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KG
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850

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Catalogue of E. Stars
No. 26.

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2	14.45
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56	20
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104	22
128	23
15	23.59

160 Additional Observations.

210 Stars in E Catalogue not reduced to 1900

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17h

	1855- Ra.	1855- Dec.	1900 Ra.	1900 Dec.	No Mag	Spectrum	No Plates	No Lines
m 45								
17 44.4+73 30	.5+73 31	17 44.4+73 30	791	7.3	I	1333, 1450, 1384,	3	7 3
17 46.7+50 49	.6+50 50	17 46.7+50 48	2468	8.0	I	1333,	5	
17 47.0+54 13	.1+54 14	17 47.0+54 13	1911	6.5	I	1333,	7	
46								
17 46.5+63 8	.2+63 9	17 46.5+63 8	1377	7.3	III	1333,	1	
47								
17 44.2+79 15	.1+79 16	17 44.2+79 15	556	7.3	II	1354, 1398, III 1450, 1333, a 1384, IV 1519, III	2 2 2 3 4 2	
17 46.1+75 34	.7+75 35	17 46.1+75 34	640	7.0	III	a 1333, III 1384,	2 2	
17 48.3+62 48	.0+62 49	17 48.3+62 48	1873	6.3	II	1333, a 1450,	2 2	
48								
17 48.3+64 47	.1+64 48	17 48.3+64 47	1222	7.0	I	1333, I 1450,	3 5	
49								
17 49.9+56 8	.1+56 9	17 49.9+56 8	2028	7.2	I	1333,	5	
17 49.6+68 22	.8+68 23	17 49.6+68 22	961	7.1	I	1450, 1333, II 1384,	4 5 2,	

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1882phot..proj...855f

K Line	H Line	Brightness	Cor Brightness	Mean Residuals	No	Remarks
10		67, 66, 66,	73, 68, 70,	✓		
10	S	65,	63,	✓		
		77, 76,	73, 71,	✓		
10 10 10 10 10 10		70, 64, 65, 67, 64, 60, 70, 72,	76, 69, 71, 73, 74, 68, 73, 75,	✓		1228,
10, 10		71, 70, 73,	78, 81, 75, 78,	✓		1210,
10 10		68, 65,	69, 62,	✓		1256,
10,		68, 69,	69, 66,	✓		
10		66,	64	✓		
5 10		70, 69, 68,	69, 72, 69,	✓		

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17h

1855 R.A.	1855 Dec	1900 R.A.	1900 Dec	No.	Mag.	Spectrum	No. Plates	No. Lines
m	°							
50								
17 50.0	+68 42							
.3	+68 43	17 50.0	+68 42	963	7.4	I 2	1395, 1450, 1333, 1384,	6644
17 51.2	+60 25							
.7	+60 26	17 51.2	+60 25	1787	6.5	I	1333, 1395, 1450,	35
17 49.8	+73 10							
.8	+73 11	17 49.8	+73 10	796	7.3	III	1384 1333	22
17 51.8	+56 53							
51.0	+56 54	17 51.8	+56 55	2033	3.5	III	601, 617, 1395, 1450, 1333, (b, bc, bc, bc, bc)	12332
52								
17 53.6	+55 60							
.8	+55 60	17 53.6	+56 0.	1995	6.5	I	1333	6
53								
17 54.3	+51 32							
.3	+51 32	17 54.3	+51 31	2282	2.2	III (b)	1333,	2
54								
17 54.7	+61 25							
.2	+61 25	17 54.7	+61 25	1710	6.8	I	1450	5
17 52.8	+77 3							
.8	+77 3	17 52.8	+77 3	670	7.5	II	1333, 1384,	22

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K Lines	H Lines	Brightness	Cw Brightness	Mean Residuals	No Remarks
10 10 . 10	. S - .	66, 65, 63, 66,	64 64, 66 67,	✓	. . . .
8 . 8	. . .	65, 67, 65,	73, 72, 61,	✓	. . .
10 10	. .	67, 70 / 69, 71	70 / 72, 69 / 70		. .
. 10 10 10 12	. . S S S	68 65 55 58 50 / 71, 69, 57, 62, 54,	49 48 49 53 49 / 52, 52, 53, 57, 53,	✓	1214 / . 206, 1234, 0237,
10	.	64,	62,	✓	.
30	S	48 / 55	45 / 52,	✓	1195
10	.	68,	64,	✓	.
10 10	. .	70, 68,	78, 74,	✓	. .

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17h

	1855 Ra	1855 Dec	1900 Ra	1900 Dec	no	mag	Spectrum	As Plates	As Lines	
m										
55										
	17 55.5 + 62 37									
	17 55.5 + 62 38	.2 + 62 37	17 55.5 + 62 37	1886	7	7.0	III	1333, 1450,	2 4	10 10
		.2 + 62 38	17 55.5 + 62 38							
	17 54.3 + 74 36	.7 + 74 36	17 54.3 + 74 36	740	6.8		I	1333, IIa: 1395, 1450, 1384,	6 2 6 6	10 10
58	17 54.0 + 76 58	.9 + 76 58	17 53.9 + 76 58	667	5.2	dv	I	584, IIa 601, IIa 628, IIa 1384, IIa 1395, IIa 1450, IIa 1333, IIa: 1384,	4 2 2 3 3 3 4 2	10 12
56										
	17 56.1 + 69 38	.5 + 69 38	17 56.1 + 69 38	958	6.7	v	I	1450, III 1384,	4 2	10
57										
	17 56.9 + 72 0	.7 + 72 0	17 56.9 + 721	818	6.0		I	617, IIa 628, IIa: 1333, IIa 1395, IIa: 1450, IIa 1384,	4 2 3 2 3 3	10 10
	17 56.1 + 76 1	.8 + 76 1	17 56.1 + 761	668	7.5		I	1333, II 1384	4 2	v
58										
	17 56.0 + 78 20	.4 + 78 20	17 56.0 + 7826	616	6.5		III	1384 1395, 1450, 1333, 1384	2 2 1 2 3	10 10
	17 55.7 + 79 21	.6 + 79 21	17 55.6 + 79 21	864	7.5		I	1384 IIa: 1395, 1450, IIa 1333, 1384 III	3 2 3 2 2	10
	17 58.7 + 64 9	.5 + 64 9	17 58.7 + 64 9	1237	7.0		II	1333, 1450, 1384,	3 2 3	10 10
59										
	17 57.7 + 75 10	.2 + 75 10	17 57.7 + 75 16	647	7.0	b	III	1333, III 1450, III 1384,	3 2 2	10 10
	17 59.6 + 63 32	.3 + 63 32	17 59.6 + 63 32	1399	6.8		III	1384	2	10

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14h

K Line	L Line	Brightness	Corr Brightness	Mean Residuals	Remarks
10 10	..	68 69, 68	68 69, 65	..	
10 10 10 10	... .	58, 66, 63, 60,	63, 67, 65 64,	-, 1438, ..	
10 12 12 10 10 10 12 10	... S S S S S	68, 66, 58, 64, 53, 58, 54, 51,	61, 40, 54, 68, 56, 58, 52, 57,	1236, 1215, 1276, -, 2022, 2217, 1178, 1233	
. 10	..	72, 69 73,	71, 70 74,	..	
10 10 10 10 10 10	.. S . S S	67, 69 54, 57, 54, 56,	56, 61, 59, 57, 55, 59,	1265, -, 22, 1196, 1432, 1251,	
2 .	. S	65 63,	72, 68,	..	
10 10 . 10 10	... . S	70 74, 63 68, 66 70, 64 68, 61 65	75 79, 67 72, 71 75, 73 71, 68 72,	... , 1222, .	
. 10 10 10 10	... . .	70, 63, 66, 68 64,	76, 68, 72, 75 5.5 5.8	, 1425, , 1228, .	
10 10 10	S . S	65, 66, 66 69,	66, 63, 65 68,	...	
10 10 .	S . S	64 66, 67 69, 60 63,	71 73, 70 72, 65 68,	1209, . .	
10	.	69 71,	68 70,		

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8

18h

m	1855 Ra.	1855 Dec.	1900 Ra.	1900 Dec.	No Mag	Spectrum	No Plates	No Lines	
0									
	18 1.0 + 58 38								
	18 1.2 + 56 23								
	.4 + 58 38		18 1.0 + 58 38		1781 2060 80	6.5 I	1395, 1480,	44	10 10
	.4 + 56 23		18 1.2 + 56 25 23		2061	7.2 II	1480	21	10
	18 1.3 + 65 57								
	.2 + 65 57		18 1.3 + 65 57		1233	7.0 II a	1383,	21	10
	18 1.7 + 63 36								
	.3 + 63 36		18 1.7 + 63 36		1402	8.6 III	1384	1	
	~~.9 + 78 41~~				~~621~~	~~7.4 II~~	~~1480, 1333~~ I d?	~~214~~	10
	18 1.2 + 71 37								
	.2 + 71 37		18 1.3 + 71 37		864	8.0 III	1480, 1384,	12	10
	18 0.3 + 78 41								
3	.9 + 78 41		18 0.3 + 78 41		621	7.4 II	1395, 1333, 1480 I d? 1384,	2214 2	10
4									

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K Line	H Line	Brightness	Cor Brightness	Mean	Residuals	No	Remarks
10 10	..	6.6, 6.6,	6.9, 6.1,			..	
10	.	7.9,	6.4,			.	
10,	.	6.8,	7.0,			12 12,	
-	.	7.0 7.2,	7.3 7.5,			.	
10 10	..	6.8, 6.5	7.4, 7.8			.	
10	..	7.2 6.8 7.5, 7.0,	7.3 7.1 7.6, 7.3,			..	
10 10 10 10	....	6.5 6.8, 6.5, 6.8 6.3,	7.4, 7.0, 7.5, 7.1,			....	

1882phae.proj..851F

18h

	1855 Ra.	1855 Dec.	1900 Ra.	1900 Dec.	No Mag	No Mag	Spectrum	No Plates	No Lines	
18 5.1 +65 42	5.0	+65 42	185.1	+65 42	1240	6.8	I	1333, 1450, 1384,	6 5 3	12
18 5.8 +66 56	.3	+66 56	185.3	+66 56	1077	6.5	I	1395, 1450, 1333, 1384,	4 2 2 2	10, 1
18 6.2 +64 12	6.0	+64 12	186.2	+64 12	1245	7.0	III	1450, 1384,	3 3	10 1
18 6.9 +65 52	.8	+65 52	186.9	+65 52	1245	7.5	I	1333, III 1384,	4.1	10
18 8.5 +54 16	.6	+54 15	188.4	+54 15	1950	6.0	III	1384	2	10
18 8.0 +67 23	.1	+67 22	188.0	+67 23	1051	7.5	III	1384,	2	10
18 6.6 +75 47	.2	+75 46	186.6	+75 47	655	6.5	I	601, 628, 1333, 1450, 1384,	3 4 6 6 6	10
18 8.9 +61 52	.5	+61 51	188.9	+61 52	1727	7.0	III	1450, II 1384	2 2	10 1
18 9.9 +60 23	.4	+60 22	189.9	+60 23	1813	6.2	I	617, 1395, 1450, I 1384	3,5, 3	
18 9.4 +67 59	.6	+67 58	189.4	+67 59	1052	7.5	III	1450, II 1333, 1384,	1 2 2	10

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K Line	H Line	Brightness	Cor Brightness	Mean Residuals	No Remarks
12 5	. . .	64, 65, 65	66, 63, 65		. . .
10, 10 10 10	. . . .	69, 71, 68, 65, 68,	68, 69, 70, 68,		. . . .
10 10	S S	69, 67, 70, 69,	66, 66, 67, 68,		. .
10 .	. .	69, 70, 73	76, 70, 73,		. .
10	.	67, 69,	63, 65,		.
10	.	71, 75	71, 75,		.
. 10, 2 2 .	. . . . S	73, 70, 59, 64, 59,	62, 64, 66, 67, 64,		. . . .
10 10	. .	70, 71, 70,	66, 67, 68,		. .
. . . .	. . S .	69, 65, 62, 62,	53, 70, 58, 60,		. . .
. 10 10	. . .	70, 74, 70, 70,	69, 73, 73, 71,		. . .

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18 h i

m	1855 R.a.	1855 Dec.	1900 R.a.	1900 Dec.	No Obs.	Mag Obs.	Spectrum.	Ast. Rates.	As Lines.
10									
18 7.6	+ 80 0								
18 7.7	+ 80 1	.9	+79 59	187.5	+79 59	5-70	6.5-		
13-1 11.		.0	+79 60	187.6	+79 59	5-71	6.5	II a	587, 601, 628, 682 IIa? 738, IIa? 1354, IIa 1333, 1395,
18 9.0	+ 77 29								
		.1	+77 28	189.0	+77 29	6.99	8.1	II	1384
18 10.6	+ 72 8								
		.4	+72 7	1810.6	+72 8	8.29	7.8	II	1450, III 1384,
18 10.1	+ 76 7								
		.8	+76 6	1810.1	+76 7	6.78	7.2	II	1333, III? 1384,
18 13.0	+ 56 12 34								
		.2	+56 33	1813.0	+56 34	2080	7.0	III	1450
18 13.9	+ 53 15								
		.9	+53 14	1813.9	+53 15	2060	7.3	II	1384
18 13.3	+ 64 21								
		13.1	+64 20	1813.3	+64 22	1252	5.0	II a	617, 628, 1395, 1450, IIa? 1384,
18 13.8	+ 66 27								
		.8	+66 26	1813.8	+66 27	1089	7.8	III	1384
18 11.3	+ 79.6								
		14.1	+79 5-	1811.4	+796	5-76	8.2	III	1395, I 1450, II 1333,
18 12.5	+ 77 34								
		.1	+77 33	1812.5	+77 34	681	7.8-	III	1384,

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1.8 h

K Line	S Line	Brightness	Cor Brightness	Mean Residuals	Ast Remarks
3 3 3	15 10 10 10 20 12 10 10	. . . .	S S S S	64 64 61 65 53 48 47 48	59 57 59 50 58 55 66 54
	10	-	70	71	
	10	- -	70 69 70	71 72 73	- -
	10 10	- -	68 65 66	75 70 71	- -
	10	-	67 69	63	-
	-	-	67	63	-
	12 10 10 10 10	. . .	S S	60 65 58 54 57	45 53 54 51 53
	10	-	71 73	71 73	-
	10 10	- - -	68 71 71 71	73 76 71 81	- - -
	10	-	67 70	74 71	-

1239 1427

193 205 221 226 396 1184

211 215 1437 1260 1278

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18h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No Mag	No Spectrum	No Plates	No Lines	
m 15									
	.8+83 54	18 8.1+83 55	4	524	7.7	III	1354, 1450, 1579,	2 2 1	10 1
18 15.5+70 47									
	16.1+70 46	18 15.5+70 47		985	7.2	I	1333, 1395, 1450,	3 5 3	
18 15.9+68 43									
	.2+68 42	18 15.9+68 43		984	6.0	III	1395, 1450, 1384,	2 2 3	10 10
17									
~~18 17.5+69 40~~									
18 17.6+68 41	~~.9+69 39~~	~~18 17.5+69 40~~		~~973~~	~~8.0~~	~~III~~	~~1384~~	~~2~~	~~10~~
	.9+68 40	18 17.6+68 42		989	6.8	I	628, 1395, 1450, 1384,	5 3 7 5	
	18.1+85 40	18 7.2+85 41		294	7.5	I	1328, IIa: 1354, I 1450, II: 1579	3 1 4 1	
18 19.8+51 29									
	.8+51 28	18 19.8	8	+51	29	2365	II	1384	2 10
	19.1+86 36	18 4.5+86 37		269	4.5	I	587, 617, 682, 1395, 1450, I 1579,	8, 10, 10, 7, 10, 3,	2 2
	.4+81 26	18 15.0+81 30		619	8.5	I	1354, ~~IIa~~ 1398, 1450, II 1384, II 1579,	4 2 2 1 1	10 10

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	K Line	h Line	Brightness	Ca Brightness	Mean Residuals	Remarks
	10 10 ·	· · ·	6.9 6.6 7.0 7.0 6.7 7.2	8.1 7.8 7.9 8.2 7.9 8.1		· · ·
	· · ·	· · ·	6.6 6.6 6.5	7.0 6.5 6.5		· · ·
	10 10 10	· · S	6.5 6.6 6.4 6.8 6.9 6.7	6.3 6.5 6.5 6.6 6.8 6.8		· · ·
	10	·	6.4	6.5		·
	· · · ·	· · S S	7.0 6.3 6.4 6.2	6.0 6.1 6.3 6.3		· · · ·
	· · · 10 ·	· · · ·	6.8 6.6 6.2 6.9	8.6 8.2 7.8 8.2		· 1194 · ·
	10	·	7.0	6.4		
	2 2 2 · 2 ·	· S S S S S	· 4 8 5 2 · · ·	· 5 5 5 9 · · ·		· · · · · ·
	10 10 10 · ·	· · · · ·	6.9 6.2 6.6 6.6 7.0	7.6 7.0 7.5 7.1 7.6		· 1430 1259 · ·

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18h

	1855 Ra.	1855 Dec.	1900 Ra.	1900 Dec.	No DM.	May DM.	Spectrum	No Plates	No Lines	
18 19.9+67 21										
	20.0	+64 20	18 19.9	+67 23	1066	7.0	III	1384,	1	
18 21.7+53 15										
	.7	+53 14	18 21.7	+53 15	2079	6.8	I	1384	6	
21										
18 20.7+71 28										
	.4	+71 24	18 20.7	+71 28	884	4.7	a II	1450, 1384, (2) II 1384 (7) II	2 2 2	10 10
18 22.4+58 46										
	.8	+58 45	18 22.4	+58 45	1809	4.8	I	617, 628, 1395, 1450, 1384,	3 3 3 3 3	3 2
22										
18 22.8+71 16										
23.0	+71	14	18 22.2	+71 17	889	4.7	I	617, (1) 628, (2) 628, 682, 1333, 1395, 1450, (1) 1384,	8 7 9 6 7 9	10 9 ...
18 20.2+79 21										
	.0	+79 19	18 20.2	+79 21	5-79	8.3	III	1450,	1	
	.6	+81 25	18 19.1	+81 27	621	8.7	II	1450	2	10
18 22.8+72 42										
	.7	+72 40	18 22.8 (23.0)	+72 42	839	3.8	a II	617, 628, 682, IIa: 1333, IIa 1395, 1450, a III 1384, IIa: 1519	2 2 2 2 3 3 2	12 1
18 24.6+60 25										
	24.1	+60 23	18 24.6	+60 25	1827	8.2	II	1384	2	10
18 22.4+77 4										
	.3	+77 2	18 22.4	+77 4	693	8.0	I	1383,	3	
	.4	+86 5-9	18 7.6	+87 0	2722	6.0	I	617, 682,	4 2	
18 24.7+64 47										
	.5	+64 45	18 24.7	+64 47	1266	7.5	III	1384	2	10
18 22.1+79 1										
	.8	+78 5-9	18 22.1	+79 1	632	7.1	a II	1395, II: 1450, III 1333, II 1384, III 1519	2 2 2 3 2	10 10

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1882phae.proj..851F

18h

	K Line	Fe Line	Brightness	Ca Brightness	Mean Residuals	Remarks
			70 74	70 74		
		S	65	61		
	10 10 10	S	67 68 6.0	67 67 5.9		1249
	3 2	S S	61 60 5.7 5.3 5.3	4.4 4.6 4.8 4.8 5.0		
	10 9	S S S S	49 5.0 5.2 4.9 4.1 4.2	3.7 4.6 4.0 4.4 4.0 4.2		
			72 75	78 81		
	10		72	81		1258 1264 1293
	3 2 12 10 12 20 12 15 10	S S S S S S S	50 53 5.4 18 4.2 18 42 44 46	39 45 43 18 4.2 18 45 47 44		210 213 228 1201 1433
	10		66	64		
			70	78		
			69	71		
	10		68 70	66 68		
	10 10 10 10 10	S	65 69 70 64 72	70 75 78 80 72 75 71		1423

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1882phae.proj..851F

18h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No Mag	Mag	Spectrum	No Plates	No Lines	
m										
25										
18 24.0+73 59										
	.2	+73	57	18 24.0	+73 59	8.2 2	8.0	I	1333, 1384,	4 5	8
18 26.3+57 20										
	.6	+57	18	18 26.3	+57 20	18.3	7.5	II	1384,	2	10
18 25.7+65 30										
	.6	+65	28	18 25.7	+65 30	12.1	5.0	III	628, 1395, 1450, 1384,	3 2 3 2	10 10
18 26.3+59 29										
	.7	+59	27	18 26.3	+59 29	18.9	6.2	III	1450, 1384,	2 1	10
26										
18 24.7+75 30	.1	+80	35	18 22.4	+80 34	5.7	8.0	III	1579	2	10
	.2	+75	28	18 24.7	+75 30	6.6	8.4	III	1384	1	
	.7	+81	24	18 22.4	+81 26	6.2 2	7.2	III	1450,	1	
27										
18 25.8+75 47										
	.4	+75	45	18 25.8	+75 47	6.6 8	8.0	II	1333,	1	
28										
18 27.5+71 39	.1	+83	37	18 21.5	+83 39	5.3 0	7.8	III	1450	2	10
	.2	+71	37	18 27.5	+71 39	8.9 4	7.5	II	1450, 1384	2 2	10 10
	.6	+82	52	18 22.9	+82 54	5.4 0	7.5	I	696, 1333, 1395, 1450, 1519,	4 5 5 3 4	10
18 29.9+52 3										
	.9	+52	1	18 29.9	+52 3	2.2 3 2	6.5	I	1384	4	10
29										

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18h

c.	K Line.	H Line.	Brightness.	Cw Brightness	Mean. Residuals.	no Remarks.
	3	--	6.7, 6.6,	7.3, 7.0,	✓	--
	10	-	7.0,	7.1,	✓	1279,
	10 10 10 10	4 - SS	6.6 6.4 5.7 5.7 6.9, 6.8, 6.2, 6.0,	5.5 - 6.1 5.7 5.7 5.7, 6.5, 6.0, 6.0,	✓	-, 1263,
	10	--	7.0 7.0 7.1, 7.3,	6.5 6.7 6.6, 7.0	✓	--
	10	-	7.2 7.5 -	7.7 8.0,	✓	-
	-	-	6.9 7.0,	7.4 7.5 -	✓	-
	-	-	7.0 7.4,	7.9 8.3	✓	-
	- -	-	7.0,	7.7.	✓	-
	10	-	7.0 7.2,	8.2 8.4	✓	-
	10 10	--	6.9 6.7,	7.1 7.0,	✓	--
	10 - - - -	- - - - -	6.9, 6.0, 5.9, 6.0, 6.5,	7.1, 7.1, 6.9, 7.1, 7.3,	✓	- - - - -
	10	-	6.6,	6.1,	✓	-

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18h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Mag.	Spectrum	No. Plates.	No. Lines	
18 30.4+62 28m									
30	.0	+62 26	18 30.4	+62 28	16	29 7.0	II	1450, 1384,	2 2	10 10
18 30.9+56 58							bd	IIa IIa IIv		
	.1	+56 56	18 30.9	+56 58	21	13 5.4	II	628, 1395, 1450, 1384,	2 3 3 3	10 10
18 31.7+52 17										
	.7	+52 15-	18 31.6	+52 16	22	38 5.5	III	1384,	2	
18 31.0+65 22								IIa		
	.9	+65 20	18 31.0	+65 22	12	76 6.8	I	1450, 1384,	3 3	10 10
31										
~~18 32.2+51 43~~										
	.2	+51 41	18 32.2	+51 43	24	04 6.9	II	~~1384~~	2	10
18 29.3+77 30										
	.3	+77 28	18 29.3	+77 30	69	6.7	III	1395, 1450, 1333, 1384,	2 2 2 2	10 10
32										
18 32.8+57 43										
	.1	+57 41	18 32.8	+57 43	18	82 7.5-	III	1450, 1384,	1 2	10
18 32.6+67 41										
	.7	+67 39	18 32.6	+67 41	10	79 6.5	III	1384	2	10
	.8	+84 35-	18 24.6	+84 37	41	2 7.5	II	1328, 1354, 1395, I+II 1450, 1519,	2 2 2 6 2	10 10
33										
18 30.7+79 9										
	.5	+79 7	18 30.7	+79 9	58	7 7.0	III.	1395, 1450, 1333, 1384, 1519	3 2 3 2 2	10 10
18 33.8+66 16										
	.8	+66 14	18 33.8	+66 16	11	12 7.2	I	1384	3	
18 32.0+77 4										
	.9	+77 2	18 32.0	+77 4	69	7 8.5	I	1333, 1384	3 3	
34										
18 33.1+72 59										
	.1	+72 57	18 33.1	+72 59	84	8 7.7	III	1384,	1	
18 34.5+63 37										
	.2	+63 35-	18 34.5	+63 37	14	39 8.0	I	1384,	4	10

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K Line	L Line	Brightness	Cor Brightness	Mean	Residuals	Remarks
10 10	..	70, 69	66, 67		..	
10 10 10 10 10	. S S S	63, 60, 62, 56,	49, 54, 57, 53,	v	216, 232, 1238, -	
.	S	66 69,	61 64,	v	.	
10 10	. S	69, 64,	66, 63,	v	2, 12 75,	
10	.	65,	69,	v	.	
10 10 10 10	....	66 70 68 65 69 73, 70, 68,	70 75 77 72 73, 78, 79, 75,	v	....	
. 10	. .	71 74, 69,	66 69, 66,	v	..	
10	.	69 73,	69 73	v	.	
10, 10 10 10 10	.....	64, 66, 61, 60, 67,	80, 80, 74, 74, 78,	v	.....	
10 10 10 10 10	S . S . .	59 64, 65 68, 62 66 62 65, 70 73,	64 71 72 70 73 69, 74, 76 73, 76,	v	.....	
.	.	67,	67	v	.	
. .	. .	68 64	76 58	v	. .	
.	.	70 71,	71 74,	v	.	
10	.	68,	67	v	.	

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18h

	1855 Ra	1855 Dec	1900 Ra	1900 Dec	No Obs	Mag	Spectrum	As Plates	As Remarks
	18 33.3	+76 8 m							
	35.0	+76 6	18 33.7	+76 8	694	7.8	III	1333, 1384,	2 1
	18 35.8	+64 59							
	.6	+64 57	18 35.8	+64 59	1276	8.2	III	1384	2
	18 36.6	+52 14							
	.6	+52 12	18 36.6	+52 14	2258	6.8	II	1384	2
	18 35.8	+65 23							
	.7	+65 21	18 35.8	+65 23	1283	6.0	I	628, 1395, 1450, 1384,	5 4 4 6
	18 36.4	+66 49							
	36.4	+66 47	18 36.4	+66 49	[illegible]	[illegible]	I	1384	3
	18 36.7	+62 26							
	.3	+62 24	18 36.7	+62 26	1637	5.7	I	628, 1395, 1450, 1384,	5 4 5, 8,
	18 37.1	+60 36							
	.6	+60 34	18 37.2	+60 37	1840	6.8	a II	1450, 1384,	2 2
	18 37.7	+52 6							
	.6	+52 4	18 37.5	+52 6	2263	5.7	I	628, 1384,	5 7
	18 34.8	+77 27							
	.8	+77 25	18 34.6	+77 28	699	6.5	b III	628, 1384, 1395, 1450, 1333, 1384, 1519	1, 2, 2 3 3 2
	18 36.1	+72 18							
	.9	+72 16	18 36.1	+72 18	852	6.8	III	1384	3
	37.0	+79 30	18 33.2	+79 34	18,532 Wellzen	7.8	I	1395, 1450, 1519 I?	4 4 4
	18 37.2	+67 41							
	.3	+67 39	18 37.2	+67 41	1085	7.8	I	1450, 1384,	4 4
	18 37.7	+63 26							
	.4	+63 24	18 37.7	+63 26	1445	7.3	III	1384	2
	18 34.6	+79 44							
	.7	+79 42	18 34.6	+79 44	591	7.8	I	1333, II 1384, 738 I	4 2 3
	18 37.0	+72 11							
	.8	+72 9	18 37.0	+72 11	855	7.0	III	1384	2
	38								
	18 37.7	+72 18							
	.5	+72 15	18 37.7	+72 18	857	6.5	III	1384	2
	18 38.6	+67 4							
	.6	+67 1	18 38.6	+67 4	1087	8.0	III	1384	2
	18 38.0	+73 12							
	39.0	+73 9	18 38.0	+73 12	831	7.0	III	1384	1
	18 38.7	+72 11							
	.5	+72 8	18 38.7	+72 11	858	8.0	III	1384	2
	18 40.1	+62 40							
	.7	+62 37	18 40.0	+62 39	1641	6.3	III	1450, 1384,	2 1
	18 40.7	+55 27							
	.8	+55 24	18 40.7	+55 26	2107	5.3	I	628, 1384,	1 1

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1992phao.proj..8515

K Line	H Line	Brightness	Cor Brightness	Mraw	Residuals	no Rmarks
10	..	6.9 6.9 7.1, 7.2,	7.6 7.4 7.8, 7.7,		..	
10	.	7.0 7.3,	6.9 7.2,		.	
10	.	6.5,	6.0,		.	
10 10 10	... S	6.9, 6.7, 6.3, 5.9,	8.7, 6.3, 6.0, 5.8,		....	
.	.	6.4,	6.4,		.	
..	.. S S	6.7, 6.1, 6.9, 8.9	8.7, 5.6, 5.6, 5.7,		....	
10 10	..	6.9, 6.9,	6.5, 6.7,		1247, .	
.2	. S	7.1, 6.4,	5.8, 5.9,		..	
.10 10 10 10 10 10	... S S S .	6.7 6.0 6.2 6.5 6.0 5.7 7.0 7.0, 6.3, 6.5, 6.8, 6.5, 6.1, 7.3,	6.3 6.3 6.6 7.0 6.9 6.4 7.2 6.6, 6.6, 6.9, 7.3, 7.4, 6.8, 7.5,		1218 .. 219, 392, 1235, 1240,	
10	S	6.9 7.0	7.2 7.3,		.	
10 10 10	...	6.2 6.5 7.0	5.7 6.0 6.1		...	
10.	..	7.0 6.7,	6.8 6.7,		..	
10	.	7.0 7.3,	6.9 7.2,		.	
10 10.	.. .	6.5 6.0 6.4	8.4 6.9, 5.7		.. .	
10	.	6.8 7.1,	7.4,		.	
10	.	6.7 7.0,	7.0 7.3,		.	
10	.	7.0 7.2,	7.0 7.2,		.	
.	.	6.8 7.0,	7.1 7.3,		.	
10	.	7.0 7.3,	7.3 7.6		.	
10.	..	6.8 6.5 7.0, 6.8,	6.4 6.3 6.6, 6.6,		..	
..	. S	6.9, 5.3,	4.4, 4.9,		..	

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1882phae.proj..851F

18 h

	1855- Ka.	1855- Dec.	1900 Ka	1900 Dec	No Mag	Spectrum	As Plates	As Lines
m 40								
18 41.4+53 47	.4+53 44	18 41.4	+53 47	2126	6.0 I	1384,	6	
41								
18 41.1+72 53	.0+72 50	18 41.1	+72 53	889	8.0 III	1384	2	10
18 42.9+54 47	.0+54 44	18 42.9	+54 47	2034	6.0 III	1384	3	10
18 41.2+74 32	.5+74 29	18 41.2	+74 32	789	8.2 III	1384	2	10
18 43.1+60 57	.6+60 54	18 43.1	+60 54	1845	6.0 III	1384	2	10
18 43.3+61 51	.9+61 48	18 43.3	+61 51	1771	7.9 III	1384	2	10
43								
161 18 44.5+52 52	.2+83 4	18 37.3 36.4	+83 6 18	5536	6.2 I	584, 617, 682, 696, 800, 1354, 1395, 1450,	5 5 5 3 7 6 7 8	10
	.5+52 49	18 44.5	+52 53	2280	6.3 I	628, 1384,	2 6	
18 44.1+64 42	.9+64 39	18 44.1	+64 42	1289	7.7 III	1384	2	10
44								
18 43.8+70 29	.3+70 26	18 43.8	+70 29	1020	8.0 III	1450 1384,	2 1	10
18 42.5+77 35	.5+77 32	18 42.5	+77 35	702	7.0 I	628, 738, 1395, 1450, 1333, 1384, 1519,	4 2 2 4 2 2 1	10
18 43.7+71 33	.4+71 30	18 43.7	+71 33	906	8.3 III	1384	1	
18 44.3+70 42	.8+70 39	18 44.3	+70 41	1023	6.3 III	1450, 1384,	2 1	10

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1882phae.proj..851F

	K Line	S Line	Brightness	Cor Brightness	Mean Residuals	Remarks
		S	64	60		
10			78 78	75 78		
10		S	67 69	63 68		
10			68 70	72 74		
10			69 73	67 71		
10			70 72	68 70		
10	2 2 2 2 2 2	S S	65 66 67 69 61 69 57 52	65 65 66 64 63 60 64 63		
		S	71 62	58 57		1268
10			70 73	69 73		
10			69 69 71 73	69 71 71 75		
10 10 10 10 10 10			71 64 62 65 60 60 71	67 67 66 70 69 67 73		3911420 ; 1221 1276
			71 74	83 86		
10			67 70 70 74	67 72 70 76		

1882phae.proj..851F

18h

	1855 1855 1900 1900 No. mag					
m	R.A. Dec. R.A. Dec. Obsn. Obsn.	Spectrum.	No. Plate	No. Lines		
45						
18 44.6 + 75 12	46.0 + 75 9	18 44.6 + 75 12	678	7.5 I	738, 1384, 1519	8 8 2	
18 46.3 + 68 38	.5 + 68 35	18 46.3 + 68 38	1019	7.8 II	1450	2	10
18 46.9 + 63 9	6 + 63 6	18 46.9 + 63 9	1461	7.5 III	1384	1	
18 46.9 + 67 41	47.0 + 67 38	18 46.9 + 67 41	1096	7.0 I	628, 1395, 1450, 1384, 1519	3 6 2 8 2	
18 47.7 + 57 43	.0 + 57 40	18 47.7 + 57 43	1907	8.1 III	1384	2	10
18 48.2 + 54 12	.3 + 54 9	18 48.2 + 54 12	2042	7.5 II	1384	1	
48							
18 49.4 + 52 51	.4 + 52 48	18 49.3 + 52 50	2294	5.5 III b	1384	2	10
18 49.7 + 59 16	49.1 + 59 13	18 49.7 + 59 16	1925	4.3 III	628, 1384, 1519, b	2 3 3	10
18 48.3 + 73 57	.4 + 73 54	18 48.2 + 73 58	838	5.3 III	628, 682, 738, 1395, 1450, 1384, 1519, lv bc b	2 2 3 1 3 3 2	10

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1882phae.proj..851r

K Line.	I Line.	Brightness.	Cor. Brightness	Mean.	Residuals.	No	Remarks.
- 10 10	- S -	63 63 - 72 75	64, 70, 72 75,				. . .
10	-	71,	70,				-
-	-	70 72,	69 71,				-
10, 10, 10 - 10	- - - - -	73, 67, 70, 65 - 72 75 -	62, 73, 68, 65 - 67 70,				- - - - -
10	-	71 75 -	68 72				-
-	-	69,	65 -				-
10	-	65 - 69	60 64,				1267,
10 10 10	- S S	65 - 60 64 68, 64 - 67,	57 57, 56 64, 61, 59,				- - 1285 -
10 10 10 - 10 10 10	- - S - S S -	68 70 69 60 55 62 70, 74 - 63, 63, 58, 65 -	61 60 60 62 59 61 63, 64, 54 - 4 65, 62, 64,				- - - - - 1259, 1272, 1295 -

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18h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Mag.	Mag.	Spectrum.	No. Plate		No. Lines
m										
50.0	+59	30	18 50.6	+59 33	9	26	7.3	I	1384, 1519,	41
	18 49.6	+75 19								
51.0	+75	16	18 49.6	+75 19	6	82	5.8	I	617, 628, 682, 693, 1381, 1770, 1395,	4 7 6 7 9 5 3
	18 49.7	+74 37								
.0	+74	34	18 49.7	+74 37	7	92	7.5	III	1430, 1384,	11
	18 52.1	+57 20								
.3	+57	17	18 52.1	+57 20	19	18	6.3	III	1384	1
	18 52.3	+59 53								
.7	+59	50	18 52.3	+59 53	19	29	7.0	II	1384, 1519,	22
52										
	18 52.9	+58 35								
.2	+58	32	18 52.9	+58 35	18	44	7.8	III	1384	2
53										
	18 49.9	+80 11								
.4	+80	8	18 52.1	+80 11	5	91	8.5	II	1430,	2
54										
	18 55.0	+57 42								
.3	+57	38	18 55.1	+57 41	19	22	5.8	III	1384	1

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18h

K Line.	I Line.	Brightness.	Cor. Brightness.	Mean Residuals.	No Remarks.
		68, 69,	65-61,		
		68, 5-7, 65-63, 53, 64, 55,	62 61 57, 51, 56, 60, 54, 57, 57,		
		71 65- 73 68,	73 69 73 73		
		70 7.4	67 71,		
10 10		69, 69,	66, 61,		
10		71 71,	68 71,		
10		71,	78,		
		67 70,	64 67		

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18h

	1855 Obs.	1855 Dec.	1900 Obs.	1900 Dec.	Mag.	Spectrum	No. Plate	No. Lines	
18 55.8+58 4m	55.	.1+58 1	18 55.8	+58 4	18 49	6.6 I	1384, 1519,	5 2	10
18 54.8+71 39		.1+71 35	18 54.4	+71 39	9 14	7.5 II a	1395, 1450 (1) 1384 (2) 1384 II 1519,	2 6 5 2 5	10 2
18 56.0+65 8		.8+65 4	18 56.0	+65 8	13 09	8.5 III	1384, 1519,	3 2	10 10
18 54.4+74 20		.6+74 16	18 54.4	+74 20	19 68	8.3 III	1384	2	10
18 52.6+79 50	60.	.8+79 46	18 52.7	+79 50	6 04	6.5 I b	628, 693, 696, 738, 1333, 1395, 1450 1384,	4 4 4 6 5 6 7 8	10 10
18 56.3+62 16		.9+62 12	18 56.3	+62 16	16 69	6.1 III	1384,	1	
18 55.7+71 10	56	.2+71 6	18 55.6	+71 10	9 18	8.3 III b	628, 682, III b 1395 III b 1450 III b 1384, 1384, III bc 1519	1 2 2 3 2 3 3	
18 57.3+60 32		.7+60 28	18 57.3	+60 32	18 64	6.6 I	1384, II 1519,	5 2	10
18 55.6+73 58		.4+73 54	18 55.5	+73 57	8 43	7.8 III	1384	2	10
	54								
18 58.7+55 31		.8+55 27	18 58.8	+55 31	21 34	8.7 III	1384	3	10
18 55.8+78 43	58.	.2+78 39	18 55.8	+78 43	6 60	7.5 II	1384	2	10
18 57.4+73 2		.3+72 58	18 57.4	+73 2	8 71	8.9 II	1384	2	10
18 56.9+75 39	150	.4+75 35	18 56.9	+75 39	6 83	6.5 I	628, 682, 142 693, 738, 770, 1395 (1) 1395 (2)	6 4 5 5 6 4 5 4	10
18 59.8+52 7		.7+52 3	18 59.8	+52 7	23 26	6.3 III	1384,	2	10
18 56.3+78 50		.8+78 46	18 56.6	+78 50	6 61	7.5 II	1384	2	10
18 58.7+69 70 02		.9+69 58	18 58.7	+70 2	10 84	6.5 III	1519	2	10
18 59.5+69 23		.8+69 19	18 59.5	+69 23	10 18	6.3 I	628, 1384, 1519,	4 7 4	

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18h

K Line	F Line	Brightness	Cor Brightness	Mean	Residuals	No	Remarks
10		6.5 7.0	6.2 6.2				
10 2 5 10 10	S S	6.5 6.6 6.5 6.8	6.5 6.6 6.8 6.6			1431	
10 10	S	6.7 6.7 7.0	6.1 6.4				
10		6.7 7.0	7.1 7.4				
10 10 10 10 10 10 8 5	S S S	6.7 7.0 6.9 5.9 5.8 5.7 5.9 5.7	6.5 7.1 6.7 6.0 7.7 6.3 6.6 6.6			220 1426	
		6.7 7.0	6.5 6.8				
10 12 10 10 10	S S S	6.8 7.0 5.7 5.8 5.7 6.1 7.1 7.3 6.1 6.1 6.1 6.5	5.9 5.8 5.6 5.8 6.2 6.1 6.0 6.1 5.9 5.8 6.3 6.2			222 1429 1248 1281 1241	
10		6.6 7.0	6.4 5.3				
10		6.8 7.9	7.2 7.4				
10	S	6.5 6.7	6.3				
10		6.5	7.3				
10		7.3	7.6				
10	S S	6.5 7.0 6.7 5.9 7.0 6.3 5.9 6.1 6.4 6.0 6.3 6.5					
10		7.0 7.2	6.5 6.7				
10		6.4	7.2				
10		7.2 7.5	6.9 7.2				
	S	6.8 6.1 6.6	5.8 6.2 6.2				

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1882phae.proj..851F

19h

	1855 R.A.	1855 Dec.	Reg	1920 R.A.	1920 Dec.	no. Obs.	mag. Dif.	Spectrum.	No. Plate.	No. Lines.
m										
0										
	19 1.6	+62 33		.2	+62 29	19 1.6	+62 33	16 7.4 6.7 III 1384	2	10
	19 2.7	+53 16		.4	+53 12	19 2.6	+53 14	21 7.8 5.7 I 628, 1384,	4 6	
	19 2.4	+61 57		.9	+61 53	19 2.4	+61 57	18 7.0 II 1384	1	
	19 1.4	+71 22	2	.0	+71 18	19 1.4	+71 22	9 8.3 II 1384,	2	10
	19 1.1	+73 59		.2	+73 55	19 1.1	+73 59	8 6.8 II a 7 3.8, II 1450, I 1384, II 1519,	2 2 6 2	10
	19 3.8	+68 10	3	.1	+68 6	19 3.0	+68 10	10 7.0 I 1384, III 1519,	5, 2,	10
	19 2.1	+76 54	4	.9	+76 50	19 2.2	+76 55	12 6.5 II 1342, III 693, II a 738, II 1395, II a 1450, II 1384, II 1519	2 2 2 2 3 2 2	10

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K Line.	F Line.	Brightness.	Cor. Brightness	Mean.	Residuals.	Nr.	Remarks.
10	.	69 71	67 69			.	
..	.S	69 69	57 56			..	
.	.	70	68			.	
10	.	.	.			.	
10 10 10 10	.. S.	65 67 63 70	65 69 67 69			383 ...	
.. 10	S.	66 73	67 69			..	
2 . 10 10 10 10 10 10 10	.... S ..	69 72 61 64 67 58 69	69 70 63 67 71 64 75			238 387 1239 ..	

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1882phae.proj..851F

19h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Em.	Mag. Em.	Spectrum	No. Plate	No. Lines	
m 5										
	19 6.9	+54 56								
6	.9	+54 52	19 6.9	+54 56	2089	7.8	II	1384	2	10
	19 5.5	+73 13								
	.4	+73 9	19 5.5	+73 13	848	9.4	I	1384	3	
7										
	.7	+80 42	19 4.1	+80 46	603	8.2	I	738, 1450,	4 4	10 10
8										
	19 9.7	+56 42								
	19 8.6	+71 55								
	19 9.3	+65 48								
	.9	+56 38	19 9.7	+56 41	2209	5.5	III	1384, 1519	3 2	10 10
	.2	+71 51	19 8.6	+71 55	902	7.2	III	1384	1	
	.2	+65 44	19 9.4	+65 49	1326	6.9	I	628, 1384, 1519,	5 5 5	5
	4	+82 9	19 4.7	+82 13	542	6.0	I	696, 1395, 1480, 1519, 1520,	5 5 5 6 5	
	19 10.4	+57 29								
	.6	+57 24	19 10.4	+57 29	1961	7.2	III	1384	1	

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K Line.	F Line.	Brightness.	Cor. Brightness.	Mean Residuals.	No Remarks.
10	.	70,	66,		.
.	.	69,	72,		.
10 10	..	70, 67,	76, 75,		..
10 10	S .	60 70 63, 72,	56 61 59, 63,		..
.	.	67 69,	70 72,		.
5	. S .	69, 60, 66,	58, 60, 61,		...
... 5 2	... S .	68, 57, 57, 63, 64,	69, 66, 67, 70, 69,		.....
.	.	70 73,	67 70,		.

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1882phae.proj..851F

19h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Obs.	mag.	Spectrum.	No. Plate	No. Lines
10	19 9.4	+72 7m							
	.1	+72 2	19 9.4	+72 7	8	7.1	8.0 II	1384	2
	19 9.7	+71 20							
	.2	+71 15	19 9.6	+71 20	9	8.4	8.5 II	1384	2
163	.4	+83 42	19 14.0	+83 47	5	4.4	6.5 I	682, 800, 696, 753, 1354, 1393, 1450, 1519,	3 1 6 3 4 6 6 5
11									
	19 12.2	+57 32							
	.4	+57 27	19 12.1	+57 32	19	6.8	5.3 III	1384, 1519,	2 2
	19 11.2	+72 5							
	.9	+71 60	19 11.2	+72 5	9	3.6	7.5 II	1384	1
12									
	19 11.8	+71 57							
	.4	+71 52	19 11.8	+71 57	9	3.8	8.3 II	1384,	2
	19 12.5	+67 29							
	.5	+67 24	19 12.5	+67 29	11	2.9	3.4 III bc	628, 682, 742, 693, 738, 770 1384, 1519,	2 2 2 2 3 2 2 3
13									
	19 13.8	+66 57							
	.8	+66 52	19 13.8	+66 57	11	7.9	7.5 I	738, 1384,	6 5
	19 14.1	+65 6							
	.9	+65 1	19 14.1	+65 6	13	3.3	7.6 a II	1384	2
14									
	19 12.8	+76 24							
62	.4	+76 19	19 12.8	+76 25	11	7.4	5.5 I	628, 682, 682, 693, 738, 770, 1395, 1450 742	7 2 6 7 9 6 6 7
	19 13.0	+76 1							
	.5	+75 56	19 13.0	+76 1	6	9.0	8.0 II	1384	2

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K Line.	J Line.	Brightness.	Cor. Brightness.	Mean.	Residuals	No.	Remarks.
10	.	6.7	7.0				
10	.	7.9	7.2				
5 5 5 2 5	. . . . .	6.9 7.4 6.7 6.3 6.9 5.6 5.5 6.9	6.9 7.1 7.0 6.8 7.2 6.7 6.8 6.9				
10 10	. .	6.4 6.9 6.7 7.1	6.4 6.3				
.	.	7.0	7.3				
10	.	6.7	7.0				
3 14 18 15 25 20 25 12 12	. S . . S S . S	5.6 5.8 5.4 5.5 5.7 5.0 5.2 5.8 6.1 5.7 5.8 6.0 5.3 5.5	4.5 4.4 4.8 4.7 5.0 4.5 4.8 5.3 5.0 4.7 4.7 5.1				1277, 1283 218, 223, 232, 240, 390, 245
2	. .	6.4 6.5	6.0 6.5				
10	.	6.8	6.7				1274
8 10 10 10 10 10 10 10 10	S . . S S S S S S	6.0 . 6.5 6.0 4.8 6.2 5.3 5.6 5.6 5.5 . 5.7 4.8 6.0 5.6 5.6 6.0	?				
10	.	7.0	7.5				

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19h

m	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Obs.	Mag.	Spectrum	No. Plates	No. Lines
15									
	19 15.9	+63 2							
	.5	+62 57	19 15.9	+63 2	17	6.5	II 1384	2	10
16									
	19 16.3	+66 58							
	.2	+66 53	19 16.3	+66 58	11	8.2	III 1384	1	
	19 16.8	+60 46							
	.2	+60 41	19 16.8	+60 46	19	7.0	I 1519	4	10
	.6	+82 28	19 11.7	+82 31	5	7.4	I 1395, 1450, 1519,	2 4 4	10
17									
	.7	+80 28	19 14.4	+80 32	6	7.2	III 1338, 1384,	2	10
	19 16.2	+76 43							
	.9	+76 38	19 16.2	+76 43	7	8.3	II 1384	1	
	19 17.0	+73 40							
18	.0	+73 35	19 17.0	+73 40	8	6.8	I 1338, 1384,	3 2	10
	19 16.8	+74 51							
	.0	+74 46	19 16.8	+74 51	8	8.0	II 1384	1	
	19 18.4	+71 9							
	.9	+71 4	19 18.4	+71 9	9	6.8	I 1384	4	10
	19 17.4	+73 10							
	.3	+73 5	19 17.5	+73 10	8	7.4	III 628, 682, 738, 770, 1384, 1519, 1570,	2 2 3 2 3 2 1	10,
	.8	+51 28	19 19.9	+51 33	23	6.8	II 1384	2	10
	19 19.0	+64 13							
	.7	+64 8	19 19.0	+64 13	13	6.5	I 1338, 1384, 1519,	6 3 4	10
	.9	+80 30	19 15.5	+80 35	6	7.1	I 800, 1338, 1395, 1450, 1384, 1519, 1520,	3 5 3 3 3 3 3	5
19									
	19 20.1	+65 31							
164	.9	+65 26	19 20.2	+65 31	13	5.3	I 628, 682, 742, 693, 738, 770, 1384, 1519,	6 7 6 8 9 6 7 9	2

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K Line	F Line	Brightness	Cor. Brightness	Mean Residuals	No	Remarks
10	-	7.0	6.9	✓		
		7.0	7.3	✓		
10	-	7.0	6.3	✓		
10 10 10	- - -	6.5 6.4 7.0	7.4 7.4 7.1	✓		
10	- -	6.9 6.5 6.8	7.5 7.5 7.8	✓		
	-	6.8	7.4	✓		
10	- -	7.1 6.8 6.9	7.1 7.2 7.4	✓	1271	
10 12 10 10 10 10	- - - S - -	6.5 6.6 5.8 6.8 5.4 5.9 6.5 6.8 7.0 6.2 7.1 5.8 6.8 6.8	5.7 5.5 5.7 5.9 5.7 5.7 6.8 6.1 6.9 6.1 6.2 6.1 6.3 6.1	✓	1292 2.14 2.27 1.38 2.43 1270	
10	-	7.0	6.5	✓		
10	- - -	6.2 6.2 6.5	5.7 6.4 5.9	✓		
8	- - - - - - -	7.3 6.4 6.3 6.4 6.2 6.9 6.8	6.5 7.0 7.0 7.2 7.1 7.3 7.1	✓		
9	2 2 1 2	S S S S	6.9 6.2 6.5 5.5 4.8 5.8 5.2 6.0	4.8 4.8 5.1 4.4 4.6 5.2 4.3		

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19 h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No.	Mag.	Spectrum	No. Plates	No. Lines	
m										
20										
	19 19.6	+74 44								
	.8	+74 39	19	19.6	+74	44	815 8.4 II 1384	2		10
21										
	19 20.4	+74 7								
	.4	+74 2	19	20.4	+74	7	816 8.8 II 1384,	2		10
	19 20.8	+73 22								
	.7	+73 17	19	20.8	+73	22	860 7.5 a² II 1384, I 1579 I 38	2 4 3		10 10
22										
	19 22.1	+71 55								
	.7	+71 50	19	22.1	+71	55	949 7.5 III 1384	2		10
	19 21.4	+76 25								
	23.0	+76 20	19	21.4	+76	25	731 7.6 II 1384	2		10
	19 24.0	+57 49								
	.2	+57 44	19	24.0	+57	49	1999 6.5 I 1579	3		
	24.0	+81 0	19	20.4	+81	3	655 8.3 I 1480	4		10
	19 22.6	+76 36								
	.2	+76 31	19	22.6	+76	36	732 7.3 III 1384	2		10

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K Line	T Line	Brightness	Cor. Brightness	Mean Residuals	Hs	Remarks
10	.	7.1	7.5			
10	.	7.0	7.4			
10 10	.	6.4 6.8 6.5	6.8 6.7 5.8			1269
10	.	6.9 7.2	7.3			
10	.	6.6	7.3			
	.	7.0	6.2			
10	.	7.2	8.0			
10	.	6.8 7.0	7.4 7.6			

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19h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Lines	Mag.	Spectrum	No. Plate	No. Lines	
m										
25										
26										
	19 25.1	+76 23								
•	.6	+76 1	19	25.1	+76 22	134	6.5	II 1384	2	10
27										
	19 28.2	+56 26								
	19 28.4	+55 56								
	19 25.6	+77 59								
1	.3	+56 2	19	28.2	+56 26	2250	6.9	I 738	7	10
2	.5	+55 5	19	28.4	+55 56	2213	6.3	I 738	4	
•	.5	+77 5	19	25.6	+77 59	728	7.8	I 738, II 1450, III 1384,	4 2 1	10 10
28										
•	.3	+81 3	19	24.2	+81 45	660	8.0	I 738, 1450,	4 4	
29										
	19 28.7	+73 9								
•	.5	+73 3	19	28.7	+73 9	863	7.5	I 738, III 1384,	4 2	10

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1882phae.proj..851F

K Line.	F Line.	Brightness.	Cor. Brightness.	Mean.	Residuals.	No.	Remarks
10	.	69	75			.	
10	.	64	56			-	
.	.	65	57			.	
10 10 .	. . .	66, 71, 67	69, 76, 74,			. . .	
10	. .	67, 69	74, 78			. .	
10	. .	68, 69	67, 72			. .	

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19h

	1855 R.A. Dec.	1855 R.A. Dec.	1900 Hin.	1900 Hin.	No. mag.	Spectrum.	No. Plate	No. Lines.
m 30								
155	19 27.8 +79 24	.4 +79 18	19 27.8	+79 24	628 6.3	I	628, 682, 742, 693, 800, 696, 738, 770,	65 68 46 96 . 2
a	19 30.6 +59 57	.9 +59 51	19 31.6	+59 57	2060 6.2	I	738	
31								
32								
	19 31.8 +70 47	.1 +70 41	19 31.8	+70 47	1073 6.3	III	738	2 10
X	19 32.4 +69 31	.6 +69 25	19 32.5	+69 31	1053 5.0	b III	682, 742, 693, 738, 770, 1519, 1540,	2 2 2 3 3 2 3 10
	19 33.4 +65 19	.1 +65 13	19 33.4	+65 19	1369 7.5	b III	693, 738,	32 10 10
	19 33.9 +56 46	.0 +56 40	19 33.9	+56 46	2272 6.5	II	738	2 10
156	19 30.5 +79 35	.4 +83 10	19 27.9	+83 16	552 6.0	I	614, 682, 800, 696, 753, 774, 1354, 1395,	34 46 44 55
		.2 +79 29	19 30.5	+79 35	629 8.0	II	1459	2 10
34								

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K Line. F Line. Brightness. Cor. Brightness. Mean. Residuals. No. Remarks.

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19h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Obs.	Mag. Obs.	Spectrum	No. Plate	No. Series
19 34.8+70 2m	35.0	+69 56	19 34.8	+70 2	105	8.2	I 738	3	10
19 36.4+54 44	.4	+54 38	19 36.4	+54 44	2193	5.8	II 738, III 1570,	4 2	
19 35.4+71 23	.8	+71 17	19 35.4	+71 23	964	6.7	? (a) I 738 (c) I 738, II 1579,	2 4 1	
~~19 36.6+63 30~~	~~.2~~	~~+63 24~~	~~19 36.6~~	~~+63 30~~	~~1544~~	~~8.0~~	~~I 738~~	~~3~~	
19 34.3+78 3	.2	+77 57	19 34.3	+78 3	734	7.0	a II 738, III 1384,	2 2	10
19 35.6+75 5	.7	+74 59	19 35.6	+75 5	829	8.5	I 1384, III 1579,	3 1	
19 38.1+55 32	39.1	+55 26	19 38.1	+55 32	2241	7.0	I 738	4	
19 38.5+56 29	.6	+56 23	19 38.5	+56 29	2283	7.8	I 738,	2	
19 38.7+60 16	38.0	+60 10	19 38.7	+60 16	1991	6.5	d I 742, I 738, I 770, I 1519, I 1570,	3 5 4 4 2	5
19 37.2+74 7	.2	+74 1	19 37.2	+74 7	831	6.7	III 1384	2	10
19 39.1+66 14	.9	+66 8	19 39.1	+66 14	1225	7.9	I 738	3	

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K Line.	F Line.	Brightness.	Cor. Brightness.	Mean. Residuals	No	Remarks
10	3	70,	68,			
10, 10	..	62, 67, 71,	84, 53, 56,			..
10, 10,	...	., 64, 70,	., 62, 67,			...
.	.	65-	60,			.
10 10	..	63, 62,	66, 69,			389, .
..	..	65, 72, 74-	70, 72, 75-			..
.	.	69	61,			.
.	.	72,	64,			.
. 5 24 10 .	.....	66, 65, 71, 68, 69,	58, 59, 57, 61, 67,			.....
10	.	69, 71,	73-			.
..	.	69,	75-			.

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1882phae.proj...851F

19h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Obs.	Mag. Obs.	Spectrum.	No Plate.	No. Lines.
m 40									
19 41.3+57 46	4+57	40	19 41.3	+57 46	20	5.7	6.2 II	738, III a 1540,	21
19 41.6+56 47	7+56	41	19 41.6	+56 47	22	9.1	6.3 I	738, II a	12
41									
42									
43									
44									
19 44.4+69 7	5+68	60	19 44.4	+69 6	10	7.9	6.2 I	682, 742, 693, 738, 740, 1519, 1540,	5-6 6 7 5-7 4 5-8
19 45.4+56 40	5+56	33	19 45.4	+56 40	23	8.4	7.0 I	738,	2

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K Line.	I Line.	Brightness.	Cor. Brightness.	Mean. Residuals.	No.	Remarks.
10.	..	6.5, 7.0, 7.3,	5.8, 5.7, 6.0,		..	
10 10	5.	5.6, 6.6,	5.7, 5.8,		5.8, 6,	
5 5 2 2 2 2.	..... 8.	7.0, 6.4, 6.5, 5.7, 6.7, 6.4, 6.7, 6.9,	5.7, 5.7, 5.8, 5.4, 5.6, 6.0, 5.8,		.....	

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19h

1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Lin.	Mag. Obs.	Spectrum	No. Plate	No. Lines
m								
45								
19 46.3	+53 31							
.5	+53 24	19 46.6	+53 31	2303	7.1	I	738	8
19 46.5	+59 10							
.7	+59 3	19 46.5	+59 10	2121	6.5	I	738, 1519,	23 2
19 45.8	+67 14							
~~.6~~	~~+67 7~~	~~19 45.8~~	~~+67 14~~	~~1200~~	~~7.4~~	~~I~~	~~770~~	7
19 46.4	+65 9							
46.0	+65 2	19 46.4	+65 9	1400	8.2	I	738.	8
19 46.6	+68 11							
.6	+68 4	19 46.6	+68 11	1082	6.4	I	742, 693, 738, 1519, 1570	8 4 7 2 2
19 44.0	+79 46							
.6	+79 39	19 44.0	+79 46	640	8.0	I	1584	4
19 48.0	+52 44							
47.0	+52 37	19 48.2	+52 45	2547	5.3	III b	738,	2
19 ~~48.8~~	+60 57							
48.1	+60 50	19 48.8	+60 57	2026	6.1	II a	738, 1519,	2 2
~~19 49.1~~	~~+58 44~~							
~~.3~~	~~+58 37~~	~~19 49.1~~	~~+58 44~~	~~1994~~	~~8.5~~	~~III~~	~~742~~	~~2~~
19 48.5	+69 70 0							
165 .6	+69 53	19 48.5	+70 1	1070	3.8	III b	682, 693, 800, 696, 738, 770, 1519, 1147, 8 2, 2 2 4 3 3 2 3 3	12

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K Line.	F Line.	Brightness.	Cor. Brightness.	Mean. Residuals.	Ns.	Remarks.
10	.	6.8	6.0		.	
10	..	6.8, 7.2, 7.5	6.1, 6.4, 6.7,		..	
.	.	6.4,	5.2,		.	
8	.	6.5,	6.0,		.	
10 10 10 10 10	S	6.5, 7.0, 6.3, 6.9, 7.0,	6.0, 6.3, 6.0, 6.4, 6.1,		. . . . .	
10	.	6.8,	7.6,		.	
10	.	6.6 6.9,	5.7 6.0,		380,	
10 10	..	6.9, 7.2, 7.5,	6.3, 6.6, 6.9,		3.95,	
10	.	6.7 7.0,	5.8 6.1 5.3 5.6		.	
12	..	5.7 6.6			234	1286, 1361,
33 12 12 . 20, 12, 12 10 10, . S S S . S S	^ ^	6.0 6.3 6.0, 6.5, 6.1, 5.8, 6.3, 5.5 6.1	5.8 6.0 6.0 5.2 5.8 5.4 5.4	48 48 5.1 49 48 40 49 5.2 8.2, 5.1, 6.8, 5.2, 6.5,	^	225 242, . 25 1394 1246,

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1882phae.proj..851F

19h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No.	Mag.	Spectrum	No. Plate	No. Lines
	m	°							
	50								
	19 51.2	+57 15							
	.3	+57 8	1951.2	+5716	2084	5.4	I	742, 693, 738, 1519, 1570, 770	I 8 8 8 6 8 7
	19 51.8	+59 26							
	51.0	+59 19	1951.8	+5927	2137	5.8	I	742, 693, 738, 770, 1519, 1570,	7 5 8 3 4 4
	19 49.4	+79 17							
	.7	+79 10	1949.3	+7917	645	7.5	I	738	4
	19 52.1	+66 26							
	.8	+66 19	1952.1	+6626	1253	7.0	I	738	4
	19 52.9	+52 11							
	.9	+52 4	1953.1	+5211	2572	5.5	I	742, 693, 738, 770, 1570,	4 8, 10, 4 6
	52								
	19 53.4	+57 59							
	.5	+57 52	1953.4	+5759	2092	6.3	III	738	2
	53								
	19 54.2	+56 25							
	.2	+56 18	1954.2	+5625	2331	6.3	I	742, 693, 738, 770, II 1519, 1570,	6 4 8 3 2 4
	19 54.1	+58 35							
	.2	+58 28	1954.1	+5835	2013	5.1	bc III	738, III 1570, III 742	2 2 2
	19 51.9	+79 12							
	54								
	.1	+79 5	1951.8	+7912	648	7.0	I	1384	3

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K Line	F Line	Brightness	Car. Brightness	Mean Residuals	No Remarks
.....	S..S..	5.9, 6.1, 5.4, 6.0, 5.6, 6.4	5.0, 5.0, 4.7, 5.2, 4.3, 4.8		230, ...
2.2...	.....	6.6, 6.6, 6.0, 6.9, 6.5, 7	5.7, 5.5, 5.8, 5.4, 5.7,		.....
10	.	6.5,	6.9,		.
.	.	6.8,	6.4,		.
10, 2, 2, 10, 2	..S..	6.4, 6.5, 5.7, 6.9, 6.4,	5.3, 5.2, 4.8, 5.2, 4.9,		.....
10	.	6.5, 6.8,	5.8 6.1,		.
..2..10	.....	6.7, 6.9, 6.4, 6.4, 6.9, 6.4,	5.7, 5.7, 5.3, 5.8, 6.0, 5.0,		.....
15 10 10	..	6.3, 6.6, 6.7, 7.2, 6.7, 7.0 }	5.6, 5.6, 5.9, 5.9,		393, .
		6.6,	7.4,		

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19h

1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Lin.	Mag. Lin.	Spectrum.	No. Plate	No. Lines.
55-								
19 56.5	+51 47							
.4	+51 40	19 56.6	+51 47	2	6.5	I	738	6
19 57.X	+51 52							
56								
19 56.9	+57 32							
.0	+57 25	19 56.9	+57 32	2	7.5	I	738	5 10
19 57.3	+63 16							
.7	+63 9	19 57.3	+63 16	15	6.5	I	742, 693, 738, 770, 1519, 1148, 1570	6 5 10 2 3 4 5 2
57-								
19 58.7	+60 48							
58								
19 58.3	+68 9							
.0	+60 41	19 58.7	+60 48	2	7.5	I	738	2
.2	+68 2	19 58.3	+68 9	1	7.5	I	738	4 10
19 59.2	+55 43							
.2	+55 36	19 59.2	+55 43	2	8.1	I	738,	4 10
19 58.5	+67 11							
.3	+67 4	19 58.5	+67 11	1	7.4	I	738	4 10
19 59.7	+57 22							
.7	+57 15	19 59.6	+57 22	2	7.7	I	738	5
19 59.9	+70 5							
59.1	+69 58	19 59.0	+70 5	1	6.5	III	738, 1519, 1520,	3 2 1 10 10
.4	+81 12	19 56.0	+81 19		7.7	II	1450	2 10
19 59.7	+69 8							
.7	+69 0	19 59.7	+69 8	1	7.8	I	738	4
19 59.8	+68 12							
.7	+68 4	19 59.8	+68 12	1	7.5	I	738	4 10
1920 0.8	+56 49							
.8	+56 41	20 0.8	+56 49	2	7.2	I	738	4
20 0.4	+64 33							
.9	+64 25	20 0.4	+64 32	1	8.0	III	742, 738, 1519,	2 2 1 10 10

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K Line.	I Line.	Brightness.	Cor. Brightness	Mean.	Residuals	No.	Remarks
.	.	.	.			.	
.	.	70,	47,			.	
10	.	65,	58,			.	
5	2 . 2 . 5 10 10	S, S . . .	68, 68, 61, 73, 66, 71, 66,	61, 58, 56, 60, 60, 62, 55,		. . . . .	
.	.	72,	66,			.	
10	.	69,	66,			.	
10	.	69,	61,			.	
10	.	67,	63			.	
.	.	68,	61,			.	
10 10 .	. . .	64, 72, 71, 66, 75, 73,	61 69 66 63 72, 68,			. . .	
10	.	70,	78,			.	
.	.	65,	62,			.	
10	.	69,	66,			.	
.	.	63,	56,			.	
10 10 .	. . .	70, 63, 71, 73, 67, 74,	63 68 66 66, 62, 69,			. 382 .	

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20h

1855 RA	1855 Dec	1900 RA	1900 Dec	No. Lin.	Mag. Hin.	Spectrum.	No. Plate	No. Lines.
.5	+84 24	19 53.8	+84 32	44	8.5	II	1485	0
20 1.3	+64 21							
.8	+64 13	20 1.2	+64 21	140	6.5	III	738, 1519	3 1 10
20 1.8	+70 11							
.9	+70 3	20 1.8	+70 11	1102	8.1	I	738	3
20 3.1	+56 3							
.1	+55 55	20 3.1	+56 3	2324	6.5	I	742, 693, 1570, 738	3 2 2 2 10
20 2.4	+67 35							
.2	+67 24	20 2.4	+67 35	1222	5.1	III	742, 693, 738, 770, 1519, 1448, 1520, 1570,	3 2 2 2 2 2 2 32 10
20 3.6	+52 52							
.4	+52 44	20 3.6	+52 51	2623	5.9	III	693, 738, 1570,	3 2 2 10
20 3.5	+63 37							
.9	+63 29	20 3.5	+63 36	1593	6.5	I	742, 693, 696, 738, 1478, 1520 1570,	5 6 3 7 2 5 4 5,
20, 3.9	+61 42							
.2	+61 34	20 3.9	+61 42	1970	5.0	III	738 738,	2 2 10
20 2.3	+76 12							
.6	+76 4	20 2.4	+76 12	771	6.0	II	738	2 10
20 5.7	+57 31							
.7	+57 23	20 5.7	+57 31	2144	7.2	I	738, 1570,	4 3
20 5.5	+63 25							
.9	+63 17	20 5.5	+63 25	1597	7.8	I	738	4

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K Line.	F Line.	Brightness.	Cor. Brightness.	Mean.	Residuals.	No.	Remarks.
		79	83				
10	S	6.4 6.7 7.2 7.5	5.8 6.6 6.1 6.9				
		79	68				
10 10 10		7.0 7.0 6.6 6.4	6.0 5.8 5.2 6.7 5.7			287	385
232 10 10 10 10 10 10 10	S S S	6.3 6.5 5.7 7.0 6.5 6.4 6.5 6.4 6.6 6.9 6.0 7.3 6.9 7.1 7.0 6.8	5.7 5.7 5.3 5.8 5.0 5.6 5.8 5.4 6.0 6.1 5.6 6.1 6.4 6.3 6.3 5.8			231 239	388 244 282 1299 1305
10 10 10	S	7.1 6.1 6.8 7.2	5.8 5.2 5.3 5.7			235	
10 10 10	S S S	6.8 6.8 6.8 6.2 7.2 6.7 6.6	6.1 5.9 5.6 5.7 6.3 6.6 5.9 5.8				
10 10	6	6.5 6.8	5.9 6.2			379	397
10		6.4	6.5			385	
		6.6 7.1	5.9 5.8				
		6.9	6.4				

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20h

1855 RA.	1855 Dec.	1900 RA.	1900 Dec.	No. mag.	Stn.	Spectrum.	No. Plate	No. Lines
m s								
20 6.2	+66 1							
.8	+65 5-3	20 6.2	+66 1	1433	7.0	I	742, 693, 738, 15-20,	4 4 6 1
20 6.4	+64 54							
.9	+64 46	20 6.4	+64 54	1418-	7.2	I	738	4
20 7.1	+55 44							
6.0	+55 36	20 7.1	+55 44	2336	6.5	III	738,	2
20 5.8	+72 29							
.2	+72 21	20 5.8	+72 29	934	7.5-	I	738	5-
20 7.3	+61 47							
.6	+61 39	20 7.3	+61 47	1978-	6.8	I	696, (1) 738, (2) 738,	3 6 5-
7								
8								
20 10.1	+57 5							
.1	+56 57	20 10.1	+57 5	2375-	7.4	I	738	4
20 9.9	+61 47							
.2	+61 39	20 9.9	+61 46	1983	8.8	a II	696, (1) 738, (2) IIa 738, 15-20,	2 3 2 3
20 9.8	+68 0							
.6	+67 52	20 9.8	+68 0	1233	7.7	I	738	5
20 10.2	+63 14							
.6	+63 6	20 10.2	+63 14	1605-	7.8	I	738	
20 7.6	+79 24							
.8	+79 16	20 7.6	+79 24	660	6.5-	III-	738, 1384, 15-19, 15-20,	1/2 2 2 1
20 11.0	+53 21							
.8	+53 13	20 11.0	+53 21	2368	6.6	I	738,	3
20 10.2	+59 51							
.3	+59 43	20 10.2	+59 51	2198	7.4	I	738	4

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K Line.	Y Line.	Brightness.	Cor. Brightness.	Mean Residuals.	No.	Remarks.
....	....	7.0, 7.0, 6.4, 7.0,	6.4, 6.2, 6.0, 6.0,	✓	....	
10	-	7.0,	6.5,	✓	-	
10	-	66 69,	58 61,	✓	-	
-	-	6.7,	6.6,	✓	-	
...	...	7.1, 6.5,	5.8, 5.9,	✓	...	
10	-	6.9,	6.2,	✓	-	
10 10 10 10	... S	6.9, 6.4, 6.6,	5.6, 5.8, 5.7,	✓	2S4, 3S4, 3S1, 13S5,	
10	-	6.8,	6.5,	✓	-	
10 10 10 10 -	...	6.8 6.4, 6.2, 7.1, 7.0 6.6, 6.5, 7.3, 7.3,	6.1, 6.8, 7.0, 7.3, 7.4, 7.1, 7.0, 7.3, 7.6, 7.4,	✓ ✓	3...	
-	-	6.8,	6.0,	✓	-	
-	-	7.0	6.8	✓	-	

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20h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	Mag.	Spectrum	No. Plate		No. Lines	
20 11.0 +56 16m										
10	10.0	+56 8	20 11.1	+56 16	23	7.6	4.8	I	742, 696, 738, 770, 1478, 1520, 1570, 693	8, 7, 10, 8, 9, 6, 8, 8	2	2
20 10.5 +67 58										
0	3	+67 5.0	20 10.5	+67 58	12	8.5	6.9	I	738	6	8	
20 11.6 +60 21										
1	.8	+60 13	20 11.6	+60 20	20	99	6.0	III	738	2	10	
11												
12												
20 11.5 +77 33										
13	0	+77 25	20 11.5	+77 32	7.62	7.7	II	738	3	10	
20 12.1 +75 57										
1	.2	+75 49	12.1	+75 57	12	6	8.0	I	803,	3	1	
20 12.3 +77 24										
144	.8	+77 16	20 12.3	+77 25	7.64	4.8	I	682, 742, 693, 800, 696, 803, 720, 738,		7, 11, 10, 8, 8, 9, 8, 2	2	2
14												
20 14.3 +72 34										
2	.6	+72 26	20 14.2	+72 34	94.3	6.8	III	1579	2	10		
	.6	+82 5.9	20 10.0	+83 7	60.8	8.5	II	1450	1			
20 15.9 +55 5										
20 15.4 +61 49	.8	+54 8.7	20 15.9	+55 5	23.29	6.0	I	742, 693, 738, 770, 1478, 1570,		6, 6, 8, 5, 4, 5	5	2
	.9	+61 41	20 15.7	+61 49	19.96	8.2	II	738,		2		10

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1882phae.proj..851F

K Line	T Line	Brightness	Cor Brightness	Mean Residuals	No	Remarks
2 2 2 3 2 8 2 3	S · S · S S S · 5.3, 4.8, 5.9, 6.3, 5.8, 5.3, 4.3, 4.0, 4.3, 4.1, 4.7, 3.9, 4.4					
8	·	6.4,	6.1,			
10	·	6.8, 7.2,	6.3, 6.7,			
10	·	6.5	6.7			
·	·	6.9,	6.4,			
2	· 2 · 2 · · · ·	S S S · S S · S	5.4, 4.7, 4.6, 5.7, 5.5, 5.3, 5.2, 4.3,	4.6, 4.7, 4.4, 4.5, 5.0, 4.9, 4.8, 4.5,		
10	·	7.4,	6.9 7.3,			
·	·	6.9,	8.0,			
· 5 2 5 · 5	S · S · · ·	6.4, 6.6, 6.9, 7.0, 6.5, 6.8,	5.4, 5.4, 6.1, 5.4, 5.3, 4.9,			
10	·	·	·			

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1882phae.proj..851F

20h

1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Elm.	mag Dim.	Spectrum	No. Plate	No. Lines
m 15								
16 20 16.4	+66 31							
.1	+66 23	20 16.4	+66 31	1281	6.2	II a	742, 738, 770, 1478, 1870,	2, 3, 3, 2, 1
17 20 18.0	+61 56							
1/2, .2	+61 48	20 18.0	+61 56	2000	5.8	I	742, 693, 800, 696, 738, 738, 770, 1478,	4, 3, 3, 6, 7, 6, 5, 2
18								
20 18.3	+70 28							
.3	+70 19	20 18.3	+70 28	1115	7.5	II	738	2
20 20.0	+54 37							
.8	+54 28	20 20.0	+54 37	2339	7.3	I	738	4
19 20 19.8	+63 41							
.0	+81 46	20 15.6	+81 55	699	7.5	III	1879	2
.2	+63 32	20 19.8	+63 41	1618	8.9	III	738	2
20 20.5	+54 21							
.3	+54 12	20 20.5	+54 21	2341	6.7	I	693, 738, 1478,	3 4 1
20 19.6	+68 34							
.4	+68 25	20 19.6	+68 34	1121	6.0	III	1820,	2

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1882phae.proj..851F

K Line	I Line	Brightness.	Cor. Brightness	Mean.	Residuals.	No	Remarks
10 10 . 10 .	. 8 . . .	6.9, 5.9, 7.5, 7.1, 6.6 6.9	6.3, 5.8, 6.3, 6.3, 5.6 5.9,			229, ...	
. . . . . 2 5 10	. . . . 8 . . .	. 6.9, 7.9, 6.4, 6.3, . . 6.8,	. 6.0, 5.0, 6.1, 5.7, . . 5.8,			. . . . . ; 1297	
10	.	6.7,	6.6,			.	
2	.	6.4,	6.1,			.	
10	.	7.0 7.2,	7.6 7.8,			.	
10,	.	6.6 7.0	6.1 6.5,			.	
. 10 .	. . .	7.2, 6.5, 7.0,	6.0, 5.7, 5.8,			. . .	
10.	.	7.8 7.8,	6.4 6.7,			.	

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1882phae.proj..851F

20h

	1855 RA	1855 Dec	1900 RA	1900 Dec	Yr Dim	Mag Dim	Spectrum	No. Plate	No. Lines
173	m 20.0	+84 14	20 14.0	+84 23	1481	7.0	I	682, 800, 696, 783, 1114, 1395, 1450, 1519,	4 5 3 4 3 3 5 5
	20 17.9	+80 9							
	.3	+80 0	20 17.9	+80 9	648	7.8	I	738	4
	20 21.8	+53 14							
	.6	+53 5	20 21.8	+53 14	2394	6.2	I	738, 1570,	6 4
	20 22.1	+55 7							
	21.0	+54 58	20 22.1	+55 7	2344	6.9	I	738	4
	20 21.9	+69 12							
	.8	+69 3	20 ~~22.0~~ 21.9	+69 12	1099	7.7	I	738, 1520,	6 1
	20 23.0	+59 17							
	22.1	+59 8	20 23.0	+59 17	2228	6.4	I	696, 738, 1478, 1520, 1570	5 6 3 3 4
	20 20.8	+79 44							
	.7	+79 35	20 20.6	+79 44	670	8.9	II a	1520	2
	20 20.2	+80 13							
166	.6	+80 4	20 20.2	+80 13	650	6.8	I v	742, 693, 696, 803, 783, 738, 1470, 1884,	4 5 5 6 5 8 5 3
	20 23.7	+59 51							
	.8	+59 42	20 23.7	+59 51	2234	7.3	I	738	4
	20 24.0	+56 19							
	.9	+56 10	20 24.0	+56 19	2421	6.6	I	742, 693, 738, 1478, 1570,	3 5 6 3 5

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K Line	J Line	Brightness	Cor. Brightness	Mean Residuals	No	Remarks
...5...25	.....	70, 69, 68, 62, 70, 57, 57, 62, 71, 57, 72, 68, 69, 69, 70, 72,		✓	.....	
10	.	65,	73,	✓	-	
10	..	66, 68,	58, 57,	✓	..	
.	-	61,	63,	✓	.	
10.	..	66, 72, 74,	63, 66, 68,	✓	..	
10 8 ...	.....	69, 64, 67, 67, 67, 68,	55, 57, 56, 57, 53,	✓	.....	
10	.	67,	69,	✓	130%	
10 2.2..2.	..... S..	68, 69, 68, 64, 65, 58, 69, 56,	68, 70, 66, 63, 65, 63, 66, 66,	✓	.....	
10	.	70,	63,	✓	.	
.5...8	.....	70, 69, 62, 67, 66,	60, 57, 54, 58, 52,	✓	.....	

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20h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No.	Mag.	Spectrum	No. Plate	No. Lines
20 25.9+59 24	25.0	+59 15	20 26.0	+59 24	2040	7.4	III	1570	2
20 26.7+55 44	.8	+55 35	20 27.0	+55 44	2411	6.0	I	738, 1478, 1570, 693, 770	8 5 6 6 5
20 26.7+65 25	.2	+66 16	20 26.7	+65 25	1466	6.3	I	693, 696, 738, 1520, 1570, III	3 4 7 3 2
20 28.0+62 40	.2	+62 31	20 27.9	+62 40	1821	4.0	I	742, 693, 800, 696, 738, 770, 1478, 1520, 675, 10, 9, 798	
20 29.3+56 26	.2	+56 17	20 29.3	+56 26	2444	6.3	I	738	3
20 30.7+54 27	.5	+54 18	20 30.7	+54 27	2374	7.0	III	738	

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K Line	F Line	Brightness	Cor. Brightness	Mean Residuals	No.	Remarks
10	-	7.4	8.1			
		6.8 6.9	3.0, 5.1, 5.0	- -		
2 10		6.9, 7.2, 6.3, 6.7, 6.8 7.9	6.0, 6.0, 5.8, 5.9, 5.7 5.9			
98	5-2 6,3 3 2 2 2	- - - S S - S S	5.7 5.8 5.9 5.4 4.8 6.5 5.4 4.8	5.1, 4.8, 3.9, 4.1, 4.2, 5.1, 4.4 3.9.		
		7.0,	6.2,			
		6.9 7.3,	6.1 6.5,			

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1882phae.proj..851F

20h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No.	Mag.	Spectrum	No. Plate		No. Lines.
m										
30.	0+84	8-	2024.4	+84 44	62	7.0	I	696,	II 1395, IIa 1450, II 1519, IIa 1520, IIa? 1521, I 1564	3 2 2 2 3 3 4
31.	0+84	40	2024.6	+84 49	463	7.2	II	1519,	II 1520, II 1521, III 1564,	1 2 2 2
20 32.1	+61	28								
	2+61	16	20 32.1	+61 25	2028	7.3	II	738,	III 1520,	2 1
32.	0+81	53	2028.7	+82 2	106	7.4	I	753,	IIa 738, II 1519, II 1520, III 1521,	3 2 2 2 2
20 32.2	+70	12								
	1+70	3	20 32.2	+70 11	1126	6.8	I	800,	II 696, I 738, I 1520,	3 4 6 3
20 30.5	+79	52								
	6+79	43	20 30.5	+79 52	675	7.3	I	696,	d I 753, I 738, I 1519, II 1521, I 1584,	4 3 3 4 3 3
33.	1+82	22	2029.4	+82 31	613	8.5	I	1521		3
20 32.9	+74	35								
168.	4+74	26	20 32.8	+74 37	872	8.5	I	742,	693, 800, 696, 803, 720, 738, 770	9 9 6 7 7 6, 11, 6
34										
20 35.7	+60	24								
	8+60	15	20 35.7	+60 24	2142	7.0	I	800		3

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1882phae.proj..851F

K Line.	J Line.	Brightness.	Cor. Brightness	Mean Residuals	No.	Remarks.
10 10 10 10 10 10	S S	70, 63, 64, 67, 66, 65, 66	74, 78, 71, 77, 74, 76, 76,	✓	1262, 1317, 1345	
10 10 10		68, 66, 66, 67,	79, 75, 78, 78,	✓		
10		74,	63,	✓		
10 10 10 10		68, 69, 67, 66,	70, 75, 71, 73	✓	878,	
10		70 70 63, 65,	54, 61, 61, 60,	✓		
10 10		70, 69, 63, 70, 67, 68,	68, 69, 68, 74, 72, 76,	✓		
		71,	79,	✓		
2 3 2 2 2	S S	60, 58, 62, 63, 60, 53, 65,	58, 54, 58, 58, 57, 54, 57,	✓		
		69	49,			

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1882phae.proj..851F

20h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Obs.	Mag. Obs.	Spectrum	No. Plate	No. Lines
m 35									
	20 36.4	+55 39							
	.2	+55 30	20 36.4	+55 39	2444	6.5	II	1478	2
	20 36.1	+67 9							
	.6	+66 60	20 36.1	+67 9	1311	7.4	I	738,	5
	.8	+80 56	20 33.2	+81 6	654	7.5	III	738, 1519, 1521, 1584,	3 1 1 1 1
	.9	+85 48	20 27.2	+85 54	347	8.0	I	1520	3
36									
37									
	20 38.2	+60 10							
	.2	+59 60	20 38.2	+60 9	2272	6.2	a II	1478, 1520,	2 3
170	.2	+80 56	20 34.5	+81 5	659	5.8	III	682, 690, 696, 733, 714, 738, 740, 1519,	2 2 2 2 2 3 2 3
	.4	+80 35	20 35.2	+80 45	660	6.1	III	696, 733, 738, 1519, 1520, 1570, 1584,	1 3 3 2 2 2 2
38									
	.2	+82 41	20 34.4	+82 51	617	7.0	III	1519, 1520,	1 1
	20 38.7	+70 50							
	.6	+70 40	20 38.7	+70 50	1136	7.8	I	738,	4
39									
	20 40.7	+56 46							
	.6	+56 36	20 40.7	+56 46	2477	6.7	II	1478	2
	20 40.8	+54 56							
	.6	+54 46	20 40.8	+54 56	2408	6.7	II	1478,	2
	20 40.6	+60 14							
	.6	+60 4	20 40.5	+60 14	2184	6.2	I	800, 696, I 1478, 1520,	3 4 4 5

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K Line	Y Line	Brightness	Cor Brightness	Mean	Residuals	No.	Remarks.
10	-	70,	68,				
	-	67,	63,				
10	S	71 69 68 69 65, 72, 70, 71,	74 74 74 78 74, 77, 76 80,				. . . .
		70,	81,				
10 10	- S	70, 67,	60, 58,			1300,	1290
23 10 . 10 10 10 10 . 10	- - - - S - S	70 67, 64 63 68 65-68 65-9 72, 70, 68, 66, 72, 60, 71, 63,	66 59 63 64 62 62 66 64 68, 62, 67, 67, 66, 66, 69, 68			275,	276,
2 . 10 10 10 10 10 .	- S S - S - S	68 64 61 65- 65- 71 65- 71, 67, 65, 67, 67 73, 67,	67 65- 67 70 68 71 74 70, 68, 71, 72, 70, 73, 76,			244,	1289, 1310,
. .	. .	67 69 70, 71,	74 74 71, 76,				. .
.	.	65-	63,				
10	-	67,	65-				
10	.	71,	59,				
. . 10 3	. . . S	70, 69, 66, 65-	60, 56, 56, 56,				. . .

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20h

	1855 RA	1855 Dec	1900 RA	1900 Dec	No. Obs.	Mag.	Spectrum	No. Plate	No. Lines
m 40									
			20 41.5	+65 58					
	.9	+65 48	20 41.5	+65 58	1499	7.0	I	1584, 738	4 5
20 40.1	+76 29								
	41.0	+76 19	20 40.1	+76 29	809	7.1	I	800, 738, 1584,	3 6 1
			20 42.0	+66 18					
	.4	+66 8	20 41.9	+66 18	1318	5.5	I d	693, 696, 803, 720, 738, 770, 1478, 1520, (1) 800	5 5 6 4 9 4 5 6 3
20 39.9	+79 4								
	.6	+78 54	20 40.0	+79 5	716	6.9	I v	693, 800, 696, 803, 753, 738, 770, 1519,	3 3 2 2 4 7 3 4
20 42.9	+57 14								
	.8	+57 4	20 42.8	+57 14	2240	4.5	II a	696, 1478, 1520,	2 3 3
42									
20 43.3	+61 27								
	.4	+61 14	20 43.2	+61 26	2058	3.7	III bd	800, 696, 803, 720, 1478, 1478, 1520, (1) 1584	3 3 2 3 3 3 3 3
43									
	.2	+83 7	20 39.1	+83 16	588	6.2	I	682, 800, 696, 774, 928, 834, 1395, 1480,	4 3 6 3 3 3 4 7
20 43.9	+69 23								
	.6	+69 13	20 43.9	+69 23	1127	6.7	III	1520,	
44									

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K Line. F Line. Brightness. Cor. B rightness. Mean. Residuals. No. Remarks.

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20h

	1855 RA.	1855 Dec	1900 RA.	1900 Dec.	No. Mag.	Spectrum.	No. Plate	No. Lines.
m								
45								
20 46.9+58 22	.8	+58 12	20 46.9	+58 22	21 7/8 6.5	I	1820	4
46								
20 47.3+67 39	.8	+67 29	20 47.3	+67 39	12 6/7 6.5	III	1584	1
20 47.6+63 40	.8	+63 30	20 47.6	+63 40	16 6/7 6.5	I	803, 1520, 1584,	4 3 2
47								
20 47.7+69 17	.4	+69 7	20 47.7	+69 17	11 3/0 7.0	I	1584	4
48								
49								

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K Line.	L Line.	Brightness.	Cor. Brightness.	Mean Residuals.	No.	Remarks.
10	.	6.8,	5.8,		.	
.	.	7.1 / 7.3,	7.0 / 7.2,		.	
10 10 10	. S.	7.3, 6.6, 6.6 / 7.9	6.2, 5.8, 6.4 / 6.8,		. . .	
10	.	7.2,	7.2,		.	

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20h

	1855 R.A. Dec.	1855 R.A. Dec.	Dm.	Dm.	Spectrum.	No. Plate	No. Lines.
m							
50							
20 51.3+58 56							
	.2+58 46	20 51.3+58 56	218	7 6.6	I	1584	4
51							
	.5+82 31	20 48.1+82 41	62	7 8.6	II	1520,	1
52							
20 53.6+56 29							
20 52.5+74 16							
	.4+56 19	20 53.6+56 29	287	5 6.0	II	1478, 1520, 1584,	2 2 4
	.8+74 6	20 52.5+74 16	89	0 7.3	I	738, 1520, 1584,	3 1 4
148	.8+81 59	20 49.8+82 10	71	8 6.0	I	682, 800, 696, 803, 720, 753, 774, 928,	6 5 8 2 1 7 7 6
53							
54							
20 52.2+80 10							
171	.1+80 0	20 52.2+80 11	67	2 5.3	III	800, 696, 803, 720, 738, 770, 1579, 1478,	2 2 2 2 3 1 3 2

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K Line.	F Line.	Brightness.	Cor. Brightness.	Mean.	Residuals.	No.	Remarks.
		70	66				
		73	78				
		66 67 66	65 56 55			1303	
		65 69 66	65 66 69				
		63 64 56 58 62 53	60 57 56 60 57 62				
		69 67 65 68 59 70 63 69 72 70 70 71 63 73 61 73	60 65 67 67 66 67 67 70 63 68 69 70 68 70 71 74			250 375	1287

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1882phae.proj..851F

20h

1855 RA.	1855 Dec.	1900 RA.	1900 Dec.	No. Dim.	Mag. Dim.	Spectrum	No. Plate	No. Lines
m								
55								
~~.8~~	~~+80 56~~					~~687 7.5 II 1520~~		
20 57.0	+59 2						1	
.9	+58 52	20 57.6	+59 3			2201 5.6, III 1584	2	10
56								
20 56.0	+75 31							
.5	+75 21	20 55.9	+75 32	764	7.0	I ~~693, 741~~ III 1521, III 1584,	~~6 3~~ 2 3	
57								
20 59.2	+56 39							
20 59.4	+56 16							
20 59.3	+57 23							
58 .0	+56 29	20 59.2	+56 40	2828	6.5	I 803, II ~~1478~~, III 1520,	3 2 1	.10
.2	+56 5	20 59.4	+56 16	2824	5.8	I 803, I ~~1478~~, 1520, 1584,	6 5 3 3 5	
.1	+57 12	20 59.3	+57 23	2273	7.0	I 1584	3	
59								

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K Line	F Line	Brightness	Cor. Brightness	Mean	Residuals	No	Remark
~~.~~	~~.~~	~~7.1,~~	~~7.4,~~			~~.~~	
10	.	6.8 7.2,	6.4 6.8	✓		.	
~~. .~~ 10 10	~~. .~~ . S	~~6.8, 6.9,~~ 7.1, 6.6, 6.9 6.4	~~6.5, 6.2,~~ 7.2, 7.0, 7.0 6.8	✓		~~. .~~ . .	
. 10 .	. . .	7.2, 6.9, 7.3, 7.0	5.8, 5.7, 6.2, 5.9	✓		. . .	
. . . . . .	. . . . . .	6.7, 6.6, 6.2, 6.6, 5.8,	5.3, 5.2, 5.0, 5.5, 3.3,	✓		. . . . .	
.	.	6.8	6.4,	✓		.	

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1882phae.proj..851H

1882phae.proj..851F

21h

m	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Obs.	Mag.	Spectrum.	No. Plate.	No. Lines.
0									
	21 2.2	+59 51							
	.1	+59 40	21 2.2	+59 51	2313	7.0	II	1584	1
2									
	21 1.6	+77 2							
	.4	+76 57	21 1.6	+77 2	824	8.2	I	1538, 1584	4 3
	21 3.9	+59 1							
	.8	+58 50	21 3.9	+59 1	2226	7.3	III	1584	2 10
	.8	+83 23	20 59.0	+83 34	596	7.7	III	1519, 1520, 1521, 1564,	2 3 1 10
3	.0	+81 14	21 0.6	+81 25	725	8.0	II	1584	2 10
4									

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1882phae.proj..851F

K Line	I Line	Brightness	Corr Brightness	Mean Residuals	No Remarks
.	-	70,	66,		.
..	..	67, 71,	69, 76,		..
10	.	72 75	68 71,		.
10	....	69 71, 68, 66, 68,	74 79, 74, 75, 72,		....
10	.	68,	71,		.

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1882phae.proj..851F

21h

	1855 RA	1855 Dec.	1900 RA	1900 Dec.	No. Mag.	Spectrum	No. Plate	No. Lines
m 5								
21 5.8+71.2	.5+70 51	21 5.8	+71 2	11'64	6.0	I	800, 696, 803, 753, 1520, 1521, 1584,	3, 2, 2, 4, 5-4 5-
21 6.4+67 51	.8+67 40	21 6.4	+67 51	1288	7.0	I	803, 1520, 1584,	5 4 5-
21 7.2+53 9	.8+52 58	21 7.1	+53 9	2880	5.5	I	803, 720, 1584,	5, 5-6
6								
21 7.4+62 53	.4+62 42	21 7.4	+62 53	1903	7.0	I	1520, 1584,	5-3
7								
21 9.2+59 33	.1+59 22	21 9.3	+59 34	2334	6.0	I	696, 803, 720, 1520, 1584,	3, 4 4 3 7
21 7.5+77 43	.4+77 32	21 7.5	+77 43	800	6.1	I	742, 693, 696, 803, 720, 753, 774, 795,	4, 6, 6, 8, 5 5 5 3
21 8.0+75 58	~~.4+75 47~~	~~21 8.0~~	~~+75 58~~	~~774~~	~~8.2~~	~~I~~	~~738~~	5-
	.4+82 2.4	21 5.5	+82 35	636	8.5	III	1520, 1521,	1 2
21 9.1+66 18	.4+66 7.	21 9.1	+66 18	1366	68	I	1584,	3
9								

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1882phae.proj...851F

K. Line	I Line	Brightness	Cor. Brightness	Mean Residuals	No.	Remarks
10, 10, 10, 10 10 10	S S	6.9, 6.8, 6.9, 6.3, 6.4, 6.3, 6.4,	5.3, 5.9, 6.1, 5.6, 5.9, 6.1, 6.5,		25.2, 26,	
10 10 10		7.1, 7.0, 6.6,	6.2, 6.4, 6.6,			
		6.9, 6.9, 6.0,	5.5, 5.5, 5.5,			
		6.6, 6.6,	5.7, 6.3,			
	S S	6.7, 6.8, 6.8, 6.1, 6.0,	5.3, 5.5, 5.5, 5.7, 5.6,		, 13 5.9,	
? 2,		6.3, 6.2, 6.5, 6.3, 6.2, 6.2, 6.8, 5.7,	6.4, 6.1, 6.1, 6.0, 5.9, 6.0, 5.9, 6.1,			
		6.6,	6.7,			
10		7.2, 7.6, 7.0,	7.7, 8.1, 7.8,		, 13 4.1,	
		7.0,	6.9,			

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1882phae.proj..851F

21 h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Obs.	Mag.	Spectrum	No. Plate	No. Lines
21 8.2 +80 47m									
10	.0	+80 36	21 8.2	+80 46	79	7.0	I	696, 753, 738, 1579, 1520, 1521, 1584	5, 4 6, 4, 3-3 3-
21 10.2 +74 48									
	.4	+74 34	21 10.1	+74 50	907	7.0	III	1520, 1584,	1 2
21 11.7 +63 59									
	.8	+63 48	21 11.7	+63 59	1708	6.4	III	1520, 1584,	1 1
11									
12									
21 11.2 +78 15									
	.2	+78 4	21 11.2	+78 15	742	7.5-	I	753, 738, 1520, 1584,	3 3-2 3
21 12.7 +69 38									
	.2	+69 27	21 12.7	+69 38	1152	6.5-	III	1584	3
21 13.9 +53 34									
	.5	+53 23	21 13.9	+53 34	2588	5.8	I	803, 720, 1584	5, 3 3-
13									
21 13.0 +75 53									
	.4	+75 42	21 13.0	+75 53	778	6.8	I	803, 720, 1584,	5, 4 3-
21 14.6 +58 10									
	.4	+57 59	21 14.6	+58 10	2309	6.5-	I	803, 1520, 1584,	3, 1 1
21 13.9 +72 45									
	.8	+72 34	21 13.9	+72 45	980	7.3	III	1584	1
14									
21 13.8 +78 34									
	.8	+78 23	21 13.8	+78 34	744	6.8	I	803, 753, 738, 1520, 1521, 1570, 1584,	4 3 3-2 2-1 3

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K Line	J Line	Brightness	Cor. Brightness	Mean	Residuals	No. Remarks
10, 10 10 10 10 10	S S S S S	6.9 6.8, 6.4 6.7, 6.6 6.5, 6.7	6.8 6.9, 7.0, 7.2, 6.9, 7.1, 7.6,		V	
10		7.1 6.7 7.5, 6.9,	6.8 7.0 7.3, 7.2,		V	
		7.0 7.4, 6.9,	6.2 6.6, 6.7,		V	
10		7.1, 6.4, 6.9, 6.6,	6.9, 6.7, 6.9, 7.2,		V	
10	S	7.0 7.2,	7.0 7.2,		V	
?	S	7.0, 7.3, 6.4,	5.6, 5.9, 5.9,		V	
10		7.0 7.3, 6.5,	6.5, 6.8, 6.9,		V	
		7.1, 7.0 7.4, 6.5,	5.8, 6.0 6.4, 6.1,		V	
		7.2 7.4,	7.1 7.6,		V	
10		7.0, 7.0, 6.3, 6.6, 6.8, 7.0, 6.3,	6.1, 6.8, 6.6, 6.6, 7.1, 6.7, 6.9,		V	

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1882phae.proj..851F

21 h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Dim.	mag. Dim.	Spectrum	No. Plate	No. Lines
m									
15									
21 16.3+62 9									
21 16.5+58 12	2+61 58	21 16.2+62 10	2111	3.0	I	800, 696, 803, 803, 720, 720, 1520, 1584,			9, 9, 10, 7, 11, 3, 12, 12,
	3+58 1	21 16.5+58 13	2249	5.6	II	1584,			1
21 16.8+68 8									
	8+67 57	21 16.5+68 8	1303	8.0	I	803			4
16									
21 17.4+64 28									
178	5+64 17	21 17.3+64 27	1527	5.5	II	800, 696, 803, 720, 753, 774, 1520, 1521,			2, 4, 7, 6, 8 3 3 3
21 17.8+60 15	7+60 4	21 17.8+60 15	2224	6.5	III	1520 1584,			1 2
21 18.0+60 20	9+60 9	21 18.0+60 21	~~2224~~ 2227	6.8	III	1584			1
17									
21 16.9+76 35									
	3+76 24	21 16.8+76 36	833	6.0	III	1520, 1521, 1584, 1576,			2 1 2 2
21 16.7+80 23									
18	2+80 12	21 16.7+80 23	688	6.5	I	696, 753, 1520, 1521, 1584, 738			4, 4 2 2 3 5 7
21 19.0+66 47	2+66 36	21 19.0+66 47	1392	7.6	III	1520			2
21 17.6+78 10	4+77 59	21 17.7+78 10	811	7.0	I	753, 738, 1520, 1521, 1584,			3 5 3 4 5
21 19.5+53 48	1+53 37	21 19.5+53 48	2609	7.2	III	1584,			2
21 18.8+69 7	2+68 56	21 18.8+69 7	1206	8.0	II	1584			1
21 17.5+80 48									
153	19.2+80 37	21 17.6+80 48	690	6.3	I	693, 800, 696, 803, 720, 753, 774, 795, 787			4, 6, 8, 7 6 8 7 4

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K Line	L Line	Brightness	Cor Brightness	Mean Residuals	No Remarks
2,2,4,6,3,-5,-2,	8,8,8,8,8,8,8,8	5.4,4.2,5.1,-4.5-,4.0,13	3.4,4.9,3.9,-3.3,-3.1,13,		-,266,
		6.8,	6.4,		
		7.2,	6.3,		
10,-,-,10,-		7.0,6.4,6.4,6.3,6.1,6.6,5.7,5.5	5.1,5.2,5.3,5.2,5.1,4.9,4.9,5.0,		138 - -,256,263,-
10	-	7.4,6.9,	6.5,6.6,		
	-	6.6,6.8	6.3,6.5		
10-10 10	-	7.1,7.2,7.5,7.5,7.1,6.7,7.1,6.9	7.0,7.4,7.1,7.6,6.8,7.0,		
10,10 10 10		7.0,6.7,6.7,6.9,6.7,6.5	6.8,6.7,6.9,7.4,7.8,5.8		-,1308,1331
10	-	7.2,7.5-	6.5,6.8,		
10 5-		7.0,6.3,6.7,7.0,6.6,	6.8,6.6,6.7,7.3,7.2,		
10	-	7.3,7.5,	6.8,7.0,		
	-	7.2,	6.1,		
5,5,-2 2 5-,-		6.8,6.7,6.1,6.5,6.7,6.0,6.4,5.9,6.6,2	7.0,5.9,6.0,6.5,6.7,6.1,6.8,6.6,6.4		-,265,-,304

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21h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Dm.	Mag. Dm.	Spectrum	No. Plate	No. Lines	
m										
20										
	21 21.3	+64 37								
	.3	+64 25	21 21.3	+64 37	1536	7.2	II a	1584	1	
	21 22.1	+57 39								
	.8	+57 27	21 22.1	+57 39	2322	7.1	III	1584	1	
	21 21.2	+71 39								
	.8	+71 27	21 21.2	+71 39	1062	6.8	I	1520, 1521, 1584,	3 1 4	
	21 22.0	+65 44								
	21.1	+65 32	21 22.0	+65 44	1582	7.8	II	1584,	1	
	21 22.4	+69 7								
	.4	+68 55	21 22.3	+69 7	1214	7.0	I	803, 1520, 1521, 1584,	4 2 2 5	10,
	21 23.5	+52 28								
	.2	+52 16	21 23.4	+52 28	2939	5.8	I	720, 1584,	4 5	
23	21 24.6	+59 19								
	.4	+59 7	21 24.6	+59 19	2383	6.4	III	1584	2	10
	21 24.7	+52 52								
	.2	+52 40	21 24.7	+52 52	2945	6.7	I	1584	3	
	21 24.1	+70 3								
	.5	+69 51	21 24.1	+70 3	1169	7.4	II a	753,	2	10
	21 23.3	+76 40								
179	.7	+76 28	21 23.3	+76 40	836	6.5	I	696, 803, 720, 753, 795, 787, 1520, 1521,	4, 6, 4 2 4 4 4 4	10
	21 23.6	+76 7								
	.8	+75 55	21 23.6	+76 7	787	6.7	III	1584,	2	10
24	21 25.7	+54 59								
	.3	+54 47	21 25.7	+54 59	2544	6.1	I	803, 720, 1584,	5, 4 6	
	.7	+81 24	21 22.8	+81 36,	736	7.9	I	928, 1584, 1864	795	4 2 1 5	10,

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1882phae.proj..851F

K Line	I Line	Brightness	Cor Brightness	Mean	Residuals	No Remarks
		68	66	✓	135.2	
		70 / 72	66 / 68	✓		
		68, 71	63, 69	✓		
		71	70	✓		
10, 10		70, 66, 68, 65	61, 60, 65, 64	✓	1306, 1327	
		72, 63	67, 57	✓		
10		72 / 75	68 / 71	✓		
		70	64	✓		
10		69	62	✓	272	
10, 2, 10		70, 67, 67, 65 / 64, 69, 66, 67	65, 63, 63, 62 / 67, 64, 65, 69	✓		44
10		68 / 69	73	✓		
	S	70, 70, 62	56, 56, 57	✓		
10, 10		70, 68 / 70	71 / 76	✓		

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21h

	1855 RA	1855 Dec	1900 RA	1900 Dec	No. Obs.	Mag.	Spectrum	No. Plates	No. Lines
21 25.9+66 32									
177	25.0	+66 10	21 25.8	+66 22	1405	5.5	I	803, 720, 783, 783, 774, 774, 1520, 1521	8, 6 5 6 5 5 5 6
	.0	+83 39	21 21.5	+83 50	603	7.5	III	1521, 1564,	1 2
21 26.6+52 30									
	1.+52 18		21 26.6	+52 30	2953	7.2	II	1584,	1
21 27.0+52 31									
	.5+52 19		21 27.0	+52 31	2957	6.3	I	803, 720, 1584,	4, 4 5
21 24.9+75 32									
	.0+75 20		21 24.8	+75 32	788	6.8	III	1584,	1
	.2+81 54		21 23.0	+82 6	737	7.5	II	1564	2
26									
21 28.1+58 58									
	.8+58 46		21 28.1	+58 58	2279	6.8	III	1584	1
21 27.4+66 37									
	.5+66 25		21 27.4	+66 37	1407	6.5	I	803, 1584,	4, 5
21 28.1+52 11									
	.6+51 59		21 28.1	+52 11	3079	6.5	III	1584	1
21 27.4+70 8									
180	.8+69 56		21 27.4	+70 7	1173	3.0	I	800, 696, 803, 720, 783, 774, 1520, 1521,	8, 8, 10, 11 9, 11, 9 10
21 28.2+60 1									
	27.0+59 49		21 28.3	+60 1	2395	5.7	I	803, 720, 1521, 1584	4 4 4 6
21 28.6+57 4									
	.3+56 52		21 28.6	+57 4	2589	7.5	III	1584,	1
	.7+86 26		21 19.6	+86 37	319	7.0	I	783, 1521	4 4
21 28.9+67 51									
28	.1+67 39		21 28.9	+67 51	1322	7.3	I	803, 1520 1521, 1584,	4, 2 2 4
21 27.8+80 6									
	29.0+79 54		21 27.8	+80 5	707	6.0	III	696, 803, 783, 1520, 1521, 1584, 1576,	2, 2 3 3 2 2
21 29.7+70 22									
	.1+70 10		21 29.7	+70 22	1183	7.2	I	1520 1521, 1584,	3 3 3
21 31.0+51 15									
	.3+51 3		21 31.0	+51 15	3091	6.4	II	1584	1
21 28.9+75 58									
	.1+75 46		21 28.9	+75 58	791	7.3	III	1584	2

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K Line.	F Line.	Brightness.	Cor. Brightness.	Mean Residuals.	No. Remarks.
..10..10..10..... SS		6.4, 6.3, 6.3, 6.6, 6.2, 6.9	5.4 5.3, 5.4, 5.5, 5.5, 5.6	✓	.....
.10	..	7.0 6.7 7.3, 7.0,	8.0 7.6 8.3, 7.9,	✓	..
.	.	7.3,	6.7,	✓	.
.10.	...	7.1, 7.4, 6.5	5.6. 5.9 5.9,	✓	...
.	.	7.2 7.5,	7.0 7.9	✓	.
10	.	6.8,	7.4,	✓	.
.	.	7.0 7.3,	6.6 6.9,	✓	.
..	..	7.1, 6.6	6.1, 6.5	✓	..
.	.	7.2 7.4,	6.6 6.8,	✓	.
.....	S, S S S S S S S	5.2, 4.5, 4.5, 4.7, 5.0, 5.1, 3.8, 3.3. 6, 3.6, 3.4, 3.9, 4.3, 3.7, 3.8,		✓	.. 259, ...
.. 8	.. S S	6.8, 6.7, 6.1, 5.9,	5.3, 5.4, 5.4, 5.5	✓	....
.	.	7.2 7.4	6.8 7.0,	✓	.
10, 5	..	6.6.	7.1.	✓	..
.10 10.	.....	7.0, 7.1, 7.0 7.1, 6.5	6.0 6.4, 7.0 7.1, 6.4,	✓	....
10, .. 10 10 10 10 .. S S ..		6.8 6.4 6.2 6.4 6.7 7.0 7.3, 6.6 6.7, 6.6, 6.6, 6.9,	6.6 6.6 6.7 7.2 6.9 6.8 7.2, 6.4 6.9, 7.1, 7.4 7.1,	✓	.. 1330, ..
10 10 .	S ..	6.8, 6.6, 6.7,	6.3 6.4 6.8,	✓	...
.	.	.	.	✓	.
10	.	7.0 7.3,	7.4 7.1,	✓	.

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1882phae.proj..851F

21 h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Obs.	Mag.	Spectrum	No. Plate	No. Lines	
m 30										
	-2	+82 21	21 24.9	+82 33	648	8.0	III	1520	1	
21 29.9 + 77 30	.3	+77 18	21 29.9	+77 30	623	7.2	III	1584	1	
21 32.0 + 65 18	31.0	+66 6	21 32.0	+65 18	1602	7.5	III	1584	2	10
32										
21 34.3 + 53 36	.8	+53 24	21 34.3	+53 36	2659	6.5	III	1584	2	10
21 33.6 + 67 46	.8	+67 34	21 33.6	+67 46	1329	6.8	I	803, 720, 753, 1521, 1584,	5, 4, 3, 3, 6	
33										
21 34.6 + 58 18	.3	+58 6	21 34.6	+58 18	2300	7.1	II	1584	2	10
21 35.2 + 53 8	.7	+52 56	21 35.2	+53 8	3003	6.5	II	1584	1	
21 35.3 + 61 37	34.1	+61 25	21 35.2	+61 38	2169	5.0	I	803, 803, 720, 720, 753, 714, 1521, 1584,	5, 5, 4, 6, 5, 4, 4, 4	10,
181										
21 35.7 + 57 2	.5	+56 50	21 35.8	+57 2	2617	6.2	I?	803, 720, 1521, 1584,	3, 4, 1, 4	

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1882phae.proj..851r

K Line	F Line	Brightness	Cor. Brightness	Mean	Residuals	No.	Remarks
		7.1, 7.5	7.6, 8.0				
		7.2, 7.4	7.7, 7.9				
10		7.2, 7.5	7.0, 7.3				
10		6.8, 7.1	6.3, 6.6				
10,		6.8, 7.0, 6.7, 6.7, 6.2,	5.8, 6.0, 5.8, 6.3, 6.1,				
10		7.1,	6.7,				
		7.2,	6.6,				
10, 10, 10,		6.7, 6.5, 5.9, 6.5, 5.2, 5.8,	5.5, 5.3, 4.8, 4.7, 4.6, 5.5,				
		6.8, 6.6, 6.7, 6.9, 5.8,	5.5, 5.3, 6.0, 6.2, 5.4,				1554,

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21h

	1855 RA	1855 Dec.	1900 RA	1900 Dec.	no. Obs.	mag	Spectrum	No. Plate	No. Lines
m									
35									
21 37.4 + 54 25	.9	+54 13	21 37.4	+54 25	25	9.5 6.0	III	1584	1
36									
21 37.6 + 59 18	.3	+59 6	21 37.6	+59 18	24	09 6.9	III	1584	2 10
37									
21 39.3 + 57 17	.9	+57 8	21 39.3	+57 17	23	74 7.2	II	1584	2
38	.1	+83 12	21 35.4	+83 24	6	13 8.6	II	1564	2 10
21 39.7 + 58 48	.4	+58 8	21 39.7	+58 48	23	14 6.7	III	1584	1
21 40.5 + 58 19									
39	.1	+58 7	21 40.4	+58 20	23	16 var.	~~III~~	803, 1521, 1584,	2, 3, 2 10,
21 40.5 + 70 50									
	.8	+70 38	21 40.4	+70 51	1	93 8.0	III	803, 720, 753, 774, 1520	2 2 3 2 3 3 3 10 10
							III bc	1521, 1584,	

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K Line	F Line.	Brightness.	Cor. Brightness	Mean.	Residuals.	No.	Remarks.
		70 73,	65 68,				
10		73 75,	69 71,				
	S	67,	63,				
10		66,	74,				
		71 74,	67 70,				
10, 10	S S	70 68 62 73 72 67,	57 61 58 60 65 63				1356,
10 10 10 10 10 10 10 10	S S S	67 67 63 65 60 55 59 70 70, 66, 68, 65, 60, 64,	59 57 56 55 55 53 60 62, 62, 60, 58, 65,				1335, 1362, 260, 264, 273, 266, 1313

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1882phae.proj..851F

21 h

	1855 R.A. Dec.	1855 R.A. Dec.	No. Obs.	No. Mag.	Spectrum	No. Plate	No. Lines
m							
40							
	21 42.2+61 59	41.0+61 44	21 42.2	+61 59	2193 6.2 IV	753, 1521, 1584,	2 3 2
	21 42.6+60 38	3+60 26	21 42.6	+60 40	2288 4.5 I	803, 720, 753, 774, 1521, 1584,	5 6 6 7 2 7
	21 41.9+71 50	3+71 38	21 41.8	+71 52	1082 5.5 III b	753, 774, 1520, 1521, 1584,	3 2 3 2 1
42							
		2+83 18	21 39.5	+83 30	614 8.4 II	1864	1
	21 43.4+67 17	4+67 5	21 43.4	+67 17	1357 8.1 III	1584	1
43							
	21 44.5+60 14	2+60 2	21 44.5	+60 14	2294 6.0 III	1521, 1584,	1 2
	21 44.6+59 14	2+59 2	21 44.6	+59 14	2420 7.0 II	1584	1
44							
	21 45.2+69 41	4+69 29	21 45.3	+69 41	1198 6.4 I	803, 720, 753, 774, 1521, 1584,	5 3 5 4 5 4

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K Line	I Line	Brightness	Cor. Brightness	mean Residuals	Ns	Remarks
10 10 10	S	64, 65, 67, 69,	53, 59, 64, 66,			
8 8	S S	64, 63, 57, 62, 52, 53,	52, 51, 46, 44, 46, 50,			1332,
10 10 10 10	S S	63 68 62 60 65 65, 72, 66, 64, 68,	57 55 58 59 62 59, 59, 62, 63, 65,			276, 289, 1338,
		68,	76,			
		70 73,	69 71,			
10		71 68 75, 72,	65, 65 69, 69,			
		72,	68,			
2		69, 70, 64, 71, 63, 63,	60, 61, 56, 56, 60, 63,			

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21h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Obs.	Mag.	Spectrum	No. Plate	No. Lines
m 45									
21 47.0 + 66 20	.9	+66 7	21 46.8	+66 20	1441	6.4	I	803, 1521, 1584,	3, 2, 4
46									
21 47.8 + 61 20	.5	+61 7	21 47.8	+61 20	2208	8.0	III	1584	1
21 46.6 + 77 47	.8	+77 34	21 46.5	+77 47	834	7.0	I	690, 803, 720, 753, 795, 1520 1521, 1584,	4, 4, 3 4 4 4 3 5
184 21 48.6 + 55 20	47.1	+55 7	21 48.8	+55 20	2639	6.0	I	803, 720, 1584,	5, 5, 7,
21 49.1 + 54 35	.6	+54 22	21 49.1	+54 35	2640	7.0	II	1584	1
21 49.1 + 65 17	.0	+65 4	21 49.1	+65 17	1664	6.6	I	803, 1521, 1584,	3, 5 3
48 21 49.2 + 64 27	.0	+64 14	21 49.2	+64 27	1600	7.0	III	1584	1
	.4	+83 39	21 45.7	+83 52	616	8.8	II	1521	1
21 48.3 + 80 15	49.1	+80 2	21 48.3	+80 15	706	8.2	II	1564	2
21 50.9 + 62 8	.6	+61 55	21 50.9	+62 8	2216	7.5	III	1521, 1584,	1 2

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1882phae.proj..851F

K Line.	I Line.	Brightness.	Cor. Brightness.	Mean.	Residuals.	No.	Remarks.
10 10		7.2, 6.8, 6.6,	6.2, 6.4, 6.5,				
		6.9, 7.1,	6.6, 6.8,				
10,		7.0, 7.0, 7.3, 6.7, 6.3, 6.8, 6.7, 6.4,	6.6, 6.7, 7.0, 6.5, 6.7, 6.8, 7.0, 7.0,				
	S	6.7, 6.4, 5.6,	5.3, 5.0, 5.1,				
		7.0,	6.5,				
10		7.0, 6.7, 6.5,	5.9, 6.2, 6.3,				
		7.7, 7.5,	7.0, 7.3,				
		7.2,	8.2,				
10		6.9,	7.3,				
10		7.0, 7.2, 7.0,	6.4, 6.6, 6.7,				

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21h

	1855 RA	1855 Dec	1900 RA	1900 Dec	No. Obs.	Mag.	Spectrum	No. Plate	No. Lines	
21 51.6+56 8m										
50	.1+55	55	21 51.5+56 8		2644	6.2	II	1521	1584 II	2 3
21 50.8+72 1										
	.2+71	48	21 50.8+72 1		1096	7.0	I	753, 1521, 1584,		4 3 1
21 51.0+68 1										
	.0+67	48	21 51.0+68 1		1371	7.0	III	1584		2
21 50.2+80 12										
	.9+79	59	21 50.2+80 12		717	8.0	II	1564		2
21 51.6+71 31										
	.9+71	18	21 51.6+71 31		1097	6.1	I	753, 1521, 1584,	1576,	4 4 2 3
21 51.7+73 13										
51	.1+72	60	21 51.6+73 14		1003	6.5	II	803, 720, 753, 774, 795, 1521, 1584,	1576	3, 3, 5 4 4 3 5 3
21 52.5+67 18										
	.4+67	5	21 52.5+67 18		1375	6.8	II	1584		2
21 52.7+65 15										
	.5+65	2	21 52.7+65 15		1680	7.5	I	1521, 1584,		2 2
21 52.9+64 52										
	.7+64	39	21 52.9+64 52		1607	6.5	I	803, 720, 753, 774, 1521, 1584,		4, 4, 6, 4 5 5
21 53.3+59 19										
	.9+59	6	21 53.3+59 19		2436	7.0	I	1521, 1584,		3 2
52										
21 53.9+63 9										
	.6+62	56	21 53.8+63 9		2004	8.7	III	1521, 1584,		3 2
	.7+83	22	21 50.3+83 35		618	7.2	I	928, 1519, 1520, 1521, 1564,		5, 3 2 3 3 5
21 54.3+60 49										
	.9+60	36	21 54.3+60 49		2320	7.5	II	1521, 1584,		4,
53										
21 54.3+65 9										
	.1+64	56	21 54.3+65 9		1611	7.0	II	1584		1
21 54.7+65 41										
	.5+65	28	21 54.7+65 41		1691	6.5	I	803, 720, 1521, 1584,	1576,	3, 4, 4, 4 4
21 53.4+79 5										
	.8+78	52	21 53.3+79 5		768	6.5	III	1521, 1584, 1576,	1564,	1 2 2 2
21 53.4+79 29										
	.9+79	16	21 53.4+79 29		720	8.2	II	1564		2
54										
21 56.0+57 10										
	.5+56	57	21 56.0+57 10		2670	6.7	I	1521		3

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K Line.	I Line. Brightness.	Car. Brightness.	Mean Residuals.	No.	Remarks.
10 10	5	6.4	5.8		
10		69, 67, 74,	63, 66, 73, 76,		
10		70, 72,	72,		
10		79,	74,		
10		68, 66, 68, 71,	61, 64, 69, 72,		
10, 10,		71, 78, 65, 72, 68, 65, 65, 76,	64, 68, 59, 59, 68, 64, 67, 72,		
10		70,	69,		
10		72, 70,	67, 68,		
10	S S	69, 70, 64, 68, 69, 59,	58, 59, 54, 51, 45, 57,		283
10		68, 68,	61, 64,		
10 10	S	68, 67, 71, 70,	63, 66, 65, 68,		
10 10 10		69, 67, 66, 63, 63,	68, 81, 75, 72, 72, 71,		
		70, 68, 70,	64, 65, 67,		
		70,	68,		
10,	S	69, 71, 65, 62, 65,	59, 61, 61, 61, 58,		
10 10 10		71, 71, 72, 67, 75, 74, 78, 70,	75, 78, 81, 73, 76, 79, 81, 76, 73,		
10		68,	71,		
		72,	65,		

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1882phae.proj..851F

21h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Dm.	mag Dm.	Spectrum	No. Plate	No. Lines
m 55									
56 21 57.6 + 62 0	.3	+61 47	21 57.6	+62 0	2233	7.0	I	1521	3
21 55.8 + 79 50	4	+79 37	21 55.9	+79 50	121	6.4	III	1521, 1584, 1564,	1 1 1
21 57.0 + 74 30	.5	+74 17	21 56.9	+74 31	946	6.4	III	1584	1
21 57.9 + 72 41	57.2	+72 28	21 57.8	+72 42	1009	5.0	II^a	803, 720, 753, 774, 795, 787, 1521, 1584,	2, 4 2 2 2 2 2 3
(82) 21 58.7 + 57 31	.2	+57 18	21 58.7	+57 31	2441	6.4	II	753, 774, 1521,	2 3 3
58									
22 0.2 + 65 35	59.0	+65 22	22 0.2	+65 35	1712	7.0	I	1521, 1584, 1576,	3 4 4
22 0.9 + 62 37	.6	+62 24	22 0.8	+62 38	2028	5.9	III	1521 1576	3 2
183. 22 0.9 + 64 8	.6	+63 55	22 0.9	+64 8	1802	4.5	I^a	803, 720, 753, 774, 795, 787, 1521, 1584,	6, 5, 8 6 5 5 7 8

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1882phae.proj..851F

K Line.	I Line.	Brightness.	Corr. Brightness.	Mean. Residuals.	No.	Remarks.
		68,	62,			
		72 70 65 75, 73, 69,	77 78 69 80, 81, 73,			
		72 75	75 78,			
10, 10, 10, 10 10 10 10 10	S S	6.8, 66, 66, 66, 66, 66, 53, 57,	6.1, 59, 54, 53, 59, 58, 52, 59,		255	280, 291, 296, 308 1340, 1351,
10		65, 70, 63,	53, 67, 56		268,	
10		48, 67, 66,	44, 66, 39,		1346	
10 10	S	70 68 71,	64 59 6.7, 6.2			
10; 10, 5 5 10 5 5	S S S	6.4, 60, 58, 63, 55, 60, 50, 53,	5.3, 49, 48, 46, 51, 48, 45, 51,			1344

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22h

m	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No.	mag	Spectrum	No. Plate	No. Lines.
0									
	22 2.0	+62 16							
	.6	+62 3	22 2.0	+62 18	2029	6.0	III	1521	
	22 2.1	+61 48							
	.7	+61 35	22 2.1	+61 48	2246	6.0	I	753, 774, 1521, 1576,	6, 5, 3
1									
2									
3	.2	+82 10	22 1.8	+82 23	673	7.5	I?	720, 928,	1, 2, 3, 2, 2
	.3	+82 10	22 2.0	+82 23	674	8.0		1520, 1521, 1564	
	.2	+82 48	22 1.5	+83 1	672	8.2	I	928, 1521, 1564,	3, ?, 2, 2
	22 5.3	+58 48							
	.8	+58 35	22 5.3	+58 48	2398	6.5	I	1521	5
	22 5.4	+66 41							
4	.2	+66 28	22 5.4	+66 41	1587	6.7	I	928,	6, 2,
	22 5.1	+70 12							
	.1	+69 59	22 5.1	+70 12	1221	6.8	II	1521, 1576,	2, 2, 10
	22 5.3	+71 53							
	.5	+71 40	22 5.3	+71 53	1109	7.2	I	753, 1576,	4, 3, 10,
	22 4.9	+71 43							
	.0	+71 30	22 4.9	+71 43	1107	7.5	I	1521	5, 5
	22 5.5	+63 40							
	.2	+63 27	22 5.5	+63 40	1812	8.2	I	1521,	5, 5

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K Line.	J Line.	Brightness.	Corr. Brightness.	Mean.	Residuals.	No.	Remarks.
.	.	6.8 7.1	6.2 6.6				
.10, . .	S. S.	6.0, 6.4, 5.3, 6.3	4.9, 4.6, 5.7, 5.4,			..	1337, .
.10, 10 10 10 10	.. S S. .	6.5 6.7 6.5 6.4 6.1	7.3 7.0			345	
		.6.1 6.6	.6.9 7.1, 7.2, 6.8,			.	. . . .
? 10 10	. .	6.5, 7.0, 6.4,	7.4, 7.9, 7.2,			.	1342, 1414,
1	.	7.0,	6.3,				
2,	.	6.6	6.2				
10 .	. .	6.8 6.7	6.6, 6.4,			1329,	.
10, .	. .	6.8, 6.7,	6.2 6.5			..	
5	.	6.7,	6.5,				
5	.	6.9,	6.4,				

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1882phae.proj..851F

22 h

1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Mag.	Diam.	Spectrum	No. Plate	No. Lines
m s								
22 6.7	+ 63 38							
.4	+63 25	22 6.7	+63 38	1815	7.2	III	1576	2
22 7.4	+ 57 42							
.8	+57 29	22 7.4	+57 43	2475	4.1	III b	753, 774, 795, 787, 1521, 1576,	3, 2, 2, 2, 3, 3
22 7.6	+ 65 1X							
.3	+64 48	22 7.6	+65 1	1634	7.7	II	1576	2
22 7.9	+ 62 55							
.5	+62 42	22 7.9	+62 55	2045	8.0	II	1521	2
22 8.1	+ 58 55							
.6	+58 42	22 8.1	+58 56	2402	5.8	II	753, 774, 787, 1521, 1576,	2, 5, 2, 5, 1
22 8.2	+ 56 20							
.6	+56 7	22 8.2	+56 21	2727	6.0	I	795, 1521, 1576,	3, 3, 3
22 8.5	+ 58 34							
.0	+58 21	22 8.5	+58 34	2403	6.3	I	753, 787, 1576,	3, 2, 1
22 7.9	+ 71 51							
.0	+71 38	22 7.9	+71 51	1111	5.2	III b	753, 774, 795, 795, 787, 1521, 1584, 1576,	3, 2, 2, 2, 2, 1, 3, 3, 2
22 8.5	+ 69 38							
.4	+69 25	22 8.4	+69 38	1228	5.9	II a	803, 720, 753, 774, 795, 787, 1521, 1584,	2, 3, 4, 5, 3, 5, 2, 2
22 8.3	+ 71 37							
.4	+71 24	22 8.3	+71 37	1112	6.7	I	753, 774, 1521, 1584, 1576, 1576,	6, 4, 8, 6, 3, 4
22 8.8	+ 60 15							
.3	+60 2	22 8.7	+60 16	2358	5.4	III	1521, 1576,	3, 2
22 9.2	+ 62 46							
.8	+62 33	22 9.3	+62 49	2048	6.5	III	1521	1
22 9.7	+ 58 48							
.2	+58 35	22 9.7	+58 48	2409	7.5	I	1576	3
22 10.4	+ 68 28							
9.3	+68 15	22 10.4	+68 28	1287	7.3	I	1576	4
22 10.7	+ 62 39							
.3	+62 26	22 10.7	+62 40	2053	7.0	I	753, 774, 1521, 1576,	5, 4, 6, 5
22 11.3	+ 56 32							
.7	+56 19	22 11.3	+56 33	2741	5.1	I	753, 774, 795, 787, 1521, 1576,	7, 7, 7, 7, 8, 9

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K Line	I Line	Brightness.	Cor. Brightness.	Mean Residuals.	No.	Remarks
10	-	7.0 7.2	6.2 6.4			
10, 10, 10, 10, 10 10	S . . . S S	6.2 6.7 5.8 6.2 5.8 5.9 6.6 7.0 6.2 6.6 6.5, 6.4,	5.0 4.8 5.2 4.8 5.1 4.9 5.4 5.1 5.6 5.2 5.8 5.4,		1386 269, 285, 302, 313, 322,	
10	-	7.1,	6.3,		1371,	
10	-	7.1,	6.5,		.	
10, . . .	. . . S -	6.2, 6.8, 6.4, 5.7, 5.8,	5.6, 4.9, 6.0, 5.0, 4.8		. . . . -	
10 10	- S S	6.6 -, 6.1,	5.9 -, 5.0,		, 1320, 1379,	
?, .	. .	7.1 7.0 7.3,	5.9 6.0 6.3,		. 346 -	
10, 10, 10, 10, - 10 10 10	S . . . . S S -	6.1 6.8 5.9 . . 5.5 6.2 6.3 6.4 7.1 6.3 . . 5.9, 6.5, 6.5,	5.5 5.5 5.9 - 5.4 6.4 5.9 5.8 5.8 6.3 . . 5.8 6.7, 6.1,		314 1336, 1350, 1367 273, 288, 294, 305, 306	
10, . . 10, 10, 10, 10, 0	. . . S . . S	6.8, 6.9, 6.3, 6.8, 6.2, 6.5, 5.7, 5.9	5.9, 6.0, 5.5, 5.3, 6.0, 5.5, 5.4, 5.7		1326, 1360 258, . 271, . 303 -	
. 5, - . . .	- - S . . -	6.4 6.8, 6.0, 6.6, 6.7, 6.3,	5.7, 5.4, 5.8, 6.7, 6.2, 5.8,		. . . . -	
10 10	S -	6.6 6.6 6.9, 6.9,	6.0 6.7 6.3, 6.0,		- -	
.	-	7.1 7.4,	6.5 6.8		-	
.	-	7.0,	6.0,		.	
.	-	6.8,	6.2,		.	
5, . .	. . . -	6.5, 7.0, 6.3, 6.4,	5.4, 5.2, 5.7, 5.5		. . . -	
10, 5, 8, 2, 5 2	. . . . S S	. . 5.5, 6.8, . 5.3,	. . 4.8, 5.3, - 4.2,		- - - - - -	

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22h

m	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Lin.	Mag. Lin.	Spectrum.	No. Plate	No. Lines.
10	.0	+81 57	22 9.0	+82 10	767	7.7	I	928, 1564,	5, 3
22 11.0	+72 49								
	.2	+72 36	22 11.1	+72 49	1022	6.5	IIIa	753, 1521, 1584, 1576,	2, 1 2 2
22 11.8	+55 19								
	.2	+55 6	22 11.8	+55 19	2709	7.8	II a	1576	2
22 11.7	+58 36								
	.1	+58 23	22 11.7	+58 36	2413	7.5	I	1576	3
22 11.2	+69 38								
	.1	+69 25	22 11.2	+69 38	1232	8.0	II	1576	2
22 12.8	+56 43								
	.2	+56 30	22 12.8	+56 43	2746	6.5	I	1576	3
22 13.1	+61 49								
	.6	+61 36	22 13.1	+61 49	2272	7.1	I	1521	4
22 13.3	+55 40								
	.7	+55 27	22 13.3	+55 40	2714	7.8	I	1576	3
12									
22 14.3	+65 37								
13	.0	+65 24	22 14.2	+65 37	1746,	7.0	I	1521, 1576,	3 4
22 15.0	+62 17								
	.5	+62 4	22 14.9	+62 18	2059	6.0	III	1521	1
14									
22 16.4	+56 25								
	.8	+56 12	22 16.4	+56 25	2755	6.7	I	1521 1576,	3 5

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K Line	I Line.	Brightness.	Cor. Brightness.	Mean Residuals.	No Remarks.
9		6.5 6.5,	7.2, 7.1,		
10, 10 10		6.5 6.4 6.7 6.8 6.8 6.7, 6.9, 7.1,	5.9 6.3, 6.9 7.4 6.2 6.6, 7.1, 7.6,		279,
10		6.9,	6.2,		1873,
		6.8,	6.8,		
10		7.2,	6.6,		
		6.8,	6.4,		
10		7.1,	6.5		
		6.5,	6.7,		
		7.0 6.8,	6.6, 6.1,		
		6.9 7.2,	6.3 6.6,		
		.6.4,	.5.9,		

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22h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Obs.	Mag.	Spectrum	No. Plate	No. Lines
22 16.3+67 55 m									
15.	1+67 42	22 16.3+67 55	1426		7.3	I	753,		4,
22 16.4+64 17									
	.0+64 4	22 16.4+64 17	1646		8.0	III	1576		1
22 17.0+57 55									
	.4+57 41	22 17.0+57 55	2508		7.2	III	1576		1
16									
	.2+84 41	22 13.6+84 55	505		8.0	I	928,		5,
22 17.1+76 0									
No. 142.	.6+75 46	22 17.1+76 0	820		6.8	I	196, 803, 720, 753, 795, 787, 928,		4, 4, 4, 4, 5, 4, 5,
22 18.0+66 28									
	.7+66 14	22 18.0+66 28	1801		7.5	I	1576		2
22 18.6+62 38									
17.	.1+62 24	22 18.6+62 38	2070		7.5	I	1521, 1576,		3 2
22 17.7+75 31									
	.1+75 17	22 17.7+75 31	822		7.3	II	1584, 1576,		2 2
22 18.8+66 12									
	.5+65 58	22 18.8+66 12	1789		7.3	III	1576		2
22 19.3+56 47									
22 19.3+51 44	.7+56 33	22 19.3+56 47	2765		6.7	I	753, 795, 787, 1521, IIa 1576,		3, 3, 4, 2, 4
	.9+51 30	22 19.7+51 44	3358		4.7	III	795, 1576,		2, 2
22 19.6+61 55									
18.	.1+61 41	22 19.6+61 55	2291		6.5	I	753, 795, 1521, 1576		4, 4, 3, 3
22 19.2+69 46									
	.0+69 32	22 19.2+69 46	1245		7.8	I	1576		3
22 18.5+79 11									
22 20.2+58 2	.4+78 57	22 18.5+79 11	785		8.0	II	1584		2
	.6+57 48	22 20.2+58 2	2520		7.6	III	1576		1
22 19.2+77 4									
	.8+76 50	22 19.2+77 4	857		8.2	III	1584		1
19									

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K Line.	H Line.	Brightness.	Cor. Brightness.	Mean. Residuals.	No.	Remarks.
		6.6	5.8	V		
		7.3, 7.5,	6.5, 6.7,	V		
		7.0, 7.2,	6.0, 6.2,	V		
5		7.0	8.2	V		
10, 10,		6.7, 6.9, 7.1, 6.8, 6.5, 6.9, 6.7,	6.5, 6.4, 6.6, 6.4, 6.7, 6.3, 6.8	V		
		7.0,	6.3,			
		6.8, 7.0,	6.2, 6.7,	V		
10 10		6.8, 7.1,	7.2, 6.9,	V	1357,	
10		6.8, 7.0	6.1, 6.3	V		
10		6.5, 7.0, 6.7, 6.1,	5.8, 5.5, 5.7, 5.0,	V	1321,	
10, 10		6.1, 6.3,	4.9, 5.1,	V	1366,	
	5	6.4, 7.0, 6.2, 6.5,	5.3, 5.2, 5.6, 5.6,	V		
		6.7	6.1	V		
10		7.1,	7.8,	V		
		7.0, 7.1,	6.0, 6.1,	V		
		7.4,	7.6, 7.9,	V		

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22h

1855 R.A. Dec.	1855 R.A. Dec.	1900 Den.	1900 Dlu.	No. Spectrum	No. Plate	No. Lines
m 20						
22 21.9+53 26	.2+53 12	22 21.9+53 26	2876	7.1 III	1576	1
22 21.7+70 49	.6+70 35	22 21.7+70 49	1234	7.0 I	1521, 1576,	3 3
22 22.5+53 36	.8+53 22	22 22.5+53 36	2882	7.6 III	1576	1
21						
22 23.2+55 56	.5+55 42	22 23.2+55 56	2750	6.5 I	795, 1576,	3, 5
22 23.4+73 7	.4+72 53	22 23.4+73 7	1036	8.0 I	928,	3,
22 23.9+64 37	.4+64 23	22 23.9+64 37	1664	5.8 I? II?	774, 795, 787, I 1521, 1576,	3, 3, 4, 4 5
22 22.8+77 44	.4+77 30	22 22.8+77 44	860	6.8 I	196, 803, 720, 795, 787, 928, 834, I? 1521,	6, 5, 4, 6, 4, 6, 4, 5
187					929	
22 23.5+68 32	.5+83 46	22 20.9+83 60	630	7.0 I	753, 928, 834, 1520, 1521, 1564	5, 7, 3, 3 4 5
	.2+68 18	22 23.5+68 32	1303	7.7 I	1521, 1576	3 3
22 23.5+70 16	.3+70 2	22 23.5+70 16	1240	6.0 III	1521, 1576,	3 3
23						
22 23.9+76 56	.4+76 42	22 23.9+76 56	859	7.3 I	196, 1584, 1576, 1564,	3, 3 2 2
22 25.0+63 34	.5+63 20	22 25.0+63 34	852	6.5 III	1576	1
22 25.5+53 44	.7+53 30	22 25.5+53 44	2897	6.5 I	1576	3
22 25.5+57 53	.8+57 39	25.4+57 53	2547	7.5		
22 25.3+57 55	.8+57 41	22 25.4+57 54	2548	var II a	753, 774, 795, 787, 1521, II abv 1576,	2, 2, 2, 2, 3 2
	.24 1+81 12	22 28.4+81 26	775	7.0 II	753, 928, I a 875 III a 1521, 1584 1564,	2, 3, 2 2 2
186						
22 25.9+51 54	.2+85 23	22 24.3+85 36	383	5.0 I	682, 800, 696, 753, 774, 928, 834, 1521	5, 7, 8, 8, 8, 10, 8, 9 8 8
	.1+51 40	22 25.9+51 54	3396	6.7 I	795,	5,
22 26.5+56 43	.7+85 29	22 24.7+85 43	384	6.5 III	1564	1
	.8+56 29	22 26.5+56 43	2794	7.1 III	1521, I 1576,	4

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K Line	F Line	Brightness	Cor. Brightness.	Mean. Residuals	No.	Remarks
		7.2, 7.4,	6.1, 6.3,			
		7.0, 6.8,	6.8, 6.3,			
		7.7, 7.4	6.1, 6.3,			
		6.9, 6.5	6.2, 5.4,			
		7.1	7.0			
10, 10	S S	7.4, 6.8, 6.0, 6.3,	5.7, 5.6, 5.5, 5.5			
10, 2, 8, 10,	S S	6.6, 6.9, 7.1, 6.3, 6.8, 6.4, 6.9, 6.5	6.6, 6.6, 6.8, 6.7, 6.4, 6.7, 6.4, 6.8,			
	S S	6.8, 6.8, 6.9, 6.5, 6.4, 6.2	7.3, 7.8, 7.1, 7.2, 7.4, 5.3			
		7.1, 6.7,	6.8, 6.1,			
10 10	S S	6.5, 6.9, 6.8,	6.3, 6.7, 5.9, 6.3,			1389,
10 10		7.3, 6.6, 7.0, 7.2, 6.6,	7.2, 7.1, 6.9, 7.1, 6.6,			1355, 1396
		7.0, 7.3,	6.2, 6.5			
		6.7,	5.6			
10, 12, 10, 10, 10 12	S S S	5.5, 6.6, 4.7, 5.9, 5.2, 5.6,	4.3, 4.7, 4.1, 4.5, 4.5, 4.6,			1385 270, 286, 301, 311, 323,
10, 10, 10 10 10	S S	6.8, 6.5, 6.9, 7.0, 6.6, 6.2,	6.9, 7.3, 7.2, 7.6, 6.7,			342, 1364, 1469,
	S S S S S S S S	5.8, 5.5, 5.5, 5.4, 5.4, 4.7, 5.5, 4.5	5.7, 6.1, 6.2, 5.5, 6.0, 6.0, 5.5, 5.5, 5.8, 6.3,			
10,		6.7	5.9			
		6.7, 6.8	8.0, 8.2			
10		6.9, 7.3, 6.8,	6.1, 6.5, 5.7,			

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22h

	1855 R.A.	1855 Decl.	1900 R.A.	1900 Decl.	No.	Mag.	Spectrum	No. Plate	No. Lines
m 25									
	22 27.0	+61 7							
	.4	+60 53	22 27.0	+61 7	2403	7.0	II a	1521	2
22 26.0	+78 15								
185	.6	+78.1	22 26.0	+78 17	796	6.0	I	196, 803, 720, 753, 795, 787, 928, 834, 843, 950	8, 5, 5, 5, 7, 7, 8, 7, 6 7
22 26.8	+69 56								
	.6	+69 42	22 26.8	+69 56	1286	7.0	I	1521, 1576,	4 3
	22 27.3	+69 40							
	26.0	+69 2	6 22 27.3	+69 40	1257	7.3	I	1521 1520	2
22 26.2	+80 12								
	.2	+79 8-8	22 26.0	+80 11	739	7.8	III	1521, 1584, 1564,	2 2 1 2
~~22 27.1~~	~~+75 43~~								
~~4~~	~~+75 29~~	~~22 27.1~~	~~+75 43~~	~~832~~	~~7.1~~	~~II~~	~~1584~~		~~3~~
27									
	22 29.8	+56 7							
28	.1	+55 53	22 29.8	+56 7	2769	6.3	III	1576	2
	22 29.0	+78 18							
No. 139	.6	+78 4	22 29.0	+78 19	801	5.7	I	196, 803, 720, 753, 774, 795, 787, 928, 843, 950	8, 7, 6, 5, 7, 8, 7, 9, 8 9
22 30.3	+61 16								
	.7	+61 2	22 30.3	+61 16	2314	6.5	I	753, 1521, 1576,	5, 6 6
22 30.2	+69 23								
	.9	+69.9	22 30.1	+69 24	1262	6.0	I	753, 795, 787, 928, 834, 1521, 1576, 1564,	3, 5, 4, 7, 6, 2 5 4
29									
22 30.5	+69 51								
188	.2	+69 37	22 30.4	+69 51	1263	6.2	I	196, 753, 774, 795, 787, 928, 834, 1521,	4, 5, 4, 4, 5, 6, 5, 6
	.2	+84 19	22 27.5	+84 33	509	7.2	III	1521, 1564,	2 2
22 30.5	+75 41								
No. 141	.7	+75 27	22 30.6	+75 43	836	5.7	I	196, 803, 720, 753, 774, 795, 787, 928, 928, 1521 1576,	6, 6, 6, 6, 7, 6, 6, 7, 7 7

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1882phae.proj..851r

22h

K Line	H Line	Brightness	Cor. Brightness	Mean Residuals	No.	Remarks
10	.	6.8	6.4, 6.6 6.2,		1334,	
?, 3, ?, 2, 2, 2, 2,	. . . . .	S S,	6.4, 6.7, 6.6, 6.2, 5.8, 5.8, 5.6, 6.5	6.4, 6.4, 6.3, 6.0, 6.2, 5.4, 5.9, 6.0, 6.2, 6.0		. . . . .
10	. .		7.0, 6.9,	6.7, 6.3,		. .
.	.	6.9	6.6,			.
10, 10, 10, 10,	. . . .	7.2 6.9 6.9 6.4 7.5, 7.1, 7.1 6.7,	7.4 7.4 7.7 6.8 7.7, 7.6 7.9 7.1,			. . . .
10	S	6.4,	6.8,			.
10	.	6.5 6.8,	5.4 5.7,			.
1, 2, 2, 2, 2, 2, 2, 2, 10,	. . . . .	S S S S S,	6.0, 5.6 6.2, 6.5, 6.3, 6.0, 6.6, 5.2, 5.5, 5.4 6.2, 6.2, 6.0, 5.8, 5.7, 5.6, 5.1, 5.7, 5.8, 6.0,			. . . . .
5, 5	. . .		6.9, 6.6, 6.6,	5.8, 6.0, 5.7,		. . .
10, 10, 10, 10, 10 10 10	. S . . . S		6.6, 6.4, 6.6, 6.4, 7.0, 6.2, 6.3, 6.5 5.8, 6.2, 5.6, 6.4, 5.9, 5.7, 5.7, 6.1,			. . . . . 1325, . .
10, ...	. . . . . S		6.7, 6.5, 7.0, 6.2, 6.8, 6.2, 6.9, 6.2,	6.1, 5.7, 5.5, 6.0, 5.9, 5.9, 5.8, 5.9,		. . . . . 332, . .
10 10	. .		6.8 6.7 7.1, 7.0,	7.9 7.7 7.2, 8.0,		. .
. 2 2, . 2, . 2, ?, ?, 10,	. . . . .	S S S S S	6.4, 6.5, 6.5, 6.2, 6.7, 5.7, 6.1, . 5.6	5.5 5.7 6.2, 6.0, 6.4 5.8, 5.6, 4.9, 5.5, . 5.7 5.6 4.9		. . . . .

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1882phae.proj..851F

22h

	1855 R.A. Elec.	1855 Decl. Elec.	1900 R.A. Elec.	1900 Decl. Elec.	No. Mag.	Spectrum.	No. Plate	No. Lines
30m	22 32.9	+55 33						
	.2	+55 19	22 32.0	+55 33	2779	6.8 I	795, 1576,	3, 6
31	22 32.8	+53 54						
	31.0	+53 40	22 32.8	+53 54	2932	7.3 I	1576	2
32	22 33.3	+73 8						
No. 140	.2	+72 54	22 33.2	+73 7	1049	5.5 II[a]	190, 196, 753, 774, 795, 787, 928,	2, 5, 2, 5, 2, 2, 2,
	22 33.6	+72 22						
	.4	+72 8	22 33.6	+72 22	1050	7.0 I	928,	4,
	22 34.3	+58 24						
	.6	+58 10	22 34.3	+58 24	2465	7.0 I	1576,	3
	22 34.7	+56 17						
	.9	+56 3	22 34.7	+56 17	2821	6.0 III[a]	1576	2
	22 34.3	+68 41						
	.9	+68 27	22 34.3	+68 41	1319	7.3 I	928, 1521,	3, 1
33	22 34.9	+65 38						
	.4	+65 24	22 34.9	+65 38	1789	6.8 I	1576	4
	22 35.1	+63 4						
	.5	+62 50	22 35.1	+63 4	2102	5.3 I	753, 774, 795, 787, 1521, 1576,	6, 6, 7, 7, 7, 7
34	22 35.2	+74 51						
	.2	+74 37	22 35.0	+74 51	978	6.5 III	928, 1521, 1564,	1, 2, 1
	22 36.2	+53 20						
	.4	+53 6	22 36.2	+53 20	2950	6.0 III	1576	2

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1882phae.proj..851r

K Line.	F Line.	Brightness.	Cor. Brightness.	Mean.	Residuals.	No.	Remarks.
2		6.7, 6.4,	6.0, 5.3,				
		7.0	5.9,				
10, 10, 10, 10, 12, 10, 20,		6.7, 6.4, 6.1, 6.6, 5.7, 6.5, 5.5	6.3, 6.0, 5.5, 5.3, 5.7, 5.7, 5.4,			1	.281 .295, 307,
10,		6.9	6.8				
		6.9,	5.9,				
10		6.5 6.8,	5.4 5.7,				1377,
		7.0 7.4,	6.7, 6.8 7.1,				
10		6.9,	6.2,				
10, 2, 2, 2, 2 2		6.4, 6.5, 5.9, 6.5, 5.4, 5.9,	5.4, 4.8, 5.5, 5.3, 4.9, 5.1,				
10		6.8 6.7 6.7 7.2 7.0 7.0,	6.8 6.7 6.6 7.2, 7.0, 6.9,				
10		6.8 7.0,	6.7 5.9				

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1882phae.proj..851F

22h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Obs.	Mag.	Spectrum	No. Plate	No. Lines
m									
35									
	22 37.5	+53 52							
	.7	+53 38	22 37.5	+53 52	29	8.0	I	1576	4
36									
	22 38.3	+53 43							
	22 38.4	+57 5							
	.5	+53	29	22 38.3	+53 43	29	6.1	I	1576 4
	.6	+56	57	22 38.4	+57 5	28	36 7.9	II	1576 2
34									
	22 39.2	+55 53							
	22 38.8	+72 44							
	22 39.2	+65 9							
	.4	+55 39	22 39.2	+55 53	27	99 7.0	I	1576	4
	.6	+72 30	22 38.8	+72 44	10	55 7.3	I	928,	5,
	.6	+64 55	22 39.2	+65 9	17	02 7.3	III	1576	1
	22 39.6	+64 48							
	38.0	+64 34	22 39.6	+64 48	17	04 6.5	III	1521, 1576,	24
	22 39.1	+77 30							
	.4	+77 16	22 39.1	+77 30	86	8.1	I	928, 1564, 950	3, 4 2
	22 39.8	+77 5							
	39.0	+76 51	22 39.8	+77 5	87	7.5	I	795, 928, 1521, 1584, 1564, 843	3, 4, 3 4 2
	=	1+80 36	22 39.2	+80 52	731	6.7	II	928, 1576, 1564,	2 2, 2 2 2
	22 44.2	+57 37							
	.4	+57 23	22 44.2	+57 37	25	95 6.7	II	1576	2

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1882phae.proj..851f

K Line.	F Line.	Brightness.	Cor. Brightness.	Mean.	Residuals.	No.	Remarks.
		7.0,	5.9,				
		6.9,	5.8,				
10		7.1,	6.1,				
10		6.8,	5.7,				
		6.8	6.7				
		7.2 / 7.5	6.4 / 6.7,				
10 10		6.9 / 7.1, 6.4	6.4 / 6.6, 5.6,				
10		6.7 / 7.0 6.8;	5. / 7.0 7.2 5.9,				1397,
10 10 10 10 10	5 ? ?	6.8 / 6.9, 6.5, 7.1, 6.9, 6.7,	7.0	7.1 / 7.2, 6.7, 7.3, 7.4, 6.8	5.8		
10 10, 10 10 10		6.8 / 6.6, 7.0, 6.5 – 6.9 / 7.3 6.5 – 6.7		7.2 / 7.2 6.9 / 7.1, 7.4, 7.2 / 7.6 7.0 / 7.2			334, 426,
10		6.6,	5.6,				1384,

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1882phae.proj..851F

22h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No.	Mag.	Spectrum	No. Plate	No. Lines
m									
40									
	22 42.4	+54 21							
	.6	+54	22 42.4	+54 21	28	5.6	I	1576	8
41									
	22 43.0	+54 13							
	.2	+53 59	22 43.0	+54 13	29	8.7	I	1576	4
	22 43.2	+52 51							
	.3	+52 37	22 43.2	+52 51	32	9.5	I	1576	3
	22 42.2	+77 58							
	.5	+77 44	22 42.3	+77 58	871	7.2	I	196, 787, 928, 843, 930, 1521, 1584, 1576, 1564,	4, 5, 5, 4, 4, 2, 4
	22 43.5	+57 57							
	.7	+57 43	22 43.5	+57 57	2612	6.3	I	795, 1576,	5, 6
42									
	22 44.2	+64 32							
	.8	+81 8	22 42.9	+81 22	488	7.7	III	1564	1
	22 43.3	+79 54							
	.6	+64 18	22 44.2	+64 32	1717	7.0	II	1576	2
	22 44.5	+66 22							
	.8	+79 40	22 43.3	+79 54	780	7.0	III	1521, 1564,	1, 1
	22 44.7	+63 53							
	.9	+66 8	22 44.5	+66 22	1546	8.0	I	928,	3,
	.8	+53 39	22 44.7	+53 53	2993	6.0	I	795, 787, 1576,	6, 3, 5
43									
	.2	+81 44	22 43.2	+81 58	489	8.0	III	1564	1
	22 45.7	+54 18							
	.8	+54 4	22 45.7	+54 18	2867	8.0	I	1576	3
	22 45.6	+55 22							
	.8	+55 8	22 45.6	+55 22	2820	5.9	III	795,	2,
44	.1	+67 49	22 45.6	+68 2	1468	6.5	III	196, 787, 928, 1521, 1576, 1564,	1, 2, 2, 2, 2, 2
	.1	+82 30	22 43.8	+82 44	700	8.0	I	795, 928, 834, 1521, 1564	4, 7, 4, 3, 5
	22 46.1	+65 40							
192	.5	+65 26	22 46.1	+65 41	1814	3.8	III	196, 795, 787, 928, 928, 834, 1521, 1576,	3, 2, 2, 2, 2, 3, 3, 2
	22 46.1	+66 0							
	.5	+65 46	22 46.1	+65 60	1813	7.0	II	196, 795, 1576,	4, 5

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1882phae.proj..851F

K Line.	F Line.	Brightness.	Cor. Brightness.	Mean.	Residuals.	No Remarks
		66,	58			
		7.3,	6.2,			
		6.8, 69, 66	5.6,			
		7.0, 7.0, 6.7, 6.8, 6.7, 6.9, 6.5,	7.0, 6.6, 7.0, 6.7, 7.3, 6.9, 6.7,			
		6.1, 6.3,	5.5, 5.3,			
		6.7, 7.0	7.2, 7.5			
		6.8,	6.9,			
		7.2, 7.5, 6.4, 6.7,	7.7, 8.0, 6.8, 7.1			
		7.0	6.6			
		6.5, 7.1, 6.2,	5.8, 5.6, 6.1,			
		6.9, 7.3,	7.4, 7.8,			
		6.9,	5.8,			
		7.0	6.3			
		7.3	6.6			
		6.8	6.2			
		7.2, 7.0, 6.6, 6.9, 6.5, 6.7,	6.6, 6.0, 6.3, 6.6, 6.3, 6.3,			342, 325, 1383
		6.8, 6.5, 6.8, 6.6, 6.3,	7.1, 7.3, 6.8, 7.4, 7.0,			134-1372
		5.7 5.2 5.7 5.5 6.3 5.4 5.3	5.0 4.9 4.6 5.1 6.1 5.0 4.6			
		6.2 5.6 6.0 5.7 6.5 5.7, 5.6,	5.5 5.3 4.9 5.3 6.3 5.3, 4.9,			298, 302, 315, 359, 372
		6.8 7.0, 6.9, 6.7,	6.3, 6.6, 6.0,			

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1882phae.proj..851F

22h

R.A. 1855	Decl. 1855	R.A. 1900	Decl. 1900	Dm.	Mag.	Spectrum	No. Plate	No. Lines	
m 45									
22 46.9	+ 67 51								
	+67 37	22 46.9	+67 51		14	69 8,6	II	1576	2
22 47.5	+ 52 30								
	+52 16	22 47.5	+52		33	11 7.0	III	1576	1
22 47.4	+ 61 10								
	+60 56	22 47.4	+61 10		24	50 6.0	I	196, 928, IIa 1576, III 1564, II	4, 3, 3 2
22 47.4	+ 74 38								
	+74 24	22 47.4	+74 38		9	88 7.8	I	928, III 1576	4, 2
22 48.4	+ 56 10								
	+55 56	22 48.4	+56 10		28	30 7.1	III	1576	2
47									
22 48.3	+ 76 42								
	+76 28	22 48.3	+76 42		8	80 8.0	I	843	3
22 49.1	+ 59 34								
	+59 20	22 49.1	+59 34		25	95 6.3	III	1576	1
22 49.2	+ 67 26								
	+67 12	22 49.2	+67 26		14	75 7.3	IIa	928, 1576	3, 2
22 48.5	+ 79 51								
	+79 37	22 48.5	+79 51		7	56 7.2	III	1521, 1564, 843	be 2, 1 1
	+82 23	22 47.9	+82 37		7	03 5.0	III	196, 696, 753, 774, 928, 834, 1520, 1521, 929, 845-879, 1564, 835	1, 3, 3, 3, 3, 2, 3, 3, 3, 3, 3, 23
48									
22 50.2	+ 55 48								
	+55 34	22 50.2	+55 48		28	37 6.8	III	1576	1
	+82 56	22 48.6	+83 9		7	04 8.0	III	1564	1
49									

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1882phae.proj...051F

K Line.	I Line.	Brightness.	Cor. Brightness.	Mean.	Residuals.	No. Remarks.
10		7.2,	6.5			
		6.9	5.9			
		7.0	6.0			
10, 10, 10 10	SS	6.9, 6.4, 6.3, 6.5	6.9, 5.8, 5.4, 5.5, 5.8			341,
10		6.9 7.2, 7.5	6.9, 6.9,			
10		7.0 7.2,	5.9 6.1,			
		7.0,	6.7			
		7.2 7.4,	6.2 6.4			
10, 10.	S	7.0 6.9,	6.1 6.2,			323, 1380
10,		6.9 7.1 6.8	5.3 5.6 6.2	5.5 5.9 6.3 6.5	#1	1417
			6.9 7.6 6.9	7.1 8.0, 7.2		
			6.4 6.2 6.2 6.8 6.6 6.6,	4.6 5.1 5.0 5.6		43 75 09 12 14
23						367 1316 1334
33 10, 10, 10, 12, 10, 10 10 10	SSS	6.6 6.4 6.1 6.5 5.5 6.4	3.6 5.5 7.1 6.5 6.4 6.1 6.3 6.4 6.1 6.3			278, 290, 344)
		7.0 6.7 6.4 7.0 5.8 6.7	6.1, 5.9, 7.5 6.8 6.7 6.6 6.6 6.7 6.6, 6.7,			
		6.3 7.2,	5.8 6.1,			
		6.5 6.8	7.3 7.6,			

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1882phae.proj...851F

22 h

1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No.	mag.	Spectrum	No. Plate	No. Lines
22 51.9	+57 40							
	50 .1	+57 28	22 51.9	+57 40	2644	7.0	I	928, 1576, 1564,	4, 4 4
22 52.0	+55 54							
	1	+55 40	22 52.0	+55 44	2850	7.0	I	1576	4
22 51.7	+70 49							
	.2	+70 35	22 51.7	+70 49	1283	8.1	IIa	928,	2,
22 51.7	+75 48							
	.6	+75 34	22 51.7	+75 48	858	7.7	I	928, 950,	4, 5
22 52.0	+69 45							
	.5	+69 31	22 52.0	+69 45	1288	7.0	I	928,	3,
22 51.8	+78 22							
	.9	+78 8	22 51.8	+78 22	818	7.7	III	1564 III III	1
	.7	+84 0	22 50.1	+84 14	513	7.3	I	928, 1521, 1564,	5, 1 2
22 52.4	+67 42							
	.8	+67 28	22 52.4	+67 42	1482	7.5	III	1576	1
22 51.3	+74 4							
	.0	+73 50	22 51.3	+74 4	998	7.5	III	1576	1
22 52.8	+59 25							
	51 .0	+59 11	22 52.8	+59 25	2607	7.3	I?	196, 1576, 1564,	2, 5 2
22 52.9	+55 57							
	.0	+55 43	22 52.9	+55 57	2858	7.5	II	1576	1
22 53.3	+56 28							
	.4	+56 14	22 53.3	+56 28	2915	7.7	III	1576	1
22 53.0	+72 18							
	.6	+72 4	22 53.0	+72 18	1076	7.5	I	928,	7,
22 51.9	+78 32							
	.0	+78 18	22 51.9	+78 32	814	8.5	II	1564	2
22 52.4	+79 42							
	.4	+79 28	22 52.4	+79 42	758	7.8	III	1564	2
22 54.8	+51 47							
	.9	+51 33	22 54.8	+51 47	3575	7.0	I	1576	4
22 54.7	+63 10							
	53 .0	+62 56	22 54.7	+63 10	2146	6.8	III	1564	1
22 55.0	+59 16							
	.2	+59 2	22 55.0	+59 16	2615	6.5	IIa	196, 795, 928, 1576, 1564,	2, 5, 6, 5 4
	.3	+80 31	22 53.9	+80 45	739	7.9	I	928, 1564,	4, 4
22 54.7	+72 35							
	.3	+72 21	22 54.7	+72 36	1079	6.6	III	928, 1521, 1564 1576	2, 1 1 2
	3	+53 21							
22 55.9	+56 24							
	54 .0	+56 10	22 55.9	+56 24	2923	6.0	III	795 1576 1564 196 1019	2, 2 2 1
	.2	+84 36	22 53.5	+84 50	517	6.5	III	928, 1520, 1521, 1564	2, 3 3 3 3 3 3 3 2
22 55.9	+57 14							
	.0	+57 0	22 55.9	+57 14	2663	7.0	III	1576	1
22 56.4	+67 41							
	.8	+67 27	22 56.4	+67 41	1491	8.7	II	1564	2

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1882phae.proj...851F

K Line.	H Line.	Brightness Cor	Brightness Mean	Residuals	No. Remarks.
...	...	6.9 6.6, 7.0	6.2, 5.6, 6.2	V	...
10	.	6.9,	5.8,	V	. 2
10,	.	6.9	6.7	V	335,
10, 10	.5	7.0 7.0,	7.1, 7.2,	V	..
.	.	6.8	6.5	V	.
..	..	7.4	7.8 8.0 7.4	V	/
.. 10	...	7.0 6.9 6.4, 7.2 6.7,	8.1 8.3 7.7,	V	...
.	.	7.3	6.5	V	.
-	.	7.0	6.9	V	-
		7.3	7.6		
.. 10	...	7.3 6.9, 7.0	6.3 5.9, 6.2	V	...
.	.	7.1,	6.0,	V	-
.	.	7.2 7.5,	6.4,	V	-
5,	.	6.7	6.5	V	-
10	.	6.9	7.1,	V	-
10	.	7.0 7.3,	7.3 7.6	/	-
10	.	6.7,	5.5	V	.
.	.	7.2 7.5,	6.6 6.9	V	-
10, ...	.....	7.3, 6.6, 6.7, 6.5, 6.6,	6.3, 6.0, 6.0, 5.5, 5.8,	V	7. ...
10, 5.	...	6.9 6.6, 6.8	7.5 7.5, 7.3,	V	. --
10, .. 10	...	6.7 7.0 7.0 7.2 7.0, 7.4, 7.1, 7.5	6.6 6.9 6.8 6.2 6.9, 7.3, 6.9, 6.5	V	..
10, 10 10 .	...	6.6 6.7 6.8 } 6.9 6.4 7.2 7.0 } V 6.6 6.6 6.4 6.7 6.3 6.6 6.1 6.9, 7.0, 6.4 7.0, 6.5, 6.4	5.9 6.0 1 6.2 5.3 6.1 6.4 7.5 7.0 7.5 7.5 5.1 6.9 7.9 7.9 7.1, 7.8, 7.7, 5.5	V	1375, ..
10, 10 10 10 10 10 10 10 S S S S S S S.		6.5 7.0, 6.8,	7.3 7.6 7.6 7.7 8.2, 8.0	V	355 444, ...
.	.	7.0 7.3	6.0 6.3,	V	.
10	.	7.0,	6.5	V	-

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1882phae.proj..851F

22 h

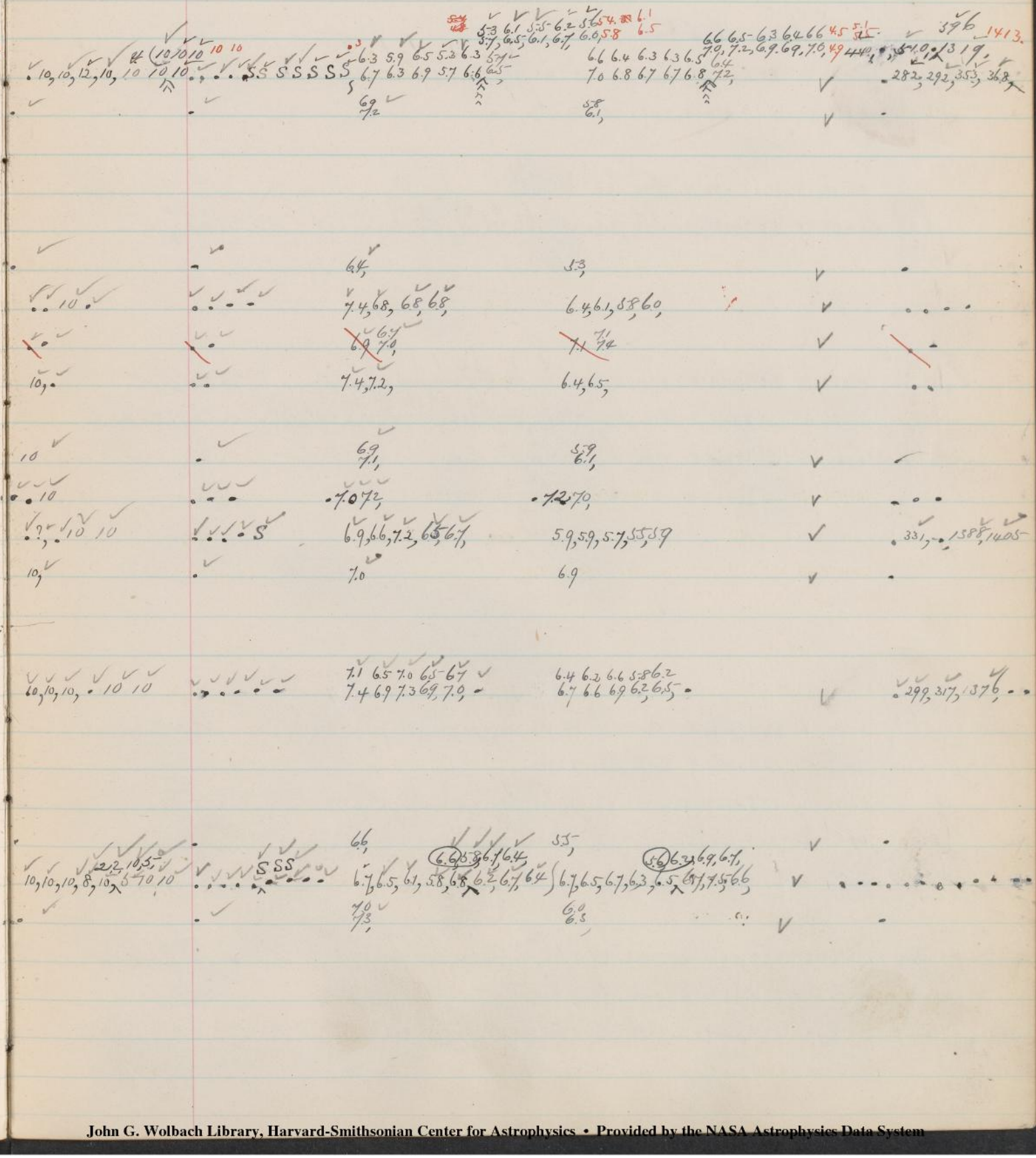
1855 R.A.	1855 Decl.	1900 R.A.	1900 Decl.	No. Obs.	Mag.	Spectrum	No. Plate	No. Lines
22 57.3	+56 34	.4	+83.34	22 55.2	+83 49	640	5.0	III	196, 753, 774, 928, 834, 1520,	1, 2, 2, 2, 3, 3 3 3 3 3 3
		.4	+56 20	22 57.3	+56 34	2924	6.1	III	1576,	1
22 58.4	+54 42	.5	+54 28	22 58.4	+54 42	2900	6.5	I	1576	4
22 58.3	+59 18	.4	+59 4	22 58.3	+59 18	2629	7.0	I	196, 928, 1576, 1564,	3, 5, 5 4
22 57.4	+79 48	.6	+79 34	22 57.4	+79 48	759	7.5	~~I~~ III	~~196,~~ 1564,	~~3~~, 1
22 58.6	+59 5	.7	+58 51	22 58.6	+59 5	2533	7.5	II	196, 928,	2, 3,
22 59.2	+58 1	57.3	+57 47	22 59.2	+58 1	2676	6.5	III	1576	2
22 58.4	+76 20	.2	+76 6	22 58.4	+76 20	892	7.3	I	928, 1576,	4, 5, 2
22 59.2	+59 54	.4	+59 40	22 59.2	+59 54	2631	6.7	I	196, 928, 834, 1576, 1564,	3, 6, 2, 2 3
22 58.5	+72 10	.4	+71 56	22 58.9	+72 10	1181	7.8	I	928,	4,
22 59.8	+66 41	58.1	+66 27	22 59.7	+66 41	1575	5.5	III	196, 795, 928, 1576, 1564, 1564,	2, 2, 2, 1 2 2
23 0.6	+56 10	.7	+55 55	23 0.6	+56 10	2889	6.6	I	1576	6
22 59.6	+80 15	.8	+79 60	22 59.6	+80 14	761	7.2	I	196, 753, 795, 928, 834, 1521, 1584, 1576,	6, 5, 5, 7, 5, 6 4 2
23 0.9	+58 12	59.0	+57 57	23 0.9	+58 12	2588	7.2	III	1576	1

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22h

K Line. J Line. Brightness. Cor. Brightness. Mean Residuals. No. Remarks.



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23h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Obs.	Mag.	Spectrum.	No. Plate.	No. Lines.
23 2.1+62 41									
	3	+62 26	23 2.1	+62 41	2170 2107	7.3	I	928,	3,
23 2.5+58 53									
	5	+58 38	23 2.4	+58 53	2545	5.3	I	196, 795, 787, 928, 834, 1576, 1564,	7, 7, 7, 9, 6, 6,
23 2.4+60 55									
	5	+60 40	23 2.4	+60 55	2479	6.8	II	1576, 1564,	1, 1,
23 2.8+52 17									
	8	+52 2	23 2.8	+52 17	3371	5.5	III	1576 1584,	1,
23 3.0+59 13									
	1	+58 58	23 3.0	+59 13	2546	6.5	II a	196, 795, 928, 834 1576, 1564,	2, 2, 8, 7, 5, 4,
23 3.7+63 6									
	9	+62 51	23 3.7	+63 6	2171	6.2	I	196, 795, 928, 834, 1576, 1564,	3, 4, 7, 5, 4, 7,
23 3.2+75 3									
	8	+74 48	23 3.2	+75 3	1002	4.3	I d	196, 795, 928, 834, 843, 950, 1521, 1576, 1564,	5, 3, 7, 6, 8, 6, 2, 3, 5,
23 3.8+65 5									
	0	+64 50	23 3.8	+65 5	1758	6.9	I	928, 1576, 1564,	5, 6, 3,
23 3.9+63 40									
	1	+63 25	23 3.9	+63 41	1931	6.3	II	1584, 1564, 1576	2, 1,
23 4.7+74 51									
No. 47	3	+74 36	23 4.7	+74 51	1006	4.6.	III	196, 186, 774, 795, 787, 928, 834, 829,	2, 2, 2, 2, 2, 2, 2, 3,
23 5.2+61 7									
	3	+60 52	23 5.2	+61 7	2491	8.3	I	928,	4,
23 5.5+58 49									
	6	+58 34	23 5.5	+58 49	2552	6.1	I	196, 787, 928, 834, 1576, 1564,	6, 4, 9, 5, 7, 6,
23 5.2+64 41									
	4	+64 86	23 5.2	+64 51	1764	6.8	I b	928, 1576, 1564,	6, 5, 4,
23 5.8+56 55									
	9	+56 40	23 5.8	+56 55	2958	7.0	III b	928, 1576,	2, 1,
23 6.0+66 43									
	2	+66 28	23 6.0	+66 42	1587	6.7	I	196, 795, 787, 834, 1576, 1564, 1564	4, 3, 3, 4, 6, 4, 3,
23 5.3+80 56									
	4	+79 51	23 5.4	+80 6	768	7.7	I	929, 1521,	6, 1,
23 5.5+80 2									
	6	+79 47	23 5.6	+80 2	769	7.5	I	196, 928, 834, 929, 843, 875, 1521, 1564, 753	6, 8, 4, 5, 7, 5, 4, 7, 4
23 6.3+64 0									
	5	+63 45	23 6.3	+64 0	1941	6.8	III	1576, 1564,	1, 2,

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K Line.	F Line.	Brightness.	Corr. Brightness.	Mean.	Residuals.	No.	Remarks.
.	.	7.0	6.4			1400	
.....	..SS...	5.7, 5.7, 6.1, 5.6, 6.2, 5.6, 5.7	4.7, 5.1, 4.7, 4.9, 4.7, 4.6, 4.9			...	328, 363, 138,
..	.	7.0, 7.0	6.1, 6.3			..	
.	.	7.0	5.8			.	
		7.2 6.8 7.0	6.0 5.3 5.5				
10, ...	.....	6.7, 6.8, 6.5, 6.5, 6.6	5.7, 6.2, 5.8, 5.5, 5.8,			6....	1403,
.....10,	.....	6.9, 6.6, 6.2, 6.7, 6.2, 6.3	6.1, 6.2, 5.7, 5.4, 5.4, 5.7			..	352 . ..
...5, ..10, .10,	....S....	6.8, 6.8, 6.4, 6.8, 6.6, 6.3 6.7 6.9, 6.8, 6.6	6.6, 7.0, 6.5, 6.1, 6.2, 6.5 6.8 7.0, 6.6, 6.6,			.....	
.5, .	...	6.8, 6.3, 6.8	6.3, 5.5, 6.2			...	.
10, .	..	7.0 7.6 7.3	6.4 6.2 6.7 .			..	
10, 10, 10, 10, 10, 10, 10, 10, ... S		6.5 6.2 6.6 5.5 5.9 5.5 6.4 6.0	6.2 6.0 5.4 5.6 5.2 5.5 5.6 5.5			370 .	
		6.7 6.4 6.9 5.8 6.2 5.7 6.6 6.3	6.4 6.2 5.7 5.9 5.5 5.7 5.8 5.8			...	297. 356
.	.	7.2	6.6			.	
10 2 10, 5, 8, 5, 10,	.....	6.5 6.8, 6.2, 6.7, 6.3, 6.4	5.9 5.5 5.4 5.5, 5.2, 5.3 5.6			.....	
....	...	6.9 6.5, 6.6, 6.7	5.6 6.0, 5.8 6.1			357 ...	
10, .	..	6.8 7.2 7.1 7.4	6.1 6.2 6.4 6.4			318 .	
10 10, 5, 10, .	.....	6.5 7.4 6.8, 7.2, 7.1, 6.6, 6.7 .	6.5 6.7 6.5, 6.1, 5.9, 5.9 6.2 .			.....	
5, .	..	6.5, 7.0	7.3, 7.5,			..	
10, 2, 2, 5, 10, 10	...SS...	6.9, 5.9, 6.8, 6.4, 6.5, 6.5, 6.6, 6.0 6.5	7.1, 6.4 6.5, 7.2, 6.5, 6.8, 7.1, 6.4, 5.3			.....	
. 10,	..	7.2 7.4 7.0	6.4 6.6 6.4			..	

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23h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Obs.	mag	Spectrum	No. Plate	No. Lines.
m 5									
23 7.9+64 11									
	6.1+63 56	23 7.9	+64 11	1949	7.0	I	928, 1576, II, 1564, II		5, 1, 1,
23 8.3+56 37									
	.3+56 22	23 8.3	+56 37	2966	6.0	III	196, 1576, b, 1564,		2, 2, 1,
23 8.0+71 27									
	.4+71 12	23 8.0	+71 27	1208	6.8	I	1584,		4,
23 8.4+64 15									
	.6+64 0	23 8.4	+64 15	1773	7.0	II?	1576,		2,
	.8+81 48	23 7.4	+823	810	8.1	III	1564,		1,
4									
	.4+81 35	23 8.1	+8150	811	8.7	I	929.		5
8									
23 9.3+79 6									
	.2+78 51	23 9.3	+79 6	823	8.5	II	1564,		2,
~~23 10.3+59 5~~									
	.4+58 50	23 10.3	+59 5	2577	8.0	III	1564,		1,
23 10.7+64 54									
	.9+64 39	23 10.7	+64 54	1779	6.5	II	1576,		2,
9									
23 11.3+63 44									
23 11.1+73 42	.4+6329	23 11.3	+63 44	1955	7.0	I	928, 834, II, 1576, III?, 1564, I?		7, 2, 1, 3,
	.5+7327	23 11.0	+73 41	1023	6.2	I	196, 196, 2, 195, 181, 928, 834, 950, 875, 1576, 1564,		6, 6, 6, 4, 9, 7, 1½, 8, 5, 6,
	.6+81 36	23 10.3	+81 51	814	8.0	I?	929, 843, III, 1521, III?, 1564, III		4, 2, 1, 2,
23 11.4+56 8									
	.4+55 53	23 11.4	+56 8	2129	7.6	II?	1576,		2,
23 10.7+79 22									
	.6+79 7	23 10.7	+79 22	772	8.7	II?	1564,		2,

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1882phae.proj...861f

K Line	I Line	Brightness.	Corr. Brightness.	Mean.	Residuals.	No. Rem.
...	...	6.0, 6.9, 6.9	5.5, 6.1, 6.3,	✓	...	
.10, .	S . .	7.0 6.5 7.0 7.4 6.8 7.2	5.9 5.4 6.1 6.3 5.7 6.3	✓	.1374, .	
10,	.	6.9	6.4	✓	.	
10,	.	6.9	6.1	✓	.	
.	.	6.8 7.0	7.4 7.6	✓	.	
.	.	6.8,	7.8,	✓	-	
10,	.	7.2	7.5	✓	.	
.	.	7.2 7.4	6.4 6.6	✓	.	
10,	.	7.2	6.4	✓	.	
10, 10, ..	....	6.6 7.0 7.0, 6.9,	6.1, 5.7 6.2, 6.3,	✓	....	
.. 2. ... 10, ..	.. S. S S, S	6.5, 6.5, 6.0 5.7, 6.4, 5.7, 6.3, 6.4, 5.9	6.2, 6.2, 6.1 5.7, 5.6, 5.8, 6.1, 6.1, 5.8	✓	.....	
.10, .10,	....	6.9 7.0 7.0 6.4 7.2 7.3 6.6	7.9 7.2 7.7 7.0 7.4 8.0 7.2	✓	....	
10,	.	7.0	5.9	✓	.	
10,	.	7.0	7.3	✓	.	

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23h

	1855 R.A. Dec.	1855 R.A. Dec.	No. Obs.	Mag. Obs.	Spectrum	No. Plate	No. Lines
23 11.7+70 21 m							
10	.0+70 6	23 11.7+70 20	1311	6.0	I	196, 795, 787, 928, 834, 843, 1576, 1564,	8, 5, 5, 8, 6, 7, 7, 4,
23 12.2+61 25							
	.3+61 10	23 12.2+61 25	2413	6.5	I	196, 928, 834, 1564,	3, 5, 2, 1,
23 12.4+57 7							
	.4+56 5	23 12.4+57 7	2978	7.2	I	1576	3
11							
23 12.7+78 42							
	.4+78 27	23 12.7+78 42	825	7.5	I	928, 929, 950, 1521, 1564,	5, 5, 7, 1, 4,
23 13.3+77 37							
	.9+77 22	23 13.3+77 37	896	7.3	I	196, 928, 843, 950, 1564, 795	4, 3, 6, 5, 2, 3,
12							
23 13.9+74 46							
No. 51	.3+74 31	23 13.9+74 46	1016	6.6	I	196, 186, 795, 787, 928, 834, 829, 843,	5, 5, 5, 5, 9, 6, 7, 11,
23 14.5+67 34							
	.7+67 19	23 14.5+67 34	1514	5.2	II	196, 787, 928, 834, 843, 950, 1576, 1564,	2, 3, 2, 3, 3, 3, 2, 3,
No. 61	.7+83 27	23 13.2+83 42	647	8.0	I	753, 928, 834, 929, 875, 844, 1019, 1521,	5, 6, 4, 6, 5, 1, 7, 3,
13							
23 15.4+59 5							
23 15.8+64 17	.4+58 50	23 15.4+59 5	2577	8.0	III	1564	1
	.9+64 2	23 15.8+64 17	1787	7.3	III	1576, 1564,	2, 4,
	.7+60 21	23 15.7+60 36	2521	7.0	I	928, 1564, 196	4, 6, 3
23 15.2+79 21							
No. 52.	.9+79 6	23 15.2+79 21	777	7.8	I	196, 186, 753, 795, 787, 928, 834, 929, 843, 950,	5, 3, 5, 3, 8, 5, 6, 11, 8,
23 16.0+59 44							
14	.0+59 29	23 16.0+59 44	2701	6.7	I	196, 928, 1564,	3, 2, 2,
23 15.9+73 23							
	.3+73 8	23 15.9+73 23	1027	7.8	I	928,	5,

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K Line	H Line	Brightness	Corr. Brightness	Mean Residuals	No.	Remarks
7, 10, 8, 8, 8, . 10, 10,	. . . . .	6.2, 6.0, 6.5, 5.7, 6.5, 6.4, 6.4, 6.7 5.8	5.7, 5.9, 5.6, 5.5, 5.5, 5.7, 5.9, 6.4 4.7			
. . . .	. . . .	6.9, 6.5, 7.1, 6.5,	6.0, 5.9, 5.7, 5.8			
.	.	7.,	6.,			
. . . . .	. . . .	6.8, 6.8, 6.8 7.0 7.2, 6.6	7.1, 7.4, 7.2 7.3 7.5 6.8			
. . 10, 5, 10, .	. . . . .	7.3, 7.0, 6.8, 6.9, 6.7 6.9	7.3, 7.3, 6.6, 7.3, 6.9 6.0			1394
. 10, 2, . 2, 2,	. . . . . 2 . .	6.6, 6.8, 6.3, 6.7, 6.0, 6.6, 6.7, 6.4	6.3, 6.6, 6.4, 6.0, 6.0, 5.8, 6.2, 5.9,			
10 10, 10, 12, 10, 12, 25, 10, 10	. . . . .	6.3 6.7 6.0 6.8 6.1 . 6.0 6.1 6.9 6.2 7.0 6.4 5.8 6.3 6.2	5.7 6.0 5.6 5.6 5.6 5.2 5.3 5.4 5.8 5.8 5.8 5.8 5.5 5.5, 5.6 5.7			1381 . . . 322 . . 488
. 2 10, . 10, . 10, .	. . . . .	6.8, 6.4, 6.9, 6.4, 6.8, 6.9, 6.3, 6.7	7.3, 7.4, 7.1, 7.7, 7.6, 7.5 7.3, 7.7			
. .	.	7.2 7.4	6.3 6.5			
10, 10,	.	7.0 7.3 7.0	6.2 6.5 6.4			
10 . 10, .	. .	6.7 6.6, 5.8 6.9	5.8 6.0, 5.7 5.6			333, . .
10, . 10, . 2, 10, . 2, .	. . . . .	6.9 6.9, 7.4, 6.5, 6.8, 6.3, 6.9, 6.0, 6.5, 6.5	6.8 7.0, 7.5, 7.0, 6.5, 6.7, 5.5, 6.7, 6.4, 7.0			
. 10, 10,	. . .	7.3, 6.9, 6.9	6.3, 6.2, 6.2			337 .
8,	.	6.9	6.8			

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1882phae.proj..851F

23 h

	1855 RA	1855 Dec	1900 RA	1900 Dec	No.	Mag.	Spectrum	No. Plate	No. Lines
23 16.9+64 12 m									
	15.0	+63 57	23 16.9	+64 12	1974	7.0	I	928, 1564,	4, 1,
23 17.2+76 31									
	.7	+76 16	23 17.2	+76 31	911	8.0	IIIe	843,	1,
23 18.1+59 35									
	16.1	+59 20	23 18.1	+59 35	2710	6.0	III	196, 928, 1564,	2, 2, 2,
	.9	+81 3	23 17.9	+81 18	818	8.5	IIa	929, 1564,	2, 2,
17									
23 19.6+56 59									
23 19.6+64 47									
	.6	+56 44	23 19.6	+56 59	2999	7.0	I	196, 928, 1564,	4, 4, 1,
	.7	+64 32	23 19.6	+64 47	1799	6.8	IIa	843, 1576, 1564,	2, 2, 2,
18									
23 20.8+61 5									
23 20.8+61 44									
23 20.3+63 18									
	.3	+60 50	23 20.3	+61 5	2535	neb.	IIa	928,	2,
	.4	+61 29	23 20.4	+61 44	2444	5.3	III	196, 928, 834, 1564,	1, 2, 2, 1,
	.3	+63 3	23 20.3	+63 18	1988	7.0	III	1564,	1,
19									
23 21.4+66 22									
23 21.5+68 25									
	.5	+66 7	23 21.4	+66 22	1607	7.3	II	1576,	2,
	.6	+68 10	23 21.5	+68 25	1376	7.2	III	1564,	1,
23 21.8+60 32									
	.8	+60 17	23 21.8	+60 32	2540	7.0	I	196, 928, 1564,	4, 7, 5,

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K Line	Y Line	Brightness	Corr. Brightness	Mean Residuals	No. Remarks
..	..	7.1 6.9, 7.3	6.5 6.4, 6.7		
.	.	7.1	6.8		
10, 10, 10,	...	7.2 6.9 6.9 7.6 7.3 7.2	6.2 6.2 6.1 6.6 6.6 6.4		330,
10, 10,	..	6.9 6.8	7.8, 7.3,		424,
10,	...	7.2, 7.0, 7.1	6.2, 6.3, 6.3		
10, 10, 10,	...	7.0 6.9 7.0 7.3 7.1	6.2 6.3 6.0 6.5 6.5		455,
10,	.	7.0	6.4		336,
10, 10,	...	6.8 6.5 6.9 6.4 7.4 6.8 7.3 6.8	5.9 5.9 5.5 5.7 6.5 6.2 5.9 6.1		340, 366,
.	.	7.1 7.3	6.5 6.7		
10,	.	7.0	6.3		
.	.	7.2 7.5	6.8 7.1		
10, 10, 8:,	...	6.8, 6.6, 6.7	5.9 6.0, 6.0		1406

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1882phae.proj..851F

23h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Obs.	Mag.	Spectrum.	No Plate	No. Lines.
23 22.0 +70 8									
.2+6953	23	22.0	+70	8	1331	6.8	I	196, 928, 834, 1564,	4, 6, 2, 3,
23 23.0 +69 49									
21.1+6934	23	23.0	+69	49	1332	6.2	I	196, 795, 787, 928, 834, 843, 950, 1576, 1564,	8, 4, 6, 9, 8, 9, 6, 6, 6,
23 23.6 +61 22									
.6+617	23	23.6	+61	22	2454	7.9	I	928, 1564,	4, 1,
23 23.8 +73 34									
22.0+7319	23	23.8	+73	34	1035	7.5	I	928, 843 950, 1564,	6, 2, 3, 2,
23 23.9 +79 0									
23 24.0 +79 15									
.4+7845	23	23.9	+79	0	834	8.0	II[a]	1564,	2,
.5+7860	23	24.0	+79	15	835	7.5	I	196, 928, 929, 843, 1564,	3, 5, 5, 7, 2,
23 24.6 +71 41									
.8+71 26	23	24.6	+71	41	1203	8.0	II[a]	928,	2,
23 24.8 +73 45									
23.0+7330	23	24.8	+73	45	1037	8.0	I	928,	3,
23 25.0 +74 41									
No. 50 .3+7426	23	25.0	+74	41	1022	7.0	I	196, 196, 186, 795, 787, 928, 834, 829, 843,	5, 1, 5, 4, 4, 8, 5, 6, 11,
23 25.5 +58 1									
.4+57 46	23	25.5	+58	1	2748	5.7	I	196, 928, 834, 1564,	8, 10, 7, 8,
23 26.2 +61 45									
24.2+6130	23	26.2	+61	45	2462	8.2	I	928,	5,
No. 62. .2+8537	23	24.6	+85	52	399	7.5	I	753, 774, 928, 834, 829, 835, 875, 844, 1521,	5, 4, 7, 5, 7, 3, 8, 6, 4,
23 26.1 +63 51									
1+6336	23	26.1	+63	51	2004	6.9	I	928,	5,
23 26.4 +58 35									
.3+5820	23	26.4	+58	35	2605	7.5	III	1564,	1,

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1882phae.proj..851F

K Line	F Line	Brightness.	Corr. Brightness.	Mean Residuals	No.	Remarks
2, 10,		6.9, 6.5, 6.9, 6.7	6.4, 6.3, 5.9, 6.4		364	
4, 5, 4, 8, 2 10, 5, 2,		6.0, 6.0, 6.5, 5.7, 6.5, 6.4, 6.3, 6.358	5.4, 5.8, 5.5, 5.4, 5.4, 5.6, 6.1, 5.7, 5.4			
		7.0 7.0 7.3	6.4 6.3 6.6			
10, 10, 10,		6.7, 6.8 7.0, 6.8	6.7, 6.3, 7.1, 6.7			
10,		6.6	6.9		1399	
2 10, 10,		7.1, 6.7, 6.8, 6.8, 6.6	7.2, 7.1, 7.5, 6.7, 6.9,		1402,	
10,		6.9	6.7		339,	
		7.2	7.2			
2 10, 2, 5, 2,		6.9. 6.7, 6.5, 7.1, 6.1, 6.8, 6.8, 6.5	6.6 - 6.5, 6.6, 6.4, 6.1, 6.0, 6.3, 6.0			
		5.9, 5.5, 6.4, 5.8	4.9, 4.8, 4.9, 5.0		4, 324, 362,	
		6.9	6.3			
10, 10, 10, 10, 5, 10, 10, 10,		6.2, 7.0, 6.5, 6.6, 6.3, 6.7, 6.0, 6.7, 6.1,	7.1, 7.2, 7.9, 7.2, 8.0, 7.8, 7.2, 7.7, 7.5			
10,		6.9	6.4			
		7.2 7.4	6.4 6.6			

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1882phae.proj..851F

23h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Plate	Mag.	Spectrum	No. Plate	No. Lines
23 26.8 + 77 20									
No. 59	.2	+77 5	23 26.8	+77 20	908	7.0	I	196, 186, 795, 928, 929, 843, 950, 875, I? 1576,	5, 3, 4, 5, 6, 8, 10, 3, 2,
23 27.7 + 65 11	.8	+85 13	23 26.3	+85 28	400	8.0	III	1564,	1,
23 27.2 + 80 27	.7	+64 56	23 27.7	+65 11	1819	6.2	I	196, 928, 834, 843, 950, 1564, II[a]	4, 7, 4, 4, 4, 2,
23 28.1 + 57 21	.8	+80 12	23 27.2	+80 27	770	8.2	I	928, 929, 1564, ?	3, 5, 3,
23 27.9 + 77 15	26.0	+57 6	23 28.1	+57 21	2758	8.0	I	196,	3,
23 28.3 + 71 27	.2	+77 0	23 27.9	+77 15	909	6.8	I	196, 186, 795, 928, 929, 843, II 1576, 1564,	6, 4, 5, 6, 6, 5, 2, 5,
	.4	+71 12	23 28.1	+71 27	1208	6.8	I	196, 928, 834, 950, 875, (2) 1576, 1564, (1) 1576	6, 8, 6, 6, 3, 6, 4
23 29.0 + 59 29	.9	+59 14	23 28.9	+59 29	2745	7.0	I	196, 928, d 1564, II[a]	3, 5, 2,
27	.2	+85 46	23 27.7	+86 1	401	8.0	II[a]	928, 929, III 835, 1564, III ?	2, 2, 3, 2,
23 29.9 + 72 23	.8	+86 30	23 27.7	+86 45	344	6.0	I	753, 774, 834, 835, 875, 879, 1564,	7, 6, 8, 10, 10, 7, 6,
	28.0	+72 8	23 29.9	+72 23	1109	7.5	I	928, 843, II ? 950, 1576, 1564,	7, 4, 2, 2, 3,
23 30.6 + 71 5	.7	+70 50	23 30.5	+71 5	1327	6.0	III	928,	2,
29									
23 30.3 + 85 38	.7	+85 23	23 30.3	+85 38	403	7.8	I	928, 834, 929, 875, 844, III 1019, 1521, 1564,	6, 5, 7, 6, 3, 5, 3, 5,

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1882phae.proj..851r

K Line	F Line. Brightness.	Corr. Brightness:	Mean Residuals.	No.	Remarks.
.....	.....	7.3, 7.0, 6.7, 6.7, 6.5, 6.8, 6.2, 7.3, 6.9	7.2, 7.0, 7.0, 6.9, 7.0, 6.5, 6.4, 7.3, 6.8		.....
.	.	6.7 6.9	7.9 8.1		.
.10, 10, .8, 10,	.....	7.1, 6.6, 7.0, 6.8, 6.8, 6.7	6.3, 6.1, 5.7, 5.8, 6.4, 6.1		 1416,
...	...	6.9, 6.9, 6.6,	7.4, 7.7, 7.0		...
.	.	7.5	6.5		.
. .10, 2, 2, .10, .	.....	7.0, 6.7, 6.6, 6.6, 6.4, 6.8, 6.9, 6.5	6.9, 6.7, 6.8, 6.8, 6.9, 6.5, 6.8, 6.6		.....
.4, 8, 5, 10, .2, 10	.....	6.8, 6.4, 6.8, 6.8, 6.9 .6.3 6.9	6.3, 6.2, 5.8, 6.7, 6.5 .6.0 5.9		.....
.10, 9, 10,	...	7.6, 6.9, 7.0	6.6, 6.2, 6.2,		. 1401,
10, 10, 10, 10,	..	6.9, 6.8 6.8 6.6 7.0 6.8	8.3, 8.5 7.9 7.9 8.1 8.1		358, 443 . .
8, 5, 8, 8, 3, 10, 10,	.....	5.8, 6.5, 6.5, 6.0 . . .	6.9, 6.9, 7.3, 7.3 . . .		.....
8, 10, 10, 10, .	.....	6.8, 7.1, 7.1, 6.9, 7.0	6.7, 6.5, 7.1, 6.5, 6.8		.....
10,	.	6.7 7.0	6.5 6.8		.
2, 8, 3, . 10, 5. .	.....	6.6, 6.7, 6.4, 6.4 6.6 6.9 . 6.5, 6.2	7.9, 7.2, 8.0, 7.5 7.5 7.8 . 7.8, 7.4		.....

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1882phae.proj..851F

23h

	1855 R.A. Elec	1855 Decl. Elec	1900 R.A. Elec	1900 Decl. Elec	No. Obs.	Mag.	Spectrum	No. Plate	No. Lines
23 32.0+67 18m									
30.0+67 3	23 32.0	+67 18	1542	72	I		196,928,843,950,1564,		4,5,5,8,3,
31									
23 33.2+82 39									
.8+82 24	23 33.2	+82 39	728	7.5	III		929,1564,		2,2,
23 34.1+61 35									
32.0+61 20	23 34.1	+61 35	2490	6.5	I		196,928,1564, II a		5,6,2,
.8+84 22	23 33.8	+84 37	533	8.7	I		929,1564, II		3,1,
23 34.9+71 24									
.9+71 9	23 34.9	+71 24	1218	8.2	I		196,		3,
No. 49							186		7
23 35.2+63 10									
33.1+74 28	23 35.0	+74 43	1032	6.5	I		196,795,787,928,834,829,843, 929		6,5,3,9,7,9,10, 5
1+57 2	23 35.2	+57 17	2780	7.1	I		843,		3,
23 35.2+77 5									
1+62 55	23 35.2	+63 10	2268	6.7	I		196,928,834,843,950,1564,		4,6,3,6,6,4,
No. 45									
23 35.0+73 25									
.4+76 50	23 35.2	+77 2	928	3.5	III	be	196,186,795,787,928,834,834,929,		2,2,2,4,2,2,3,3,
No. 60									
23 35.6+75 10									
1+73 10	23 35.0	+73 25	1047	5.6	I		186,928,834,929,843,950,875,1576, III b III II III III III II		4,2,2,1,3,3,3,2,
.7+74 55	23 35.6	+75 10	1033	8.0	II a		928,843,950, II		2,2,2,
23 35.7+79 16									
34.0+79 1	23 35.7	+79 16	790	8.2	I		929,843,1564,		4,3,4,
23 36.2+57 17									
.1+57 2	23 36.2	+57 17	2780	7.2	I		1 843 950,1564, III		3 3,2,

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1882phae.proj..851r

K Line	L Line	Brightness	Corr. Brightness	Mean. Residuals	No. Remarks.
5,		7.3, 7.0, 7.0, 6.9, 7.1	6.6, 6.6, 6.1, 6.6, 6.6		
10, 10,		6.7 6.8 7.0 7.2	7.8 7.5 8.1 7.9		
8, 10,		7.3, 6.7, 6.9	6.4, 6.1, 6.2,		1408
		7.0, 6.8	8.4, 7.8		
		7.6	7.1		
10, 2, 5, 5, 2,		6.5, 6.2, 6.7, 5.8, 6.5, 6.6, 6.3	6.2, 6.4, 6.0, 5.8, 5.7, 6.1, 5.8		
5, 10, 5, 8,		7.1 6.6 5.6 6.9, 6.2 6.9, 6.5	5.9 6.8, 6.0, 5.6, 5.9, 6.5, 5.9		
12, 12, 20, 20, 12, 12, 12, 15		5.9 5.5 4.7 4.9 4.9 5.9 4.8 5.3 5.5 5.0 4.4 5.1 5.3 5.3 6.0 5.8 5.2 5.3 5.2 6.2 5.0 5.9 5.8 5.5 4.8 5.4 5.6 5.5		360, 373, 406 3, 29, 300, 310, 34
10, 10, 10, 10, 10, 2 10,		6.4 6.7 6.7 6.5 6.9 7.4 6.6 7.0 6.6 6.9 6.8 7.1 6.9 6.7 6.3 5.8 6.1 6.5 6.6 6.5 6.1 6.8 6.3 6.8 6.8 6.5			346
10, 10, 10,		6.9, 7.0, 7.0	7.0, 6.6, 7.2		348 - 479,
10,		7.0, 7.0, 6.8	7.7, 6.9, 7.1		
10,		7.1 7.1 7.2 7.4	5.9 6.5 6.6 64		

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1882phae.proj..851F

23h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Obs.	Mag.	Spectrum	No. Plate	No. Lines
23 36.9+75 135	.0	+74 46	23 36.8	+75 1	1034	8.0	III	843	1
23 37.6+63 58									
	.5	+63 43	23 37.6	+63 58	2038	6.0	I	829,	5,
23 37.7+61 7									
	.6	+60 52	23 37.7	+61 7	2609	6.5	III	1564,	2,
23 37.8+73 34									
	.8	+73 19	23 37.8	+73 34	1052	8.0	I	928,	4,
23 38.3+52 36									
	36.1	+52 21	23 38.3	+52 36	3503	6.5	I	843, 950,	6, 2,
23 38.6+57 30									
	.4	+57 15	23 38.6	+57 30	2787	7.5	III	1564,	1,
23 38.8+80 45									
	37.1	+80 30	23 38.8	+80 45	780	7.8	I	196, 928, 929, 843, 875, 1521, 1564,	3, 5, 7, 5, 4, 3, 5,
23 39.2+66 0									
	.1	+65 45	23 39.2	+66 0	1935	7.7	III?	843,	2,
23 40.3+69 11									
	38.2	+68 56	23 40.3	+69 11	1393	6.8	I	196, 928, 843, 950, 875, 1564,	5, 5, 2, 6, 2, 4,
23 40.6+76 7									
	.7	+75 52	23 40.6	+76 7	893	8.6	II	843,	1,
23 41.1+62 7									
	39.0	+61 52	23 41.1	+62 7	2519	7.7	I	928,	4,
23 41.2+62 45									
	.1	+62 30	23 41.2	+62 45	2294	7.2	I	928,	4,
23 41.5+66 13									
	.4	+65 58	23 41.5	+66 13	1943	6.3	I	196, 186, 928, 928, 834, 843, 950, 1564, 1564,	6, 5, 6, 7, 4, 2, 8, 2, 6,
23 41.7+63 45									
	.6	+63 30	23 41.7	+63 45	2051	7.0	II	843,	2,
23 41.4+82 15									
	.7	+82 0	23 41.4	+82 15	735	8.2	I	929,	5,

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1982phae.proj..051F

K Line	F Line. Brightness.	Corr Brightness.	Mean Residuals	No.	Remarks
		7.6 7.3	7.0 5.8 6.1		
2	S	6.7	5.7		
10,		7.0 7.3	6.3 6.6		
		7.0	7.0		
10,	S.	7.0, 6.9	5.6, 7.1		474,
		7.2 7.4	6.4 6.6		
5,	S	7.5, 6.5, 6.5, 6.8, 7.0, 6.9, 6.5	7.7, 7.1, 7.4, 6.9, 7.4, 7.3 7.0		
10,		7.0 7.3	6.1 6.4		
10, 10, 10,	S? S?	7.0, 6.7, 6.7, 6.7, 7.0, 6.8	6.4, 6.4, 5.9 6.5, 6.5 6.4		328, 467,
2		7.0	6.6		458
2		6.8	6.2		
		7.0	6.4		
10, 2, 10, 10,	S S S.	6.4, 6.4 6.5, 7.1, 6.4, 5.6, 6.4	5.7, 5.8 6.1 - 5.9, 5.5, 5.3 - 5.9		390 316 27 351, 484
10,		7.2	6.2		
		7.1	8.1		

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1882phae.proj..851F

23h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Lines	Mag	Spectrum	No. Plate	No. Lines.
23 42.2+58 5m									
40.0	+57 50	23 42 2	+58 52	80 4	5.3	III	196, 186, 928, 834, 843, 950, 1564,		2, 2, 2, 2, 3, 3, 3,
23 42.8+56 54									
.0	+56 39	23 42 2	+56 54	30 85	6.0	III	843,		2,
23 42.6+80 49									
.6	+80 34	23 42 4	+80 49	784	8.0	I	928, 929, 1521, 1564,		5, 7, 3, 3,
23 43.1+67 15									
No. 54									
41.0	+67 0	23 43 1	+67 15	1562	5.5	I	196, 186, 186, 928, 834, 834, 829, 843, 950,		8, 7, 5, 8, 6, 8, 9,
23 43.3+63 15									
.1	+63 0	23 43 3	+63 15	2055	7.8	I	928, 843, 1564,		4, 4, 5,
23 43.7+80 0									
.8	+79 45	23 43 7	+80 0	793	8.3	I	928, 929, 1564,		3, 3, 2,
23 44.0+61 39									
.8	+61 24	23 44 0	+61 40	2533	5.9	II	196, 928, 834, 843, 843, 950, 875, 1564		3, 3, 4, 2, 3, 3, 3,
23 43.8+64 19									
.7	+64 4	23 43 8	+64 19	1861	6.5	I	196, 196, 928, 843, 950, 1564,		4, 3, 5, 9, 7,
23 44.0+59 25									
.8	+59 10	23 44 0	+59 25	2777	6.5	I	196, 186, 928, 834, 843, 950, 1564,		6, 4, 7, 5, 7, 6, 5,
23 44.3+58 25									
42.1	+58 10	23 44 3	+58 25	2653	6.8	II	196, 928, 843, 950, 1564,		2, 2, 3, 3, 2,
23 44.0+84 31									
.5	+84 16	23 44 0	+84 31	539	8.1	III	929, 1564,		2, 1,
23 44.5+82 26									
.8	+82 11	23 44 5	+82 26	736	8.5	I	929,		3,
43									
~~23 45.6+63 11~~									
~~.4~~	~~+62 56~~	~~23 45 6~~	~~+63 11~~	~~2310~~	~~6.9~~	~~I~~	~~928,~~		~~5,~~
23 46.1+63 26									
.9	+63 11	23 46 1	+63 26	2064	6.6	I	186, 834, 843, 950, 1564, 928		4, 4, 4, 8, 5, 5
44									

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1882phae.proj.0517

K Line	H Line	Brightness	Corr. Brightness	Mean Residuals	No.	Remarks
10, 10, 10, 10, 15, 10,	S S S S S	6.5 6.5 6.4 6.9 6.5 6.2 6.4 7.0 6.8 6.7 7.2 6.8 6.5 6.7	5.5 5.6 5.7 5.4 5.3 5.6 5.6 6.0 5.9 6.0 5.7 5.6 5.9 5.9		1396 326 465	
10,		6.8 7.2	5.5 5.9			
10, 8,		6.8, 6.6, 7.0, 6.7	7.4, 7.5, 7.6, 7.2			
2, 1, 2,	S S S S S	5.8, 5.9, 6.4, 5.7, 6.5, 6.4, 5.9, 5.0	5.1, 5.3, 5.8, 5.3, 5.3, 5.5, 5.0, 4.7			
		6.9, 7.0, 6.9	6.4, 6.0, 6.3			
10,		7.0, 7.0, 6.9	7.5, 7.8, 7.3		1404,	
10, 10, 10, 10, 10,	S S S S S	6.9, 6.2, 6.7, 6.7, 6.6, 6.8, 7.0, 6.4	5.9, 5.6, 5.3, 5.6, 6.1, 6.1, 6.3, 5.7		338, 472	
	S S S S	6.9, 6.6, 6.5, 6.2, 6.5,	6.1, 6.1, 5.5, 5.8, 5.9,			
	S S S	6.5, 7.0, 6.4, 6.8, 6.6, 6.6, 6.4	5.5, 6.1, 5.7, 5.3, 5.4, 6.0, 5.6			
10, 10, 10, 10, 10,	S S S S	6.8, 6.8, 6.8, 6.6, 6.7, 6.9	5.8, 6.1, 5.6, 6.0, 5.9, 6.1		347	
10,		6.9, 6.7 7.1, 7.0	8.3, 7.7 8.5, 8.0			
		7.2	8.3			
		6.6	6.1			
2, 10, 5,	S S S S	6.6, 7.0, 6.8, 6.8, 6.7, 6.4	5.9, 5.7, 5.8, 6.4, 6.1, 5.8			

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1882phae.proj..851F

23h

	1855 R.A. Dec.	1855 R.A. Dec.	1900 Nr.	1900 Mag.	Spectrum	No. Plate	No. Lines
23 47.0+77 3m							
	45.0+7648	23 47.1+77 3	934	6.9	IIa	196, 186, 795, 928, 929, 843, 950, 1576, 1564,	2, 4, 2, 2, 2, 3, 3, 2, 4,
23 47.3+81 17							
	.4+81 2	23 47.3+81 17	838	8.0	I	928, 929, 1564,	4, 6, 1,
23 47.5+74 59							
	.4+74 44	23 47.5+74 59	1047	6.3	III	843, 950, 1564,	3, 3, 1,
23 48.1+79 17							
	46.1+79 2	23 48.1+79 17	796	8.3	I	929, 1564,	4, 2,
23 48.7+60 18							
	.7+60 3	23 48.9+60 18	2636	7.0	III	196, 843, 1564,	1, 2, 2,
23 49.4+56 56 47							
	.2+56 41	23 49.4+56 58	3111	5.0	II	196, 186 928, 834, 829, 843, 1564,	2, 2, 2, 2, 3, 3, 2,
23 49.7+61 17							
	.5+61 2	23 49.7+61 17	2562	6.8	I	196,	2,
23 49.9+56 24							
	.7+56 9	23 49.9+56 24	3112	8.4	III	1564,	1,
23 50.0+73 51							
No. 53	.9+73 36	23 50.0+73 51	1063	7.0	I	196, 196, 186, 928, 834, 929, 829, 843, 950,	4, 3, 4, 8, 4, 6, 3, 8, 9,
23 50.5+56 53 48							
	.3+56 38	23 50.5+56 53	3115	7.5	II	196, 928, 843, 1564,	1, 2, 3, 2,
23 50.8+85 21							
	49.1+856	23 50.8+85 21	406	8.8	III	1564,	1,
23 51.8+55 17							
	.6+55 2	23 51.8+55 17	3055	7.5	IIa	843,	3,
23 51.6+82 38							
No. 56	.7+82 23	23 51.7+82 38	743	6.0	I	196, 783, 774, 928, 834, 929, 835, 875, 879, 844,	4, 6, 3, 8, 5, 9, 8, 6, 5,
23 52.1+55 10							
	.9+54 55	23 52.1+55 10	3076	6.0	I	196, 186, 843, 950,	4, 3, 2,

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1882phae.proj..851F

K Line	F Line	Brightness	Corr. Brightness	Mean	Residuals	No.	Remarks
10, 10, . 10, 10, 10, 10, 10, 10,	. . . . . SS . .	6.7 6.9 6.7 6.6 6.4 6.5 6.2 6.7 6.4	5.6 6.9 7.0 6.8 6.9 6.2 6.5 6.6 6.8 6.5		✓	485, 5,	. 320, 405, 462,
. 10, .	. . .	6.9 7.0 6.9	7.5 7.9 7.4		✓		
10, 10, .	SS .	6.6 6.6 6.8 6.9 6.9 7.0	6.1 6.7 6.7 6.4 7.0 6.9		✓		
. 10,	. .	7.0 6.9	7.7 7.2		✓		
. 10, 10,	. . .	7.6 7.2 7.2 8.1 7.5 7.4	6.7 6.1 6.5 7.2 6.4 6.7		✓		
. 10, 10, 10, 10, 10, 10,	. . . SS .	6.3 6.3 6.6 6.9 6.7 6.9 6.4 6.5	5.3 5.4 5.8 5.4 5.5 5.7 5.2 5.7		✓	1392	. 28, 319, 361, . 460
.	.	8.0	7.1		✓		
.	.	6.8 7.0	5.9 6.1		✓		
5, ... 2? .	. . . . . SS	7.3, 6.8, 6.8, 6.4, 6.8, 6.3, 6.9, 6.5, 6.4	7.0, 6.5, 6.6, 6.4, 6.0, 6.6, 6.4, 6.0, 6.5				2, ... 452 .
. 10, 10, 10,	. . S .	6.8, 6.8, 6.6 6.7 6.8	5.7, 6.4, 5.3 5.8 5.9		✓		. . . .
.	.	6.9 7.1	8.1 8.3		✓		.
10,	S	6.6	5.3		✓	454	
. 10, . 2, 5, 1, 2, 2, 2, .	. . . . SSSS	7.2, 6.5, 6.9, 5.5, 6.6, 6.5, 6.2, 6.4, 6.0	7.7 6.8, 6.5, 6.3, 6.6, 7.0, 6.8, 6.4, 6.4		✓		. . . . .
. 1 10,	. 7 .	7.0, 6.5 7.3 6.3	5.9, 5.5 6.0 5.6		✓		. . 478

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23h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Obs.	Mag.	Spectrum.	No. Plate.	No. Lines.
23 52.2+79 12m									
50.1	+78 57	23 52.2	+79 12	851	7.8	I	928, 843, 950, 1564,		4, 3, 3, 2,
23 52.5+59 28									
.3	+59 13	23 52.5	+59 28	2795	6.7	I	196, 186, 186, 928, 834, 843, 950, 1564,		5, 3, 3, 5, 2, 7, 5, 5,
23 52.5+61 27									
.3	+61 12	23 52.5	+61 27	2573	7.3	I	928,		4,
23 52.8+56 34									
.5	+56 19	23 52.7	+56 34	3119	7.7	I	843,		3,
23 52.4+72 18									
.2	+72 3	23 52.4	+72 18	1127	7.8	I	928		4,
23 52.6+73 18									
.4	+73 3	23 52.6	+73 18	1067	8.0	II	928,		2,
23 52.4+75 45									
.3	+75 30	23 52.5	+75 45	901	7.8	I	929, 843,		5, 5,
51									
23 54.0+55 12									
.7	+54 57	23 53.9	+55 12	3082	5.0	I	196, 186, 829, 843, 950,		5, 7, 8, 6, 10,
23 54.4+57 7									
52.1	+56 52	23 54.4	+57 7	3127	7.4	I	843, 950,		4, 5,
23 54.2+74 15									
.0	+73 60	23 54.2	+74 15	1068	7.5	I	950,		5,
23 54.7+86 9									
.8	+85 54	23 54.7	+86 9	409	8.0	I	173, 753, 928, 834, 929, 835, 875, 844, 1019, 1521, 1564		4, 5, 9, 5, 7, 8, 8, 6, 2, 7, 3
53									
23 55.5+59 1									
.2	+58 46	23 55.5	+59 1	2685	6.3	III	843, 1564,		2, 1,
23 55.7+61 37									
.4	+61 22	23 55.6	+61 37	2580	7.2	II	196, 843,		2, 8,
23 55.8+67 54									
.6	+67 37	23 55.8	+67 54	1597	7.9	I	843,		3,
23 55.9+69 3									
.7	+68 48	23 55.9	+69 3	1417	8.0	I	928,		3,
23 56.0+69 1									
.8	+68 46	23 56.0	+69 1	1418	7.5	I	928, 929, 843, 1564,		4, 5, 3, 2,
23 56.3+60 17									
54.0	+60 2	23 56.3	+60 17	2656	6.8	I	196, 928, 1564,		2, 4, 3,
23 56.5+73 3									
No. 55									
.3	+72 48	23 56.5	+73 3	1135	6.5	I	196, 186, 928, 834, 929, 829, 843, 950, 835,		3, 6, 8, 5, 7, 7, 8, 8, 5,
23 56.7+65 45									
.4	+65 30	23 56.7	+65 45	1984	7.0	II	843, 1 2		2
23 56.6+60 39									
.3	+60 24	23 56.5	+60 40	2657	6.0	I	196, 186, 186, 928, 834, 843, 875, 1564,		6, 6, 2, 7, 2, 9, 8, 6,
.4	+82 10	23 56.5	+82 25	748	7.0	I	1019,		6
23 56.8+65 53									
.6	+65 38	23 56.8	+65 53	1985	6.9	I	196, 928, 843, 950, 1564,		4, 3, 7, 6, 1,
23 56.5+71 41									
.3	+71 26	23 56.5	+71 41	1246	6.9	II	928, 950		2, 8,
23 56.7+64 54									
.4	+64 39	23 56.7	+64 54	1087	7.5	III	843,		2,

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K Line.	F Line.	Brightness.	Corr. Brightness	Mean.	Residuals.	Ks Rem.
10, 10, 10,	S	6.8 6.8 6.9 7.0 6.9 7.0	7.3 6.9, 7.4 7.3	7.1 6.7	✓	....
9 2,	SS?	6.7, 6.8, 6.9, 6.5, 7.0, 6.7, 6.5 6.6	5.7, 5.9, 6.0, 5.8, 5.5 5.5 5.9 5.8		✓	
10,		7.2	6.6			
		7.0	5.7			
		6.9	6.8			
10,		7.0	6.9			
		6.6, 7.0	7.0, 6.6		✓	400
	SSS	6.0, 5.6, 6.5, 6.0, 5.4	4.9, 4.6, 5.2, 4.7, 4.7		✓	477
2,		7.0, 7.0	5.8, 6.4,		✓	
		7.1	7.2		✓	
2, 10, 2, 10, 2, 2, 5,	SSSSS	6.5, 6.4, 6.7, 6.4, 6.5, 6.2, 6.6, 6.2 6.0	7.5, 7.9, 7.4, 8.2, 7.7 7.5, 7.7, 7.7 7.4		✓	
10,		6.7 6.9	5.5 6.1			
		6.9 7.2	5.7 6.4		✓	
10, 10,	S	6.9, 6.7	7.0, 5.6		✓	
		7.2	6.3		✓	
		7.0	6.7		✓	
10,		7.0, 7.1, 7.0 7.6 7.3	6.7, 7.1, 6.2 6.6 6.9		✓	
		7.8, 6.9, 7.0	6.9, 6.3 6.3		✓	
10, 2, 8, 10, 8, 10,	SSSS	7.5, 6.8, 6.4, 6.9, 6.5, 7.0, 6.6, 6.4, 6.7	7.1, 6.1, 6.3, 6.0, 6.3, 6.4, 6.0, 6.4, 6.3		✓	
10,		6.9	6.0			457
10, 8, 10, 10, 10, 5, 5, 10,	SSS	6.6, 6.4, 6.9, 6.3, 6.9, 6.6, 6.5, 6.4	5.7, 5.6, 6.1 5.7, 5.5, 5.5, 5.7 5.7			38 36 5
		5.9	6.7		✓	
	S	6.9	7.4			
	SSS	7.4, 7.0, 6.8, 6.5 7.1	7.1, 6.6, 5.9, 6.2 7.6		✓	
10, 2	S?	7.2, 6.5	7.0, 6.4		✓	
		6.9	5.9			
10,	S?	7.2	6.2		✓	

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23 h

m	1855 R.A.	1855 Decl.	1900 R.A.	1900 Decl.	No.	Mag.	Class.	Spectrum.	No. Plate	No. Lines.
55.5	23 57.5	+65 32								
	2	+65 17	23 57.5	+65 33	1987	6.3	I	196, 186, 928, 929, 843, 950, 1564,	3, 5, 2, 1, 3, 2, 2,	10,
	23 57.6	+79 45								
	4	+79 30	23 57.6	+79 45	799	7.5	I	196, 929, 843, 1564,	3, 4, 3, 2,	
	23 57.6	+82 25								
	4	+82 10	23 57.6	+82 25	748	7.0	I	928, 834, 929, 835, 875, 844, 1521, 1564, 1019	7, 4, 9, 3, 5, 6, 4, 5, 6	2,
56	23 58.3	+72 36								
	0	+72 21	23 58.3	+72 36	1136	7.0	I	196, 928, 929, 843, 950, 835, 1564,	3, 6, 7, 3, 5, 3, 3,	3,
	23 58.3	+63 5								
	0	+62 50	23 58.3	+63 5	2356	6.5	I	196, 834, 843, 875, 1564, 928	3, 2, 2, 3, 2, 2	
	23 58.5	+69 45								
	2	+69 30	23 58.5	+69 45	1377	8.0	I	928,	3,	
	23 58.6	+68 19								
	3	+68 4	23 58.6	+68 19	1423	8.2	I	929,	6,	
	23 59.1	+74 52								
	8	+74 37	23 59.1	+74 52	1059	8.8	II	1564,	2,	10,
	23 59.1	+61 44								
	8	+61 29	23 59.1	+61 44	2586	5.6	I	196, 186, 928, 834, 843, 950, 875, 1564,	5, 4, 6, 3, 4, 3, 4, 5,	60,
57	23 59.5	+66 36								
	2	+66 21	23 59.5	+66 35	1679	6.0	III	196, 186, 843, 950, 1564,	1, 2, 3, 3, 1,	10,
	23 59.7	+57 58								
	4	+57 43	23 59.7	+57 58	2855	6.5	II	186, 950,	2, 3, 10,	10,
	23 59.8	+64 53								
	5	+64 38	23 59.8	+64 53	1894	7.2	I	929,	5,	
	23 59.9	+60 46								
	6	+60 31	23 59.9	+60 45	2667	6.0	I	196, 186, 928, 829, 843, 875, 1564,	6, 5, 6, 5, 10, 8, 5,	
	0	.0.1	+68 19							
58	.8	+68 4	0 0.1	+68 19	1426	7.0	I	196, 186, 928, 834, 843, 950, 835, 1564, 929	5, 5, 6, 4, 4, 7, 3, 3, 6	
	0	0.9	+63 7							
	6	+62 52	0 0.9	+63 7	2363	7.2	I	843,	4,	10,
	0	1.0	+57 53							
	7	+57 38	0 1.0	+57 53	2865	6.5	II	186, 843, 950,	2, 3, 3	10/0,
	0	1.2	+63 37							
No. 48	59.0	+63 22	0 1.2	+63 38	2107	5.4	I	196, 196, 186, 928, 834, 929, 829, 843,	4, 4, 6, 6, 5, 8, 8, 12,	10,
	0	1.4	+84 51							
	.1	+84 36	0 1.4	+84 51	546	8.2	I	929, 1019,	4, 4,	
	0	1.9	+72 39							
	.6	+72 24	0 1.9	+72 39	1140	8.0	III	1564,	1,	

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K Line.	F Line.	Brightness.	Corr. Brightness.	Mean.	Residuals.	No.	Remarks
10, 10, 10, 10, 10, 10,	.....	6.8, 6.7, 6.7, 6.6, 6.5, 6.9, 6.8, 6.8, 6.5, 6.6	6.0, 6.0, 6.2, 6.4, 6.6, 5.5, 5.8, 6.1, 6.0			1417	349, 456, 476,
10, 10,	..	7.5, 6.8, 6.9, 6.6, 6.8	7.6, 7.5, 6.8, 6.9, 7.1				
2, 2, 10, 5, 2, 5,	.....	6.0, 6.9, 5.8, 6.8, 6.9, 6.5, 6.5, 6.0, 5.9, 6.8, 6.9, 6.9, 7.3, 7.5, 6.9, 7.3, 6.7, 5.2					
3, 2, 10, 10,	.....	7.5, 6.6, 6.7, 7.1, 6.7, 7.0, 7.2, 6.8	7.1, 6.5, 6.9, 6.5, 6.7, 6.6, 6.8, 6.6				
10, 10, 10, 10	.....	7.0, 7.1, 6.9, 6.9, 6.5, 6.5	6.2, 5.8, 5.9, 6.2, 5.9, 5.7				451,
		7.0	6.7				
		6.6	6.6				
10,		7.0	6.9				
60, 2, 10,	.....	6.7, 6.5, 6.5, 7.1, 6.7, 6.8, 6.2	5.8, 5.7, 5.9, 5.7, 6.2, 6.0, 5.5,				
10, 10, 10,	..	6.6, 6.7, 6.5, 6.6, 6.5 7.0, 7.0, 6.8, 6.9, 6.8	5.9, 6.1, 5.6, 6.3, 6.0 6.3, 6.4, 5.9, 6.6, 6.3				26, 483,
10, 2,	.	6.8, 6.7, 6.5,	5.9, 5.9, 5.9				32, 487,
		6.1	5.9				
10, 2,	.....	6.5, 6.7, 6.2, 6.7, 6.5, 6.4, 6.2,	5.6, 5.9, 5.6, 5.7, 5.4, 5.6, 5.5				
	.....	6.8, 7.0, 6.9, 7.1, 6.8, 6.8, 7.0, 6.7, 6.6	6.2, 6.5, 6.6, 6.0, 6.0, 6.3, 6.4, 6.3, 5.9				
10,	.	7.0	6.0				
10, 10,	..	6.9, 6.6, 6.5, 6.7, 6.6	6.0, 5.4, 5.9, 6.0, 6.0				31
10, 10, 2,	.....	6.8, 6.5, 5.9, 5.9, 6.7, 5.9, 6.6, 6.3	6.0, 5.7, 5.2, 5.4, 5.3, 5.7, 5.6, 5.3				
	..	6.9, 6.5,	8.4, 6.7				
		7.0, 7.3	6.8, 7.1				

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No.	1855 R.A. hr	1855 Dec. ° ′	1900 R.A.	1900 Dec.	No. Dm.	Mag. Dm.	Spectrum	No. Plate	No. Lines
No. 1	0	7m 48.1 +58 23		138	5.0	III	914,	3	10
" 2	1	0 X0 +78 54		34	5.6	I[d]	875, 879, 848, 876, 914, 844, 1019, 877, 939, 1564,	10,8,7,9,9,8,10,8,7,7,	2,
" 3	1	10.3 +75 28		59	6.2	I	876, 914, 844, 1019, 1019,	3,7,6,6,7	
" 4	1	50.8 +76 35		63	5.3	I	876, (914) (844) (844) (1019) (877) (939) (884)	3,8,8,8,13,8,10,5	10,
" 5	1	11.2 +77 58		49	6.0	II[a]	876, (914) (844) 1019, 877, 939	3,8,1,10,5,1	15
" 6	1	0.9 +68 0		77	6.0	I	914,	8	
" 7	1	34.1 +80 10		55	7.5	I	914, 844, 1019, 877, 939, 884, 898,	7,7,8,4,4,5,7	
" 8	1	6.2 +80 8		36	6.7	I	876 914, 844, 1019, 877, 939, 1564,	5,7,9,4,7,6,	
" 9	1	51.8 +80 36		64	6.1	II	~876 914, 844, 1019, 877, 939, 884, 898,	7,6,9,10,8,7,7,7	
" 10	1	15.8 +67 22		123	5.2	III[b]	844, 1019,	3,3,	10,
" 11	1	51.2 +71 42		117	4.0	I	844, 1019, 877, 877, 939,	12,3,9,2,9	1,
" 12	1	51.8 +75 25		86	5.0	III	844 (1019), 877, (939)	3,3,3,2	10,
" 13	1	20.8 +65 21		175	6.0	I	844, 1019, 1019,	4,4,6	
" 14	1	27.6 +77 14		58	6.5	I	1019, 877, 939,	8,7,7,	
" 15	1	15.2 +70 13		102	6.1	I	1019,	8,	
" 16	1	48.8 +74 47		91	6.5	I	1019, 877, 939,	6,7,8	
" 17	1	50.1 +70 11		153	4.6	I	877, 939, 939[d2]	9,5,8	5,3,
" 18	1	50.5 +73 8		108	6.2	I	939,	9,	5,
" 19	1	3.9 +79 8		36	6.5	I	939, 1564,	5,1,	10,
" 20	1	52.6 +80 46		65	6.7	I	939, 898,	6,7	5,2
" 21	1	25.0 +80 41		50	7.4	I	939, 884, 898, 1564,	5,5,5,2,	10,10
" 22	1	56.6 +79 0		63	6.7	I	898	8,	2
" 23	2	49.6 +80 54		97	5.5	I	939, 884, 898, 954, 1057,	8,7,9,9,7,	3,5,
" 24	2	56.3 +73 50		168	5.2	I	884, 898, 954,	9,13,11,	2,2
" 25	3	46.0 +80 18		125	4.9	II[a]	939, 884, 898, 954, 1057, 1069,	3,7,3,3,3,7,	5,2
" 26	3	22.2 +77 11		115	6.2	I	884, 898, 954,	6,10,9,	10,
" 27	3	58.5 +82 59		113	5.0	III	898, 1057, 1229,	3,3,2,	15,
" 28	3	55.1 +83 26		104	5.0	I	898, 1054, 1035, 1119, 1229,	12,9,8,6,7,	
" 29	3	19.4 +72 50		178	6.7	I	954,	9,	2,
" 30	3	29.0 +77 39		133	7.2	I	1057,	6,	

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K Line	F Line	Brightness	Corr. Brightness	Mean Residuals	Ns	Remarks
10	S	6.1 6.3	5.3 5.5			
2,2,2,2,2 . . 5,10² :	S S S S S S S S S	5.8, 5.7, 6.1, 5.5, 5.5, 5.5, 6, 5.5, 5.6, 5.0	6.0, 5.3, 6.0, 5.5, 5.8, 5.6, 5.9, 5.6 5.6			. . . . .
. 10,10, 2 10	. S S . S	6.5, 6.3, 6.4, . 6.0	6.2, 6.3, 6.1, . 6.1			. . . . .
10, 5, 10, 2 10, 8, 10, 2, 10	S S S S S S S S	5.8, 5.6, . 5.8, 5.7, 5.9, 4.8 6.2	5.6, 5.7. 5.6, 5.9, 5.7, 5.3, 5.8			524 . . . . .
15² . . 2² ? ?	S S S S S S	6.4, 6.0, 6.4, 6.0, 6.4, 5.5	6.3, 6.2, 6.3, 6.3, 6.3, 6.0			. . . . .
.	S	5.6	5.2			.
. . . . 2, 10, .	S S S . . S S	6.4, 6.5, 6.1, 6.7, 6.0, 7.0, 5.8	6.8, 6.6, 6.6, 6.8, 6.7, 6.5, 6.5			. . . . .
. . 2² 10, 10 2	S S . S S S	6.9 6.0, 6.4, 5.8, 6.5, 5.9, 5.7,	7.0 6.4, 6.5, 6.3, 6.6, 6.6, 6.1			. . . . .
. . . 2, 2 . 10 .	S S S S S S S S S	64 6.8 5.5, 5.8, 5.4, 5.9, 5.3, 6.3, 5.2, 6.4	66 7.0 6.0, 6.0, 6.0, 6.1, 6.1, 5.9, 6.0, 6.6			. . . . .
10, 15 .	S S	6.0 6.4 6.1 6.4	5.2 5.6 5.7 6.0			547, 571
1, 2, . . .	S S S S	4.8, 4.0, 5.0, . 4.3	4.3, 3.9, 4.5 . 4.4			. . . .
10, 10, 10, 10,	S S S .	6.1 6.4 5.9 6.4 6.1 6.6 5.6	5.8 6.0 6.1 6.1 6.2 6.3 5.9			. 594 . .
. . .	S² . S	6.4, . 6.2	5.5. 5.7			. . .
. . 2	S S S	6.1, 6.5, 5.8	6.3, 6.3, 6.2			. . .
.	S	6.2	6.0			.
. 2 .	. S S	5.8, 6.6, 5.9	5.9, 6.3, 6.2			. . .
5, 3, 2	S . S	5.2, 5.3, 4.8	4.6, 5.3, 4.8			. . .
. 5,	S	5.9	6.0			.
10, .	S .	5.8, 6.4	6.4, 6.7			. .
5, 2,	S S	6.1, 6.0	6.9, 6.8			. .
10, 10 . .	. S . .	6.3, 6.9, 6.1, 6.3	7.1, 6.5, 6.9, 6.8			. . . .
2	S	5.7	6.3			.
3, 5, 5, 2, 10	S S S S S	5.1, 6.2, 4.9, . 5.2	5.9, 5.8, 5.7, . 6.0			. . . . .
2, 2⁹ .	S S S	5.4, 4.9, 4.6	4.4, 5.1, 5.0			. . .
5, 2, 8, 5, 10, 10,	S S S S S S S	5.2, 6.1, 4.9, 4.8, 5.2, 5.3	5.9, 5.6, 5.6, 5.7, 5.9, 6.0			615 - 624 657 674 .
. 10, 2, 5,	S S S	6.5, 5.4, 4.9	5.7, 5.8, 5.6			. . .
15, 15, 10, 10 ?	S S . S	4.8 5.4 5.8 5.2 5.7 5.9 4.7	5.9 6.5 6.6 6.3 6.8 6.7 5.6			632 . . .
. . . . 10 ?	S S S S S	4.0, 4.4, 5.3, 5.2, 4.7	5.2, 5.6, 6.2, 6.0 5.6			. . . . .
2,	S	5.9	6.2			.
.	S	6.0	6.5			.

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	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Dm.	Mag. Dm.	Spectrum.	No. Plate.	No. Lines.
No. 31	0 49.7	+85 29			19	5.0	III be 1521?, 1564,	1, 3,	.4
" 32	0 1.5	+78 55			1	6.5	I 1576, 1564,	4, 7,	10, 8
" 33	0 8.1	+76 9			5	6.5	I 1564, 1564,	7, 4,	..
" 34	0 40.5	+77 10			27	6.7	I 1564,	1,	.
" 35	0 17.9	+79 14			10	7.0	I 1564,	7,	.
" 36	0 57.1	+79 14			29	6.4	III b 1564,	2,	10,
" 37	0 48.6	+79 46			24	6.5	I 1564,	2,	10,
" 38	0 49.6	+81 6			25	7.5	I 1564,	6,	5,
" 39	0 29.0	+81 42			13	6.5	I d 1564,	3,	10,
" 40	0 10.2	+72 8			15	7.0	I 1564,	2,	10,
" 41	0 41.6	+82 55			20	6.5	I 1564,	9,	2,
" 42	1 55.1	+82 52			51	7.0	III 1564,	2,	10,
" 43	0 48.4	+83 49			20	7.0	I 1564?,	6,	10,
" 44	0 10.2	+75 28			7	7.4	I 1564,	2,	10,
" 45	23 33.4	+76 50	23 35.2	+77 2	928	3.5	III be 829, 843, 950, 835, 875, 879, 1576, 1564,	3, 4, 11, 3, 3, 3, 2, 3,	10,
" 46	9 29.8	+79 48			319	6.0	I 1064, 1065, 1113, 1233, 1074, 1208, 1255, 1162,	3, 8, 8, 7, 9, 8, 6, 4,	10,
" 47	23 33	+74 36	23 4.7	+74 51	1006	4.6	III 843, 950, 875, 1521, 1576, 1564,	3, 3, 3, 3, 3, 2,	12
" 48	23 59.0	+63 22	0 1.2	+63 38	2107	5.4	I 950, 835, 875, 879, 1564,	11, 7, 5, 5, 5,	..
" 49	23 33.1	+74 28	23 35.0	+74 43	1032	6.5	I 950, 835, 875, 1576, 1564,	10, 9, 7, 5, 6,	2,
" 50	23 23.3	+74 26	23 25.0	+74 41	1022	7.0	I 950, 1576, 1564,	8, 3, 5,	2.
" 51	23 12.3	+74 31	23 13.7	+74 46	1016	6.6	I 950, 1576, 1564,	10, 4, 5,	2,
" 52	23 13.9	+79 6	23 15.2	+79 21	777	7.8	I III? 835, 875, 1521, 1564,	3, 6, 6, 5,	10,
" 53	23 47.9	+73 36	23 50.0	+73 51	1063	7.0	I b II a 835, 875, I 1564,	7, 5, 4,	10,
" 54	23 41.0	+67 0	23 43.1	+67 15	1562	5.5	I 875, 1564,	6, 7,	.
" 55	23 54.3	+72 48	23 56.5	+73 3	1135	6.5	I d? 875, 1564,	3, 3,	.
" 56	23 49.7	+82 23	23 51.7	+82 38	743	6.0	I 1019, 1521, 1564,	6, 5, 7,	.
" 57	9 16.0	+81 8			302	4.3	III 1065, 1233, 1116, 1255, 1162,	3 3 3 2 3	10
" 58	9 1.2	+73 32			452	6.0	I 1113, 1073, 1233,	8 6 7	2
" 59	23 25.2	+77 5			908	7.0	I 1564,	5,	.
" 60	23 33.1	+73 10			1047	5.6	I 1564?,	4,	.

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K Line.	I Line.	Brightness.	Corr. Brightness.	Mean Residuals.	No. Remarks.
4,	ss	5.3 5.8	6.6 7.1		1418,
10,8,	s	6.4, 5.8	6.5, 6.1		..
..	s? .	6.1 .	6.2 .		..
.	.	6.5	6.6		1398
.	.	5.7	6.0		.
10,	.	6.3 6.6	6.6 6.9		.
10,	.	6.0	6.4		1407,
5,	.	5.7	6.2		.
10,	s	5.9	6.5		1411
10,	.	7.0	6.8		.
2,	s	5.2	6.0		.
10,	.	6.2 6.5	7.0 7.3		.
10,	.	5.9	6.8		.
10,	.	7.0	7.0		.
10,12,15,10,12,10,12,10,	s s s s s s s s s	5.5 5.5 5.6 5.4 5.4 5.1 5.2 5.2 5.9 5.8 B 6.0 5.7 5.8 5.5 5.6 5.5 B 6.9 5.7 5.2 5.4 5.5	6.5 5.4 4.8 5.0 5.3	✓	513 1382, 1393 446, 463, . 491, 502,
10, 10, 8.8 10 5, 8, 10	s . s s s s . s	6.2, 5.4, 5.4, 5.5, 5.3, 5.8, 5.6 5.0, 6.7, 6.2, 6.1, 6.1, 5.9, 6.6, 6.1, 5.6,		✓	. . . . .
12, 12, 10, 10, 10, 10,	s s s s s .	5.9 5.3 5.8 5.5 5.7 5.6 6.1 5.5 6.2 5.7 5.9 5.9	5.4 5.4 5.6 5.5 5.4 5.5 5.6 5.6 6.0 5.7 5.6 5.8	✓	. 480 . . 1376
. . . . .	s s s . .	5.7, 6.3, 6.2, 6.6, 6.2,	5.3, 5.5, 5.5, 5.3, 5.6,	✓	. . . . .
2, 10, 5, 5, 5,	s s s . .	5.5, 6.1, 6.3, 6.3, 6.0	5.6, 5.8, 6.1, 6.0, 5.9	✓	. . . . .
2 . .	s . .	6.1, 6.6, 6.4,	6.2, 6.3, 6.3,	✓	. . .
2, . .	s . .	6.1, 6.1, 6.3,	6.2, 6.1, 6.2,	✓	. . .
10, 10, .	s s s .	6.8 6.9 6.8, 6.5, 6.2	6.9 7.0 7.0, 6.9, 6.5	✓	. . . .
10, . .	s s .	6.6, 6.7, 6.3,	6.3, 6.5, 6.2,	✓	499 . .
. .	s .	5.9, 5.8	5.3, 5.3	✓	. .
. .	s . .	6.7, 6.3	6.4, 6.1	✓	. .
. . 2,	s . s .	5.6, 5.7 5.6,	6.4, 6.5 6.3	✓	. . .
10 10 10, 10 10	s s s . s s	5.2 5.0 5.6 5.2 5.0 5.3 5.6 5.3 5.2 5.6 5.8 5.8	6.2 5.8 5.7 5.7 6.1 6.6, 6.3 6.1, 6.2 6.6,	✓	857, 897, 912,
2 10 2	s . s	5.6, 5.6, 5.7	5.8, 5.9, 5.8	✓	. . .
.	.	6.5	6.6	✓	.
.	.	6.4	6.2	✓	.

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	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Elm.	Mag. Elm.	Spectrum	No. Plate	No. Lines
No. 61	23	12.7	+ 83	27	647	8.0	I	1564,	4,
" 62	23	24.2	+ 85	37	399	7.5	I	1564,	6,
" 63	9	12.6	+ 73	44	377	6.2	I	1233 1233	4 6
" 64	9	39.0	+ 66	16	637	6.7	I	1233	3
" 65	9	45.3	+ 73	33	478	6.3	III	1208,	3
" 66	9	19.0	+ 83	0	262	7.8	I	1255, 1162,	7 3
" 67 [illegible] #84	10	22.6	+ 76	28	393	5.0	III	1113, 1233, 1074, 1074, 1208, 1116, 1255, 1255,	3 2 2 3 3 2 1
" 68	10	13.6	+ 66	18	664	5.0	I	1073 1073 1233, 1233 1074 1074, 1208	8, 9 8, 10, 9 9 9
" 69	10	28.9	+ 81	11	349	6.2	I	1233, 1074, 1208, 1116, 1255, 1314, 1286, 1162,	6 7 9 7 8 1 5 3
" 70	10	7.5	+ 65	49	767	5.8	I	1233, 1074, 1074, 1208,	7 4 6 6
" 71	4	33.4	+ 80	56	155	5.5	III	1069, 1035,	3, 3,
" 72	4	38.8	+ 79	3	169	5.2	II	1035, 1071,	3, 3,
" 73	4	2.0	+ 80	28	133	5.7	III	1069, 1035,	3, 3,
" 74	4	55.1	+ 85	32	78	7.0	I	1057, 1119, 1229,	8, 5, 6,
" 75	4	54.3	+ 76	17	190	6.7	I	* 1057, 1035,	1, 1,
" 76	10	0.8	+ 79	39	328	6.7	I	1074, 1208, 1116, 1255, 1162,	8 8 6 6 4
" 77	10	10.0	+ 69	29	568	6.0	I	1074, 1208	8 8
" 78	10	5.7	+ 73	48	489	6.5	I	1208	7
" 79	10	21.4	+ 64	8.9	789	6.2	I	1208	9
" 80	10	39.1	+ 65	54	803	6.5	I	1208, 1116, 1116, 1255, 1255, 1162, 1162,	7, 5, 6 5 4 6 4
" 81	10	32.0	+ 66	28	678	6.2	III	1208 1255	2 3
" 82	10	7.8	+ 84	5.9	234	5.0	I	1116, 1255, 1256,	8 10 11
" 83	10	32.6	+ 69	49	586	4.7	III	1255, 1162	3 3
" 84	10	22.6	+ 76	28	393	5.0	III	1162	3
" 85	10	39.8	+ 76	46	402	7.0	I	1314, 1162	1 2
" 86	10	48.2	+ 78	33	367	6.2	III	1314, 1162,	2 2
" 87	10	30.4	+ 78	11	359	7.0	I	1314	4
" 88	10	46.5	+ 80	27	344	7.8	II	1256	3
" 89	10	13.0	+ 83	18	297	5.2	I	1256, 1162,	6, 2
" 90	10	20.8	+ 81	14	343	6.2	III	1162	2

* Fine absorption lines, hazy

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K Line	I Line	Brightness	Corr. Brightness	Mean.	Residuals	No. Remarks
.	.	6.2	7.1			.
10,	S	6.1	7.4			.
..	..	., 5.9	. 6.1,			..
.	.	.	.			.
10	S	6.2 6.8,	6.8 7.1,			930,
5.	S.	6.0, 6.5	6.9, 7.5			..
12, 10 12, 20, 10, 10, 12.	S.. S. S. ..	5.4 5.7, 6.1, . 6.0 6.1 5.7 5.4 5.8 5.6 5.9, 6.1, 6.4, . 6.3 6.2 5.3 5.9 6.4, 6.5, 5.6 6.1, .,				828, . 905, . 934, . 941
. . . 2, . 10 .	S S . S S S S	5.2, . 5.0 4.5 5.3 5.1 4.7,	5.1, . 4.7, 4.2, 5.0, 4.8, 5.7			. . . . .
2 . 2 . 2 . . .	. S S S	5.7, 5.1 5.8, 5.8 6.8, . 5.0 5.4,	6.4 5.8, 7.0 6.2, 7.4, . 6.1, 6.1,			. . . . .
2 . 10 .	S . S .	5.8, . 5.8, 5.6,	5.3 - . 5.5, 5.8,			. . . .
		5.8 5.5	6.6 6.0			
10, 10,	S S	6.3 6.1	7.1 6.6			696, 710,
~~15~~, 30,	~~S S~~	~~5.3, 4.5,~~	~~5.6, 5.2,~~			~~704, 737,~~
		5.8 6.0	6.6 6.5			
10, 15,	S S	6.3 6.3	7.1 6.8			697, 711
. . .	S S .	5.6 . 5.6	7.2 . 6.9			. . .
2,	S S	6.3	6.4			.
2 2 . . .	S . S S . .	5.8, 5.9 6.0, 5.7, 6.0	6.4, 7.0, 7.3, 6.2, 6.6,			. . . . .
5 5	S S	5.7, 5.8,	5.3, 6.1,			. .
10,	S	6.2,	6.8,			.
5	S	5.9	6.0			.
. 10, . . . 5 .	S . S . . S .	5.9, . 6.4, 5.9 6.3 6.4, 6.2,	6.1, - 5.8, 5.3, 5.9, 6.1, 5.9,			. . . . .
12 10	. S	6.0 6.3 6.4 6.6,	6.2 5.9 6.6, 6.2,			933.
5 5 5	S S S	4.5, 4.3, 4.7	5.3, 5.5, 6.4,			. . .
10 10	S S	5.9 6.4 6.4, 6.9,	5.7 6.3 6.2, 6.8,			958, 1029
10	S	5.7 6.1	6.0 6.4,			1026,
5 10	S .	6.3, 7.0 7.1,	6.8, 7.3 7.4,			. .
15, 10,	. .	5.8 6.4 6.1, 6.7,	6.5 6.9 6.8, 7.2,			. .
10,	.	6.5,	7.1,			.
10	S	6.0,	7.1,			.
10 10	. S	4.2, 4.2,	5.6, 5.2,			., 1035
10	.	6.2	6.9			.

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No.	1855 Ra.	1855 Dec.	1900 Ra.	1900 Dec.	No. DM	Mag. DM	Spectrum	No. Plate	No. Lines
91	11	21.4	+ 81	5-6	373	6.2	I	1256, 1162,	8 7
92	6	21.4	+79	42	212	5.5	II[a]	1069, 1035, 1071, 1119, 1229, 1072, 1112,	3, 3, 5, 3, 3, 3, 3
93	6	15.4	+79	41	208	6.3	I	1035, 1071, 1119, 1229, 1072, 1112, 1064,	8, 8, 5, 5, 5, 6, 4,
94	6	50.7	+78	59	240	6.7	I	1229, 1072, 1122, 1084,	6, 2, 6, 5,
95	6	10.5	+78	17	226	7.5	I	1229,	5,
96	5	0.6	+83	43	141	7.1	I	1229,	4,
97	6	38.8	+77	9	266	4.7	III[b]	1072, 1112, 1064,	2, 2, 3,
98	6	21.4	+79	42	212	5.5	II[a]	1064,	3,
99	11	57.9	+77	43	461	5.8	I	1162, 1242,	3 3
100	11	22.8	+70	9	665	3.3	III	1162	3
101	11	45.8	+74	34	476	6.7	II	1162	2
102	7	41.9	+79	52	265	5.8	I	1071, 1119, 1229,	9, 8, 9,
103	12	12.3	+75	59	470	5.8	I	1256, 1162, 1162, 1242,	6, 6, 6 6
104	12	5.4	+78	26	412	5.1	I	1256, 1162, 1242,	10, 7 8
105	12	5.0	+78	18	411	7.3	I	1162, 1242,	4 8
106	12	40.8	+81	28	402	6.3	I	1242, 1245, 1357,	7 8
107	12	32.8	+80	1	389	6.7	I	1245, 1357	2 12
108	12	29.7	+81	3	400	6.8	II	1245, 1357,	2 4
109	12	9.8	+80	6-6	380-1	8.3	I	1245, 1357,	5 4
	12	9.8	+80	6-6					
110	12	48.0	+84	12	290	6.5	I	1245, 1357, 1328,	8 9 7
	12	48.1	+84	12		5.5			
111	7	13.0	+66	37	502	6.2	I	1229, 1072, 1112, 1064,	5, 5, 5, 6,
112	7	41.9	+79	52	265	5.8	I	1072, 1112, 1064, 1113,	9, 10, 10, 6,
113	7	37.0	+77	56	303	7.0	I	1112, 1064,	8, 6,
114	7	30.7	+59	2	1103	5.0	I	1112, 1064,	6 7,
115	7	4.2	+78	19	251	7.0	I	1064,	5,
116	7	49.2	+59	27	1130	6.0	II[a]	1064,	4,
117	7	32.1	+80	37	238	6.5	I	1064, 1113	2, 3,
118	7	49.3	+60	42	1105	6.1	I	1064,	6,
119	7	56.0	+82	52	235	6.5	I	1065, 1233, 1074,	8, 6, 4,
120	7	0.3	+82	40	201	5.5	III[b]	1065,	3,

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K Lines	L Lines	Brightness	Cor Brightness	Mean Residuals	Ast Remarks
2 2	S S	4.8, 4.6,	6.0, 5.3,	✓	..
12, 12, 12, 12, 10, 10, 10,	? ? ? ? . ? ?	5.6, 5.3, 5.3, 5.7, 5.7, 5.5, 5.3	6.3 5.9, 6.1, 6.0, 6.1, 6.1, 6.0,	✓	771, 792 692, 706, 734, 744, 752
. 2 . . 10, . 10	? ? . ? . ? .	6.0, 6.0, 6.3, 6.3, 6.3, 6.2, 5.8	6.4, 6.8, 6.6, 6.7, 6.9, 6.9, 6.3,	✓	. . . . .
8, 10, . .	? . ? ?	6.6, 6.6, 6.3, 6.2	6.9, 7.1, 6.9, 6.6	✓	. . . .
.	.	6.5	6.7	✓	.
?	.	5.9	6.8	✓	.
10, 20, 12,	. . ?	5.7 5.6 5.7 6.1 6.0 6.0	6.0 6.0 5.9 6.4 6.4 6.2	✓	768, 785, 804
25 ?	?	5.7	6.2	✓	811
10, 10	S S	6.4 6.0 6.6 6.2,	6.8 6.7 7.0, 6.9,	✓	-, 1043,
10	S	5.4 6.1	5.3 6.0	✓	1028,
10	.	6.6,	6.7	✓	.
. . .	? ? ?	4.3, 5.0, 4.8	5.1, 5.3, 5.2	✓	. . .
. ? . ? . ?	. S . S	5.5, 5.8, 5.2, 4.8	-, 6.0, 5.4, 5.3,	✓	. . . .
2 2 10	S . S	4.5, 4.6, 4.4,	5.3, 5.0, 5.4,	✓	. . .
? , .	. .	6.3 6.0	6.7, 6.7	✓	. .
? , 2 2	S S S	. 5.2, 5.2,	. 6.1, 6.3,	✓	. . .
10 10	. .	6.0, 6.4,	6.7, 7.3,	✓	. .
10 10	. .	6.2, 6.3	7.0, 7.3,	✓	1060,
? 10	S .	5.8, 6.0,	6.3, 7.0,	✓	. .
. . .	S S S	4.0, 4.0, 1.8	5.3, 6.3, 1.8	✓	. . .
5, . ? ?	. . . ?	. 6.1, 6.0, 6.4	. 5.8, 5.8, 6.0	✓	. 784 .
. . . .	. ? ? ? ?	4.8, 4.3, 5.3, 4.6	6.7, 5.0, 5.8, 5.3,	✓	. . . .
2, 5,	? ?	6.2, 6.5,	6.7, 6.8	✓	. .
? ?	. ?	5.4, 5.7,	4.9, 5.0,	✓	. .
.	?	6.4	6.7	✓	.
10,	?	6.3	5.6	✓	810
10, 10,	? ?	5.9 6.1 .	6.5 6.7 .	✓	812, 839,
.	?	6.1	5.5	✓	/
. . .	. . .	5.3, 5.7, 5.8,	6.5, 5.8, 6.8,	✓	. . .
10,	?	5.2 5.8	6.3 6.9	✓	.

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	1855 Ra	1855 Dec	1900 Ra	1900 Dec	No	Mag	Spectrum	No	Plates	No	Lines
121	13	25.8	+79	23	452	6.6	III	1340		3	
122	7	41.6	+84	28	169	6.0	I	1233, 1074, 1116?, 1255?,		7	6, 2, 3,
123	8	19.7	+82	44	253	7.0	I	1229, 1065, 1233, 1074,		6	7, 6, 6,
124	8	19.8	+75	13	342	6.4	I	1112, 1064, 1113,		6	8, 9,
125	8	49.2	+81	24	282	6.7	II[a]	1112?, 1064?, 1065?, 1113?, 1074,		2	3, 4, 6, 2,
126	8	34.0	+80	34	272	7.3	I	1064, 1065, 1113, 1233,		4	6, 6, 6,
127	8	18.2	+61	11	1054	3.3	III[b]	1064[be],		5	
128	8	59.8	+77	40	359	6.8	I	1065, 1113, 1233		7	6, 6
129	8	44.3	+84	45	196	6.0	I	1065, II[a] 1233, 1074, 1115?, 1255, 1162,		4	6, 3, 6, 5,
130	8	30.1	+73	48	430	7.0	I	1113,		7	
131	8	39.4	+78	42	297	6.9	II	1233,		2	
132	8	45.4	+79	55	294	7.0	I	1233, 1074,		4	5
133	13	46.7	+83	29	397	6.5	III	1354,		2	
134	14	0.4	+65	4	978	3.4	I	1260		9	
135	14	37.8	+76	21	827	5.0	III[be]	1260, 1328(1), 1328(2)		3	3 3
136	14	9.5	+78	14	478	5.0	III[be]	1328, 1286		3	3
137	14	51.2	+74	45	595	2.1	III[be], III[b]	1343,		2	
138	14	57.2	+81	20	498	6.8	I	1354,		4	
139	22	28.6	+78	4	801	5.7	I	834, 1521, 1584, 1576, 1564,		7	8, 7, 6, 7,
140	22	32.2	+72	54	1049	5.5	II[a]	834, IIa? 1521, 1576, IIa? 1564,		2	2, 3, 2
141	22	29.7	+75	27	836	5.7	I	834, 1584, 1576, 1564,		7	6, 7, 5
142	22	16.6	+75	46	820	6.8	I	834, 1521, 1584, IIa? 1576, IIa? 1564, III? 1564(2),		4	5, 6, 3, 2, 2
143	15	49.3	+78	13	527	4.7	I	1354, 1333,		9	9
144	20	13.8	+77	16	764	4.8	I	738, 770, 1579, 1478, 1520, 1570, 1584,		8	10, 8, 8, 9, 7, 9
145	20	32.8	+81	59	718	6.0	I	738, 1579, 1520, 1521,		1	7, 9, 8
146	16	15.0	+76	16	594	6.0	I	1354(1), 1354(2), 1333,		8	7, 9
147	15	47.8	+80	26	487	6.7	II[a]	1333		2	
148	16	21.8	+76	5	576	5.3	I	1354, 1333,		7	10,
149	16	8.5	+77	11	616	6.0	I	1333,		7	
150	18	68.4	+78	35	683	6.5	I	1450(1), 1450(2), 1394, 1519,		5	5, 7, 6

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K Line	H Line	Brightness	Cor Brightness	Num. Residuals	Remarks
10	S	5.8 6.0	6.4 6.6	✓	.
2 . . .	. S . S	5.5, 5.9, . .	6.7, 7.1, . .	✓	. . . .
. . . 10,	. S . S	6.0, 5.5, 5.7, 5.6	6.7 6.6, 6.6, 6.5	✓	. . . .
2, 2, 5,	S, S, S	6.2, 6.4, 5.6	6.5, 6.5, 5.9	✓	. . .
. . 10, 10, 12,	. S S . S ?	. . 5.5, 5.5-8, 5.4	. . 6.5-6.7, 6.2	✓	. . 85-6 . 92-1
. . 2, 10,	. S . .	6.5, 6.3, 6.4 6.4,	7.1, 7.2, 7.2, 7.1,	✓	. . . .
12 ?	S	5.3 5.5	4.7 4.9	✓	813
. . .	S S -	6.0, 5.9 6.6	6.6, 6.4, 6.1	✓	. . .
8, 10, 10, 10, 15, 8,	S . S S S ?	5.4, 5.4, 5.8, 6.2, 4.9, 6.0	6.9, 6.7, 7.1, 7.-, 6.1, 7.3	✓	873 . 924, . . .
5,	S	6.6	6.8	✓	.
10,	-	6.8	7.3	✓	.
10, 10,	. .	6.9, 6.3,	7.5, 7.9,	✓	. .
10,	.	6.3 6.5-	7.5- 7.7,	✓	.
.	S	4.2,	4.2,	✓	.
10 10 10	S S S	5.4 5.7 5.9, 6.0 .	6.1 6.0 6.6, .	✓	1108, 1120, 1154,
10 12	S S	5.5- 5.6 6.0 5.8 -	6.4 6.7, ?	✓	1125- 1008
30,	S	6.3 6.3	6.3 6.3	✓	1165-
. .	.	6.3,	7.2,	✓	.
2, 2 2 2 2	. S S . S	6.3, 6.3, 5.3, 5.9, 5.7,	5.8, 5.6, 5.9, 5.9, 5.9,	✓	. . . .
10, 10 10 10	S S S S	7.1, 6.3, 6.0, 5.7,	6.2, 5.2, 5.6, 5.8-	✓	369, 1343, 1368, 1415
10, . 2 .	. . S -	6.6, 5.7, 5.9, 6.2,	5.9, 6.1, 5.7, 6.2,	✓	. . . .
. . . 10 10 10	. . S S . .	6.9, 6.4, 6.1, 6.5, 6.4, .	6.3 6.5, 6.0 6.5, 6.3, 6.4, -	✓	. . . , 1378, 1391, -
2 .	S S	B, 4.0, -	B, 4.9,	✓	. .
10 1	S S S S S S S	6.5 4.7, 4.9, 4.6, 4.8, 5.4, 4.9,	6.7, 4.1, 5.0, 4.4, 4.7, 5.0, 4.5-	✓	. . . . .
. 2 2 .	. S S S	. , 4.8, 5.4, 5.0,	. , 5.4, 5.8, 5.7,	✓	. . . .
. . .	. . S	5.2, 5.2, 4.5-	5.6, 5.6, 5.3,	✓	. . .
10	.	.	.	✓	.
10, 10,	. S	5.2, 4.3,	6.3, 5.0, .	✓	. .
.	S	4.7,	5.8-	✓	.
. . 2 2	. . S .	. , 6.0, 5.6, 6.3,	. , 6.3, 6.1, 6.3,	✓	. . . .

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No	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	Nv	Mag Nm	Spectrum	No Plates	No Lines
151	18 10.9	+79 59			570-1	6.5	II	1445, 1384, 1519,	3 3 3
152	21 8.4	+77 32			800	6.1	I	787, 738, 770, 1478, 1520, 1521, 1570, 1584, 1576,	4 8 5 5 6 6 5 7 4
153	21 19.2	+80 37			690	6.3	I	834, 738, 770, 1519, 1478, 1520, 1521, 1570, 1584, 1576,	6 6 4 5 4 7 8 4 7 4
154	16 38.9	+79 16			498	5.8	I	1395, 1445,	7 7
155	19 30.4	+79 18			628	6.3	I	1395, 1445, 1384, 1519, 1478, 1520, 1570,	7 6 7 5 5 5
156	19 33.4	+83 10			552	6.0	I	1445, 1519, 1520,	6 6 7
157	18 52.0	+75 16			682	5.8	I	1445, 1384, 1519, 1570,	6 8 7 5
158	17 55.9	+76 58			667	5.2	I	1519,	2
159	18 23.0	+71 14			889	4.7	I	1384, 1519,	8 7
160	18 55.8	+79 46			604	6.8	I	1519, 1520, 1570,	5 3 2
161	18 43.2	+83 4			586	6.2	I	1519, 1520,	7 7
162	19 14.4	+76 19			717	5.5	I	1384, 1519, 1519, 1478, 1570,	7 7 7 6 3
163	19 10.4	+83 42			547	6.5	I	1520, 1521,	5 2
164	19 19.9	+68 26			1345	5.3	I	1570	7
165	19 48.6	+69 53			1070	3.8	III	1520, 1570, 1520, 1570	3, 2,
166	20 22.6	+80 4			650	6.8	I	1519, 1478, 1521, 1584,	7 2 4 5 2 4
167	20 43.2	+83 7			588	6.2	I	1519, 1520, 1521, 1564,	6 7 7 5
168	20 33.4	+74 26			842	5.5	I	1519, 1478, 1520, 1570, 1584,	6 6 8 2 8
169	20 41.6	+78 54			716	6.9	I	1478, 1520, 1521, 1570, 1584,	2 1 3 3 2 1
170	20 37.2	+80 56			669	5.8	III	1478, 1520, 1521, 1570, 1584,	2 3 1 2 3
171	20 54.1	+80 0			672	5.3	III	1520, 1521, 1570, 1584, 1576,	3 3 2 2 2
172	20 17.2	+61 48			2000	5.8	I	1520, 1570	6 4
173	20 20.0	+84 14			451	7.0	I	1520, 1521, 1564,	6 6 4
174	20 41.4	+66 8			1318	5.5	I	1520, 1570, 1584,	7 8 6
175	20 27.2	+62 31			1821	4.0	I	1570	7
176	20 42.4	+61 17			2050	3.7	III	1584,	2
177	21 25.0	+66 10			1405	5.5	I	1521, 1584,	7 7
178	21 16.5	+64 17			1527	5.5	II	1584	8
179	21 23.7	+76 28			836	6.5	I	1584, 1576,	6 4
180	21 26.8	+69 56			1143	3.8	I	1584	10

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K Line	H Line	Brightness	Cor Brightness	Mean Residuals	No Remarks.
12 10 10	S S S	5.0, 5.2, 5.3	5.7, 6.9, 6.1, 5.7,		1244, 1280, 1288,
5 5 · 2 · · 2 · 3	· S - S S S -	64 5.4 6.8 6.3 5.8 5.8 6.3	60 5.7 6.3 6.2 5.8 6.1 6.0,		· · - · · - ·
· ·	- -	5.3 6.9	5.9 6.0		· ·
8 · · · 2 10 2 2	S - · · · S S	66 5.5 6.9 5.7 6.7 5.7 5.4	64 61 6.7 6.2 6.9 6.0 6.0,		· · · · · · ·
10 2 ·	· · ·	6.8 5.7 · ·	6.8 6.7 ·		· · ·
· 5	S S	5.7 5.1	5.6 5.7,		· ·
3 · · · 2 14 · ·	S S S S S S S -	5.4 5.7 5.5 5.8 6.5 5.7	5.9 6.3 6.3 6.1 6.6 6.8,		· · · · · · · ·
2 2 5	S S S	5.4 5.8 5.9	6.5 6.6 6.5		· · ·
· · · 5	· S S ·	5.4 4.9 5.8 6.2	5.7 5.2 5.3 5.7		· · · ·
10	S	5.9	6.0		·
· ·	S S	4.2 4.6	4.4 4.3		· ·
10 · 10	· · ·	6.5 6.5 7.0	6.9 6.7 6.9		· · ·
2 2	· S	5.5 5.7	6.3 6.3		· ·
5 10 10 10 ·	S S S S ·	5.0 6.2 · 6.3 6.2	5.6 6.3 · 6.1 5.8		· · · · ·
5	· ·	6.2 6.4	6.9 7.4		· ·
2	S	5.9	4.9		·
16 10	S S	5.2 5.8 5.3 5.9	4.7 5.0 5.0 5.1		1312 ·
2 10 · · 10	S · · S · ·	5.8 7.2 7.0 6.0 5.4	6.2 7.3 6.6 6.9 6.2		· · · · · · ·
2 2 ·	· S S S	5.8 5.5 5.8 5.6	6.3 6.1 6.2 6.4		· · · ·
10 · 2 · ·	· S S S S	5.3 6.1 5.3 6.0 5.2	5.2 5.7 5.0 5.4 5.5		· · · · ·
10 10 10 10 ·	· · S · ·	7.2 7.5 6.4 6.2 6.8 6.3	7.3 7.5 6.5 6.6 6.6 7.0,		· · 1328 · 1358
10 10 10 10 10	· S S · S	7.0 7.3 6.5 5.2 5.6 7.0 6.3	7.2 7.5 6.5 5.8 6.8 6.2 7.0 6.7 7.2		· 1311 · · 1363
10 10 10 10 10	S S · · ·	6.2 6.5 5.8 6.4 7.1 6.5 6.6 6.9	6.4 6.3 6.9 6.8 6.9 7.0 7.3 7.1		1309 1333 · 1361 ·
· 10	S ·	6.3 6.8	5.8 5.6		· ·
8 · ·	S · ·	6.0 6.0 6.3	6.8 7.1 7.3		· · ·
8 · 8	S · ·	6.4 6.5 5.9	5.7 5.5 5.8		· · ·
8	S	6.0	4.8		·
·	S	·	·		1365
10 ·	· S	5.8 5.3	5.4 5.2		· ·
	S	5.4	5.2		1383
2 ·	· ·	6.1 6.4	6.6 6.3		· ·
2	S	B	B		·

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No	1855 Ra	1855 Dec	1900 Ra	1900 Dec	No Dm	Mag Dm	Spectrum	No Plates	No Lines
181	21 34 1	+61 25	3169	5.0	I	15.84 (21)			7
182	21 57 2	+72 28	1009	5.0	II a	15.76			3
183	21 59.6	+63 55	1802	4.5	I d	15.76			6
184	21 46.8	+77 34	8347	0.0	I	15.76			3
185	22 28.6	+78 1	7966	0.0	I b	15.21, 15.84, 15.76, 15.64,			6 8 4 6
186	22 24.2	+85 23	3830	5.0	I	15.21, 15.64,			10 9
187	22 22.4	+77 30	8606	8.0	I	15.84, 15.76, 15.64,			7 3 6
188	22 29.2	+69 34	12636	2.0	I d	15.76 15.64			3 6
189	22 7.4	+69 25	12285	9.0	II a	15.76			6
190	22 10	+71 38	11115	5.2	III b	15.76 (2)			2
191	22 58.8	+79 60	7617	3.0	I	15.64			7
192	22 44.5	+65 26	18143	8.0	III b	15.64			3
193	17 1.0	+82 16	4987	4.0	III	15.19			2

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K Line	Fe Line	Brightness	Cor Brightness	Mean Residuals	No Remarks
10	S	.	.		.
10	S	6.3	5.9,		1369
	S	5.4	4.6,		.
.	.	6.7,	6.7,		.
2 . .	S S . .	5.8, 5.7, 6.2, 5.9,	6.1, 6.3, 6.2, 6.1,		1324, . . .
. .	S S	4.0, 5.7,	5.3, 6.3,		. .
3 . .	S . .	6.2, 6.5, 6.2,	6.8, 6.5, 6.4,		. . . .
. 10	. S	6.3 6.4	5.7, 5.7		.
10	.	6.0,	5.4,		.
10	.	.	.		.
10	S	6.0,	6.4		.
10	S	5.6 5.9,	5.7 5.4,		1419,
10	.	4.9 5.4,	5.6 6.1,		1294,

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R.A.	Dec.	No. Lim.	mag. Lim.	
22 10.0	+81 57	767	7.7	✓
22 16.2	+84 41	505	8.0	✓
22 22.5	+83 46	630	7.0	✓
22 24.1	+81 12	775	7.0	✓
22 29.2	+84 19	509	7.2	✓
22 42.8	+81 8	788	7.7	✓
22 43.2	+81 44	789	8.0	✓
22 44.1	+82 30	700	8.0	✓
22 48.8	+82 56	704	8.0	✓
22 54.2	+84 36	517	6.5	✓
23 25.8	+85 13	400	8.0	✓
23 49.1	+85 6	406	8.8	✓
22 50.7	+84 0	513	7.3	✓

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R.A.	Dec.	No.	Mag.	
~~17 35.0~~	~~+82 57~~	~~52~~	~~8.5~~	
17 37.0	+84 44	383	7.7	✓
17 38.6	+83 49	511	8.3	✓
17 39.0	+83 26	512	7.5	✓
18 15.8	+83 54	527	7.7	✓
18 18.1	+85 40	294	7.5	✓
18 19.4	+81 26	619	8.5	✓
18 23.6	+81 25	621	8.7	✓
18 24.4	+86 59	272	6.0	✓
18 26.1	+80 35	575	8.0	✓
18 26.7	+81 24	622	7.2	✓
18 28.1	+83 37	530	7.8	✓
18 28.6	+82 52	540	7.5	✓
18 32.8	+84 35	412	7.5	✓
18 37.7	+79 42	591	7.8	✓
18 53.4	+80 8	591	8.5	✓
18 55.8	+79 46	604	6.5	✓
19 7.7	+80 42	603	8.2	✓
19 9.4	+82 9	572	6.0	✓
19 10.4	+83 42	547	6.5	✓
19 16.6	+82 28	578	7.7	✓
19 17.7	+80 28	607	7.2	✓
19 18.9	+80 30	609	7.1	✓
19 24.0	+81 0	655	8.3	✓
19 28.3	+81 39	660	8.0	✓
19 30.4	+79 18	628	6.3	✓
19 33.4	+83 10	552	6.0	✓
19 46.6	+79 39	640	8.0	✓
19 51.7	+79 10	645	7.5	✓
19 54.1	+79 5	648	7.0	✓

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R.A.	Dec.	No.	Mag.	
19	59.4	+81 12	687	7.7 ✓
20	0.5	+84 24	445	8.5 ✓
20	9.8	+79 16	660	6.5 ✓
20	14.6	+82 59	608	8.5 ✓
20	19.0	+81 46	699	7.5 ✓
20	20.0	+84 14	451	7.0 ✓
20	20.3	+80 0	648	7.8 ✓
20	30.0	+84 5	462	7.0 ✓
20	31.0	+84 40	463	7.2 ✓
20	32.0	+81 53	706	7.4 ✓
20	33.1	+82 22	613	8.5 ✓
20	35.9	+85 48	347	8.0 ✓
20	38.2	+82 41	617	7.0 ✓
20	51.5	+82 31	627	8.6 ✓
20	53.8	+80 56	657	7.5 ✓
21	2.8	+83 23	596	7.7 ✓
21	3.0	+81 14	725	8.0 ✓
21	8.4	+82 24	636	8.5 ✓
21	10.0	+80 36	79	7.0 ✓
21	18.2	+80 12	688	6.5 ✓
21	19.2	+80 37	690	6.3 ✓
21	24.7	+81 24	736	7.9 ✓
21	25.2	+81 54	737	7.5 ✓
21	30.2	+82 21	648	8.0 ✓
21	38.1	+83 12	613	8.6 ✓
21	42.2	+83 18	614	8.4 ✓
21	48.4	+83 39	616	8.8 ✓
21	49.1	+80 2	706	8.2 ✓
21	52.7	+83 22	618	7.2 ✓
22	3.2	+82 48	672	8.2 ✓

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Rat	Dec	Dm	No Mag Dm	
11 20.0	+85 30	183	7.5	v
11 23.8	+86 25	170	7.0	v
11 36.4	+86 20	172	8.2	v
12 34.7	+86 32	182	6.5	v
12 52.8	+83 18	369	7.5	v
12 52.9	+82 56	378	8.5	v
12 58.8	+83 43	373	8.3	v
13 1.8	+86 39	187	7.0	v
13 16.6	+82 16	390	8.4	v
13 20.7	+85 31	222	7.0	v
13 21.9	+84 40	307	8.0	v
13 27.9	+84 3	311	7.5	v
13 28.8	+82 1	395	8.5	v
13 32.8	+82 44	397	8.6	v
13 35.7	+86 1	193	7.5	v
13 42.6	+80 58	421	7.1	v
13 53.3	+81 29	452	6.8	v
14 0.5	+82 19	407	8.2	v
14 5.1	+86 27	201	7.5	v
14 34.8	+81 27	482	6.7	v
14 36.0	+81 12	483	8.7	v
14 37.8	+80 17	448	6.3	v
14 57.2	+81 20	495	6.8	v
14 58.5	+86 33	217	6.8	v
14 59.2	+80 7	459	8.2	v
15 14.6	+86 4	221	8.1	v
15 16.6	+85 41	249	8.0	v
15 29.6	+81 33	510	7.8	v
15 34.5	+80 16	478	7.8	v
15 35.1	+84 22	345	8.3	v

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1882phae.proj..851F

R.A.	Dec.	No.	mag.	Lin.
15 35.4	+82 23	456	8.2	✓
15 38.9	+81 15	517	6.8	✓
15 45.9	+81 4	523	7.3	✓
15 50.2	+85 18	263	7.2	✓
15 51.6	+80 34	489	8.0	✓
15 54.3	+81 45	530	8.4	✓
15 54.7	+81 22	531	7.4	✓
15 59.6	+82 48	470	8.2	✓
16 4.9	+83 13	457	8.5	✓
16 6.0	+81 14	538	8.0	✓
16 6.6	+85 43	269	7.5	✓
16 7.0	+84 2	351	7.7	✓
16 7.8	+84 60	352	8.4	✓
17 8.6	+81 4	568	7.3	✓
16 10.8	+81 1	541	7.3	✓
16 12.1	+82 56	475	8.6	✓
16 18.1	+83 47	468	8.2	✓
16 19.4	+81 4	542	8.5	✓
16 21.6	+81 30	543	8.2	✓
16 24.0	+82 26	481	8.5	✓
16 27.8	+82 26	484	8.7	✓
16 29.1	+82 58	485	8.0	✓
16 38.2	+84 52	360	8.5	✓
16 40.2	+84 0	361	7.2	✓
16 40.8	+80 5	519	7.0	✓
16 47.6	+84 17	365	8.5	✓
17 8.6	+81 4	568	7.3	✓
17 21.1	+84 57	378	8.2	✓
17 36.7	+80 15	544	6.2	✓
17 35.0	+82 51	521	8.5	✓

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Stars in 8 Catalogues not reduced to 1900.

R.A. h.	R.A. m.	Dec. °	Dec. ′	Jan. Dec.	mag. Heis.	
1	27.5	+84	29	29	8.0	✓
0	22.5	+85	31	9	8.3	✓
1	33.2	+83	36	38	8.7	✓
~~1~~	~~34.6~~	~~+79~~	~~58~~	~~44~~	~~9.1~~	
1	50.8	+85	2	41	7.7	✓
1	52.6	+80	46	65	6.7	✓
1	55.1	+82	52	51	7.0	✓
2	13.3	+83	11	56	8.0	✓
2	14.2	+85	10	45	8.6	✓
2	20.8	+82	59	59	9.0	✓
2	23.6	+83	15	60	9.0	✓
2	30.9	+85	16	50	8.8	✓
2	32.9	+81	47	95	8.6	✓
2	36.7	+84	2	48	9.2	✓
2	46.8	+82	20	76	8.0	✓
2	59.3	+81	36	107	7.4	✓
2	59.9	+82	60	82	7.5	✓
3	0.1	+83	30	79	8.2	✓
3	14.9	+82	52	90	8.2	✓
3	19.5	+86	11	51	6.0	✓
3	24.8	+83	5	91	7.3	✓
3	28.1	+84	13	69	8.8	✓
3	30.5	+82	17	101	8.4	✓
3	37.6	+81	27	134	7.8	✓
3	38.2	+81	9	135	7.8	✓
3	38.9	+80	48	121	7.8	✓
3	43.3	+80	33	123	8.3	✓
3	53.8	+81	36	147	7.5	✓
3	55.2	+81	3	149	8.3	✓
3	55.7	+81	15	150	7.9	✓
4	4.2	+80	35	134	7.4	✓

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R.A.	Dec.	Dim.	Dim.
h m	° ′		
4 11.0	+83 43	114	7.4
4 11.4	+80 33	140	7.4
4 19.5	+80 32	146	8.0
4 21.2	+84 36	88	7.7
4 24.2	+83 2	121	8.5
4 27.1	+82 56	125	8.5
4 30.2	+86 4	66	8.0
4 31.0	+81 23	168	8.5
4 41.0	+85 45	74	6.0
4 47.5 ~~6~~	~~+82~~ 4+3	137 138	9.4 9.2
4 55.1	+85 32	78	7.0
5 0.6	+83 43	141	7.1
5 5.5	+81 34	183	8.6
5 20.0	+80 18	177	8.2
5 20.4	+85 14	81	8.0
5 25.4	+80 32	181	7.9
5 25.8	+81 43	192	8.5
5 29.6	+81 18 (8)	194	8.0
5 30.2	+82 42	152	7.6
5 54.0	+80 24	202	7.8
6 8.6	+80 39	210	7.2
6 13.8	+82 13	177	6.7
6 20.9	+84 48	135	8.2
6 20.9	+80 22	217	7.3
~~6 33.6~~	~~+84 47~~	~~168~~	~~7.8~~
~~6 34.0~~	~~+80 34~~	~~272~~	~~7.3~~
~~6 41.6~~	~~+84 28~~	~~169~~	~~6.0~~
6 44.8	+8(9) 45	227	8.0
6 57.4	+80 52	230	7.4
7 18.8	+82 0	213	7.5

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RA h	m	Dec. °	′	Inv.	mag	
7	30.4	+81	43	257	7.2	✓
7	33.6	+84	47	168	7.8	✓
7	37.2	+86	6	113	7.2	✓
7	46.4	+82	10	231	8.3	✓
7	53.7	+83	32	207	8.2	✓
~~7~~	~~57.0~~	~~+82~~	~~52~~	~~335~~	~~6.5~~	✓
8	3.8	+84	55	179	8.3	✓
8	25.1	+84	25	186	8.0	✓
8	26.5	+81	0	270	8.0	✓
8	33.6	+83	15	232	7.0	✓
8	35.2	+81	49	273	7.6	✓
8	35.8	+83	17	233	7.0	✓
8	36.9	+85	15	132	8.2	✓
8	44.3	+84	45	196	6.0	✓
8	45.4	+81	36	278	7.9	✓
8	47.2	+84	13	199	8.6	✓
8	48.0	+83	55	239	9.0	✓
~~4~~	~~41.0~~	~~+85~~	~~45~~	~~74~~	~~6.0~~	
~~8~~	~~44.3~~	~~+84~~	~~45~~	~~196~~	~~6.0~~	
~~8~~	~~36.9~~	~~+85~~	~~15~~	~~132~~	~~8.2~~	
	12.7	+85	33	128	7.5	
8	~~17.6~~	~~+85~~	~~42~~	~~129~~	8.2	
~~7~~	~~37.2~~	~~+86~~	~~6~~	~~113~~	~~7.2~~	
Pole Plate	4	30.2	+86	4	66	8.0
	9	28.4	+85	3	151	8.5
	9	25.4	+85	9	150	8.0
	6	52.9	+86	39	103	8.2
	6	10.0	+87	33	46	8.5
	6	0.1	+87	24	45	8.9
	22	0.2	+86	25	39	8.6
	9	47.4	+86	32	143	8.6

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A.R. h. m.	Dec. ° ′	Dm	Mag
6 47.0	+88 1	39	8.5
3 38.7	+87 54	33	8.5
10 11.5	+85 58	160	8.5
10 33.4	+86 8	154	8.2
10 8.5	+86 48	152	8.4
9 29.9	+87 16	83	7.7
9 0.8	+87 29	78	8.0
1 4.1	+86 10	21	8.8
~~0 49.7~~	~~+85 29~~		
10 50.4	+86 20	159	8.3
10 56.2	+86 26	161	7.2
7 37.	+89 2	13	7.0
2 17.1	+88 22	13	8.5
1 51.1	+88 29	9	8.0
1 58.9	+88 3	11	8.8
1 35.6	+87 47	15	8.2
1 7.1	+87 48	12	8.0
0 32.5	+86 9	9	8.0
11 36.4	+86 20	172	8.2
11 23.8	+86 25	170	7.0
10 52.9	+88 26	64	7.5
9 59.6	+88 36	60	8.5
11 51.6	+87 48	101	8.0
23 42.4	+87 32	217	8.5
23 55.3	+86 14	347	8.6
12 34.7	+86 32	182	6.5
22 30.6	+88 44	131	8.7
23 27.2	+85 46	401	8.0
23 25.8	+85 13	400	8.0
13 1.8	+86 39	187	7.0

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Rh	Dec.	Dir.	Mag.
h. m.	° ′		
13 30.5	+87 19	122	8.8
13 36.7	+88 18	77	8.5
14 32.6	+88 4	86	8.5
20 8.5	+88 52	112	6.5
20 17.2	+88 34	114	8.0
22 30.8	+87 21	205	7.5
22 7.0	+87 6	201	8.2
22 45.6	+86 32	335	8.0
13 35.7	+86 1	193	7.5
18 24.3	+88 14	104	8.0
21 26.4	+86 57	318	8.0
21 52.8	+86 20	324	8.2
14 5.1	+86 27	201	7.5
15 43.2	+87 32	147	7.9
19 36.1	+87 36	181	8.0
14 58.5	+86 33	217	6.8
18 24.2	+87 24	169	8.1
19 30.8	+87 4	180	8.0
15 14.6	+86 4	221	8.1
16 47.9	+86 31	244	8.7
17 49.1	+86 58	264	8.5
19 1.6	+86 31	282	7.0
15 16.6	+85 41	249	8.0
16 6.6	+85 43	269	7.5
18 40.2	+86 30	275	8.2
19 44.0	+85 47	329	8.4
20 11.7	+85 28	337	8.5
15 50.2	+85 18	263	7.2
18 18.1	+85 40	294	7.5
20 31.0	+84 40	463	7.2

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	RA	Dec.	No. Obs.	Mag Red.	
26	58.2	+844	474	8.4	
15	35.1	+8422	345	8.3	
16	7.8	+8460	352	8.4	
20	0.5	+8424	445	8.5	
20	30.0	+845	462	7.0	
16	38.2	+8452	360	8.5	
17	21.1	+8457	378	8.2	
17	37.0	+8444	383	7.7	
17	53.2	+8449	389	8.7	
18	15.7	+84 39	406	8.2	
18	32.8	+84 35	412	7.5	
18	55.2	+8429	423	8.6	
16	7.0	+84 2	351	7.7	
16	18.1	+83 47	468	8.2	
16	40.2	+841	361	7.2	
~~17~~	~~37.0~~	~~+8444~~	~~3~~		
18					
X	15.8	+8354	527	7.7	
19	33.4	+8310	552	6.0	
23	24.2	+8537	399	7.5	
23	27.2	+8546	401	8.0	
10					
4	53.0	+8826.	64	7.5	Pole Plate
8	54.9	+83 12,	243.	8.3	V
8	56.2	+82 56,	265.	8.8	V
8	59.1	+81 59,	289	9.0.	V
9	3.5	+83 18	248	8.4	V
9	3.8	+80 44	287	7.8	V
9	5.8	+84 22	206	8.0	V
9	12.5	+83 33	256	7.2	V
9	15.2	+84 29	212	8.5	V
9	17.0	+83 0	262	7.5	V

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q	Ra.	Dec.	Nr Nm	Nr Mag
q	22.2	+84	27	213	8.3	✓
q	24.6	+83	59	263	8.0	✓
q	25.4	+85	9	150	8.0	✓
q	30.8	+81	37	313	9.0	✓
q	36.5	+84	10	222	8.0	✓
q	41.0	+81	4	319	7.4	✓
q	42.8	+81	5	320	8.4	✓
q	44.7	+84	37	225	6.5	✓
q	53.1	+83	6	280	7.1	✓
10	5.4	+83	32	287	6.8	✓
~~10~~	~~8.8~~	~~+80~~	~~18~~	~~1752~~	~~7.3~~	
10	9.0	+82	14	300	8.1	✓
10	9.4	+82	0	301	8.6	✓
10	10.1	+84	17	237	8.5	✓
10	11.5	+85	58	160	8.5	✓
10	11.8	+81	55	337	7.9	✓
10	13.4	+85	8	161	7.5	✓
10	17.8	+82	46	307	8.2	✓
10	22.4	+82	20	308	7.7	✓
10	24.0	+82	41	310	9.0	✓
10	27.4	+81	59	347	8.4	✓
10	33.4	+86	8	154	8.2	✓
10	46.9	+83	60	312	8.5	✓
10	50.4	+86	20	159	8.3	✓
10	52.5	+81	49	359	8.2	✓
10	54.2	+83	32	318	8.2	✓
10	56.2	+86	26	161	7.2	✓
10	56.4	+81	13	360	8.6	✓
10	58.0	+82	31	325	7.0	✓
11	6.5	+84	8	252	8.4	✓

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