark$	6.6	26.8	29.9	67.5 +0.6
10.8	16.0	I	$\checkmark$	$\checkmark$ 8	$K=2H$	3	-	6.4	62.0	60.0	61.3 +0.1
10.5	23.2	I	$\checkmark$	$\checkmark$ 7	N	3	-	6.2	46.4	60.2	46.9 -3.8
10.1	14.3	III	$\checkmark$	$\checkmark$ 3	$K=H$	2	- F $\checkmark$	6.0	28.6	60.4	64.7 +0.1

Y2C058.

	No.	R.A.	Dec.	Mag.	H	T	H'	Red. of Hm starts to 1900	Cor. Br.	Br.	
DM. 243	0	54.7	+ 46 35	6.03	88.1	55.3	89.2	0 57.3 + 46 30	✓	6.1	6.6 ✓
DM. 675	0	67.8	+ 46 32	8.2	91.2	55.2	92.3	1 04 + 46 47	✓	6.0	6.5 ✓
144	0	49.6	+ 26 36	6.0	91.7	35.4	93.0	0 30.6 + 26 40	✓	5.2	6.7 ✓
102	0	36.8	+ 46 22	6.0	83.8	55.2	89.1	0 37.9 + 46 29	✓	5.6	6.1 ✓
216	0	16.8	+ 37 6	6.5	35.0	45.4	32.6	0 17.9 + 37 12	✓	5.3	5.8 ✓
DM. 357	1	7.9	+ 47 19	6.5	34.3	55.3	32.6	1 10.5 + 47 33	✓	5.8	6.3 ✓
DM. 213	0	59.3	+ 37 16	6.9	90.5	45.3	90.7	1 18 + 37 31	✓	6.2	6.7 ✓
105	0	37.8	+ 47 12	5.5	83.6	55.3	88.6	0 38.8 + 47 19	✓	5.2	5.7 ✓
161	0	46.5	+ 27 4	6.6	89.3	35.1	91.1		✓	4.7	5.2 ✓

0162

0159

0153

0255

DM. 159	0	14.9	+ 37 46	6.7	81.5	45.2		0 47.4 + 38 1	✓	6.3	6.8 ✓
DM. 4742	0	46.9	+ 47 64	6.5	89.5	55.3	93.6	0 494 + 48 9	✓	4.8	5.3 ✓
DM. 278	1	22.1	+ 38 1	6.6	35.3	45.0		1 25.7 + 38 15	✓	6.6	7.1 ✓
DM. 247	1	23.2	+ 28 40	7.3	35.4	35.4	36.2	1 25.7 + 28 54	✓	6.0	6.5 ✓
DM. 226	1	22.8	+ 18 36	5.2	34.6	25.4	30.8	1 22.2 + 18 50	✓	6.2	6.7 ✓
DM. 392	1	9.2	+ 48 16	6.9	32.8	55.2	30.8	1 11.5 + 48 29	✓	6.1	6.6 ✓
DM. 348	1	1.4	+ 48 17	6.9	30.2	53.3		1 4.0 + 48 32	✓	5.3	5.8 ✓
DM. 355	1	2.4	+ 48 26	7.3	31.2	55.4	30.9	1 5.0 + 48 37	✓	6.4	6.9 ✓

1058

DM. 229	1	9.0	+ 38 42	6.8	32.4	45.2	31.0	1 11.5 + 38 56	✓	5.5	6.0 ✓
DM. 374	1	6.0	+ 48 40	7.0	31.6	55.2		1 8.6 + 48 54	✓	5.7	6.2 ✓
DM. 220	1	6.5	+ 38 40	7.5	32.1	45.2	31.1	1 9.0 + 38 54	✓	5.3	5.8 ✓
DM. 337	0	38.8	+ 48 47	6.7	89.2	55.3		1 1.2 + 49 12	✓	6.0	6.5 ✓
DM. 191	1	2.3	+ 19 3	8.4	32.9	25.5	32.7	1 4.7 + 19 17	✓	6.0	6.5 ✓
DM. 174	0	56.5	+ 28 34	6.5	90.9	35.3	91.5	0 58.9 + 29 9	✓	6.2	6.7 ✓
DM. 334	1	19.4	+ 39 34	6.5	34.8	45.3	31.4	1 22.0 + 39 48	✓	5.2	5.7 ✓
DM. 212	1	7.7	+ 19 39	6.8	32.7	25.3	32.4	1 10.1 + 19 53	✓	5.4	5.9 ✓
DM. 200	1	6.4	+ 29 47	7.5	32.2	35.3	31.6	1 8.9 + 30 1	✓	5.2	5.7 ✓
178	1	1.5	+ 20 6	6.7	33.5	25.5	33.4	1 2.6 + 20 12	✓	5.2	5.7 ✓
100	0	35.5	+ 49 51	4.8	81.9	55.0		0 36.5 + 49 58	✓	4.7	5.2 ✓
127	1	43.2	+ 40 26	4.4	89.6	45.6	33.4		✓	5.2	5.7 ✓
196	1	5.0	+ 20 24	4.9	33.6	25.4	33.5	1 6.1 + 20 30	✓	5.4	5.9 ✓

0057

0254

January 19, 1887.
Plate 283. (F.)

V	H	Type	Lines	K	Focus	Lines	V	H	V	H	Lower
10.0	15.9	I	85	N	1	-	6.0	61.8	60.4	61.5	-0.2
10.0	16.7	I	87	$K=5H$	1	-F	6.0	66.4	60.4	69.9	-1.3
9.4	14.3	I	8	$K=5H$	2	-	4.9	28.6	60.9	64.9	+0.2
9.0	15.3	I	4	N	1	-	4.6	60.6	60.9	62.9	-0.1
9.5	17.2	I	68	$K=5H$	1	-F	4.8	64.4	60.6	68.9	-1.1
9.2	17.0	I	88	N	3	-F	4.6	64.0	60.6	69.6	-0.3
9.9	21.6	I	88	N	3	-F	6.0	42.0	60.4	61.3	-0.2
9.8	22.1	I	88	N	3	-	4.9	44.2	60.5	49.1	-3.6
8.1	13.5	I	85	N	1	-	4.0	27.0	61.4	66.6	+0.4
8.5	17.8	I	87	N	2	-	4.2	65.6	61.2	67.9	-0.8
8.9	20.0	I	87	$K=5H$	1	-	4.4	40.0	61.0	66.6	-1.5
8.9	20.2	I	4	$K=H$	1	-	4.4	40.4	61.0	62.9	-0.6
9.8 ³	20.5	I	85	N	1	-	4.6	41.0	60.8	62.6	
9.0	21.2	I?	85	$K=H$	1	-	4.5	42.4	60.9	60.9	
7.8	18.0	IIa?	25-28	$K=H$	1	-sum	6.9	66.0	61.5	67.6	-2.2
7.1	23.1	I	84	N	1	-	6.6	46.2	61.8	47.1	-1.8
6.7	14.2	I?	83	N	1	-	6.4	28.4	62.0	64.9	+0.1
6.5	19.2	I	86	$K=H$	1	-	6.2	68.4	62.2	64.9	-3.7
5.9	9.2	IIa	25-29	$K=H$	1	-sum	6.0	18.4	62.4	74.9	+3.1
5.4	20.9	II?	82	$K=H$	2	-	2.9	41.8	62.9	61.6	-0.9
4.9	21.9	III?	83	$K=H$	1	-F	2.4	46.8	66.0	49.5	-1.1
5.1	7.8	IIa	25-30	$K=H$	1	-sum	2.6	16.6	62.6	77.9	+1.0
5.0	12.0	I	86	N	1	-	2.5	24.0	62.9	69.6	+0.3
4.5	15.2	I	88	$K=2H$	3	-	2.2	60.4	66.2	62.9	-0.1
4.0	13.3	I	87	N	1	-	2.0	26.6	66.4	66.9	+0.6
3.7	24.0	I	89	$K=2H$	4	-F	1.8	48.0	66.6	46.6	-7.7
3.0	24.2	I	87	N	1	-	1.6	48.4	66.9	44.9	-6.2
2.1	23.0	I	4	N	1	-	1.0	46.0	64.4	47.6	-4.6

										Mean 5		
1/2 cord.	No.	R.A.	Dec.	Mag.	H	V	H'	Rad. of B.H.	star % 1900	Con.	Br.	Br.
	DM. 212	0 56.3 + 50	14	6.8	88.1	55.2	89.1	0 58.9 + 50	29	✓	5.5	6.0
	DM. 202	0 53.9 + 50	15	6.9	87.3	55.2	89.3	0 56.5 + 50	30	✓	5.8	6.3
	DM. 212	0 56.3 + 50	14	6.8	89.7	55.2	91.0	0 58.9 + 50	29	✓	4.8	5.3
	195	1 4.7 + 60	47	5.1	33.3	35.5	33.1	1 5.6 + 30	53	✓	6.3	6.8
	DM. 227	1 1.6 + 50	58	7.3	32.2	55.5	32.3	1 4.2 + 51	12	✓	5.7	6.2
	DM. 224	0 59.6 + 40	45	6.5	90.2	45.3	91.0	0 57.3 + 40	48	✓	4.5	5.0
02 64	160	0 56.2 + 40	41	5.9	90.6	45.5	91.7	0 57.3 + 40	48	✓	4.8	5.3
00 5.0	169	0 59.6 + 20	50	5.0	93.3	25.4	93.6	0 53.1 + 40	52	✓	4.9	5.4
02 5.5	DM. 131	0 50.6 + 40	37	6.5	92.6	45.6	92.8	0 43.2 + 50	25	✓	5.9	6.4
01 5.5	127	0 43.2 + 40	26	4.4	87.4	45.3	91.0	0 44.3 + 40	32	✓	5.0	5.5
	DM. 197	1 4.9 + 31	18	7.3	31.9	35.3	31.5	1 7.4 + 31	32	✓	6.3	6.8
01 5.6	161	0 56.2 + 31	10	5.6	91.8	35.4	92.6	0 57.3 + 31	16	✓	6.4	6.9
	DM. 164	0 43.3 + 50	47	6.7	83.3	55.2	85.9	0 45.8 + 51	20	✓	6.3	6.8
	DM. 144	0 49.1 + 31	6	7.9	89.1	35.5	90.6	0 51.5 + 31	21	✓	6.4	6.9
	DM. 161	0 42.7 + 50	43	6.7	83.1	55.1	85.9	0 45.2 + 50	58	✓	6.3	6.8
	DM. 129	0 49.8 + 20	42	7.0	90.2	25.1	90.6	0 52.2 + 20	57	✓	6.8	7.3
	D.M. 131	0 50.6 + 20	37	6.5	91.6	25.2	92.3	0 53.0 + 20	52	✓	5.9	6.4
	D.M. 143	0 39.3 + 50	39	7.5	82.2	55.1	85.9	0 42.3 + 50	54	✓	6.5	7.0
	DM. 199	0 49.6 + 51	21	7.2	83.6	53.3	85.9	0 52.2 + 51	36	✓	6.3	6.8
	DM. 220	0 55.5 + 51	43	6.0	91.5	55.6	92.7	0 58.1 + 51	58	✓	6.4	6.9
	DM. 126	0 33.1 + 51	24	7.0	79.3	53.0	81.9	0 35.6 + 51	39	✓	6.3	6.8
	DM. 111	0 43.9 + 21	50	7.0	90.1	25.4	91.9	0 46.3 + 21	5	✓	6.3	6.8
	DM. 161	1 3.9 + 21	57	7.5	32.3	25.4	32.2	1 6.3 + 22	11	✓	6.4	6.9
	DM. 179	0 45.5 + 51	54	6.3	83.9	53.1	85.9	0 48.1 + 51	9	✓	6.4	6.9
	DM. 210	0 48.9 + 52	31	7.5	84.3	55.7	91.0	0 51.5 + 52	76	✓	6.4	6.9
	DM. 293	1 13.9 + 42	23	6.5	34.3	43.4	34.6	1 18.5 + 42	37	✓	6.4	6.9
	223	1 19.3 + 42	50	6.1	37.7	45.8	34.6	1 18.5 + 42	37	✓	6.4	6.9
	150	0 50.8 + 22	47	4.6	92.6	25.5	93.5	0 57.9 + 22	52	✓	6.5	7.0
	141	0 48.5 + 22	59	5.4	92.3	25.4	93.4	0 49.6 + 22	6	✓	6.5	7.0
	DM. 226	1 17.7 + 22	46	6.5	33.3	25.4	32.3	1 20.1 + 23	0	✓	6.5	7.0
	DM. 204	1 8.6 + 22	48	7.0	32.6	25.3	32.3	1 11.0 + 23	2	✓	6.5	7.0
02 5.5	176	1 1.1 + 46	18	5.6	31.5	45.5	31.6	1 2.2 + 43	24	✓	6.5	7.0
	DM. 187	1 5.2 + 33	21	7.0	31.8	35.4	31.2	1 7.7 + 33	35	✓	6.5	7.0
03 4.6	82	0 30.3 + 53	14	3.7	78.3	55.0	81.2	0 31.3 + 53	21	✓	6.5	7.0
03 5.8	119	0 41.0 + 26	57	4.4	89.0	25.4	90.7	0 40.7 + 26	18	✓	6.5	7.0
	77	0 29.5 + 53	30	5.0	77.9	53.0	81.2	0 30.5 + 53	28	✓	6.5	7.0
	113	0 39.6 + 44	11	5.9	88.0	45.7	93.2	0 40.7 + 44	18	✓	6.5	7.0
	163	0 43.6 + 44	20	5.9	89.6	45.3	94.2	0 44.7 + 44	18	✓	6.5	7.0

January 19, 1884.

Plate 283. (F)

V	H	Type	Lines	K	Focus	Lines	V	H	V	H	Lines
2.0	21.5	I	✓	2	✓	N	✓	1	—	1.0	46.0 63.4 60.3 -2.2
2.7	18.0	I	✓	7	✓	N	✓	1	—	1.4	66.0 64.0 67.3 -1.7
1.9	14.0	I	✓	12	✓	N	✓	3	—	1.0	28.0 64.4 66.3 +0.6
3.0	13.2	III	✓	25	✓	31	✓	1	—	1.5	26.4 66.9 66.9 +0.3

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

8.4

Plate 858. (F)

8.2

21.9	15.7	III	✓	2	✓	K=H	✓	1	—	11.0	61.8
20.0	16.1	I	✓	5	✓	N	✓	1	—	10.0	62.2
19.0	8.4	I	✓	5	✓	N	✓	2	—	9.5	17.4
19.0	10.6	II	✓	25	✓	32	✓	2	—	9.5	21.2
18.6	15.2	I	✓	3	✓	K=H	✓	1	—	9.3	60.4
15.4	19.0	I	✓	4	✓	K=H	✓	1	—	7.8	68.0
13.5	16.5	I	✓	7	✓	K=H	✓	2	—	6.8	66.0
12.7	9.4	I	✓	5	✓	N	✓	1	—	6.4	18.8
12.5	18.5	I	✓	6	✓	K=H	✓	2	—	6.2	67.0
10.5	15.0	I	✓	7	✓	N	✓	3	—	6.2	60.0
10.1	15.8	I	✓	6	✓	K=H	✓	1	—	6.0	61.6
9.0	21.1	I	✓	8	✓	N	✓	3	—	4.6	42.2
8.0	17.2	III	✓	13	✓	K=H	✓	2	—	4.0	64.4
8.0	22.8	I	✓	5	✓	N	✓	2	—	4.0	45.6

Amt. of Fog. due to moon & clouds.

Amt.

8.5

Plate 827. (F)

8.5

16.8	12.8	I	✓	4	✓	N	✓	1	—	8.4	26.6 19.7 46.8 +0.6
6.0	15.1	II	✓	25	✓	33	✓	2	—	6.0	60.2 26.1 69.2 0
5.5	11.3	I	✓	5	✓	N	✓	1	—	2.8	22.6 26.3 46.8 +0.7
2.9	21.8	II	✓	2	✓	K=H	✓	1	—	1.4	46.6 26.7 26.8 -2.8

$\frac{1}{2} \cos S.$

02.5.9

No.	R.A.	Dec.	Mag.	H	V	H'	Red. of H	Cor. B ₂	B ₂
133	0 43.6 + 44 20	15.9	86.6	45.3			0 44.4 + 44 27	1.176	0 42.2 + 44 12
148	0 48.3 + 34 24	7.0	91.3	35.4	89.4	0 50.7 + 34 39			
169	0 53.4 + 44 3	5.7	89.4	45.4	91.1	0 54.0 + 44 10		1.193	51.9 + 43 53
189	1 3.8 + 54 31	4.4	61.8	56.5	31.2	1 5.0 + 54 37			
198	1 7.3 + 23 56	4.6	63.7	25.4	33.4	1 8.3 + 24 3			

Means

Cor. B₂

Mean 10

23 3.7 + 74.6	11098	23 4.1 + 74 44	4.5	✓
23 10 + 73.4	4112	23 10.3 + 73 35	5.6	✓
22 33 + 62.9	4009	22 34.4 + 62 58	5.2	✓
22 32 + 72.9	4002	22 32.8 + 73 1	5.3	✓
23 2 + 62.9	2171	23 1.9 + 62 51	6.2	✓
23 27 + 71.2	1208	23 26.4 + 71 12	6.8	✓
23 14.5 + 70.1	4115	23 11.0 + 70 14	5.5	✓
22 29 + 69.6	1263	22 29.2 + 69 37	6.2	✓
23 21 + 69.5	4150	23 20.2 + 69 42	5.7	✓
23 23 + 58.6	4086	23 1.5 + 58 47	5.0	✓
23 3.8 + 58.5	4099	23 4.6 + 58 41	5.4	✓
23 23.5 + 57.7	4153	23 24.5 + 57 53	4.8	✓
23 12 + 67.3	4127	23 13.8 + 67 28	4.9	✓
23 41 + 67.0	4204	23 42.2 + 67 8	5.1	✓

23 4.7 + 74 51	✓	5.5	6.5	✓
23 11.0 + 73 41	✓	5.4	6.4	✓
22 35.1 + 63 4	✓	5.1	6.1	✓
22 33.3 + 73 7	✓	4.9	5.9	✓
23 3.7 + 63 6	✓	5.8	6.8	✓
23 28.1 + 71 27	✓	5.9	6.9	✓
23 11.8 + 70 20	✓	4.7	5.7	✓
22 30.4 + 69 51	✓	5.3	6.3	✓
23 23.1 + 69 48	✓	4.8	5.8	✓
23 2.7 + 58 53	✓	4.3	5.3	✓
23 5.4 + 58 47	✓	5.4	6.4	✓
23 25.0 + 57 59	✓	4.5	5.5	✓
23 14.3 + 67 33	✓	4.8	5.8	✓
23 43.1 + 67 15	✓	4.4	5.4	✓

01.6.9

01.6.8

6861	21 44.5 + 29 37	5.0	70.1	68.0	69.5	21 45.0 + 29 43	✓	6.8	✓
6846	21 69.2 + 25 6	4.2	69.4	28.1	69.4	21 40.3 + 25 11	✓	6.4	✓
6867	21 47.6 + 25 22	5.0	69.2	28.2	68.5	21 48.3 + 25 27	✓	6.7	✓
6784	21 22.4 + 36 66	6.1	66.0	68.0	68.8	21 23.2 + 36 41	✓	6.8	✓

Plate 684

γ	H	Type	No Lines	K	Focused	Other Lines	
21.0	21.1	I	3	?	1	—	n
20.1	17.3	III	2	$K=H$	1	—	
19.5	13.8	I	4	?	1	sure,	n
18.4	19.8	I	6	$K=1.2H$	2	F,	n
17.1	16.0	I	4	N	1	—	✓
18.0	19.4	I	5	$K=1.2H?$	1	—	n
16.4	10.4	I	4	N	1	F	✓
16.9	15.9	I	2	$K=H$	1	sure	IN ? 5.9
15.6	9.9	I	5	N	2	F, sure,	✓
14.6	15.6	I	4	N	1	—	✓
13.8	11.4	I	4	$K=1.5H$	1	F?	n
13.0	12.1	I	4	?	1	—	✓
13.1	18.3	I	4	N	1	—	✓
11.3	9.7	III	3	$K=H$	1	F	19.7 ?
11.4	16.2	I	7	$K=1.5H$	2	F,	n
9.4	10.4	I	5	$K=1.5H?$	1	F,	n
9.5	21.0	I?	3	N	1	—	✓
9.4	23.1	III	2	$K=H$	1	F	n
8.4	22.3	I	4	N	1	F	✓
7.8	17.7	III	2	$K=H?$	1	—	n.
4.8	17.1	I	3	N	1	—	✓

Book 6.

Plates	Means
✓ 772	16 ✓
✓ 801	11
943	—
✓ 944	6
✓ 893	6
✓ 735	3
✓ 668	7
503	—
492	—
✓ 684	9
✓ 650	4
✓ 649	4
948	—
✓ 669	8
✓ 283	5
✓ 858	10
827	—

1386ghae.proj..8325