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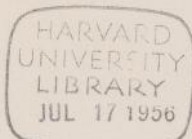
HENRY DRAPER MEMORIAL

Description of Spectra.
No. 24.

ICG 11365.848

186-11365-847

AG 113.65.848



November 3, 1887.

Plate 1373

Book 20 I. Page 4

ν	H	Type	Remarks	Description of Lines on Spectra
21.0	11.9	II^a	1	$g \& h = .2$
20.5	19.3	II^a	2	$g \& h = .2$
18.4	15.8	II^a	3	$g \& h = .4$
17.2	13.7	III^{bc}	4	$f_6 g = .2 B$, $f_8 g = .2$, $g_5 h = .1$, $h_3 H = .1$
16.0	20.4	III^{bc}	5	$f_3 g = .2 B$, $f_5 g = .1$, $f_6 g = .2 B$, $f_8 g = .3$, $g_5 h = .3$, $h_3 H = .3$
.. 6	14.2 22.3	II^a	6	$g \& h \text{ dbl.} = .2$
	12.0 13.5	II^a	7	$g \& h = .4$
	11.6 19.9	II^a	8	$g \& h = .5$
	9.8 9.4	II^a	9	$g \& h = .2$, $h \text{ dbl.}$
	9.8 13.2	III^{bc}	10	$f_3 g = .2 B$, $f_5 g = .2 B$, $f_8 g = .1$,
	8.0 9.2	III^b	11	$g \& h = .2$
.. 8	8.8 19.7	II^a	12	$g \& h = .3$
	7.0 15.5	III^{bc}	13	$f_3 g = .2 B$, $f_5 g = .1$, $f_6 g = .2 B$, $f_8 g = .3$, $g_4 h = .2$, $g_5 h = .2$, $g_7 h = .2$, $h \text{ bright?}$, $h_2 H = .2$.
	6.1 7.2	III^{bc}	14	$f_5 g = .2 B$, $f_7 g = .2 B$, $f_9 g = .2 B$ $g_7 h = .2$, $h_5 H = .5$
	3.1 11.5	II^a	15	$g \& h \text{ dbl.} = .3$
	2.6 8.1	III^b	16	$f_7 g = .2$

Plate 1460.

.. 10	13.0 19.7	III^{bc}	17	$f_3 g = .2 B$, $f_4 g = .2$, $f_5 g = .2 B$, $f_8 g = .2$, $g_3 h = .2$
	8.4 9.8	II^a	18	$g \& h = .2$, $g \text{ dbl.}$
.. 12	6.1 21.4	II^{bc}	19	$f_2 g = .2$, $f_3 g = .2$, $f_4 g = .3 B$, $f_5 g = .1$, $f_9 g = .1$, $g_7 h = .1$
	3.1 8.3	II^a	20	$g_4 h \text{ dbl.} = .3$

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Plate 1460

Book 20 I. Page 12 v H Type Remark Description of Lines on Spectra

2.2 16.1 II^a 21 G 5 h = .5

Plate 1419

22.3 12.1 III^b 22 F 6 G = .5

" 14 16.6 12.3 II^a 23 G 5 h = .3, G dbl.

3.0 13.6 III^b 24 F 3 G = .3 B, F 5 G = .2, F 6 G = .2 B,
F 7 G = .2, F 9 G = .4, G 4 h = .2,
h 5 H = .2, h 7 H = .2

Plate 1321

" 16 21.4 6.4 II^a 25 G 5 h = .2

21.4 17.5 II^a 26 G 5 h dbl. = .2

20.0 6.3 III^b 27 F 6 G = .2 G dbl.

19.6 11.1 III^b 28 F 3 G = .2, F 5 G = .2, F 7 G = .2,
G 7 h = .2, h 7 H = .1

18.6 6.8 II^a 29 G 5 h = .5

17.0 10.8 II^a 30 G 5 h = .5

" 18 15.5 17.1 III^b 31 F 3 G = .1 B, F 5 G = .1 B, F 7 G = .4
G 3 h = .2

14.1 10.6 II^a 32 G 5 h = .5

" 20 13.5 14.2 III^b 33 F 3 G = .2 B, F 5 G = .2 B, F 7 G = .4,
G 3 h = .1 B, h bright?, h 2 H = .2

12.6 11.3 II^a 34 G 5 h = .1 G dbl.

12.3 22.2 III^b 35 F 3 G = .2 B, F 4 G = .1, F 5 G = .2 B,
F 7 G = .3, h 5 H = .2, h 7 H = .2

11.4 7.4 II^a 36 G 5 h = .2, G dbl.

11.0 18.4 III^a 37 G 5 h = .2

11.5 18.6 II^a 38 G 5 h dbl. = .3

November 3, 1887.

Plate 1321.

Book 20 I. Page 22	v	H	Type	No. Remark	Description of Lines on Spectra.
"	10.6	18.4	II ^a	39	G & h = .3
"	9.4	15.2	II ^a	40	G & h = .2
"	9.8	24.0	II ^a	41	G & h = .5
"	6.4	10.2	III ^{bc}	42	F 4 G = .3 B, F 6 G = .3 B, F 8 G = .1 G 3 h = .1 B, h bright?, h 2 H = .1
" 24	6.2	13.5	III ^{bc}	43	F 5 G = .2 B, F 8 G = .3, h 4 H = .2
"	6.8	21.3	II ^a	44	G & h = .4
"	5.9	14.9	II ^a	45	G & h = .2
"	4.0	7.6	II ^a	46	G & h = .1
"	4.2	18.2	II ^a	47	48 G & h = .3
"	3.5	6.2	II ^a	49	G & h = .2
"	3.6	8.2	II ^a	50	G & h = .5
"	2.0	23.5	III ^a	51	G & L dbl = .5

Plate 1535

" 28	15.8	16.2	III ^{bc}	52	F 4 G = .3 B, F 6 G = .3 B, F 8 G = .3, h 4 H = .2
"	14.5	10.0	II ^a	53	G & h = .5
" 30	12.3	7.6	II ^a	54	3 lines between F - H
"	12.8	11.4	II ^a	55	G & h = .4
"	12.6	15.9	II ^a	56	G & h dbl = .5

Plate 1443

" 32	22.8	14.6	II ^a	57	G & h = .3
"	17.0	10.0	II ^a	58	G & h = .5
" 34	16.6	19.7	II ^a	59	G & h = .5
"	15.6	12.3	II ^a	60	G & h = .2
"	13.4	20.2	II ^a	61	G & h = .5

November 3, 1887

Plate 1443

Book 20 I. Page 38	ν	H	Type	Remarks	Description of Lines on Spectra
"	11.9	11.6	III	^{bc}	62 F3 G=.2 B, F5 G=.2 B, F8 G=.2
	11.0	11.3			G f L=.1, L4 H=.2
"	11.0	11.3	II	^a	63 G & L=.3
"	11.5	15.2	II	^a	64 G & L=.3, G dbl.
" 40	6.6	24.1	II	^a	65 G & L=.2
"	4.2	17.0	III	^{bc}	66 F8 G=.2, G f L=.1

Plate 1413

" 42	20.8	8.4	III	^{bc}	67 F3 G=.2 B, F5 G=.2 B, F8 G=.2
					G f L=.1, L5 H=.2
" 44	14.6	11.8	II	^a	68 G & L=.2
"	12.8	23.0	III	^a	69 G & L=.2
"	11.1	14.6	II	^a	70 G & L=.5
" 46	10.2	16.3	III	^{bc}	71 F3 G=.2 B, F4 G=.2, F6 G=.2,
					F8 G=.2,
"	9.0	14.1	II	^a	72 G & L=.3, G dbl.
"	8.5	8.6	III	^{bc}	73 G3 G=.2 B, F5 G=.2 B, F8 G=.2
					74 G f L=.1, L5 H=.1
" 48	7.3	14.3	II	^a	75 G & L=.5
"	3.5	12.7	II	^a	76 G & L=.5

November, 4, 1887.
Plate 1633.

Book 209. Page 50	V.	H.	Type	Remarks	Description of lines on Spectra.
	13.4	10.4	II ^a	77	G and h dbl. = .2
52	10.5	16.1	III ^{b.c}	78	F ₃ G = .1 B, F ₅ G = .1, F _{5½} G = .1 B, F ₆ G = .1 F ₈ G = .3, G ₄ h = .2, G ₆ h = .2, h ₃ H = .3
	9.3	13.9	II ^a	79	G and h = .2
	7.6	14.1	II ^a	80	G and h = .5 G abl.
54	3.4	21.2	II ^a	81	G and h dbl = .5

November, 4, 1887.
Plate 1455.

"	56	22.6	18.3	I ^b	82	h ₆ H = .5
		22.9	22.1	II ^a	83	G and h dbl. = .2
		20.8	9.3	III ^{b.c}	84	F ₄ G = .2, F ₅ G = .2 B, F ₆ G = .2, F ₈ G = .3, Several lines between G and H
		18.0	15.0	III ^{b.c}	85 86	F ₃ G = .2 B, F ₅ G = .3 B, F ₈ G = .3, G ₇ h = .2, h ₄ H = .2.
		13.0	21.4	II ^a	87	G and h = .2, h abl.
58		7.3	16.7	II ^a	88	G and h = .3.

November, 4, 1887
Plate, 1578.

"	60	21.6	7.3	III ^{b.c}	89	F ₃ G = .2 B, F _{4½} G = .1, F ₅ G = .3 B, F ₈ G = .5, G abl., G ₇ h = .3, h ₃ H = .3 B h ₈ H = .2
"	"	23.1	20.0	II ^a	90	G and h = .2, F _{9½} G = .1 B. ?
62		7.0	18.7	III ^{b.c}	91	F ₄ G = .5 B, F ₆ G = .4 B, F _{8½} G = .2, Several lines between G and H, F _{5½} G = .1.
		9.6	23.8	II ^a	92	G abl., G ₃ H = .1, G ₇ h = .1.

$\gamma = .3$
H.
 $\gamma = .2$

3 B

November, 4, 1887.
Plate 1578.

Book 20, I. Page v.	H.	Type	Remarks	Description of lines on Spectra.
62 5.0	18.3	II ^{a.c}	93	G and h = .5, F6 G = .3 B, G6 h = .1, h6 H = .1
" 4.4	14.7	II ^a	94	G and h = .3, Gall.

November, 4, 1887.
Plate 1565

" "	64 6.6	18.8	III ^{bc}	95 F3 G = .3 B, F4 ¹ / ₂ G = .2, F5 G = .2 B, F8 G = .4, G5 h = .2, G7 h = .2, hB?, h3 H = .2
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Plate 1466.

" "	64 18.8	19.6	III ^{bc}	96 F5 G = .1 B, F8 G = .1, F9 G = .2 B,
	17.5	15.0	II ^a	97 G and h = .3
	9.6	17.1	II ^a	99 G and h = .5, Gall.
	7.6	11.9	II ^a	100 G and h = .6

Plate 1529, November, 7, 1887.

" "	66 19.0	20.6	II ^a	101 G and h = .2
	18.8	15.1	III ^{bc}	102 F3 G = .1 B, F4 ¹ / ₂ G = .1, F5 G = .2 B, F8 G = .3, F9 G = .1
	18.7	20.2	III ^{bc}	103 F5 G = .1 B, F7 G = .2, F9 G = .2
	17.5	20.7	II ^a	104 G and h = .5
" 68	15.0	7.3	II ^a	105 G and h = .5
	14.6	14.9	I ^b	106 F6 G = .1, h6 H = .1, H6 a = .1
	12.3	7.3	II ^a	107 G and h = .4
70	11.0	15.8	III ^{bc}	108 F3 G = .1 B, F3 ¹ / ₂ G = .1, F5 G = .2, F6 G = .1, F8 G = .3, Several lines between G and H
	9.5	12.7	III ^{bc}	109 F3 G = .1 B, F5 G = .1 B, F7 G = .1, F8 G = .5

November, 7, 1887.

Plate 1529.

Book 20, 2, Page 700.	\mathcal{H}	Type.	Remark	Description of lines on Spectra.
80	21.7	III ^{bc}	110	$F_3 \mathcal{G} = .2 B$, $F_3 \frac{1}{2} \mathcal{G} = .1$, $F_4 \frac{1}{2} \mathcal{G} = .2$, $F_5 \mathcal{G} = .1 B$, $F_6 \mathcal{G} = .1$, $F_8 \mathcal{G} = .3$, several lines between \mathcal{G} & \mathcal{H} .
74	7.3	II ^a	111	\mathcal{G} and $h = .3$, \mathcal{G} dbl.

Plate 1595

72	22.2	10.4	I ^b	112	$h \mathcal{H} = .5$
	14.0	16.5	II ^a	113	\mathcal{G} and $h = .4$
74	12.2	23.3	II ^a	114	\mathcal{G} and $h = .5$
	11.5	11.1	II ^a	115	\mathcal{G} and $h = .1$, \mathcal{G} dbl.
9.8	17.2		III ^{bc}	116	$F_3 \mathcal{G} = .1 B$, $F_5 \mathcal{G} = .3$, $F_6 \mathcal{G} = .2$, $F_7 \mathcal{G} = .1$, $F_8 \mathcal{G} = .2$, Several lines between \mathcal{G} and \mathcal{H} .
4.3	6.5		II ^a	117	\mathcal{G} and h dbl = .5
2.0	16.7		III ^{bc}	118	$F_3 \mathcal{G} = .3 B$, $F_3 \frac{1}{2} \mathcal{G} = .2$, $F_4 \frac{1}{2} \mathcal{G} = .4$, $F_5 \mathcal{G} = .3 B$, $F_6 \mathcal{G} = .2$, $F_7 \frac{1}{2} \mathcal{G} = .1$, $F_8 \mathcal{G} = .5$, several lines between \mathcal{G} and \mathcal{H} .
2.4	17.6		I ^b	119	$F_5 \mathcal{G} = .10$, $h \mathcal{H} = .2$

November, 9, 1887.

Plate 1599

76	21.6	16.4	III ^{bc}	120	$F_3 \mathcal{G} = .5 B$, $F_3 \frac{1}{2} \mathcal{G} = .1$, $F_4 \frac{1}{2} \mathcal{G} = .2$, $F_5 \mathcal{G} = .2 B$, $F_6 \mathcal{G} = .1$, $F_8 \mathcal{G} = .5$, several lines between \mathcal{G} and \mathcal{H} .
21.2	17.9		III ^{bc}	121	$F_3 \mathcal{G} = .1 B$, $F_4 \mathcal{G} = .2$, $F_7 \mathcal{G} = .4$.
19.7	15.5		I ^b	122	$h \mathcal{H} = .2$, $\mathcal{H} 6 a = .2$.
18.0	6.8		II ^a	123	\mathcal{G} and $h = .2$
18.0	11.0		III ^b	124	$F_4 \mathcal{G} = .2$, $F_6 \mathcal{G} = .2$, $F_7 \mathcal{G} = .5$, several lines between \mathcal{G} and \mathcal{H} .
18.6	17.1		III ^b	125	$F_2 \mathcal{G} = .2$, $F_4 \mathcal{G} = .2$, $F_6 \mathcal{G} = .2$, $F_7 \frac{1}{2} \mathcal{G} = .5$
16.4	18.3		III ^b	126	$F_4 \mathcal{G} = .2$, $F_5 \mathcal{G} = .1 B$, $F_6 \mathcal{G} = .1$, $F_7 \mathcal{G} = .3$, \mathcal{G} dbl.

B.
H.

4.2

B,
mem

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November, 9, 1887.
Plate 1599

Book 20, Page 76. v	λ	Type	No. Remark.	Description of lines on Spectra.
" " " 13.0 15.0	I ^b	127	$h\ 5\ H = .3$	
" " " 12.0 6.3	III ^b	128	$F_4\ G = .2, F_7\ G = .4, G\ all.$	
" " " 12.5 14.9	I ^b	129	$h\ 5\ H = .2,$	
" " " 78 9.0 7.1	II ^a	130	$G\ and\ h = .5, G\ all.$	
6.8 20.0	II ^a	131 132	$G\ and\ h = .2$	
3.6 11.9	I ^b	133	$h\ 6\ H = .2, H\ 6\ a = .2.$	
2.5 21.0	III ^b	134	$F_5\ G = .2, F_7\ G = .2$	

November, 9, 1887,
Plate 1420

" " " 80 22.0 20.5	II ^a	135	$G\ and\ h = .5$	
21.4 7.9	II ^a	136	$G\ and\ h\ all. = .5$	
20.4 24.0	III ^b	137	$F_7\ G = .5,$	
19.5 17.4	II ^a	138	$G\ and\ h = .5$	
17.7 17.7	II ^a	139	$G\ and\ h = .5$	
" " 82 16.2 12.3	II ^a	140	$G\ and\ h = .5$	
14.8 20.5	II ^a	141	$G\ and\ h = .2$	
14.8 21.7	II ^a	142	$G\ and\ h = .2$	
13.4 10.3	II ^a	143	$G\ and\ h = .5$	
" " " 13.4 17.7	III ^b	144	$F_3\ G = .5\ B, F_3\ \frac{1}{2}\ G = .2, F_4\ \frac{1}{2}\ G = .2, F_5\ G = .1\ B, F_5\ \frac{1}{2}\ G = .2$ $F_7\ G = .4, Several\ lines\ between\ G\ and\ H$	
84 12.5 22.5	III ^b	145	$F_3\ G = .2\ B, F_4\ \frac{1}{2}\ G = .2, F_5\ G = .1\ B, F_7\ \frac{1}{2}\ G = .5.$	
9.4 11.2	II ^a	146	$G\ and\ h = .2$	
8.4 21.6	III ^b	147	$F_3\ G = .1, F_7\ G = .3, G\ all.$	
86 5.2 12.4	II ^a	148	$G\ and\ h = .2$	
4.8 11.5	II ^a	149	$G\ and\ h = .2$	
4.6 13.4	II ^a	150	$G\ and\ h = .5$	
3.4 13.3	II ^a	151	$G\ and\ h = .2$	

$g=2$

November, 9, 1887.
Plate 1420.

Book 20, Page 88 π π . Type π . Remark. ^{no.} Description of lines on Spectra.
3.6 18.5 III ^b 152 F7 G = .4

Plate 1528

November, 10, 1887
Plate 1623

92 21.7 19.8 II^a 153 G and h = .5
13.6 20.2 II^a 154 G and h & h = .5
94 6.5 18.0 II^a 155 G and h = .5
5.0 18.8 II^a 156 G and h = .2
2.5 11.1 III^b 157 F7 G = .4, G7 H = .3

November, 10, 1887.
Plate 1456

" " " 96 17.8 19.9 II^a 158 G and h = .5
12.0 11.8 II^a 159 G and h = .5
12.1 12.5 II^a 160 G and h = .5
" " " 98 9.1 21.6 II^a 161 G and h = .5
5.7 21.0 II^a 162 G and h = .5

Plate 1632.

" " " 100 14.2 15.2 II^a 163 G and h = .4, G & h.
10.0 11.0 III^b 164 F8 G = .7,

Plate 1657

December, 14, 1887.

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Plate 1657

Book	20	Page	τ	H	Type	No. Remark.	Description of lines on Spectra.
104	18.7	17.1	Π^a	165	Gand $h=.5$		
106	15.6	11.2	Π^a	166	Gand $h=.5$		
108	13.6	11.9	Π^a	167	Gand $h=.5$		
110	12.2	7.0	Π^b	168	$F_6 G_2, F_9 G_3$, Lines between G & H.		
	12.9	7.9	Π^a	169	Gand $h=.5$		
	12.0	15.8	Π^a	170	Gand $h=.5$, Lines below K.		
	11.5	9.2	$\Pi^{b.c.}$	171	$F_3 G_1, F_4 G_2, F_5 G_3, F_7 G_3$, Lines between Gand H.		
112	11.2	14.6	Π^a	172	Gand $h=.5?$		
	11.6	21.9	Π^a	173	Gand $h=.3$		
	10.2	7.4	Π^a	174	Gand $h=.5$		
	10.1	10.5	Π^a	175	Gand $h=.1$, Gand $h=.3$ Lines below K.		
114	8.4	6.3	Π^a	176	Gand $h=.5?$		
	8.0	11.4	Π^a	177	$G=.5, h=.2$, Lines below K.		
	8.4	17.3	Π^a	178	Gand $h=.3$		
	7.7	9.4	Π^a	179	Gand $h=.5?$		
116	7.0	19.3	I^b	180	$h_6 H=.1, H_6 \alpha=.1$,		
	7.0	19.7	Π^a	181	Gand $h=.5$		
	6.9	6.0	Π^a	182	Gand $h=.5$		
118	3.8	17.9	Π^a	183	Gand $h=.5, 2$ Lines below K.		

December 19, 1887.

Plate 1710.

Book 205, p. 122

λ	H	Type	Remarks	Description of Lines on Spectra
38	14.9	I^b	184	$\lambda 6 H = .2$, $H 6 \alpha = .2$,

Plate 1712

19.4 6.1 I^a 18.5 $G 5 h$ dbl. = .3,

January 30, 1888.

Plate 1712.

18.3	19.2	I^a	186	$G 0 h = .3$, G dbl., Lines below K .
15.5	11.5	III^b	187	$F 3 G = .1 B$, $F 5 G = .2 B$, $F 7 G = .3 B$, Lines between G & H
15.6	18.9	III^b	188	$F 3 G = .2 B$, $F 4 \frac{1}{2} G = .1$ $F 5 G = .3 B$, $F 5 \frac{1}{2} G = .1$ $F 7 G = .3$ $F 8 G = .1 B$, Lines between G & H , Line below K .

Aug.

Aug. 7 1888.

Plate 1712

Bark 20	Pages V.	26.	Type	No.	Remark.	Description of Lines on Spectra
126	12.0	14.7	IIa	189		$g+h=.3$
	12.0	15.0	IIIb?	190		$F\gamma g=.2$
	11.0	19.5	IIa?	191		$g+h=.3$, Gotth. 2 lines below K.
	12.5	16.6	IIa?	192		$g+h=.3$
	6.0	6.7	IIIb	193		$F\gamma g=.3$
128	5.4	11.7	IIIb	194		$F\gamma g=.3$
	3.0	11.1	Ib	195		$F\delta g=.2$, $h\delta b=.2$.
	2.4	14.9	IIa?	196		$g+h=.5?$
St. let.	5.7	F.m. &c.	8.0	7.9		F. ch. 7.9 Box No. 175

Plate 1738.

	22.0	8.2	?	197		Peculiar spectrum. Several faint lines, 352 bright lines. Bright line bet h and $\delta b = \delta b?$
	21.0	11.5	IIa?	198		$g+h=.2$, Gotth. 2 lines below K.
	17.0	13.5	IIa	199		$g+h=.3$
	17.0	15.9	IIIb?	200		$F\gamma g=.2$
	16.2	14.7	IIIb?	201		$F\gamma g=.3$
150	12.8	9.0	IIa?	202		$g+h=.2$, Gotth. 2 lines below K.
	12.7	19.8	IIa?	203		$g+h=.2$, Gotth. 2 lines below K.
	10.8	11.8	IIIb	204		$F\gamma g=.3$
	10.2	17.7	IIa?	205		$g+h=.2$, Gotth. Bright lines?
	10.1	21.1	IIIb	206		$F\delta g=.2$, $F\delta\frac{1}{2}g=.1$, $F\eta\frac{1}{2}g=.2$, $F\delta g=.3$, $F\delta\frac{1}{2}g=.1$, $F\gamma g=.3$ $F\delta g=.2$, $F\eta g=.1$, Lines bet δ & δb . 2 lines below K.
	9.6	16.3	IIa?	207		$g=.4$, $h=.2$,
	9.0	23.6	IIIb	208		$F\gamma g=.3$
	4.1	12.8	IIa?	209		$g+h=.3?$

August 7.

Plate 1738.

Book 209 Page. V. No. Type. Rem. Description of Series on Spectra.
 180 4.4 18.4 IIa 210 $g+h=.5$, shines below K.
 St. dt. 5.4 F. m. re. 8.0 7.4 F. ch. 7.4 Box No. 201

Dark Plate.

Plate 2137

132 18.0 23.1 IIIh 211 $F\gamma g=.3$
 17.4 18.6 IIa? 212 $g+h=.5$, $g+h=.?$
 17.5 18.5 IIa 213 $g+h=.2$, $g+h=.?$, shines below K.
 16.1 11.9 IIIh? 214 $F\gamma g=.3$
 15.0 18.2 IIa 215 $g+h=.3$
 15.0 18.4 IIIh? 216 $F\gamma g=.3$

Aug. 9, 1888.

Plate 2137

184 12.3 7.0 IIIh? 217 $F\gamma g=.3$
 11.2 20.6 IIa? 218 $g+h=.5?$
 11.6 23.4 IIIh? 219 $F\gamma g=.1B$, $F_{4\frac{1}{2}}g=.2$, $F_{5\frac{1}{2}}g=.1B$,
 $F\gamma g=.3$, Series tot. $g+h$.
 10.0 13.6 IIa? 220 $g+h=.5?$, shines below K.
 136 9.2 19.8 IIIh 221 $F\gamma g=.3$
 8.0 8.2 IIIh? 222 $F_{2\frac{1}{2}}g=.2$, $F_{3\frac{1}{2}}g=.2B$, $F_{4\frac{1}{2}}g=.1$
 $F_{5\frac{1}{2}}g=.2B$, $F_{6\frac{1}{2}}g=.1$,
 $F\gamma g=.2$, Series tot. $g+h$.
 8.7 10.7 IIa 223 $g+h=.3$
 5.4 8.4 IIIh 224 $F\gamma g=.3$
 5.0 21.3 IIIh 225 $F_{3\frac{1}{2}}g=.2B$, $F_{4\frac{1}{2}}g=.1$, $F_{5\frac{1}{2}}g=.2B$,
 $F_{6\frac{1}{2}}g=.1$, $F\gamma g=.3$, Series tot. $g+h$,
 2 shines below K.

Aug. 9. 1888.

Book 208 Page	V.	W.	Type.	No.	Description of Series on Spectra.
136	4.4	13.6	IIa?	226	$g+h=.3$
	4.0	19.1	IIa?	227	$g+h=.5$, 2 lines below K.
	3.7	7.5	IIa?	228	$g+h=.5$
138	2.5	21.3	IIIb?	229	$F7b=.3$, Series bet. S & H.
	St. Let. (5.6	5.4)	From + c.	7.8	6.2 Fch. 6.3 Box No. 304

Plate 1740

17.9	9.9	IIa?	230	$g+h=.5$?, 2 lines below K.
17.7	17.9	IIa	231	$g+h=.5$
16.0	22.5	IIIb?	232	$F3b=.1B$, $F4\frac{1}{2}b=.2$, $F5b=.2B$, $F5\frac{1}{2}b=.1$, $F7b=.3$, Series bet. S & H.
14.3	7.6	IIIb?	233	$F7b=.3$
14.0	17.8	IIb	234	$F6b=.2$, $h6b=.2$,
140	12.5	IIIb	235	$F3\frac{1}{2}b=.1$, $F4b=.2B$, $F4\frac{1}{2}b=.2$, $F5b=.2B$, $F5\frac{1}{2}b=.1$, $F7b=.3$, $F8b=.1B$, Series bet. S & H.
11.0	11.5	IIb	236	Series narrow. $F6b=.1$, $h6b=.2$, $B4\gamma=.4$
10.9	11.9	IIIb	237	Several bright and faint lines.
10.5	14.4	IIIb?	238	$F7b=.3$
8.8	14.3	IIIb?	239	$F7b=.3$
5.1	22.5	IIa?	240	$g+h=.5$?
4.8	13.1	IIb	241	$F6b=.1$, $h6b=.1$, $B4\gamma=.3$
St. Let. 5.9	From + c.	8.0	7.9	Fch. 7.9 Box No. 176

Sept. 11, 1888.
Plate 2220.

Brk 35 Page 4	V.	No.	Type.	No.	Description of Lines on Spectra.
	18.0	12.4	$\text{II}^a?$	242	G & h = .5?
6	17.7	11.7	$\text{III}^b?$	243	Lines between G & H.

Sept. 12, 1888
Plate 2220

8	16.1	15.8	$\text{II}^a?$	244	G and h = .5?
	16.6	15.9	$\text{II}^a?$	245	G and h = .5?
	16.9	19.1	III^b	246	$F_{4\frac{1}{2}} G = .2, F_6 G = .1, F_7 G = .3$, Lines between G & H.
10	14.8	11.8	$\text{II}^a?$	247	G and h = .5?
12	12.6	13.5	$\text{II}^a?$	248	G and h = .5
	12.3	15.7	$\text{II}^a?$	249	G and h = .5?
	12.4	23.1	$\text{II}^a?$	250	G and h = .3?
	11.5	8.5	$\text{III}^b?$	251	$F_7 G = .2$
14	9.8	9.1	II^a	252	G and h dbl. = .2, 3 Lines below K.

Sept. 13, 1888.
Plate 2220.

16	9.9	14.8	$\text{II}^a?$	253	G and h = .5?
	9.2	15.0	$\text{III}^{b.c.}$	254	$F_{4\frac{1}{2}} G = .2, F_5 G = .2 B, F_7 G = .3$, Lines between G and H.
	8.2	11.1	$\text{III}^b?$	255	$F_7 G = .3$
18	6.0	15.9	$\text{III}^b?$	256	$F_7 G = .3$
20	5.6	14.0	$\text{III}^b?$	257	$F_7 G = .3$
	4.8	8.6	$\text{II}^a?$	258	G and h = .5?
	4.4	15.2	$\text{II}^a?$	259	G and h = .5?
	3.1	13.0	$\text{II}^a?$	260	G and h = .5?

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K

Sept. 13, 1888.
Plate 2220

Book	Page	V.	Ab.	Type.	No.	Description of Lines on Spectra.
35	22	2.5	16.9	III ^{b.c.}	261	$F_{2\frac{1}{2}} G=.2$, $F_3 G=.2$ B, $F_{4\frac{1}{2}} G=.2$, $F_5 G=.2$ B, $F_{5\frac{1}{2}} G=.2$, $F_7 G=.3$, Lines between G & H.
	2.4	22.0		III ^b	262	$F_7 G=.3$

St. Lt. $\begin{cases} 6.1 \\ 5.5 \end{cases}$ Fog. m & c. 6.0-5.8 Fog ch. 6.9 Box No. 312.

Plate 2047

24	21.6	21.3	II ^a	263	G and h $h=.5$
	14.9	19.5	II ^a	264	G and h $h=?=.3$, 4 Lines below K
	12.4	9.1	II ^{a?}	265	G and h $h=.5?$
	12.4	10.1	II ^a	266	G and h $h=.3$, 7 Lines below K.
	5.5	17.8	III ^{b?}	267	$F_{5\frac{1}{2}} G=.2$, $F_7 G=.3$.

St Lt. 6.3 Fog m. & cl. 8.0-6.8 Fog ch. 6.8. Box No. 267.

Plate 2155

Book 20	Page 144	22.0	13.6	II ^a	268	G and h $h=.5$, 1 Line below K
		21.4	12.3	II ^{a?}	269	G and h $h=.5$
144		20.2	13.7	III ^{b?}	270	$F_{5\frac{1}{2}} G=.2$, $F_7 G=.3$.
		20.8	15.9	III ^{b?}	271	$F_7 G=.3$.
		18.4	7.8	III ^{b.c?}	272	$F_3 G=.2$ B, $F_{4\frac{1}{2}} G=.1$, $F_5 G=.3$ B, $F_{5\frac{1}{2}} G=.1$, $F_7 G=.3$, Lines between G & H, Lines below K.
		17.6	8.3	II ^{a?}	273	G and h $h=.3?$
		17.1	11.4	II ^{a?}	274	G and h $h=.5?$
		17.2	22.2	II ^a	275	G and h $h=.5$

Sept. 13, 1888
Plate 2155

Book 209 Page	V.	Ab.	Type.	No.	Description of Series on Spectra.
144	15.6	21.5	II ^a	276	G and h = .5
	13.8	19.5	II ^a	277	G and h = .5, 2 Lines below K.
146	12.6	12.0	II ^a ?	278	G and h = .5? 4 Lines below K.
	6.4	14.8	III ^b ?	279	F ₃ h = 2 B, F ₃ $\frac{1}{2}$ h = 1, F ₄ $\frac{1}{2}$ h = 1, F ₅ h = 2 B, F ₅ $\frac{1}{2}$ h = 1, F ₇ h = 3, Lines between G and h, Lines below K.
	4.0	10.8	III ^b	280	F ₄ $\frac{1}{2}$ h = 2, F ₇ h = 3
	3.6	10.9	III ^b ?	281	F ₇ h = 3
	2.8	16.0	II ^a	282	G and h = .5, 2 Lines below K.
	2.6	18.7	II ^a ?	283	G and h = .5
St. Lt. 6.0 F ₇ m & cl. 7.5-6.7. F ₇ ch. 6.9. Box No. 305.					

March 27, 1889.

Plate 2988

150	18.1	7.1	K	284	F ₄ $\frac{1}{2}$ h = 2, F ₅ h = 2 B, F ₇ h = 3. Series kt. G + h.
	17.4	8.6	F	285	F ₃ h = 3, F ₇ h = 3.
152	15.5	12.5	F?	286	G + h = .5, several lines below K.
	15.6	19.5	F	287	F ₇ h = 3
	15.4	22.0	F	288	F ₇ h = 3
154	14.9	12.3	F?	289	G + h = .5
	13.2	11.3	F	290	G + h = .5
	13.0	20.4	F	291	G + h = .5
	12.8	7.8	F	292	G + h & h = .5, 3 lines below K.
	12.9	17.7	F	293	G + h = .5, 3 lines below K.
Plate 2988.					
156	11.4	19.7	F	294	G + h = .3, 3 lines below K.

April 1, 1889

April 1, 1889

Plate 2988.

Book 20	Page V.	16.	Type.	Kim.	Description of Lines on Spectra.
156	10.1	20.8	H?	295	4 lines below K.
	10.3	21.7	F	296	$g+h=.5$
158	9.5	11.0	F	297	$F_3 g=.2, F_7 g=.3$
	9.9	12.5	K	298	$F_2 g=.2, F_3 g=.2, F_{3\frac{1}{2}} g=.1 B, F_4 g=.1, F_{4\frac{1}{2}} g=.2, F_5 g=.2 B, F_{5\frac{1}{2}} g=.1, F_6 g=.3, F_7 g=.2, F_8 g=.2$ Lines at $g+h$.
	9.3	20.1	F	299	$g+h=.5$
	8.0	7.9	F	300	$F_7 g=.3$
	8.2	12.4	F	301	$g+h=.5?$
	7.9	21.2	A?	301 ^W	^{448,3}
160	5.0	15.5	F?	302	$g+h=.5$
	4.1	15.9	A?	303	2 lines above F.
	4.4	18.7	F	304	$F_3 g=.2, F_7 g=.3$
162	3.4	15.0	F	305	$g+h=.3$
	1.9	13.2	F?	306	$g+h=.5$
	2.0	17.6	F	307	$g+h=.3$
	St. lat. 5.4				$F_{min} + c. 6.0 - 6.4$ Feb. 6.9 Box No. 637.

Plate 2987.

April 10. 89

164	32.4	11.0	F?	308	$g+h=.3, 3$ lines below K.
	20.9	8.2	F	309	$F_{4\frac{1}{2}} g=.2, F_7 g=.3$ Lines at $g+h$.
	19.6	9.5	F	310	$F_7 g=.3$
	19.1	12.4	F?	311	$g+h=.5$
	19.2	17.2	F	312	$g+h=.5$
166	17.0	12.8	E?	313	Several lines below K.
	17.2	15.7	F	314	$F_7 g=.3$
	16.4	12.3	F?	315	$g+h=.5$
	15.3	19.9	F?	316	$g+h=.5$
	14.5	22.8	F	317	$g+h=.5$

April 10 1889.

Book 209

Plate 298f.

V.	W.	Type.	No.	Description of Lines on Spectra.
166	13.0	7.4 F	318	$g+h=.5$
168	12.9	16.9 F	319	$g+h=.5$, 4 lines below K.
	12.5	21.5 F	320	$g+h=.2?$
	11.4	11.1 K?	321	$F 2\frac{1}{2}g=.1$, $F 3g=.2B$, $F 3\frac{1}{2}g=.1$, $F 4g=.2B$, $F 4\frac{1}{2}g=.1$, $F 5g=.1B$, $F 5\frac{1}{2}g=.2$, $F 6\frac{1}{2}g=.1$, $F 7g=.3$.
	11.5	17.4 F?	322	$g+h=.5$
	11.0	18.4 F	323	$g+h=.2$, 2 lines below K.
	10.2	19.9 F?	324	$g+h=.5$, 1 line below K.
	10.1	22.4 F?	325	$g+h=.5$
	8.3	15.4 F	326	$g+h=.5$
	8.9	18.2 F?	327	$g+h=.5?$, 2 lines below K.
	7.4	22.9 F	328	$g+h=.5$
	5.4	16.4 F?	329	$g+h=.7$, 3 lines below K.
	2.2	11.7 F?	330	$g+h=.3$
	2.4	13.9 F	331	$g+h=.2?$
	2.0	17.2 F?	332	$g+h=.5$, 4 lines below K.
Std. lat. 5.1		From. & c. 5.4-5.2.		Fch. 6.8. Box No. 632.

April 18 1889.
Plate 1881.

Book 35 Page	V.	H.	Type.	No. Rims.	Description of Series on Spectra
26	21.1	12.2	F	333	$g+h=.3$
	19.5	18.9	K	334	$F_2 \frac{1}{2} g=.1, F_3 g=.2 B, F_4 \frac{1}{2} g=.2, F_5 g=.1 B,$ $F_5 \frac{1}{2} g=.1, F_7 g=.3$ Series bet. $g+h$.
	18.6	21.9	F	335	$g+h=.3$
	17.0	12.9	F	336	$g+h=.3$
	17.4	17.8	K	337	$F_2 \frac{1}{2} g=.1, F_3 g=.2 B, F_3 \frac{1}{2} g=.1,$ $F_4 \frac{1}{2} g=.3, F_5 g=.2 B, F_5 \frac{1}{2} g=.2,$ $F_6 \frac{1}{2} g=.2, F_7 g=.3$ Series bet. $g+h$.
	16.6	13.9	F	338	$g+h=.5$
	15.4	17.3	K	339	$F_2 \frac{1}{2} g=.2, F_3 g=.1 B, F_3 \frac{1}{2} g=.2, F_4 g=.1 B,$ $F_4 \frac{1}{2} g=.3, F_5 g=.2 B, F_5 \frac{1}{2} g=.2,$ $F_7 g=.3$ Series bet. $g+h$.
	13.8	12.4	K	340	$F_3 g=.2 B, F_4 \frac{1}{2} g=.1, F_5 g=.2 B,$ $F_5 \frac{1}{2} g=.1, F_6 \frac{1}{2} g=.1, F_7 g=.3$ Series bet. $g+h$.
					Series below K.
28	13.4	15.5	F	341	Grand $h=.5$
	13.2	17.9	I?	342	$F_3 g=.2, F_7 g=.3$
	12.8	6.4	I	343	$F_7 g=.3$ Lines between Grand H
	12.0	12.7	K	344	$F_3 g=.1 B, F_3 \frac{1}{2} g=.1, F_4 \frac{1}{2} g=.3, F_5 g=.1 B,$ $F_5 \frac{1}{2} g=.2, F_7 g=.3$ Lines between $g+h$.
	10.0	6.1	F?	345	Grand $h=.2$
	12.2	23.7	F	346	Grand $h=.5$
	9.9	8.5	F?	347	Grand $h=.5$, 2 Lines below K.
30	8.0	13.5	F?	348	Grand $h=.2$, Lines below K.
	7.8	6.3	E?	349	Grand $h=.5$
	5.4	17.8	F	350	Grand $h=.5$.
32	4.2	8.9	K	351	$F_3 g=.1 B, F_4 \frac{1}{2} g=.2, F_5 g=.2 B, F_7 g=.3,$ Lines between $g+h$.
	2.1	14.6	F	352	Grand $h=.5$ 2 Lines below K.

April 18, 1889.

Plate 1900

Book	Page	V.	No.	Type	No.	Description of Lines on Spectrum.
	32	21.6	21.1	M?	353	$F_{4\frac{1}{2}} G=2, F_7 G=3$
		19.3	18.6	I	354	$F_7 G=3$
		18.2	8.2	F?	355	Grand $h=5$
		18.9	14.0	K	356	$F_{2\frac{1}{2}} G=1, F_3 G=2 B, F_{4\frac{1}{2}} G=1, F_5 G=2 B,$ $F_{5\frac{1}{2}} G=1, F_7 G=3$, Lines between G & H
		18.4	15.9	B	357	$F_7 G=2, G_7 h=2, K 6\alpha=2$.
34		17.4	13.3	I	358	$F_4 G=2, F_7 G=3$.
		17.0	19.9	I	359	$F_{4\frac{1}{2}} G=1, F_6 G=1, F_7 G=3$.
		16.9	20.6	F?	360	Grand $h=5?$
		17.0	21.1	K	361	$F_3 G=1 B, F_{4\frac{1}{2}} G=1, F_5 G=1 B, F_7 G=3$, Lines between G & H.
		15.9	18.0	F?	363	Grand $h=5$.
		15.7	16.7	K	362	$F_3 G=1 B, F_5 G=2 B, F_{5\frac{1}{2}} G=1, F_7 G=3$, Lines between G & H.
		14.1	10.6	K?	364	$F_3 G=2 B, F_{4\frac{1}{2}} G=3, F_5 G=2 B, F_{5\frac{1}{2}} G=1,$ $F_7 G=3$, Lines between G & H.
		14.5	14.1	F	365	Grand $h=2$, Gdbl. 3 Lines below K.
		13.4	17.8	I	366	$F_3 G=2, F_7 G=2$
36		13.2	12.3	F?	367	Grand $h=5$, 3 Lines below K.
		13.2	19.0	I	368	$F_7 G=4$.
		12.4	15.1	F	369	Grand $h=2$, 5 Lines below K.
		12.0	23.6	F	370	Grand $h=2$
		11.2	18.7	F	371	Grand $h=3$.
		11.5	13.2	F?	372	Grand $h=3$
		11.4	16.7	F	373	Fdbl.?, Grand $h=4$, Gdbl., 2 Lines below K.
		11.0	20.4	K?	374	Several bright and faint lines -
38		10.8	10.8	K	375	$F_3 G=2 B, F_{3\frac{1}{2}} G=1, F_{4\frac{1}{2}} G=2, F_5 G=3 B,$ $F_{5\frac{1}{2}} G=1, F_7 G=3$, Lines between G & H.

April, 18, 1889
Plate 1900

Book 35 Page	λ	λ	Type	Kim.	Description of Series or Spectra.
35	10.0	19.0	K	376	$F_3 G_{=1} B$, $F_{3\frac{1}{2}} G_{=1}$, $F_{4\frac{1}{2}} G_{=2}$, $F_5 G_{=2} B$, $F_{5\frac{1}{2}} G_{=2}$, $F_7 G_{=4}$, Lines between G & H.
	10.1	23.1	F?	377	Grand h = .5?
	9.0	5.7	F	378	Grand h = .3
	9.5	7.4	I	379	$F_7 G_{=3}$
	9.4	10.4	K?	380	$F_3 G_{=2} B$, $F_{4\frac{1}{2}} G_{=1}$, $F_5 G_{=2} B$, $F_{5\frac{1}{2}} G_{=1}$, $F_7 G_{=3}$, G & H. Lines between G & H.
	8.2	16.0	F?	381	Grand h = .5
40	8.0	21.5	F	382	Grand h = .5, 2 Lines below K.
	7.9	15.1	F?	383	Grand h = .5? 2 Lines below K.
	7.3	15.7	F?	384	Grand h = .2, Lines below K.
	6.4	15.9	I	385	$F_7 G_{=3}$
	5.0	10.9	F?	386	Grand h = .5.
	5.1	19.5	F	387	Grand h = .5
42	4.0	15.6	I	388	$F_{4\frac{1}{2}} G_{=2}$, $F_7 G_{=3}$.
	3.4	11.2	F?	389	Grand h = .5, 5 Lines below K.
	2.0	9.0	F	390	Grand h = .3, 3 Lines below K.

Plate 2015.

	21.8	10.3	F	391	Grand h = .5, 2 Lines below K.
	20.3	18.8	M?	392	$F_3 G_{=2} B$, $F_{4\frac{1}{2}} G_{=1}$, $F_5 G_{=2} B$, $F_6 G_{=1}$, $F_7 G_{=4}$, Lines between G & H.
	19.3	17.6	M?	393	$F_3 G_{=2}$, $F_{3\frac{1}{2}} G_{=1}$, $F_4 G_{=2} B$, $F_{4\frac{1}{2}} G_{=2}$, $F_5 G_{=2} B$, $F_{5\frac{1}{2}} G_{=3}$, $F_6 G_{=2}$, L. dbl?
44	18.4	11.9	F	394	Grand h = .5, 2 Lines below K.
	18.0	14.3	F	395	Grand h = .3
	17.4	10.0	F	396	Grand h = .3, 2 Lines below K.
	16.4	6.6	F.	397	Grand h = .5, 4 Lines below K.

April 20, 1889
Plate 2015.

Bark 35 Page	V.	H.	Type.	W.	Description of Lines on Spectrum.
46	16.2	7.2	I	398	$F_7 G = .3$
	16.8	12.6	$F^?$	399	G and $h = .5$
	16.2	12.	F	400	G and $h = .3$
	16.2	14.4	F	401	G and $h = .3$
	16.6	22.7	F	402	G and $h = .5$
	15.9	16.6	$I^?$	403	$F_7 G = .3$
	14.9	9.2	$K^?$	404	$F_3 G = .1 B$, $F_{3\frac{1}{2}} G = .1$, $F_{4\frac{1}{2}} G = .4$, $F_5 G = .1 B$, $F_{5\frac{1}{2}} G = .1$, $F_7 G = .3$.
	14.3	10.2	F	405	G and $h = .3$
	14.0	13.5	F	406	G and $h = .2$, G dbly, 2 Lines below K.
48	13.0	14.6	F	407	$G = .5$, $h = .3$
	12.8	16.7	F	408	G and $h = .2$
	12.5	20.2	$K^?$	409	$F_3 G = .2 B$, $F_{3\frac{1}{2}} G = .1$, $F_{4\frac{1}{2}} G = .2$, $F_5 G = .2 B$, $F_7 G = .3$, Lines between G and H.
	10.4	13.8	$F^?$	410	G and $h = .5$
	10.4	15.9	$K^?$	411	$F_3 G = .2 B$, $F_{4\frac{1}{2}} G = .1$, $F_5 G = .2 B$, $F_{5\frac{1}{2}} G = .1$, $F_7 G = .3$, Lines between G and H.
	10.6	17.4	K	412	$F_{2\frac{1}{2}} G = .1$, $F_3 G = .1 B$, $F_{3\frac{1}{2}} G = .2$, $F_{4\frac{1}{2}} G = .2$, $F_5 G = .2 B$, $F_{5\frac{1}{2}} G = .2$, $F_7 G = .3$, Lines between G and H.
	9.8	8.3	F	413	G and $h = .5$, 2 Lines below K.
	9.2	12.3	$F^?$	414	G and $h = .5$
	9.5	16.1	I	415	$F_7 G = .3$
	9.8	22.4	F	416	G and $h = .2$, 2 Lines below K.
	8.9	7.7	F	417	G and $h = .2$, 2 Lines below K.

April 21, 1889

Book 20 P. Page

Plate 305-6.

172	V.	No.	Type	Pin.	Description of lines on Spectra
	22.9	16.3	F?	418	$g+h=.5$
	21.8	8.0	F	419	$g+h=.5$
	21.3	13.6	F	420	$g+h=.3$
	21.7	14.3	I	421	$F7g=.3$
	21.5	15.5	F?	422	$g+h=.5$
	20.4	9.9	I	423	$F7g=.3$
	20.0	10.9	I	424	$F7g=.3$
	20.5	20.1	F	425	$g+h=.5$
174	20.3	23.6	F	426	$g+h=.5$
	19.8	6.6	F	427	$g+h=.5$
	19.4	14.1	D	428	Lines narrow.
	19.5	14.6	F	429	$g+h=.2$
	19.5	17.1	I?	430	$F7g=.3$
	19.4	20.1	F	431	$g+h=.5$
	18.5	10.4	F?	432	$g+h=.5$, 2 lines below K.
	18.5	13.3	F?	433	$g+h=.5$
	18.7	14.0	F	434	$g+h=.5$
	18.8	14.3	I	435	$F7g=.3$
	18.4	17.8	I	436	$F7g=.3$
	18.2	21.4	F	437	$g+h=.5$
176	17.5	10.0	F	438	$g+h=.5$, 3 lines below K.
	17.2	14.8	F	439	$g+h=.2$, 5 lines below K. addl.?
	17.0	15.4	I	441	$F7g=.3$
	17.0	7.9	I	442	$F7g=.3$
	16.3	8.9	F?	443	$g+h=.5$, 2 lines below K.
	16.5	21.7	F	444	$g+h=.5$
178	16.1	22.0	F?	445	$g+h=.5$
	15.4	14.7	F	446	$g+h=.5$

April 21, 1889.

Plate 305-6

Book 208 Page	V.	H.	Type.	No.	Description of Lines in Spectrum.
178	15.9	16.1	F	447	$g+h=.3$, 4 lines below K.
	15.5	20.9	F	448	$g+h=.3$, 2 lines below K.
	14.9	11.8	F	449	$F_7g=.3$
180	14.7	23.9	F	450	$g+h=.5$
	13.0	16.7	K	451	$F_2g=.2$, $F_3g=.2B$, $F_3\frac{1}{2}g=.1$, $F_4\frac{1}{2}g=.2$, $F_5g=.2B$, $F_5\frac{1}{2}g=.2$, $F_7g=.3$, Lines bet. $g+h$.
182	13.3	17.2	F	452	$g+h=.3$
	13.1	21.4	F	453	$g+h=.5$, 2 lines below K.
	12.6	8.3	K	454	$F_3g=.2B$, $F_4\frac{1}{2}g=.1$, $F_5g=.1B$, $F_5\frac{1}{2}g=.1$, $F_7g=.3$, Lines bet $g+h$.
	12.8	12.2	K	455	$F_4\frac{1}{2}g=.1$, $F_5g=.2B$, $F_5\frac{1}{2}g=.1$, $F_7g=.3$.
	12.0	17.3	F ₂	456	$g+h=.2$, $g+h$, lines below K.
	11.7	6.8	A	457	1 line above F.

April 22, 1889

Plate 2015					Description of Series on Spectra.
2345	V. H.	Type	No. Rem.		
	7.8 9.0	F ²	458	Band h=5, 2 Lines below K.	
	7.7 12.5	F ¹	459	Band h=3	
	7.0 17.7	F ¹	460	Band h=3	
	7.9 21.0	F ¹ ?	461	Band h=5, 3 Lines below K.	
	6.8 11.2	F ¹	462	Band h=5, 4 Lines below K.	
	5.0 6.7	F ¹ ?	463	Band h=3?	
	5.2 9.9	F ¹ ?	464	Band h=5	
	5.6 10.5	F ¹	465	Band h=3	
	5.6 13.5	F ¹	466	Band h=5	
	5.2 16.9	F ¹	467	Band h=5	
	5.0 17.9	F ¹	468	Band h=5	
	4.4 21.4	F ¹ ?	469	Band h=5	
	4.9 23.8	F ¹	470	Band h=5	
	3.5 7.2	I	471	F ₇ G=3	
	3.0 14.0	M ²	472	F ₇ G=2	
	3.0 18.0	F ¹	473	Band h=5	
	2.0 12.4	F	474	Band h=2	

April 23, 1889

Plate 3056

	V.	H.	Type	No.	Description of Series on Spectra.
23 ^h 15 ^m	11.6	11.8	F?	475	G r h = .5
B20, 184	11.1	19.5	F?	476	G r h = .5
	10.5	8.6	F	477	G r h = .3
	10.0	10.3	F	478	G r h = .3
186	10.1	13.9	F	479	G r h = .3
	10.2	20.7	I	480	F 7 G = .3
	10.6	22.5	I	481	F 7 G = .3
188	9.5	20.7	I	482	F 7 G = .3
	8.7	10.2	F?	483	G r h = .3
	8.5	10.8	I	484	F 7 G = .3
	8.6	14.8	F?	485	G r h = .5
	8.3	20.8	F?	486	G r h = .5
	8.3	23.3	I?	487	F 7 G = .3 lines between G r h
	7.7	5.6	F?	488	G r h = .5
190	7.3	13.0	I	489	F 4 G = .3, F 7 G = .3
	7.6	16.9	F	490	G r h = .2, 3 lines below K.
	7.9	20.0	F?	491	G r h = .5?
	6.8	8.6	F?	492	G r h = .5?
192	6.9	16.8	F	493	G r h = .5
	6.5	21.6	K	494	F 3 G = .2 B, F 4 1/2 G = .2, F 5 G = .2 B, F 7 G = .3, lines between G r h.
	5.4	9.5	I	495	F 4 G = .3, F 7 G = .3 lines bet. G r h.
	5.5	18.7	I	496	F 7 G = .3
194	4.8	8.0	F?	497	G r h = .5
	4.3	11.4	F?	498	G r h = .5
	4.4	14.1	F?	499	G r h = .5?
	4.7	15.4	K	500	F 3 G = .2 B, F 4 1/2 G = .1, F 5 G = .2 B, F 5 1/2 G = .1, F 7 G = .3, lines bet. G r h, lines below K.

April 23, 1889.

Plate 3056

T	H	Type	No. Run	Description of lines on Spectra
4.3	18.8	I	501	$F7\ G = .3$
4.4	19.7	F	502	$G\ r\ h = .15?$
4.8	20.6	I?	503	$F7\ G = .3$
3.3	18.3	F	504	$G\ r\ h = .3$
196	2.6	8.4	F	505 $G\ r\ h = .3$
2.9	15.2	K	506	$F3\ G = .12\ B$ $F4\ 1/2\ G = .1$ $F5\ G = .2\ B$, $F7\ G = .3$. Lines bet. $G\ r\ h$.

0 57 At Lt. 5.2 $F7\ m\ r\ e. 60\ 5.8$ $F\ Ch. 7.0$ Box No 594.

April 27, 1889.

Plate 1923

	r	H	Type	No. Rein.	Description of lines on Spectra.
B, 20, 198	18.4	14.7	F	507	$G\gamma h = .5$, G dbl?
	17.4	15.6	I	508	$F4\frac{1}{2}G = .2$, $F7G = .3$,
	16.6	20.9	F	509	$G\gamma h = .5$
	14.2	10.6	F	510	$G\gamma h = .3$, G dbl, 4 lines below K.
200	13.1	8.6	F	511	$G\gamma h = .3$
	13.6	9.3	K	512	$F2\frac{1}{2}G = .2$, $F3G = .2$ B, $F4\frac{1}{2}G = .2$, $F5G = .2$ B, $F7G = .3$, line bet. $G\gamma h$.

April 28, 1889.

Plate 1923

γ	H	Type	No. Run.	Description of lines or spectrum
B 20 202	12.0 7.2	I	513	$F 5 G = .2$, $F 7 G = .3$
	8.9 10.8	I	514	$F 5 G = .2$, $F 7 G = .3$, Lines between $G 5 H$
	8.8 18.2	I	515	$F 4\frac{1}{2} G = .2$, $F 7 G = .3$
204	6.5 14.4	I	516	$F 4\frac{1}{2} G = .2$, $F 7 G = .3$
	4.6 12.1	I	517	$G 5 H = .3$
	2.9 13.6	F?	518	$G 5 H = .5$? 3 lines below K
	2.8 19.0	K	519	$F 3\frac{1}{2} G = .1 B$, $F 4\frac{1}{2} G = .2$, $F 5 G = .2 B$, $F 7 G = .3$, lines bet. $G 5 H$

St Lt 54 F mol. 7.3 7.0 F ch 7.5 Box No. 232

Plate 3132.

	21.8 17.6	F?	520	$G 5 H$ dbl. = .2
	18.4 13.2	F	521	$G 5 H = .5$, 2 lines below K
206	17.0 5.8	M?	522	$F 4\frac{1}{2} G = .2$, $F 7 G = .3$
	16.8 13.9	F	523	$G 5 H = .2$, G dbl. 5 lines below K
	14.0 6.7	F	524	$G 5 H = .2$, G dbl. 3 lines below K
	13.4 9.3	F?	525	$G 5 H = .2$?
	13.4 18.4	K	526	$F 3\frac{1}{2} G = .3 B$, $F 4\frac{1}{2} G = .1$, $F 5 G = .1 B$, $F 5\frac{1}{2} G = .2$, $F 6\frac{1}{2} G = .2$, $F 7 G = .3$, lines bet. $G 5 H$
	13.8 19.2	I?	527	$F 4\frac{1}{2} G = .2$, $F 7 G = .3$
208	13.3 19.8	F	528	$G 5 H = .5$?, G dbl. 4 lines below K
	12.8 15.7	K	529	$F 3 G = .3 B$, $F 4\frac{1}{2} G = .2$, $F 5 G = .2 B$, $F 5\frac{1}{2} G = .2$, $F 6\frac{1}{2} G = .2$, $F 7 G = .3$, lines bet. $G 5 H$
	11.4 19.8	F?	530	$G 5 H = .5$, G dbl?

April 28, 1889.

Plate 3132

B 20	208	r H Type	No. Run.	Description of Spectra.
	9.2 11.9	F?	531	$g_{rh} = .3$
	8.5 17.4	K	532	$F3G = .2B$ $F4\frac{1}{2}G = .2$ $F5G = .2B$ $F7G = .3$, 'lines bet. G & H
	7.5 6.5	M	533	$F3G = .2$ $F4\frac{1}{2}G = .2$ $F5G = .3$, $F7G = .2$
	7.2 16.4	I	534	$F7G = .3$
210	6.2 16.9	M	535	$F3G = .2$ $F5G = .2$
	4.7 13.2	K?	536	$F3G = .3B$ $F3\frac{1}{2}G = .12$ $F5G = .3$, $F6\frac{1}{2}G = .2$, $F7G = .3$
	4.2 16.6	F	537	$g_{rh} = .2$, g_{dbl} , 2 lines below K
	4.7 19.5	I?	538	$F3G = .2$ $F7G = .3$, lines bet. G & H ,
23	10	St. Lt. 5.0	F.M.C. 7.4 6.8	FCh. 7.0 Box No. 501

Plate 2561

B 30- 58	20.0 13.7	I	539	$F7G = .3$
	17.3 19.8	F?	540	$g_{rh} = .5$
	17.4 19.9	F	541	$g_{rh} = .5$, 3 lines below K
	17.5 24.5	M?	542	$F3G = .2$ $F7G = .3$ lines bet. G & H ,
	16.8 8.2	I	543	$F4\frac{1}{2}G = .2$ $F7G = .3$
	16.2 12.2	F?	544	$g_{rh} = .5$
	15.2 10.3	F?	545	$g_{rh} = .5$?
	15.0 22.6	F	546	$g_{rh} = .5$
	14.3 15.5	M?	547	$F7G = .2$
	14.8 2.5	F	548	$g_{rh} = .3$
60	13.6 11.0	F	549	$g_{rh} = .2$
	12.5 10.9	F?	550	$g_{rh} = .3$
	12.6 14.2	F	551	$g_{rh} = .2$ g_{dbl} , 2 lines below K

Plate 2561 April 1889

	λ	H	Type	Rev.	Description of lines on spectrum
B 35 $\frac{1}{2}$ 60	12.5	15.1	F	552	G r h dbl = .3
	12.4	21.9	F?	553	G r h dbl = .5, 2 lines below K
	12.1	23.0	F?	554	G r h = .5
	11.4	10.4	F	555	G r h = .3, G dbl
	11.8	12.3	F	556	G r h = .5
	11.0	13.8	F	557	G r h = .3 3 lines below K
	10.5	8.2	F?	558	G r h = .3
	10.2	9.2	I	559	F 7 G = .3
62	10.3	21.5	F	560	G r h = .5
	9.0	17.6	F	561	G r h = .5
	8.4	14.0	F?	562	G r h = .5? 4 lines below K
	6.4	19.6	I	563	F 7 G = .3
	4.9	10.7	F	564	G r h = .5
	4.2	12.3	M?	565	F 4 $\frac{1}{2}$ G = .1 B, F 7 G = .3
64	3.0	13.0	F?	566	G r h = .5
	2.9	15.0	F?	567	G r h = .5?

April 29, 1889.

Plate 2542

γ	H	Type	No.	Description of Spectra.
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B35 p 66

20.0	12.6	K	568	$F3G=.2B$, $F4\frac{1}{2}G=.2$ $F5G=.2B$
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$F7G=.3$ lines bet. $G5H$, Bands below K,

19.0	16.4	F	569	$G5H=.5-$
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19.0	17.5	F	570	$G5H=.5-$ 2 lines below K
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19.4	18.1	F	571	$G5H=.3$
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19.6	20.8	F?	572	$G5H=.5?$
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18.2	16.0	F?	573	$G5H=.5?$
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68 17.2	10.7	I?	574	$F7G=.2?$
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16.1	7.2	I	575	$F7G=.2$
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16.6	15.7	F?	576	$G5H=.5?$ 3 lines below K
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70 15.9	8.3	I	577	$F7G=.3$
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15.7	9.2	F?	578	$G5H=.3?$
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15.4	10.4	F?	579	$G5H=.3$
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14.6	8.3	F	580	$G5H=.5$ 2 lines below K
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14.6	8.9	F	581	$G5H=.5$
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14.1	9.1	F	582	$G5H$ dbl $=.2$
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14.4	10.9	F	583	$G5H=.5?$
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14.1	16.1	I	584	$F7G=.3$
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14.6	23.0	I	585	$F4\frac{1}{2}G=.2$, $F6\frac{1}{2}G=.2$, $F7G=.3$, lines bet. $G5H$,
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13.0	13.5	F	586	$G5H=.5$
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13.0	17.2	I	587	$F7G=.3$
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12.6	10.7	F	588	$G5H=.5$ 2 lines below K
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72 12.3	17.0	F	589	$G5H=.3$
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12.0	22.3	F	590	$G5H=.3$
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11.5	16.6	F?	591	$G5H=.5-$
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11.2	17.2	I	592	$F7G=.3$, lines bet. $G5H$
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10.4	10.3	M	593	$F3G=.1B$, $F4\frac{1}{2}G=.2$, $F7G=.3$, lines bet. $G5H$
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April 29, 1889.

Plate 2542

	γ	H	Type	No. Rem.	Description of lines on spectra
B. 35 μ	10.8	10.8	\mathcal{I}	594	$F\gamma G = .3$
	10.5	12.5	$F?$	595	$G\gamma H = .5$
	10.5	18.6	F	596	$G\gamma H = .3$, 2 lines below K
	10.5	19.9	F	597	$G\gamma H = .3$
	10.9	21.1	F	598	$G\gamma H = .3$ 2 lines below K
	10.5	23.9	F	599	$G\gamma H = .5$
74	9.4	12.1	$F?$	600	$G\gamma H = .5?$
	9.7	15.5	F	601	$G\gamma H = .3$
	9.2	15.7	\mathcal{I}	602	$F\gamma G = .3$
	8.6	18.3	F	603	$G\gamma H = .5?$
	7.2	10.1	\mathcal{I}	604	$F\gamma G = .3$
76	7.4	19.4	F	605	$G\gamma H = .5$, 3 lines below K
	7.6	21.2	F	606	$G\gamma H = .2$, 3 lines below K
	6.5	8.6	\mathcal{I}	607	$G\gamma H = .5$
	6.1	12.2	F	608	$G\gamma H = .5$
	6.2	12.7	M	609	$F\gamma G = .2 B$ $F\gamma G = .2 B$ $F\gamma G = .3$, lines bet $G\gamma H$.
	6.5	11.4	F	610	$G\gamma H = .5$
	5.5	21.8	F	611	$G\gamma H = .5$
78	4.9	15.0	F	612	$G\gamma H = .5$
	3.0	19.1	F	613	$G\gamma H = .3$
	2.6	12.5	F	614	$G\gamma H = .5$
	1.8	18.7	$F?$	615	$G\gamma H = .5$

0 50

St. Lt. 50 Fmoc 6.4 6.2 Vt. Ch 7.2 Box No 546

April 30, 1889.

Plate 2631

	λ	H	Type	$\lambda_{\text{sun.}}$	Description of lines on Spectra.
B35 p 80	21.0	12.2	F	616	$g r h = .2$
	19.3	12.0	F?	617	$g r h = .5$
	18.1	6.4	F	618	$g r h = .5$
	17.6	10.9	F?	619	$g r h = .5$
	16.4	11.5	F	620	$g r h = .5$
	16.6	12.9	F	621	$g r h = .5$, 2 lines below K
82	15.3	11.6	F	622	$g r h = .5$
	15.8	22.0	F	623	$g r h = .3?$
	13.5	6.4	I	624	$F 7 G = .3$
	12.7	7.1	I?	625	$F 7 G = .2$
	12.2	9.2	I	626	$F 7 G = .3$
	11.9	16.2	I	627	$F 4 \frac{1}{2} G = .3$, $F 7 G = .3$
	11.7	16.9	I	628	$F 7 G = .3$
84	10.1	7.9	F?	629	$g r h = .5$
	9.9	11.6	F?	630	$g r h = .5$
	8.8	8.1	F?	631	$g r h = .5$
	7.6	5.9	I?	632	$F 7 G = .3$
86	7.5	14.5	I?	633	$F 7 G = .3$
	7.4	19.0	F?	634	$g r h = .5$
	5.1	11.6	F	635	$g r h = .5$
	4.4	22.4	F	636	$g r h = .5$
	3.9	17.3	F?	637	$g r h = .5?$
	3.5	21.1	F	638	$g r h = .5$
	3.7	23.5	F	639	$g r h = .5$
	2.4	7.4	F?	640	$g r h = .5$, 4 lines below K
	2.8	9.5	F?	641	$g r h = .5$

St. Lt. 5.5 F.M.C. 6.1 5.6 F.Ch. 6.7 Box No. 518

May 1st 1889

Plate 3133

	r	H	Type	No. Run.	Description of lines on Spectra
B20 p 212	22.1	6.6	I	642	$F7\ G = .3$
	21.2	16.2	K?	643	$F\frac{1}{2}\ G = .2$, $F7\ G = .3$, $F4\frac{1}{2}\ G = .3$, $F5\ G = .1$, $F6\ G = .2$, $F6\frac{1}{2}\ G = .1$, $F7\ G = .3$, Lines bet. G & H .
	19.2	18.2	K	644	$F3\ G = .1$, $F5\ G = .2$, $F7\ G = .3$.
	17.2	18.7	I	645	$F4\frac{1}{2}\ G = .2$, $F7\ G = .3$.
	16.1	17.3	G	646	$G\ H = .2$, G dbl. Bright lines bet. F & G , 3 lines below K .
	14.3	11.4	I	647	$F4\frac{1}{2}\ G = .2$, $F5\frac{1}{2}\ G = .1$, $F7\ G = .3$.
	14.0	14.2	M?	648	$F4\frac{1}{2}\ G = .2$, $F7\ G = .3$.
	14.3	19.3	F?	649	$G\ H = .5$
214	13.4	13.4	I?	650	$F7\ G = .3$
	11.0	6.1	F	651	$G\ H$ dbl. = .3, 2 lines below K
	10.7	6.6	F?	652	$G\ H = .5$
	10.6	14.0	M	653	Several bright bands & faint lines between F & G , several lines bet. G & H , $G\ 3\ H = H$?
	9.2	19.5	F?	654	$G\ H = .5$?
	8.0	8.6	F	655	$G\ H = .3$
	8.1	8.7	I	656	$F4\frac{1}{2}\ G = .2$, $F7\ G = .3$
	8.4	11.0	F	657	$G\ H = .3$
B39 p 4	6.5	7.0	F	658	$G\ H = .5$?
	6.1	15.8	I	659	$F7\ G = .3$
	4.3	11.3	F	660	$G\ H = .5$
	4.8	15.3	I	661	$F7\ G = .3$
	3.5	12.8	I	662	$F7\ G = .2$
	2.1	16.0	I	663	$F7\ G = .2$
	2.5	21.1	F?	664	$G\ H = .3$?
	2.5	16.8	F	665	$F\ H = .3$

Box No. 500

1887phae.proj. 849P

May 1st 1889.

Plate 3145.

	ν	H	Type	No.	Description of lines on Spectra.
B 39	6	22.5	21.1	M	665 $F 2\frac{1}{2} G = .12$ $F 4\frac{1}{2} G = .2$, $F 7 G = .3$
		16.0	14.6	F?	666 $G 5 H = .5?$
		15.2	20.0	F?	667 $G 5 H = .5?$
		13.0	15.1	F?	668 $G 5 H = .5?$ 2 lines below K
		13.4	21.4	I	669 $F 7 G = .3$
		12.1	8.5	I	670 $F 7 G = .3$
		12.0	13.4	K	671 $F 2\frac{1}{2} G = .1$, $F 3 G = .2 B$, $F 3\frac{1}{2} G = .1$, $F 4\frac{1}{2} G = .2$, $F 5 G = .1 B$, $F 5\frac{1}{2} G = .1$, $F 6 G = .2 B$, $F 6\frac{1}{2} G = .2$, $F 7 G = .3$, lines bet $G 5 H$
		12.1	16.1	F	672 $G 5 H = .5$
		11.6	22.7	I	673 $F 7 G = .3$
8		9.1	15.8	I	674 $G 5 H = .5$ 2 lines below K
		9.2	16.0	K	675 $F 3 G = .1 B$, $F 5 G = .2 B$, $F 7 G = .2$
		8.5	10.4	F	676 $G 5 H = .3$ 5 lines below K
		8.2	10.9	I	677 $F 7 G = .3$
		8.7	13.9	F	678 $G 5 H = .5$
		8.4	18.2	F?	679 $G 5 H = .5$
		8.8	21.8	M	680 Several B. Bands & ft. lines bet. $F 7 G$, several lines bet $G 5 H$ $G 3 H = H$.
		7.0	16.1	F	681 $G 5 H = .3$
		6.5	12.4	M?	682 Several B. Bands & ft. lines bet $F 7 G$
		6.4	15.2	F	683 $G 5 H = .3$ 3 lines below K
		5.0	11.4	I	684 $F 7 G = .3$
		5.5	11.6	B	685 $F 6 G = .1$, $H 6 H = .1$
		4.6	16.3	F	686 $G 5 H = .5$
		Re Hb. 5.4			$F 9 H = .7$, $3 G = .6$ $F 4 H = .6$ Box No. 510.

May 1st 1889.

Plate 3146.

	λ	H	Type	$\tilde{\lambda}_{\text{em.}}$	Description of lines on Spectra.
B 39	10	22.4	18.6	I?	687 $F4\frac{1}{2}G=3$, $F5\frac{1}{2}G=2$, $F7G=1.3$ lines bet. G & H .
	19.2	8.3	I	688	$F7G=1.3$.
	18.5	10.5	I	689	$F4\frac{1}{2}G=3$, $F5\frac{1}{2}G=2$, $F7G=1.3$.
	14.6	15.4	F?	690	$G5h=.5$
	13.8	6.6	I?	691	$F4\frac{1}{2}G=2$, $F7G=1.3$
	12.1	7.6	F?	692	$G5h=.5?$
	12.8	9.0	F?	693	$G5h=.5?$
	12.9	17.3	I	694	$F7G=1.3$
	11.8	10.7	M	695	B, Bands & ft. lines bet. F & G .
	10.2	21.4	K	696	$F3G=.1$, $F3\frac{1}{2}G=.2$ B, $F4\frac{1}{2}G=.2$, $F5G=.1$ B, $F5\frac{1}{2}G=.2$, $F6\frac{1}{2}G=.2$, $F7G=.3$. lines bet. G & H .
12	10.1	23.6	F?	697	$G5h=.5?$
	9.8	17.0	F	698	$G5h=.5$
	8.8	17.1	F	699	$G5h=.3$ 5 lines below K
	8.3	17.4	I	700	$F7G=1.3$
	7.4	8.1	M?	701	$F7G=1.3$, $F3G=.1$ B
	7.2	20.2	F	702	$G5h=.5$
	6.0	17.9	I	703	$F7G=1.2$
	6.5	22.3	F?	704	$G5h=.3$
	2.9	9.3	F	705	$G5h=.5$
	2.7	12.7	F	706	$G5h=.3$
14	2.4	20.4	F?	707	$G5h=.5?$

At. Lt. 5.2 $F.9m10.7.37.0$ $F.Ch.7.0$ Box No. 510

B39 p 16 Plate

v	H	Type	No. Perm.	Description of lines on spectra
19.0	21.2	I?	708	$F7\ G = .3$
17.6	7.9	I?	709	$F7\ G = .3$
17.3	10.9	I?	710	$F7\ G = .3$
13.0	18.6	F?	711	$G\ F\ h = .5$
10.0	18.3	I	712	$F4\frac{1}{2}\ G = .2\ F7\ G = .3$
8.2	12.2	I?	713	$F4\frac{1}{2}\ G = .2\ F7\ G = .3$
7.3	7.9	F?	714	$G\ F\ h = .5$
6.5	15.9	F?	715	$G\ F\ h = .5$
18	5.6	23.7	F 716	$G\ F\ h\ dbl = .2$
2.1	12.9	F?	717	$G\ F\ h = .5$
2.4	16.7	F	718	$G\ F\ h = .3$

Alt. 5.3 $F\ M\ F\ C. 7.5\ 7.0$ $F\ Ch\ 7.1$ Bot. No 546.

May 9, 1889

B39 p 20 Plate 2688.

v	H	Type	λ_{min}	Description of lines on Spectra
22.5	8.9	I	719	$F7G = .3$
22.6	19.6	K	720	$F2\frac{1}{2}G = .2$, $F3G = .2B$, $F3\frac{1}{2}G = .2$, $F4\frac{1}{2}G = .3$, $F5G = .2B$, $F5\frac{1}{2}G = .3$, $F6G = .1$, $F6\frac{1}{2}G = .1$, $F7G = .3$, Lines bet. G & H .
21.4	6.3	F	721	$G5h$ dbl? = .5. 2 lines below K
19.7	12.2	K	722	$F2\frac{1}{2}G = .1$, $F3G = .3B$, $F4\frac{1}{2}G = .3$, $F5\frac{1}{2}G = .2$, $F7G = .3$, Lines bet. G & H
19.7	15.1	F	723	$G5h = .5$
18.1	16.2	I	724	$F4\frac{1}{2}G = .2$, $F7G = .3$
18.6	21.0	K	725	$F2\frac{1}{2}G = .1$, $F3G = .1B$, $F3\frac{1}{2}G = .1$, $F4\frac{1}{2}G = .2$, $F5\frac{1}{2}G = .1$, $F7G = .3$, Lines bet. G & H .
17.1	18.7	F	726	$G5h = .3$
16.5	21.9	F	727	$G5h = .5$
16.8	23.3	I	728	$F4\frac{1}{2}G = .2$, $F7G = .3$, Lines bet. G & H
15.0	17.7	K	729	$F3G = .2B$, $F3\frac{1}{2}G = .1$, $F4\frac{1}{2}G = .2$, $F5G = .2B$, $F5\frac{1}{2}G = .2$, $F7G = .3$, Lines bet. G & H .
15.3	22.0	I	730	$F7G = .3$
14.9	6.3	I	731	$F7G = .3$
14.3	12.0	F	732	$G5h = .5$ 1 line below K
13.5	7.5	F	733	$G5h = .2$
22	13.1	I	734	$F4\frac{1}{2}G = .2$, $F7G = .3$.
13.5	13.0	I	735	$F4\frac{1}{2}G = .2$, $F5\frac{1}{2}G = .2$, $F7G = .3$. Lines bet. G & H .
13.5	21.4	I	736	$F7G = .3$.
12.8	10.5	I	737	$F7G = .3$.
12.9	13.0	I	738	$F7G = .3$.
12.4	13.8	I	739	$F7G = .3$.
12.7	17.7	I	740	$F4\frac{1}{2}G = .2$, $F5\frac{1}{2}G = .2$, $F7G = .3$. Lines bet. G & H .
12.0	20.7	K	741	$F2\frac{1}{2}G = .2$, $F3G = .2B$, $F4\frac{1}{2}G = .2$, $F5G = .2B$, $F5\frac{1}{2}G = .1$, $F7G = .3$, Lines bet. G & H .

May 9, 1889.

B39 p 22 Plate 2688

γ	H	Type	Reim.	Description of lines on Spectra
10.8	6.4	I	742	$F4\frac{1}{2}G=.2$, $F7G=.3$
10.0	13.3	F	743	$G8H=.5$, $G8H?$, 2 lines below K
10.6	13.6	F	744	$G8H=.3$
9.1	8.1	K	745	Several bright & faint lines. Lines below K
9.5	15.8	K	746	$F4\frac{1}{2}G=.1$, $F5G=.2B$, $F5\frac{1}{2}G=.1$, $F7G=.2$, $F8\frac{1}{2}G=.2$, lines bet. $G8H$. Lines below K
8.7	12.1	F	747	$G8H=.3$
24 8.1	19.9	K	748	$F4\frac{1}{2}G=.1$, $F5G=.1B$, $F5\frac{1}{2}G=.2$, $F6\frac{1}{2}G=.2$, $F7G=.3$, lines bet $G8H$.
7.4	11.7	I	749	$F4\frac{1}{2}G=.2$, $F7G=.3$
6.7	15.5	I	750	$F4\frac{1}{2}G=.2$, $F7G=.3$, Lines bet $G8H$
6.7	20.5	I	751	$F7G=.3$
5.5	20.3	F	752	$G8H=.5$
4.9	13.9	I	753	$F7G=.3$, Lines bet. $G8H$
4.3	15.2	I	754	$F4\frac{1}{2}G=.2$, $F7G=.3$
3.8	19.7	F	755	$G8H=.3$
2.6	17.6	F	756	$G8H=.3$

St. Lt. 4.9 F.M.C. 7.5 6.8 F.Ch. 6.9 Box No. 615

K

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May 9th 1889.

B39p. 26

Plate

γ	H	Type	No.	Description of lines on Spectra.
22.5	19.9	F?	757	$G\gamma h = .5$, 2 lines below K
20.5	9.2	F	758	$G\gamma h$ dbl? = .2
19.5	16.3	F	759	$G\gamma h = .3$ G dbl?
19.0	17.2	F	760	$G\gamma h = .5$
17.0	9.3	F?	761	$G\gamma h = .5$
15.8	10.1	F	762	$G\gamma h = .5$
15.0	16.9	F	763	$G\gamma h = .5$
14.4	9.3	F	764	$G\gamma h$ dbl? = .2 2 lines below K
14.6	12.9	S	765	$F\gamma G = .2$
13.1	14.7	S	766	$F\gamma G = .3$
28 11.4	9.6	F?	767	$G\gamma h = .5$
10.8	15.1	K	768	$F3G = .2$ B $F5G = .3$ B, $F5\frac{1}{2}G = .2$, $F7G = .3$, Lines bet. $G\gamma h$
8.3	13.1	F?	769	$G\gamma h = .5$
8.9	20.0	F	770	$G\gamma h = .5$
7.2	22.0	F	771	$G\gamma h = .2$
5.4	11.0	F	772	$G\gamma h = .5$
30 3.5	12.3	F	773	$G\gamma h = .5$

St. Lt. 6.0 F_{MTC} , 6.6 6.0 F_{Ch} , 6.5 Box No. 609

May 10, 1889.

Plate 2808

B39 p 32	λ	λ'	Type	No. Kim.	Description of lines in Spectra
	21.6	14.9	F	774	$G\gamma h = .5$
	20.2	16.8	F	775	$G\gamma h = .5$
	20.3	17.7	K	776	$F2\frac{1}{2}G = .2$, $F3G = .2B$, $F3\frac{1}{2}G = .2$, $F4\frac{1}{2}G = .2$ $F5G = .2B$, $F7G = .3$, Lines bet. $G\gamma h$
	20.4	22.3	F	777	$G\gamma h$ dbl? = .3, 2 lines below K
	17.0	17.7	I	778	$F7G = .3$
	17.2	18.6	F	779	$G\gamma h = .3$
	15.9	8.9	F	780	$F7G = .3$
	15.0	16.4	G	781	$G\gamma h = .2$ Gdbl, Bright line bet $F5G$, 2 lines below K.
34	13.0	5.8	I	782	$F7G = .3$
	13.6	22.6	K	783	$F3G = .2B$, $F4\frac{1}{2}G = .1$, $F5G = .1B$, $F7G = .3$
	12.6	7.5	I	784	$F4\frac{1}{2}G = .2$, $F5\frac{1}{2}G = .1$, $F7G = .3$
	12.0	7.8	K	785	$F3G = .2B$, $F4\frac{1}{2}G = .2$, $F5G = .1B$, $F7G = .3$, Lines bet. $G\gamma h$.
	12.0	8.0	I	786	$F7G = .3$
	11.2	23.5	I	787	$F7G = .3$
	10.4	9.0	F	788	$G\gamma h = .5$ Gdbl.
	9.0	22.9	I	789	$F7G = .3$, Lines bet $G\gamma h$.
	8.8	9.2	I	790	$F7G = .2$
36	6.9	8.5	F	791	$G\gamma h = .5$
	6.4	10.8	F	792	$G\gamma h = .5$
	5.9	6.2	F?	793	$G\gamma h = .5$
	5.4	11.2	F	794	$G\gamma h = .5$

St. L. 53 F.M.C. 7563 FCh. 64 - Ref No 585

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May 13, 1889.

21 ^h 30 ^m		Plate 3127		No.		Description of lines in spectra.	
B39	p 38	γ	π	Type	Rem.		
18.5	13.2	B	795			$F6G = .2$, $F6H = .2$	
15.5	12.2	K	796			$F3G = .2B$, $F3\frac{1}{2}G = .1$, $F4\frac{1}{2}G = .1$, $F5G = .2B$, $F7G = .3$, Lines bet. G & H .	
15.8	12.8	F	797			$G5H = .3$	
15.5	15.1	K	798			$F3G = .3B$, $F3\frac{1}{2}G = .1$, $F4\frac{1}{2}G = .2$, $F5G = .3B$, $F6G = .1$, $F7G = .3$, Lines bet. G & H .	
14.2	16.5	K	799			$F3G = .2B$, $F4\frac{1}{2}G = .2$, $F5G = .2B$, $F5\frac{1}{2}G = .1$, $F7G = .3$, Lines bet. G & H .	
13.6	16.4	K?	800			$F1\frac{1}{2}G = .1B$, $F3G = .3B$, $F3\frac{1}{2}G = .1$, $F4\frac{1}{2}G = .2$, $F5G = .3B$, $F5\frac{1}{2}G = .2$, $F7G = .3$, Lines bet. G & H .	
13.5	16.6	K	801			$F5G = .2B$, $F7G = .3$.	
40 12.3	6.9	F	802			$G5H = .5$	
12.5	15.8	K	803			$F3G = .1B$, $F4\frac{1}{2}G = .1$, $F5G = .1B$, $F7G = .2$.	
12.5	15.8						
11.8	8.5	F	804			$G5H = .5$	
11.6	16.6	F	805			$G5H = .5$	
11.8	17.6	F?	806			$G5H = .5$	
10.5	10.6	G	807			$G5H = .2$, Several bright & faint lines bet. F & G .	
10.1	16.1	M?	808			$F3G = .1B$, $F4\frac{1}{2}G = .2$, $F5G = .2B$, $F5\frac{1}{2}G = .1$, $F7G = .3$.	
9.0	7.9	K	809			$F3G = .2B$, $F4\frac{1}{2}G = .2$, $F5G = .3B$, $F5\frac{1}{2}G = .2$, $F7G = .3$, Lines bet. G & H .	
8.1	13.5	K	810			$F3G = .1B$, $F4\frac{1}{2}G = .2$, $F5G = .1B$, $F7G = .3$.	
42 7.3	16.3	F	811			$G5H = .5$	
6.8	8.6	K	812			$F2\frac{1}{2}G = .1$, $F3G = .2B$, $F4\frac{1}{2}G = .2$, $F5G = .2B$, $F7G = .3$, Lines bet. G & H .	

May 13, 1889.

Plate 3127

B39 p	42	V	H	Type	Rem.	Description of lines on spectrum
6.2	16.1	F	813			$G\gamma H = .3$ Bdbl?
5.0	9.7	K	814			$F3G = .2B$, $F4\frac{1}{2}G = .1$, $F5G = .1B$, $F7G = .3$, Lines bet. $G\gamma H$,
4.3	21.3	F?	815			$G\gamma H = .5$

St Lt. 5.2 Hore 756.7 Fch. 6.8 Box No 501

Plate 2841

22.5	13.0	F	816		$G\gamma H = .5$
21.0	9.7	F	817		$G\gamma H = .5$
21.3	11.1	K	818		Several bright & faint lines bet. $F5G$, " " " " " " " " $G\gamma H$

Bands below K

21.6	12.7	F	819		$G\gamma H = .5$
18.8	13.3	D	820		$F7G = .3$
46 17.5	14.0	F	821		$G\gamma H = .3$
16.8	10.1	F	822		$G\gamma H = .5$
16.7	10.5	F?	823		$G\gamma H = .5?$
16.2	15.1	D	824		$F7G = .3$
16.6	21.1	D	825		$F4\frac{1}{2}G = .2$, $F7G = .3$
15.7	9.8	F	826		$G\gamma H = .2$
15.2	17.7	K	827		$F3G = .2B$, $F5G = .2B$, $F5\frac{1}{2}G = .1$, $F7G = .3$, Lines bet. $G\gamma H$.
15.3	20.4	K?	828		$F3G = .1B$, $F5G = .1$, $F7G = .3$, Lines bet. $G\gamma H$.
48 14.0	16.4	G	829		$G\gamma H = .3$, Bdbl? Several bright & faint lines bet. $F5G$.
14.4	21.7	F?	830		$G\gamma H = .5$
14.0	24.5	K?	831		$F3G = .2B$, $F4\frac{1}{2}G = .1$, $F5G = .1B$, $F7G = .3$, Lines bet. $G\gamma H$.

May 13, 1889

Plate 3127

B39 p 48

γ	H	Type	No.	Description of lines on spectra.
14.0	23.2	F	832	$G\gamma h = .2$
13.7	12.3	F	833	$G\gamma h = .3$
13.2	14.2	F	834	$G\gamma h = .3$
13.0	15.3	D	835	$F\gamma G = .3$
13.0	16.0	D	836	$F4\frac{1}{2} B = .2, F\gamma G = .3$
13.1	22.3	F	837	$G\gamma h = .5$
12.8	17.5	F	838	$G\gamma h = .3, G\delta h?, 2$ lines below K
12.4	23.3	D	839	$F\gamma G = .3$
50 11.4	7.4	D	840	$F\gamma G = .2$
11.1	11.9	K D	841	$F\gamma G = .2$
11.1	12.1	D	842	$F\gamma G = .3$
11.0	21.7	K	843	$F3 G = .1 B, F\gamma G = .2 B, F\gamma G = .2$
10.8	8.5	F	844	$G\gamma h = .3, 3$ lines below K
10.6	15.5	K	845	Several B & ft. lines bet. F & H.
10.6	18.5	F	846	$G\gamma h = .2, G\delta h, 2$ lines below K
10.2	21.2	F	847	$G\gamma h = .3$
10.6	23.3	F	848	$G\gamma h = .4$
9.0	7.9	F	849	$G\gamma h = .3$
6.9	13.4	F?	8	

1987chae profi 8407

May 16, 1889

23 ^{h m} 30

B35

Plate 1729

γ H Type ^{No.} Rm. Description of lines on spectrum.

18.5 18.8 J 871 $F4\frac{1}{2} G = .2$, $F7 G = .3$

15.5 16.8 J 872 $F4\frac{1}{2} G = .2$, $F7 G = .3$

15.0 22.4 G? 873 $G5h = .2$, Several Bright & faint lines

12.6 12.4 J 874 $F4\frac{1}{2} G = .2$, $F7 G = .3$

11.5 16.6 F? 875 $G5h = .5$

11.4 18.0 G? 876 $G5h = .2$ Several bright & faint lines

8.0 7.7 F? 877 $G5h = .5$ - 2 lines below K.

Pt. Lt. 6.5 Fm. C. 7.6 7.5 Box No. 201

May 26, 1889.

h m		Plate 1791		No.		Description of lines on spectra.
21	40	λ	μ	λ	μ	
1335	92	218	129	F?	878	$G\Gamma h = .5$
		210	207	F?	879	$G\Gamma h = .5$
		188	132	F?	880	$G\Gamma h = .3$
		174	212	F?	881	$G\Gamma h = .5-$
		163	58	F	882	$G\Gamma h = .5-$
94		153	98	F?	883	$G\Gamma h = .5?$
		157	171	F?	884	$G\Gamma h = .5$
		151	179	F	885	$G\Gamma h = .3$
		145	101	F	886	$G\Gamma h = .3$
		142	162	D	887	$F4\frac{1}{2}G = .2$, $F7G = .3$, bands below K
		140	174	F?	888	$G\Gamma h = .5?$, 2 lines below K
		125	150	F?	889	$G\Gamma h = .5-$
		120	162	F?	890	$G\Gamma h = .6?$, 4 lines below K
96		106	164	D	891	$F7G = .3$ lines bet. $G\Gamma H$
		100	216	F?	892	$G\Gamma h = .5-$
		103	235	F	893	$G\Gamma h = .5-$
		81	82	F	894	$G\Gamma h = .5$
		86	116	F	895	$G\Gamma h = .5-$
		86	164	F	896	$G\Gamma h = .2$, 2 lines below K
		86	202	D	897	lines narrow.
98		77	104	F?	898	$G\Gamma h = .5-$
		70	106	D	899	$F4\frac{1}{2}G = .2$, $F5\frac{1}{2}G = .1$, $F7G = .3$.
		78	157	F?	900	$G\Gamma h = .6?$, 2 lines below K
		69	136	F?	901	$G\Gamma h = .5$
		62	203	F	902	$G\Gamma h = .5$ 3 lines below K
100		58	209	F	903	$G\Gamma h = .3$
		41	101	F?	904	$G\Gamma h = .5?$
		44	197	F?	905	$G\Gamma h = .5$

May 26, 1889.

Plate 1791

B35 p	100	v	H	Type	No.	Rem.	Description of lines on spectra.
4.6	21.3	F	906				$G\gamma h = .5$
3.4	12.9	I	907				$F7G = .3$
2.6	6.4	F	908				$G\gamma h = .5$

St. Lt. 5.7 F.H.C. 53 5.7 F.Ch. 7.2 Box No. 211.

Plate 1899

162	21.5	14.4	I	909			$F7G = .3$, Lines bet. $G\gamma H$.
18.7	15.0	F	910				$G\gamma h = .2$, $G\delta H?$, 2 lines below K
17.9	15.3	I	911				$F4\frac{1}{2}G = .2$, $F7G = .3$
17.0	21.2	F	912				$G\gamma h = .5$
104	16.5	8.0	I	913			$F4\frac{1}{2}G = .2$, $F7G = .3$
16.6	15.3	I	914				$F4\frac{1}{2}G = .2$, $F7G = .3$
16.6	18.3	I	915				$F4\frac{1}{2}G = .1$, $F7G = .3$
15.5	15.3	F	916				$G\gamma h = .2$, $G\delta H$ 1 line below K
14.3	18.7	I	917				$F4\frac{1}{2}G = .2$, $F5\frac{1}{2}G = .1$, $F7G = .3$, Lines bet. $G\gamma H$
13.6	13.7	B	918				$F6G = .2$, $F6H = .2$,
13.1	15.4	F	919				$G\gamma h = .5$

Plate 1899

4 L 0.4 FMC 73.71 FCh 7.2 Box 15.231

Dark plate very hard to measure Identify
June 2, 1889.

Plate 3044

B35 p. 112	T	H	Type	Rev.	Description of lines on
	21.0	8.7	F	942	$GTh = .3$
	20.4	7.2	F?	943	$GTh = .5$
	18.0	13.2	F?	944	$GTh = .3$, 4 lines below K
	16.0	15.3	F?	945	$GTh = .5?$
114	14.0	8.7	F	946	$GTh = .3$
	14.4	10.3	F	947	$GTh = .2$
	14.6	11.0	F	948	$GTh = .2$
	14.0	13.6	F	949	$GTh = .3$
	14.6	17.7	I	950	$F7G = .3$
	14.3	19.5	F	951	$GTh = .3$
	14.8	23.2	F?	952	$GTh = .5?$
	12.0	6.5	F?	953	$GTh = .5$
	12.9	16.5	F	954	$GTh = .3$
116	11.2	11.6	K	955	$F2\frac{1}{2}G = .1$, $F3G = .2$ B, $F3\frac{1}{2}G = .1$, $F4\frac{1}{2}G = .2$, $F5G = .1$ B, $F5\frac{1}{2}G = .1$, $F7G = .3$, Lines bet. GTh
	11.7	10.0	F	956	$GTh = .5$
	8.2	12.6	F	957	$GTh = .5$
	9.6	14.0	K	958	$F2\frac{1}{2}G = .2$, $F3G = .1$ B, $F4\frac{1}{2}G = .1$, $F7G = .3$, Lines bet. GTh .
	8.7	9.7	F	959	$GTh = .5$
118	7.9	15.0	I	960	$F7G = .3$
	7.1	21.6	F	961	$GTh = .3$, 3 lines below K
	6.9	9.3	F?	962	$GTh = .3$
	6.5	14.0	F	963	$GTh = .2$ Gdbl, 4 lines below K
	6.9	15.1	F	964	$GTh = .3$
	5.1	14.1	I	965	$F7G = .3$
	5.2	16.3	F	966	$GTh = .5$

0^h 20

Plate 3044

June 7th 1889.

B 35 p 120

λ	H	Type	No. Run.	Description of lines on Spectra.
4.6 18.7	F	967	$g r h = .5$	
3.2 8.6	F	968	$g r h = .3$	
3.6 11.4	D	969	$77 g = .3$	

0 30

St. Lt. 5.2 Fmrc. 5.4 5.3 F.Ch. 6.8 Box. No. 596

June 10th 1889.

23 30

Plate 2014

	λ	H	Type	No.	Description of lines on spectrum.
B35 p 122	20.8	16.8	F?	970	$G \text{ r } h = .5$
	19.1	9.3	F	971	$G \text{ r } h = .3$, 2 line below K
	19.2	15.7	F?	972	$G \text{ r } h = .5$?
	18.4	6.0	F?	973	$G \text{ r } h = .5$
	17.0	10.8	F?	974	$F 4 \frac{1}{2} G = .2$, $F 7 G = .3$, lines bet. $G \text{ r } h$
124	17.1	14.2	F	975	$G \text{ r } h = .5$
	17.2	19.3	F?	976	$G \text{ r } h = .5$
	17.2	22.6	F	977	$G \text{ r } h = .5$
	16.9	10.8	K	978	$F 3 G = .1 B$, $F 4 \frac{1}{2} G = .1$, $F 5 G = .1 B$, $F 7 G = .3$, lines bet. $G \text{ r } h$
	16.4	15.0	F	978	$G \text{ r } h = .5$
	16.8	16.2	K?	979	$F 3 G = .2 B$, $F 3 \frac{1}{2} G = .1$, $F 4 \frac{1}{2} G = .2$, $F 5 G = .3 B$, $F 5 \frac{1}{2} G = .1$, $F 7 G = .3$, lines bet. $G \text{ r } h$.

June 18, 1889.

23^h 0^m

Plate 2014.

	λ	λ	Type	λ_{ref}	Description of Lines on Spectra.
1335 p 126	16.5	17.7	F?	980	$G\Gamma h = .5$
	15.9	14.6	F?	981	$G\Gamma h = .5$ Two lines below K.
	14.0	11.6	F	982	$G\Gamma h = .5$
	14.9	13.3	K	983	$F4\frac{1}{2} G = .2$, $F5 G = .1 B$, $F5\frac{1}{2} G = .1$, 13.0 13.7 $F7 G = .3$, 1 line below K.
	13.0	13.7	K?	984	$F3 G = .1 B$, $F4\frac{1}{2} G = .2$, $F5 G = .2 B$, $F5\frac{1}{2} G = .1$, $F6 G = .1 B$, $F7 G = .3$, lines bet. $G\Gamma H$.
	13.0	14.0	F	985	$G\Gamma h = .3$ Two lines below K
	13.3	18.2	F?	986	$G\Gamma h = .3$
	13.0	23.0	F	987	$G\Gamma h = .3$
128	12.1	14.0	F	988	$G\Gamma h = .5$
	12.8	18.6	F	989	$G\Gamma h = .3$
	10.9	8.6	F?	990	$G\Gamma h = .3$
	10.3	11.9	F	991	$G\Gamma h = .3$ Two lines below K
	10.4	12.7	F	992	$G\Gamma h = .5$ 3 lines below K
	10.6	13.2	F	993	$F7 G = .3$ lines bet $G\Gamma H$
	10.4	19.2	G	994	$G\Gamma h = .5$, $F4\frac{1}{2} G = .2$, $F7 G = .2$, $G6 h = .3$
	9.2	14.8	F	995	$G\Gamma h = .3$ Two lines below K.
	9.3	N.9	F?	996	$G\Gamma h = .3$
			B	997	$G\Gamma h = .2$
130	9.6	22.3	K	998	$F4\frac{1}{2} G = .2$, $F5 G = .2 B$, $F5\frac{1}{2} G = .1$, $F7 G = .3$, Lines bet. $G\Gamma H$.
	8.7	6.9	F	999	$G\Gamma h = .5$
	8.0	12.8	F	1000	$G\Gamma h = .3$
	8.1	16.7	F	1001	$G\Gamma h = .5$
	8.4	19.8	F	1002	$G\Gamma h = .3$

Plate 2014

June 18, 1889

B 35	μ	130	γ	K	Type	Rev.	Description of lines on Spectra.
			7.0	18.5	F	1003	$G\delta h = .2$
			6.3	7.4	F?	1004	$G\delta h = 1.3$
			6.5	18.8	F	1005	$G\delta h = 1.5$
132			5.4	12.6	F	1006	$G\delta h = 1.5$
			5.6	14.3	F	1007	$G\delta h = 1.3$
			5.0	15.8	F?	1008	$G\delta h = 1.3$ $F3 G = 1.2$
			4.2	16.0	F?	1009	$G\delta h = 1.3$
			4.3	22.3	F?	1010	$G\delta h = 1.2$ 3 lines below K
			2.3	10.2	F?	1011	$G\delta h = 1.7$ 4 lines below K
			2.8	17.8	F?	1012	$G\delta h = 1.5$

St. Lt. 6.2 F.M.C. 6.7 6.6 F.Ch. 7.3 Box No. 223.

July 1st 1889.

Plate 2509 (Dark plate).

2	40	τ	H	Type	Rem.	Description of Lines on Spectra.
B35	p 134	19.0	130	F?	1013	$G\ 5h = .3$
		19.0	188	K	1014	$F3\ G = .1\ B$; $F4\frac{1}{2}\ G = .1$; $F5\ G = .1\ B$;
		19.0	197	F		$F5\frac{1}{2}\ G = .1$; $F7\ G = .3$, Lines bet. G & H , Lines below K .
		19.0	197	F	1015	$G\ 5h = .5$
		18.8	20.1	F	1016	$G\ 5h = .2$
		19.3	23.5	F?	1017	$G\ 5h = .3$
		18.6	107	F?	1018	$G\ 5h = .4$
136		14.0	159	J	1019	$F7\ G = .3$
		14.9	21.7	J?	1020	$F7\ G = .2$
		13.0	8.5	F	1021	$G\ 5h = .5$
		13.0	189	K?	1022	$F3\ G = .1\ B$; $F5\ G = .1\ B$; $F7\ G = .3$, Lines between G & H
		12.0	120	K	1023	$F2\frac{1}{2}\ G = .1$; $F3\ G = .2\ B$; $F4\frac{1}{2}\ G = .1$; $F5\ G = .1\ B$; $F7\ G = .3$; $F8\ G = .2$, Lines bet. G and H , Lines below K .
		12.5	14.3	F?	1024	$G\ 5h = .4$
13.8		12.3	22.0	F?	1025	$G\ 5h = .3$
		11.3	9.1	F	1026	$G\ 5h = .5$. 2 lines below K
		11.1	23.0	F	1027	$G\ 5h = .5$
		10.3	16.3	F?	1028	$G\ 5h = .3$
		10.0	17.7	F?	1029	$G\ 5h = .3$
		9.7	8.7	F	1030	$G\ 5h = .5$
140		8.6	14.3	F?	1031	$G\ 5h = .4$
		8.4	18.0	F	1032	$G\ 5h = .5$
		8.6	21.6	F	1033	$G\ 5h = .5$
		7.4	7.3	F	1034	$G\ 5h = .5$
		7.4	9.9	K?	1035	$F3\ G = .2\ B$; $F4\frac{1}{2}\ G = .1$; $F5\ G = .2\ B$; $F7\ G = .3$, Lines bet. G and H , Lines below K .

July 1st 1889.

B35 p 140	V	H	Type	Run.	Description of lines on Spectra.
	7.1	12.3	F	1036	G 5 H = .5
	7.7	16.4	M?	1037	F 7 G = .3
	7.4	17.5	J	1038	F 7 G = .3
	7.2	20.2	F?	1039	G 5 H = .3
	6.9	13.8	J	1040	F 7 G = .3 G 6 H = .7
	6.6	19.4	F?	1041	G 5 H = .3
	6.4	22.3	F	1042	G 5 H = .5
	6.9	23.6	F	1043	G 5 H = .3
	5.9	8.5	J?	1044	F 7 G = .3
	5.1	10.3	F	1045	G 5 H = .5
142	4.6	20.0	B	1046	F 6 G = .2, L 6 H = .2,
	3.7	10.8	F?	1047	G 5 H = .3
	3.4	15.0	F	1048	G 5 H = .5
	2.5	13.1	J	1049	F 7 G = .3 Lines bet G 5 H.
	1.4	19.8	F	1050	G 5 H = .5 2 lines below K.

Alt. Lt. 5.3 F, MTC. 6.364 F, Ch. 7.2 Box No. 536

Plate 2673

144	19.2	7.0	F?	1051	Grh = .5	
	19.3	11.2	J	1052	F4 1/2 G = .2, F7 G = .3.	
	18.5	9.5	F?	1053	Grh = .5	
	18.0	10.3	F?	1054	Grh = .5	
	18.2	13.0	J	1055	F5 G = .2, F7 G = .3.	
	15.9	16.0	G	1056	Grh = .3, F5 G = .2, F6 G = .1 B.	
	14.1	13.9	G?	1057	Grh = .5, Gdl. F5 G = .1, F6 G = .1 B.	
	14.0	13.5	22.6	F?	1058	Grh = .5.
	12.8	10.9	J	1059	F7 G = .3.	

July 1st 1889
Plate 2673

B 35	μ	λ	μ	Type	Line	Description of lines on spectra.
12.7	16.2	F	1060			$g+h = .5$
12.6	22.8	F?	1061			$g+h = .5$
11.8	7.9	K H	1062			$F3g = .2B$, $F4\frac{1}{2}g = .1$; $F5g = .1B$, $F6g = .1$; $F7g = .3$, lines bet. $g+h$.
10.5	12.0	F	1063			$g+h = .5$
14.8	9.9	14.6	K	1064		$F3g = .1B$; $F4\frac{1}{2}g = .2$; $F5g = .2B$, $F6\frac{1}{2}g = .2$; $F7g = .3$, lines bet. $g+h$. 2 lines below K.
8.4	13.8	D	1065			Several ^{Numerous} bright and faint lines on spectrum.
8.8	14.1	I?	1066			$F4\frac{1}{2}g = .1$, $F7g = .3$, lines bet. $g+h$.
8.2	17.4	I	1067			$F4\frac{1}{2}g = .2$, $F7g = .3$
8.4	19.1	F?	1068			$g+h = .5$
7.4	12.3	F	1069			$g+h = .5$
7.1	21.3	K	1070			$F3g = .1B$, $F4\frac{1}{2}g = .1$, $F5g = .1B$, $F6\frac{1}{2}g = .1$; $F7g = .3$, lines bet. $g+h$.
4.8	6.6	I?	1071			$F7g = .3$
150	4.9	11.6	F?	1072		$g = .5$, $h = .2$
2.8	12.1	F?	1073			$g+h = .5$

Dist. 5.3 F.M.C. 7.270 F.Ch. 7.4 Box No 514

Plate 2661

15.2	21.0	19.6	K?	1074		$F3g = .2B$, $F7g = .3$, lines bet. $g+h$.
19.3	6.6	F?	1075			$g+h = .5$
18.7	20.9	I?	1076			$F7g = .3$
17.1	15.7	F?	1077			$g+h = .4$
15.2	9.0	K?	1078			Several bright and faint lines. Lines below K.

B
Z

4

R

July 1st 1889.

Plate 2661,

B35 μ

τ	H	Type	^{No.} Run.	Description of Lines on Spectra.
135	8.4	D	1079	F7G=.3
12.6	12.4	K	1080	F3G=.2 B, F4 1/2 G=.1, F5G=.2 B F5 1/2 G=.2, F7G=.3, faintest GTH h bright?
12.8	17.1	F?	1081	Goh=.5
11.6	18.8	F?	1082	Goh=.3

July 29, 1889

100^h 15^m Plate 2661Book 31/2-154 V H Type ¹⁵⁰Rem. Description of Lines in Spectra.11.9 23.2 I 1083 $F7G=.3$, lines bet. G & H 10.7 12.1 F? 1084 $G5H=.5$ 10.7 18.5 I? 1085 $F7G=.3$ 9.0 14.7 K 1086 ⁷³⁵⁼¹⁶ $F4\frac{1}{2}G=.2$ $F5G=.2B$ $F5\frac{1}{2}G=.1$,
 $F7G=.3$, ^{hB?} lines bet G & H , 2 lines
below K.8.5 7.2 F? 1087 $G5H=.5$ 8.0 17.8 F 1088 $G5H=.5$ 7.8 5.8 K 1089 $F4\frac{1}{2}G=.2B$; $F7G=.3$, lines bet. G & H .7.3 10.2 I 1090 $F7G=.3$ 7.0 12.9 F 1091 $G5H=.5$ 7.2 15.9 F? 1092 $G5H=.5$ 7.9 17.3 M? 1093 $F1\frac{1}{2}G=.1$, $F3G=.1B$, $F4\frac{1}{2}G=.1$,
 $F5G=.1B$, $F7G=.6$, G double.Lines bet. G & H .6.1 16.4 K? 1094 $F3G=.1B$, $F4\frac{1}{2}G=.1$; $F5G=.1B$,
 $F7G=.3$, lines bet. G & H .6.5 18.7 K? 1095 $F3G=.1B$, $F4\frac{1}{2}G=.2$, $F5G=.2B$,
 $F7G=.3$, lines bet G & H , lines below K.4.5 10.6 F? 1096 $G5H=.5$ 4.6 12.5 I 1097 $F4\frac{1}{2}G=.2$; $F7G=.3$, line bet. G & H .3.3 20.8 F 1098 $G5H=.5$ 3.5 22.1 F? 1099 $G5H=.5$ 2.5 6.9 F 1100 $G5H=.5$ 2.4 13.1 I 1101 $F7G=.3$, lines bet. G & H .2.6 16.1 I 1102 $F7G=.3$.2.7 19.2 I? 1103 $F7G=.3$, lines bet. G & H .

Plate 2563

Feb. 28, 1890

	τ	H	Type	No. Rem.	Description of Lines on Spectra.
B 35. p. 158	19.9	20.4	M?	1104	466=.1, 463=.1, 458=.2, 456=.1, 448=.5
	18.0	13.3	F	1105	410=.2, 434.2.
	14.6	23.0	K.	1106	Several Bright & Faint Lines 434 a 410, a 394.
	13.0	11.6	F?	1107	410, 3; 434, 3; 4 a 394.
	10.1	7.7	F?	1108	410, 5; 434, 5.
	9.1	9.0	F	1109	410, 3; 434, 3; 410 and 434 double.
	9.4	10.3	D	1110	448, 3.
	9.4	16.6	L?	1111	474, 2; 466, 3; 463, 1; 458, 2; 453, 3; 448, 3; 434 a 410.
	8.8	9.9	F	1112	410, 2; 434, 3.
160	7.5	9.9	D	1113	448, 3.
	6.5	11.1	A?	1114	453, 3; 443, 1; 456, 1.
	4.8	10.8	F	1115	410, 2; 434, 2.
	4.4	15.2	F	1116	410, 5; 434, 5.
	5.4	22.5	F	1117	410, 3; 434, 3.
	3.4	16.0	F?	1118	410, 2; 434, 5.

St. L. 5.5. F. Ch. 8.2 7.7. F M 40. 8.0 Box No. 5417

Plate 2552.

162	21.0	10.3	F?	1119	410, 2; 434, 2.
	21.4	11.4	F	1120	410, 2; 434, 2.
	20.3	13.0	F	1121	410, 2; 434, 2.
	20.7	14.9	F	1122	410, 5; 435, 5. 410 double
	20.2	16.9	F	1123	410, 2; 434, 2. 410 & 434 double
	19.2	11.3	F	1124	410, 2; 434, 2. 410 and 434 double a 394.
	18.4	15.9	F	1125	410, 2; 434, 2.
	17.0	23.2	A	1126	Hydrogen Lines double?

Feb. 28, 1890.

Plate 2552.

162	T	H	Type	Rein.	Description of lines on spectra
	16.2	7.9	D	1127	448, 3.
	15.6	6.2	F	1128	410, 2; 434, 2.
164	14.9	22.5	F	1129	410, 2; 434, 2.
	13.6	21.9	F	1130	410, 2; 434, 2.
	13.1	21.3	A ²	1131	Hydrogen Lines double?
	13.1	21.5	F	1132	410, 2; 434, 4.
	12.6	13.4	F	1133	410, 2; 434, 2.
	12.5	22.7	F	1134	410, 3; 434, 3.
	10.7	6.1	F ²	1135	410, 5; 434, 5; a 394.
	10.12	17.2	F ¹	1135 ^a	410, 2; 434, 2.
	10.1	7.6	F	1136	410, 4; 434, 3.
	10.9	15.0	G	1137	453, 1; 451, 1; 410, 2; 434, 2; 434 double; a 394.
	9.6	10.8	D	1138	448, 5.
166	8.3	15.0	D	1139	458, 2; 448, 5.
	8.3	22.1	F	1140	410, 2; 434, 2; 410 and 434 double.
	7.5	14.5	F	1141	410, 3; 434, 3.
	6.8	12.4	F	1142	410, 2; 434, 2.
	6.4	15.9	F	1143	410, 4; 434, 4.
	5.0	13.9	F	1144	410, 3; 434, 3; 410 & 434 double a 394.
	4.5	6.6	A	1145	Hydrogen Lines double.
	4.3	17.2	D	1146	458, 2; 448, 5.

St. Lt. 6.0. F. Ch. 8.0 6.5 F. M. & Cl. 6.5 Rep No 175

Feb. 28, 1890.

Plate 1702

τ	H	Type	N° Rec.	Description of Lines on Spectra.
168	18.2	21.7 M.	1147	466, 3; 458, 1; 456, 2; 453, 1; 448, 3; 410 a 434.
	13.6	8.7 J	1148	448, 3.
	11.8	21.0 A?	1149	410, 8; 434, 8.
170	10.2	14.2 F	1150	410, 2; 434, 5; 434 double.
	9.0	18.0 F?	1151	410, 5; 434, 5.
	8.4	23.5 F?	1152	410, 3; 434, 3.
	7.0	11.6 B	1153	453, 3; 402, 4.
	7.0	7.8 J	1154	448, 3.
	4.8	10.8 K	1155	468, 3; 461, 2; 458, 3; 453, 1; 448, 5; 410 a 434.
	3.8	12.4 L?	1156	471, 2; 468, 2; 463, 1; 461, 2; 458, 3; 456, 3; 448, 5; 410 a 434.
	3.2	12.5 K	1157	468, 2; 461, 2; 458, 3; 456, 2; 448, 5; 441, 1; 410 a 434

4.30

St. Lt. 6.0, F. Cl. 8.0 6.5. F. M. & Cl. 6.5. Box No. 175.

34.

March 1, 1890.
Plate 3128

B35.	p.	H.	Type.	Remi.		Description of lines on Spectra.
				No.	No.	
	172	22.5	23.5	A?	1158	Hydrogen lines double
		21.9	13.6	K	1159	468, 3; 461, 1; 458, 3; 456, 1; 448, 3; 410 a 434.
		21.9	17.5	K	1160	468, 3; 466, 1; 461, 2; 458, 1; 456, 2; 448, 4; 410 a 434.
		20.5	9.8	F?	1161	410, 2; 434, 2.
		20.0	13.2	I	1162	458, 3; 448, 3; 410 a 434.
		20.3	15.1	F	1163	Limit D; 410, 2; 434, 2.
		19.5	6.7	I	1164	448, 3.
		19.1	10.0	F?	1165	410, 3; 434, 3. Limit E
		19.3	11.4	F?	1166	410, 2; 434, 2.
174		18.4	10.5	I	1167	458, 2; 448, 3.
		16.0	14.6	I	1168	448, 2.
		16.8	15.2	K	1169	477, 1; 468, 1; 458, 2; 456, 1; 453, 2; 448, 2.
		15.0	6.4	G?	1170	Several Bright and Faint Lines. a 394
		15.8	10.3	K	1171	468, 1; 461, 1; 458, 1; 456, 1; 453, 1; 451, 1; 448, 3.
		15.4	21.2	F	1172	410, 2; 434, 2; Limit F

March, 4, 1890
Plate 3128

B. 35 p 176	R. H.	Type.	No.	Description of lines on Spectra.
	14.3 19.1	I	1173	458, 2; 448, 3;
	14.0 22.5	I	1174	458, 1; 448, 3.
	13.6 22.6	K	1175	468, 1; 458, 1; 448, 2; 410 a 434.
178	12.5 11.3	F ²	1176	410, 3; 434, 3.
	12.2 19.6	K	1177	468, 2; 461, 1; 458, 1; 456, 1; 453, 2; 448, 3; 443, 1; 410 a 434.
	11.2 5.9	F ¹	1178	410, 3; 434, 3.
	11.0 23.8	F ¹	1179	410, 5; 434, 5.
	10.5 9.0	I	1180	448, 4.
	10.6 17.9	I	1181	448, 4.
182	8.8 14.8	F ¹	1182	March 11, 1890 410, 2; 434, 2.
	8.2 19.2	B	1183	451, 2; 419, 2.
	7.5 13.6	F ¹	1184	410, 3; 434, 3.
	7.8 15.3	L ²	1185	471, 2; 468, 1; 466, 1; 461, 3; 458, 2; 456, 1; 453, 4; 448, 3; 443, 2.
	6.4 22.0	A ²	1186	Hydrogen lines narrow.
184	5.4 12.4	K	1187	466, 2; 463, 1; 458, 3; 448, 5.
	5.5 17.4	K	1188	468, 2; 461, 1; 458, 2; 456, 1; 448, 4.
	5.8 17.9	F ¹	1189	410, 3; 434, 3.
	4.8 9.7	A	1190	Hydrogen lines double, K lines double, widely separated.
	4.7 20.3	K	1191	471, 1; 468, 1; 466, 1; 461, 3; 458, 1; 453, 1; 448, 3.
	3.9 11.6	F ²	1192	410, 2; 434, 2.
	3.0 12.9	F ¹	1193	410, 3; 434, 3.
	3.1 21.3	I	1194	468, 2; 458, 2; 453, 1; 448, 4.
186	2.5 21.1	K	1195	471, 2; 466, 2; 461, 2; 458, 1; 451, 1; 448, 4.

St. Pt. 5.5, F¹ Ch. 8.06.6 F¹ M4 cl. 6.8 Br. 7.5 586

