KG
11365
849

1382phot.proj..850F

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Catalogue of Stars

No. 25.

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hour	Page
8.30 m	2
9	6
10	30
11	54
12	78
13	102
14	126
15	150
16	174
17	198
to 17.44 m	214

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1882phae.proj..850F

5h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Obs.	Mag. Obs.	Spectrum.	No. Plate	No. Lines.
m									
50									
51									
52									
53	8573+68 52								
	8563+53 30								
	8567+54 41								
	.1+69 2	8573	+68	58	504	7.3	I	458, 1065, 1113,	4, 5, 4
	.0+53 40	8 56.3	+53	30	1305	7.0	III	1113,	2,
	.4+54 51	8 56.7	+54	41	1272	5.8	I	441, 1113,	6, 7
54									
	.9+83 12	9 31	+83	2	283	8.3	III	1074, 1255,	2, 2,

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1882phae.proj..850f

K Linie.	F Linie.	Brightness.	Corr. Brightness	Mean.	Residuals.	Nebemarks.
10, 10, 10,	...	7.1, 6.7, 6.7,	6.5, 6.7, 6.6			...
10,	.	7.1 7.4	6.5 6.8			.
..	..	6.4, 6.0,	5.3, 5.4,			..
12, 10,	..	6.6 6.8 6.6	7.6 7.8 7.5			..

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1882phae.proj..850F

8h

	1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No. Obs.	mag	Spectrum	No. Plate	No. Lines
m									
55									
8 58.9+59 45	.4	+59 55	8 58.9	+59 45	1217	6.2	I	458, 441, 1113,	5, 4, 7,
8 59.7+67 17	.7	+67 27	8 59.6	+67 17	573	5.2	III	441, 1065, 1113,	2, 3, 2,
56									
	.2	+82 56	9 4.2	+82 46	265	8.8	I	1065, 1074, 1255,	4, 3, 4,
9 1.3+71 47	.8	+71 57	9 1.3	+71 47	492	6.5	II	1112, 1064?, 1065?,	2, 5, 3,
57									
9 1.4+67 4	.4	+67 15	9 1.4	+67 4	576	8.8	III	1113,	3,
9 1.6+67 33	.6	+67 44	9 1.6	+67 32	577	5.3	II a	458, 441, 1065, 1113,	3, 6, 3, 4,
9 3.8+79 41	.6	+79 52	9 3.8	+79 41	300	7.3	I	458, 1119?, 1112?, 1064?, 1065, 1113?, 1233, 1074? a	2, 1, 4, 2, 3, 2, 4, 2,
9 2.9+75 41	.8	+75 52	9 2.9	+75 41	365	7.0	III	1112, 1113,	2, 2,
9 2.2+67 52	.1	+68 3	9 2.2	+67 52	557	8.0	I	1065, 1113? III	4, 2,
58									
9 2.7+69 27	.5	+69 38	9 2.7	+69 27	509	8.5	II	1065,	2,
9 1.8+52 1	.6	+52 12	9 1.9	+52 0	1305	5.0	I	441, 1113	7, 7
9 2.3+62 51	.6	+63 2	9 2.3	+62 51	825	7.8	II	1113,	2,
9 2.7+63 55	.9	+64 6	9 2.7	+63 55	723	5.0	I bc	458, 441, 1065, 1113, I? d? I e	7, 9, 7, 9,
	59.1	+81 59	9 6.3	+81 48	289	9.0	II	1074,	2,
9 4.3+72 4	.8	+72 15	9 4.3	+72 4	444	6.3	III	1065, 1113, 1073?, II 1233,	3, 2, 2, 2,
9 5.3+77 29	.8	+77 40	9 5.3	+77 29	359	6.8	I	446, 458, d, 441, 495, 435, 1072, 1112, 1064,	5, 5, 5, 4, 5, 5, 5, 6,
No. 128									

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K Line.	I Line.	Brightness.	Corr. Brightness.	Mean.	Residuals.	No. Remarks.
...	.. S	6 7 6.9, 6.4,	5 7, 5.9, 5 9,		...	
10, 10, 10,	. S .	6.5 6.4 6.4 7.0 6.8 6.8	5.8 6.3 6.2 6.3 6.7 6.6		. . .	
10, . 10,	...	6.8, 6.9, 6.8	8.0, 7.9, 7.7		. . .	
10, 10, 10,	.. S	6.8, 6.9, 6.6 7.0	6.9, 6.8 7.2		. . .	
10,	S	7.1 7.3	6.9 7.1		.	
1.2, 10, 12, 12,	S . S S ?	5.8, 5.8, 5.3, 4.9	5.2, 5.2, 5.3, 4.8			104, 124, 844, 830
.. 10, 10, . 10, 10, 10,	. . . . .	7.0, 7.0, 6.7, 6.7, 6.7, 6.7, 6.7, 6.9, 6.3	7.2, 7.3, 7.4, 7.2, 7.5, 7.4, 7.5, 7.9,		. . . . .	915
10, 10,	. .	7.1 7.1 7.4 7.4	7.4 7.4 7.7 7.7		. .	
10, 10,	. .	7.0 7.0 7.2	6.9 7.0 7.1		. .	
10,	.	6.8	6.8		.	
1.	. S	6.0, 5.7	4.8 5.0		. .	
10,	.	7.1	6.8		.	
2, 2, 10, 2,	. S S S	5.7, 5.7, 5.3 5.2	4.9, 4.9, 5.1, 4.9,			114 . 823
10,	.	7.0	7.8		.	
10, 10, 10, 10,	S . . .	6.4 6.8 6.9 6.7 7.0 6.9 7.2	6.6 6.9 6.9 6.9 7.1 7.1 7.2		. . . .	
. 10, . . 5, 10, . .	. . . . . S	6.5, 7.0, 6.4, 6.5 6.3, 6.4, 6.3 6.5 7.2, 7.0 6.4, 6.7, 6.4, 6.8, 6.8, 6.8			. . . . .	

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1882phae.proj..850F

9h

	1855 Ra.	1855 Dec.	1900 Ra.	1900 Dec.	No. DM.	Magn. DM.	Spectrum	No. Plate	No. Lines
9 3.2+52 48									
	0.0	+52	59	9 3.2	+52 48	1371,	8.0 I	1113,	3
9 4.9+66 8									
1	.0	+66	19	9 4.9	+66 8	599	7.7 II	1113	2
9 4.7+62 21									
1	.1	+62	32,	9 4.7	+62 21	1053,	8.5, I,	458,	4
9 5.8+73 21									
58	.2	+73	32	9 5.8	+73 22	452,	6.0, I,	458, 441, 493, 435, 1072, 1112, 1064, 1065, 6, 4, 6, 6, 6, 5-8	5
9 4.8+62 3									
9 4.8+62 4	.2	+62	14	9 4.8	+62 5	1054-5,	7.6, I,	441, 1065, 1113,	4, 6, 5-
	.2	+62	15	9 4.8	+62 6				
9 5.2+66 12	.3	+66	23	9 5.2	+66 12	600	7.7 III	1113,	2
9 5.0+50 52	.8	+51	3	9 5.0	+50 52	1458	6.5- I	1113,	5-
9 7.9+78 33									
2	.1	+78	34	9 7.9	+78 23	303	7.9 III	1065, 1113,	3, 2
9 6.6+67 33									
	.6	+67	44	9 6.6	+67 33	581	7.8 I	1065, 1113,	5, 5-
9 6.5+61 49									
3	.9	+62	0	9 6.4	+61 50	1058,	8.0 II a,	458, 441, 1065, 1113	2, 2, 3, 3,
	.5	+83	18	9 1.5	+83 7	248	8.4 II a	1065, II 1074, II 1255,	2, 2, 2
	.8	+80	44	9 3.9 (10.2)	+80 32	284	7.8 II a	1065, II 1074,	2, 2
9 8.3+70 18									
4	.1	+70	29	9 8.3	+70 18	557	7.0 III	1065, 1113	3, 1
9 7.5+56 2	.2	+56	13	9 7.6	+56 2	1375-	7.5- I	1113	3
5									
9 9.4+74 26									
	.8	+74	37	9 9.5	+74 26	393,	6.5, III,	441, 1072, 1112, 1064, 1065, 1113, 1073,	2, 1, 3, 2, 2, 3, 2

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1882phae..proj..850F

K Line	F Line	Brightness	Corr. Brightness	Mean Residuals	No.	Remarks.
.	.	7.2	6.6		.	
10	.	6.8	6.6		.	
10	.	6.9	6.0		.	
8.2 . . 3 10 10 2	. . . S . S S S	6.2, 6.3, 6.0, 5.9, 6.0, 5.8, 6.2, 5.7,	5.9, 6.1, 5.7, 5.7, 6.1, 6.0, 6.2, 6.0,		. . . . .	
10 . .	. . .	7.1, 6.5, 6.7,	6.2, 6.2, 6.3,		. . .	
10	.	6.9	6.7		.	
10	.	.	.		.	
10 10	S .	6.9 6.9 7.1, 7.1,	7.6 7.5 7.8, 7.7,		. .	
10 .	. .	6.5 6.6,	6.5 6.5,		. .	
10, 10, 12, 10	. , . S S	6.1, 6.6, 6.5, 6.0,	5.2, 5.7, 5.4, 5.6,		11, 11, 8.9, 8.6	
10 10 10	. . .	6.8, 6.8, 6.7,	8.0, 7.8, 7.6,		8.6, . .	
10 10	. .	6.9, 6.8,	7.8, 7.5,		8.5 .	
10 .	S .	6.6 7.0 6.9 7.0	6.7 7.0 7.0 7.3		. .	
.	.	6.9	6.3,		.	
10, . 10 10 10 10 10	. . S . . S .	6.9 7.0 6.7 6.9 6.5 6.4 6.8 7.3, 7.2, 6.9, 7.2, 6.8, 6.6, 7.1,	6.6 7.0 6.9 6.9 6.8 6.6 7.1 7.0, 7.3, 7.1, 7.2, 7.1, 6.8, 7.4,		. . . . .	

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8

9h

	1855- R.A.	1855- Decl.	1900 R.A.	1900 Decl.	No Magn Dm	Dm	Spectrum	No Plate	No Lines	
9 8.5+57 8										
	5 .1+57 19	9 8.5+57 10	12|11	5:0	III	1065, 1113,		2,3,		10,10,
	.8+84 22	9 14.9+84 11	206	8.0	III	1255-		2		10
9 9.1+54 27	.8+54 38	9 9.0+54 26	1285-	6:7	I,	441, 1113,		8,10,		2,2
	6									
9 11.5+75 20	.6+75 31	9 11.6 (11.9) +75 20	370,	7.3,	I.	441, 433, II 1042, 1112, II 1064, 1065, 1113,		3,2,4, 3 4.6,		
9 11.9+76 6	.8+76 17	9 12.0 +76 6	348	8.1	I	1112, II 1064, II 1065, 1113,		3,2,2,3-		10,
9 10.4+57 54	.0+58 5-	9 10.4+57 54	1182	7.1	II	1065-		2		10
	8									
9 14.4+79 18 (78 51)	.6+79 2	9 14.4+78 51	305-	7.4	II	1065, 1113, 1074		3,2,2		10,10
	9									
9 13.0+61.48	.4+61 5-	9 9 13.0+61 48	1114	7.5-	I?	1065, I 1113,		4,4		10,10

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1882phae.proj...850F

K Lines	H Lines	Brightness	Corr Brightness	Mean Residuals	Remarks
10,10,	- S	6.7 6.5 / 7.0, 6.9,	6.3 6.0 / 6.6, 6.4,	..	
10	-	6.9 / 7.3	8.0 / 8.4	.	
2,2	- S	5.8,5.4,	4.4,4.0,	..	
,,10,,,10,10	,,,S,,,S	7.0,6.5,7.0,6.9,6.9,6.8,6.6,	6.8,6.4,7.2,7.2,7.0,7.2,6.9,	...8.0, , , ,	
,10,10, ,	,,,,	6.9, 7.0, 6.8, 6.7,	7.3, 7.2, 7.3, 7.1,	....	
10	.	6.7,	6.3,	.	
10,10 10	S,,	6.8,6.9,6.7,	7.0,7.5,7.2,	...	
10,0	..	7.0,7.1,	6.7,6.7,	..	

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9h

	1855 RA	1855 Dec	1900 RA	1900 Dec	No. Obs.	Spectrum	No. Plates	No. Lines	
m									
10									
	9 13.5+52 53								
	.8+53 4	9 13.5	+52 53	1580,	7.0	I	441, 1113,	4, 6	
	9 13.8+51 42								
	.6+51 53	9 13.8	+51 42	1495	6.5	II a:	1113,	2	10,
X	9 14.3+57 8								
11	.0+57 19	9 14.4	+57 8	1214	8.8	III	1113,	1	
12									
	9 17.5+75 33								
	.5+83 33	9 20.0	+83 22	256,	7.2	II	1119, 1229a, 1065, 1233a, 1074, 1116a, 1255a, 1162a, 3, 2, 2, 2, 2, 2, 2, 2, 2		10, 10,
63	9 17.0+70 47								
	.6+75 44	9 17.5	+75 33	377,	6.2	I	458, 441, 495, 435, 1042, 1112, 1065, 1113,	6, 5, 6, 5, 7, 7, 9	2,
	.8+70 38	9 17.0	+70 47	561	7.5	III	1065,	2	10,
13									
	9 17.7+64 23								
14	.0+64 34	9 17.7	+64 23	733	6.5	III	1065, 1113,	3, 3	10, 2
	9 19.4+77 30								
	.0+77 41	9 19.4	+77 30	370	8.5	I a:	1113	4	10,
	9 18.1+52 1								
	9+52 12	9 18.1	+52 1	1389	6.7	III	1113	2	10

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K Line	H Line	Brightness	Cor Brightness	Mean Residuals	Obs Remarks
..	..	7.1, 6.5	6.0, 5.9,	..	
10,	.	6.9,	7.2,	8.5	
.	.	6.8 7.1,	6.3 6.6,	.	
10, 10, 10, 10, 10, 10, 10, 10	. . . . .	6.5, 6.3, 6.2, 6.4, 6.2, 6.2, 5.8, 6.1,	7.3, 7.2, 6.5, 7.5, 7.3, 7.0, 6.8, 7.8,	. 7.5 8, . 9.2 9.2 2, . 7.8 0	
2, 2, 3, 3, 2, 1, 2, 2	. . . . .	6.4, 6.0, 6.1, 5.9, 5.8, 5.8, 5.6, 5.5,	6.2, 5.8, 6.1, 5.8, 6.0, 6.1, 6.0, 5.8,	. . . . .	
10,	.	6.6 6.9,	6.7 7.0,	.	
10, 20,	5 5	6.8 6.8 7.1 7.1,	6.6 6.5 6.9 6.8,	. .	
10,	.	7.0,	7.5,	.	
10	.	6.9 7.1,	6.2 6.4,	.	

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9h

	1855 RA.	1855 Dec.	1900 RA.	1900 Dec.	No. DM.	Magn. DM.	Spectrum	No. Plate	No. Lines	
	m 15									
1		.2	+84 29	9 24.0	+84 18	2112	8.5	II	1065, 1255	2 2
	9 18.6	+54 28	.4	+54 39	9 18.6	+54 28	1299	7.5	I	1113, 7
2	57	16.0	+81 58	9 22.8	+81 46	3002	4.3	III		353, 458, 441, 495, 435, 1119, 2291, 3 1 2 2 3 3
	9 20.6	+72 46	.2	+72 57	9 20.6	+72 46	4456	7.8	II	1073, 2
3	9 21.1	+74 24	.5	+74 35	9 21.1	+74 24	399	8.0	III	1113 2,
	17									
4	9 22.5	+72 34	.1	+72 45	9 22.5	+72 34	4459	7.2	III	1065, 2
5	9 22.7	+67 58	.8	+68 9	9 22.7	+67 58	5472	6.8	I	441, 1065, II a 1073, III 1233, 3 6 2, 2
	9 22.2	+56 41	.9	+56 52	9 22.2	+56 41	1386	6.5	I	1065, II a 1113, 4, 3
6	66	19.0	+83 0,	9 26.4	+82 49	2062,	7.5,	I,		488, 495, 1119, I 1229, 1065, 1233, 1074, I 1116, 3, 3, 4, 4, 7.5, 6, 4
	9 22.7	+56 11	.4	+56 22,	9 22.7	+56 11	1388,	6.6	I	441, II 1065, II a 1113, 4, 3, 4
7	9 24.1	+73 27	.6	+73 39,	9 24.1	+73 27	4467,	8.1,	I, II	488, II 1065, 2,
	9 23.3	+67 18	.5	+67 30,	9 23.3	+67 18	9 5494,	7.5	II	1065, I 1113 2, 4

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K Line	F Line.	Brightness	Corr. Brightness	Mean Residuals	No.	Remarks.
10 10	..	6.8, 6.8,	8.2, 7.9,		.984,	
5	5	6.8,	6.2,		.	
.,10,.,10,10,10,10	.,8,.,8,5,5,5	5.2, 5.5, 5.3, 5.5, 5.5, 5.2, 5.8, 5.9, 5.9, 5.8, 6.0, 5.7,	5.3, 5.9, 6.1, 6.0, 5.9, 6.8, 5.9, 6.3, 6.5, 6.3, 6.5, 6.3,		.,110,129,134,144,146,146,	
10,	.	7.2,	7.4,		.	
10	.	7.0, 7.4,	7.2, 7.6,		.	
10	.	7.0, 7.3	7.2, 7.5		.	
..10,10	.5..	7.0, 6.5, 6.1, 6.9, 7.2,	6.4, 6.5, 6.7, 6.7, 7.0,		.,887, .	
6,10	.5	6.8, 6.7,	6.4, 6.2,		.829,	
4 .,.,10,10,3-10,3-10	.,.,.,.5...	6.6, 6.5, 6.6, 6.5, 6.0, 6.3, 6.1 6.4,	7.2, 7.0, 7.3, 7.3, 7.2, 7.5, 7.1 7.1,		.....	
10, 10, 10	..5	7.0, 6.6, 6.5,	6.9, 6.1, 5.9,		.,840, 827,	
10 10	5.	6.6, 7.2,	6.9, 7.5,		..	
10, 10	..	6.9, 6.9,	6.8, 6.7,		..	

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1882phae.proj..850F

9h

1885- 1885- 1901 1917 No May
RA. Dec. RA. Dec. Dm Dm. Spectrum. Mag. No Lines.

m
20
9 23.7+63 28
.1+63 40 9 23.6+63 30 845, 3.5, I d 45-8, 441, 495-435, 1065-1113, 1073 1233, 6,3,2,9,7,12,9 10

9 26.4+78 41
.8+78 53 9 26.4+78 41 312 8.7 II 1074, 2 10

9 24.5+55 42
21 2+55 54 9 24.5+55 42 1339 7.5 II a 1113, 2 10,
9 25.6+72 38
.2+72 50 9 25.4+72 39 462, 6.0, II a 45-8, 441, 495-435-1065-1113, 1073, 1233, 2,2,2,2,3,3,2,3 10
9 26.2+74 47
.6+74 59 9 26.8 +74 47 402, 7.3 I 45-8, 441, 495-435-1065-1073, 1233/1074 5, 5, 6, 8 8 5 10
9 25.7+70 17
.6+70 29 9 25.7+70 16 866, 5.2, III bd 46-8, 441, 495-435-1065-1113, 1073, 1233, 2,3,3,2,2,4,3,2 10

22
9 26.0+67 14
.2+67 26 9 26.0+67 14 594 7.2 II a 1065, 1113, 2 2 10,10
~~.2+84 27 9 30.8+84 1~~ ~~213 8.3 II 1074~~ ~~2~~ ~~10~~
23.0+84 24

~~.6+74 59 9 27.3+74 47 402 7.3 I 1113~~ ~~8~~

~~23.0+84 24 216 8.7 II 1074 2~~ 10

9 26.3+52 9
.1+52 21 9 26.3+52 8 1401, 8.0, II a 441, 1113, 2,7 12,12
9 28.0+74 48
.4 74 60 9 28.0+74 48 403 8.2 II a 1065, 1113 2,2 10,10
9 27.9+72 31
.6+72 43 9 27.9+72 32 464 7.3 II a 1065, 1113, 1073, 1233, 2,2,2,2 10 18
9 28.5+75 39
.7+75 51 9 28.5+75 39 386 6.8 III 1065, 1113, 1233, 1074, 2,3,1,2 10,10
9 26.9+52 52
.8+53 4 9 26.9+52 52 1147 7.5 I 1113 4 10
9 28.4+73 32
24 .0+73 44 9 28.4+73 32 470, 6.5, I 495 II a 45-8, 441, 1113, 435-1065, 1113, 1073, 1233, 2 4,6,2,6,7,6 10 10,
9 28.0+70 5
.0+70 17 9 28.0+70 5 567 7.5 II a 1065, 1113, 1073, 1233, 2,5,2,4 10,8,
9 27.7+61 20
.2+61 32 9 27.6+61 20 1132 7.5 II 1065, 1113, 1073, 1233, 2,4,2,2 10 10
.6+83 59 9 32.6+83 47 263 8.0 I 1065, 1233, 1074, 1235, 4,2,2,4 10,10
9 30.4+79 16
.8+79 28 9 30.4+79 16 316 7.5 III 1113, 1064, 1065, 1113, 1074, 2,2,2,5,4 10,10
9 28.0+52 80
.9+52 42 9 28.0+52 30 1402 6.0 I 441, 1113, 6,9 2

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K Line	H Line	Brightness	Cor Brightness	Mean Residuals	No Remarks
10, 8, 15, 10, 10, 8, 10, 10	S S S S S S S S	5·3, 5·3, 5·3, 5·3, 5·4, 5·4, 4·3, 4·2, 4·0	4·3, 4·5, 4·6, 4·8, 4·3, 4·0, 4·0, 3·6	120, 158, 867, 821,	
10		7·0,	7·5,		
10,		7·2,	6·6,	826,	
10, 10, 10, 10, 10, 10, 12, 10	S S S S S S S S	6·4, 6·5, 6·4, 6·0, 5·8, 6·0, 5·8, 6·0,	6·0, 6·1, 6·2, 5·7, 6·0, 6·1, 6·0, 6·0	112, 118, 135, 146, 863, 819, 889, 884,	
10,	S	6·4, 6·3, 6·1, 5·8, 5·8, 5·8, 5·8, 6·4,	6·2, 6·1, 6·1, 5·7, 6·2, 6·2, 6·0, 6·6,		
10, 10, 10, 10, 12, 10, 13, 12	S S S S S S S S	5·6, 5·9, 5·8, 5·7, 5·5, 5·3, 5·3, 5·3, 5·8, 6·1, 6·0, 5·7, 5·5, 5·4, 5·3,	5·4, 5·5, 5·3, 5·6, 5·3, 5·4, 5·8, 5·6, 5·8, 5·5, 5·5, 5·2,	108, 128, 803, 836,	
10, 10		6·8, 6·8,	6·7, 6·6,	842,	
10		6·9	8·1		
	S	5·8,	6·1		
10		6·9	6·5		
12, 12,	S	5·5, 7·5,	4·3, 4·1,	114, 811,	
10, 10,		6·9, 6·9,	7·3, 7·2,	872,	
10, 10, 10, 10	S S S S S	6·8, 7·0, 6·9, 7·1, 7·0,	7·0, 7·1, 7·1, 7·3, 7·0,	862,	
10, 10, 10, 10	S S	6·7, 6·3, 6·8, 6·8, 7·0, 6·6, 7·0, 7·0,	7·1, 6·6, 7·0, 7·0, 6·4, 6·9, 7·2, 7·2,		
10		7·2,	6·6,		
10, 10, 10, 10, 10, 10, 8	S S S S S S S S	6·8, 6·7, 6·2, 6·0, 6·2, 5·7, 6·4,	6·5, 6·4, 6·0, 6·3, 6·4, 6·2, 6·5,	137, 149,	
10, 8, 10, 10,	S S S S	6·5, 6·7, 6·7, 6·9,	6·6, 6·7, 6·8, 6·8,	852,	
10, 10, 10, 10, 10	S S S S S	6·8, 6·9, 7·2, 6·8, 7·1,	6·5, 6·8, 6·5, 6·6,	838,	
10, 10, 10, 10	S S S S	6·7, 6·8, 6·6, 6·5,	8·0, 7·9, 7·7, 7·5,		
10, 10, 10, 10,	S S S S	7·2, 7·1, 6·8, 6·3, 6·8,	7·8, 7·5, 7·5, 6·9, 7·3,	848,	
12	S	5·9, 5·2,	4·7, 4·5,		

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9h

	1855- R.A.	1855- Decl.	1900 R.A.	1900 Decl.	No Mag	Mag Spectrum	No Plate	No Lines
9 28.6+63 14m								
25	.1+63 26	9 28.6+63 14	85-1	7.4	I	1113, 1073,		42
	4+85- 9	9 34.4+84 57	15-0	8.0	II	1233-		2
9 29.5+70 43								
	.4+70 55-	9 29.5+70 43	868	7.0	I	435-1065, 1113, 1073, 1233,		4 3 3 6-5-
9 30.1+73 11								
	.7+73 23	9 30.1+73 11	441	7.0	I	468, 441, 495, 435, 1065, 1113, 1073, 1233,		3, 4, 4, 4, 6, 6, 5-, 6,
9 30.6+75 53								
	.8+76 5-	9 30.6+74 53	360	7.3	III	1113		3
9 31.2+78 0	.9+78 12	9 31.2+78 0	315	8.2	III	1113		
26								
9 29.6+57 25								
	.3+57 37	9 29.6+57 25	1224	6.8	I	435-1065-1113, 1073,		4, 5-, 6, 3
9 30.2+60 39								
	.8+60 37	9 30.2+60 39	1198	6.5-	III	435-1065-1113, 1073, 1233,		2 2 3 2 2
27								
9 31.5+72 12								
9 31.2+67 43	.3+72 24	9 31.5+72 12	465-	7.7	II a	1065, 1113,		2 2
	.4+67 55-	9 31.2+67 43	602	6.5-	III	1065, 1113, 1073, 1233,		3, 3, 2, 2
9 33.0+77 40								
	.8+77 5-2	9 33.0+77 40	317	7.8	II	1113,		2
28								
9 32.1+69 0	.2+69 12	9 32.1+69 0	528	8.0	III a	1065, 1073, 1233,		2 4 2
9 34.2+78 35								
	.8+78 47	9 34.2+78 36	317	6.8	III	1112, 1065, 1113, 1233 1074, 1208,		3, 3, 2, 2, 3 2
29								
9 32.3+52 47								
	.2+52 5-9	9 32.3+52 47	1408	8.0	III	1113,		2
9 33.8+72 43								
	.3+72 55-	9 33.8+72 42	466	8.3	III b	441, 495, 435, 1065, 1113, 1073, 1233,		2, 2, 2, 3 2 3 2
9 33.7+69 41								
	.8+69 53	9 33.7+69 42	531	6.1	III b	1065, 1113, 1073, 1233,		3, 3, 2, 3
9 35.4+79 36								
30	.8+79 48	9 35.4+79 36	319	6.0	I	446, 458, 441, 495, 808, 850, 1073, 1112,		d. d 4, 6, 7, 6, 4, 5, 6,
46								
9 33.6+67 12								
	.9+67 214	9 33.6+67 12	608	8.0	I	1113, 1073,		5, 2,

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K Line	S Line.	Brightness.	Cor Brightness.	Mean Residuals	Remarks.
..	..	6.9 6.8	6.6 6.7		..
10	.	6.4	7.1		.
10 10 10 10 10	. S S S S	6.8 6.5 6.7 6.5 6.7	6.4 6.6 6.7 6.6 6.6		. 854 857 ..
. . . 5 5 8 5 2	. . . . S . . .	7.2 7.0 6.6 6.4 6.5 7.2 6.4 6.5	6.9 6.7 6.5 6.2 6.8 7.4 6.7 6.6		. . . . .
10 .	S .	6.9 6.9 7.2	7.2 7.5 7.4 7.7		. .
. 10 . .	. . . .	6.9 6.5 6.6 6.8	6.0 6.1 6.1 6.4		. . . .
10 10 10 10 10	. . S . .	6.8 7.1 6.5 6.5 7.1 6.7 7.1	6.0 6.4 6.3 6.3 6.2 6.7 6.4 6.6		. . . 854 .
10 10	. .	6.7 7.1	6.9 7.2		858 .
10 10 10 10	S S . .	6.5 6.6 6.6 7.0 6.8 7.0 7.0 7.3	6.5 6.5 6.6 6.8 6.8 6.9 7.0 7.1		. . . .
10	.	6.9	7.4		.
10 10 10	. . .	6.8 7.1 7.2	6.8 7.1 7.0		847 . .
10 10 10 10 10 10 10	S S . . S .	6.6 6.6 6.3 6.8 6.3 6.4 6.9 6.8 6.8 7.1 6.6 6.8	7.2 7.2 6.9 7.3 6.8 7.4 7.5 7.5 7.4 7.6 7.1 7.8		. . 833 . . . .
10	.	7.1 7.4	6.5 6.8		.
10 10 10 10 10 12 10	. . . S . S .	6.6 6.6 6.0 5.8 6.0 5.8 6.1 6.0 6.5 6.4 6.1 6.3 6.1 6.4	6.1 5.8 5.7 6.0 6.1 6.0 6.1 6.0 6.3 6.1 6.3 6.4 6.3 6.4		19 . 45 861 818 885 898
10 12 10 10	S S . S	6.3 6.3 6.3 6.5 6.5 6.6 6.6 6.8	6.4 6.3 6.4 6.4 6.6 6.6 6.7 6.7		851 835 . .
10 8 4 7 10 10 10 10	. . . . . S	5.9 5.9 6.2 5.9 6.6 6.3 5.8	.68 6.1 6.4 6.3 6.9 6.5 6.9 6.5		. . . . .
10 10	. .	7.0 7.5	6.8 7.5		. .

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9h

	1855 RA	1855 Dec.	1900 RA	1900 Dec.	No Mag	Spectrum	No Plate	No Lines
m 30								
9 34.6+75 3	.1+75 15	9 34.6+75 3	389,	6.8,	I,	441, 508, 1065, 1113, I 1073, 1233, II 1074, 1208,	6, 4, 5, 7, 3, 4, 2, 8	.10
9 35.4+77 11	.4+77 23	9 35.4+77 11	379	8.4	I	1065, II a 1074, III 1208,	4, 2, 2	.10
9 34.3+56 19	.8+81 37	9 37.1+81 25	313	9.0	II	1074	2	10
31	.1+86 31	9 34.3+56 19	1394	6.5	III	1065, 1113	2, 3	10,
9 35.1+70 54	.1+71 6	9 35.1+70 54	509	8.0	II a	1073	1	
9 35.6+63 23	.1+63 35	9 35.6+63 23	838	7.3	II a	1113,	2	10
9 36.9+76 46	.0+76 58	9 36.9+76 46	363	8.5	II	1113,	2	10
33								
9 36.3+54 50	.1+55 2	9 53+54 50	1345,	6.7,	I,	441, 1113, 1073,	4, 6, 7	10,
9 36.8+65 26	.2+65 38	9 36.8+65 26	731,	6.3	II a,	~~441~~ 438, 1065, 1113, I 1073, 1073, 1233	~~2~~ 2, 2, 4, 5, 3, 1	~~7~~
9 36.2+48 53	.2+49 5	9 36.2+48 53	1868	6.5	I	~~1073~~,	7,	
34								
9 38.2+64 7	.1+64 19	9 38.2+64 7	715	6.8,	II a,	~~441~~ 438, 435, 1065, 1113, I 1073, I 1233	2, 6, 2, 6, 7, 2	10,

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K Line	L Line	Brightness	Cor Brightness	Mean. Residuals	Dr's Remarks
·10,10,5-5,10,10,10	·SSS···S	6.9,7.0,6.2,6.0,·,6.6,6.7,6.2,	6.7,6.9,6.6,6.3,·,6.8,6.9,6.9,	-;-;8.5,·,····	
·10 10	···	7.0,7.0,7.0,7.3,	7.6,7.4,7.8,7.2,	·90 8··	
10	·	7.1	7.9	·	
10,10	·S	6.9,6.9,7.1,	6.4,6.3,6.6,6.5-	··	
·	·	7.2,	7.2,	·	
10	·	7.2	6.9	8.2.0,	
10	·	7.2	7.6,	·	
10,·5	·SS	6.8,6.4,6.5-	5·7,5·8,6.0,	···	
10,10,10,10,10,10,10,·	·..S·S··	6.8,6.4,6.0,6.1,6.7,6.5-6.6,	6.1,5.8,5.9,5.7,6.6,6.4,6.3,	12.3, 15.2, 8.7.6, 8.2.5-, ·8.93, 9.04	
·	S	6.4	5.8	·	
10,10,10,10,10,10	·S····	7.0,6.6,6.5-6.4,6.5,6.7,	6.2,5.8,6.3,6.1,6.1,6.3,	12.7, 13.9, 8.2.3, ··	

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9h

	1855-	1855-	1900	1900	No	Mag			
	R.A.	Dec.	R.A.	Dec.	Dm.	Dm.	Spectrum,	No Plate.	No Lines.
m									
35									
36									
	9 39.4+57 35								
	.2+57 47	9 39.5+57 35	1231	8.0	III	435, 1065, 1113, 1073, 1233,	3, 3, 3, 3, 2		
	9 40.0+63 43								
	.5+63 55	9 40.0+63 43	861	7.0	II a?	435, 1065, 1113, 1073	2, 2, 2, 2		
	.5+54 10	9 44.3+83 57	222	8.0	II a	1255	2		10
37									
	9 41.0+65 22								
	.4+65 34	9 41.0+65 22	936	7.3	II a	1065, 1113, 1073, 1073,	2, 2, 4, 2		
38									
	9 41.9+67 2								
	.2+67 14	9 41.9+67 2	614	8.0	I	1065, 1113,	4.5		
	9 41.5+60 34								
	.2+60 46	9 41.5+60 34	1209	7.4	III	1073,	1		
	9 41.7+54 44								
	.6+54 56	9 41.7+54 44	1329	7.4	II a?	1073	2		10
	9 42.6+66 4								
39	.0+66 16	9 42.6+66 4	637	6.7	I	441, 435, 1065, 1063, 1113, 1073, 1073, 1233,	4.6, 5.6, 7.5-6, 6		10
	9 42.1+46 30								
	.2+46 42	9 42.1+46 29	1551	5.9	II a	1073	3		10

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9h

K, Line	S Line. Brightness.	Cor Brightness.	Mean. Residuals.	Observers. Remarks.
10, 10, 10, 10, 10	S, S, S, S,	68 6.3 6.4 6.8 6.7 7.1, 6.6, 6.5, 7.1, 7.1,	5.9 5.9 5.9 6.4 6.1 6.2, 6.2, 6.3, 6.7, 6.5,	
10 10 10 10	S -	7.0 7.0 7.0 7.2, 7.3, 7.3, 6.7	68 6.7 6.8 7.0, 7.0, 7.1, 7.8,	15.1 9.9,
10, 10, 10, 10	6.8, 6.7, 7.0, 6.8,		6.7, 6.5, 6.9, 6.7,	8.7, 8.9,
10, 10,		7.0, 7.0,	6.9, 6.8,	
		7.1.5,	6.8 7.2,	
10		7.1,	6.6,	8.9,
10, 10, 10, 10, 10, 10, 10, 10	S S S S S S S	6.6, 6.5, 6.1, 6.1, 6.5, 6.6	5.9, 5.9, 6.0, 5.9, 6.4, 6.3,	
10	S	6.4	5.7,	8.5,

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9h

	1855 Rd.	1855 Dec.	1900 Rd.	1900 Dec.	No 2m.	Mag 2m.	Spectrum.	No Plate.	No Lines.
9 43.1+53 22m									
40	.0+53 34	9 43.1+53 22	1361,	7.2	III	1113			2
9 44.0+59 30									
	.7+59 42	9 44.0+59 30	1268,	4.0,	I	441, 495, 435, 1065, 1113, 1073, 1233,			7, 8, 2, 7, 13, 7, 8
9 46.1+78 25									
41	.0+78 37	9 46.1+78 25	327	7.1	III	1065, 1113, 1074, 1208,			2 2 2 2
9 45.3+72 9									
	.2+72 21	9 45.3+72 9	473,	7.1,	I	435, 1065, 1113, 1073, 1233, 1074			4, 4, 3 4 5 3
	.0+81 4	9 46.9+80 52	319	7.4	II	1065, 1074, 1208,			2, 2, 2
42									
9 45.3+54 33									
	.2+54 45	9 45.4+54 32	1331,	8.0,	I,	441, 1113, 1073,			6, 8, 9
	.8+81 5	9 48.6+80 53	320	8.4	II	1074,			2
9 47.7+77 6									
43	.0+77 18	9 47.8+77 6	389	7.4	III	1065, 1113, 1074, 1208,			1, 2, 1, 1
9 46.9+58 10									
	.7+58 22	9 46.9+58 10	1220	7.4	II:	1065,			2
44									
9 47.7+61 36									
	4+61 48	9 47.6+61 36	1151	6.4	III a	435, 1065, 1113, 1073,			2 2 2 2
	.7+84 37	9 52.6+84 25	225	6.5	III	1065, 1233, 1074, 1116, 1255,			3 2 2 1 3

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9h

K Line	L Line.	Brightness.	Cor Brightness.	Mean.	Residuals.	Remarks.
10	.	7.2	66		.	
2, 8, 8, 10, 5, 10, 5	SSS, SSSS	5:6, 5.3, 5, 4, 4.9 4.3, 4.6, 4.3,	4.6, 4.5, 4.5, 4.5, 3.8, 4.2, 3.7,		.. 141, 847, .8 80, 076,	
10, 10, 10, 10	....	69 69 67 69 72, 72, 70, 72,	76 7.5 7.2 7.9 7.9 7.8 7.5, 8.2,		....	
.., 10, - 10 .	.....	6.8, 6.6, 6.9, 6.6, 6.8, 6.5,	6.5, 6.8, 7.0, 6.8, 6.8, 6.5,		.....	
10, 10, 10	...	6.9, 6.8, .	7.8, 7.5, .		...	
., ., 2	- S S	5:8, 5.3, 4.7,	4:7, 4.7, 4.2,		...	
10	.	6.9	7.6.		.	
.10 ..	....	6.8 6.9 6.7 6.9, 7.1, 6.8, 6.9,	7.3 7.3 7.5 7.4, 7.5, 7.1, 7.7,		....	
10	.	7.2	6.8		.	
10, 10, 10, 10	....	6.8 6.6 6.8 6.8 7.0, 6.9, 7.1, 7.0,	6.0 6.3 6.4 6.3 6.2, 6.6, 6.7, 6.7,		143 ..	
10, 10 10 . 10	S ... S	6.8 6.6 6.4 6.6 6.2 6.5, 7.0, 6.9 7.0, 6.6,	7.6 7.9 7.7 7.6 7.4 8.0, 8.3, 8.2 8.0, 7.8,		...., 983,	

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9h

	1855 Rd.	1855 Dec.	1900 Rd.	1900 Dec.	No. Obsd	Mag.	Spectrum.	No. Plate.	No. Lines
m 45									
no 65	9 49.5	+73 20							
	.3	+73 33	9 49.4	+73 22	478,	6.3,	III,	441, 495, 435, 1065, 1113, 1073, 1233, 1074,	2, 2, 2, 3 3 3 2
46									
	9 49.2	+50 17							
	.2	+50 30	9 49.2	+50 17	1698	5.6	I.	1073,	8
	9 49.4	+52 44							
	.4	+52 57	9 49.4	+52 44	1431	7.2	III	1073,	1
47									
	9 50.3	+57 53							
	.1	+58 6	9 50.2	+57 54	1224	6.2	II	435, 1065, 1113, 1073, 1233	2, 2, 3, 2, 2
48									
	9 51.5	+59 26							
	.3	+59 39	9 51.5	+59 26	1274	7.1	III	1073,	2
	9 52.7	+75 14							
	.4	+75 27	9 52.7 +48	+75 14	399	7.2	II	1113, 1073, 1233, 1208	2, 2, 1, 2
	9 53.1	+72 54							
	.9	+73 7	9 53.1	+72 54	481	8.2	III	1113, 1073, 1208	2, 2, 2
	9 52.2	+52 33							
	.2	+52 46	9 52.2	+52 33	1438	8.0	III	1073	1
	9 52.3	+50 37							
	.3	+50 50	9 52.3	+50 37	1702	7.0	I.	1073	7
	9 53.5	+69 12							
	.8	+69 25	9 53.5	+69 12	380	7.7	II	1074	2
	9 53.1	+57 17							
	9	+57 30	9 53.0	+57 18	1242,	5.0	III	435, 1065, 1113, 1073,	2 3 3 1

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9h

K Line	L Line	Brightness	Cor Brightness	Mean Residuals	No. Remarks
10, 10, 10, 10, 10, 10, 10, 10	... S S S S S	6.8, 6.5 6.5 6.5 6.5 6.0 6.4 6.2 6.9, 6.8, 6.8, 6.8, 6.4, 6.5, 6.5	6.5 6.4 6.3 6.8 6.7 6.3 6.5 6.3 6.8, 6.8, 6.6, 7.1, 7.0, 6.7, 6.9, 6.6		147, 864, 901,
2	S	5.6	5.0		
		6.8 7.0	6.3 6.3,		
10, 10 10 10 10 10	S, S	6.4 6.3 6.6 6.7 6.6, 6.6, 6.6, 6.7, 6.9,	6.0 6.0 6.2 6.1 5.7, 6.2, 6.1, 6.3, 6.3,		843,
10,		7.0 7.3	6.6 6.9		
10, 10 10 10		6.5, 7.0 7.2 6.5 6.9,	6.8, 7.2 7.2 7.4, 7.6,		
10 10 10		7.3, 7.1, 6.9,	7.2 7.4, 7.3 7.4,		
		7.0 7.3,	6.4 6.7,		
	S	6.4	5.8,		
10,		7.0	6.8,		
10, 10, 10	S S	6.6, 6.6 6.6 6.8 7.0 6.6, 7.1, 7.0, 7.2,	5.7, 6.2 6.1 6.4 6.1 6.5, 6.5 6.8,		

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1882phae.proj..850F

9h

	1855 Rct.	1855 Dec.	1900 Rct.	1900 Dec.	No	Mag	Spectrum	No Plate	No Lines
m 50									
51	9 54.9+69 16	.2+69 29	9 54.9+69 16	38	7.8	II	1074,	2	10
52									
	9 55.7+57 44	.5+57 57	9 55.7+57 44	1243	7.8	III	1073	1	
53	9 56.4+58 35	.1+58 6	9 59.6+82 53	280	7.1	III	1074, 1255,	2 2	10
		.2+58 48	9 56.4+58 35	1231	7.4	I	1065, 1073,	4 2	10,
	9 56.6+57 9	.5+57 22	9 56.6+57 9	1246	7.8	II	1065,	2	10,
	9 57.4+67 46	.8+67 59	9 57.4+67 46	632	6.8	III	1065, 1113, 1074	2 2 2	10
54									
	9 57.6+60 9	.4+60 22	9 57.6+60 9	1234	8.0	III	1073	2	10
	9 57.9+54 22	.9+54 35	9 58.0+54 23	1348	6.2	II	1073	2	10
	9 57.8+49 4	.9+49 17	9 57.8+49 36	1909	7.2	III	1073	2	10

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K Line	L Line	Brightness	Cor Brightness	Mean Residuals	Remarks.
10	.	6.9	6.7		
.	.	7.3	6.9		
10 10	. .	6.6 6.8 6.9, 7.2,	7.6 7.7 7.9, 8.1		. .
10, 10	. .	6.9, 7.0,	6.5, 6.6,		. .
10,	.	7.0,	6.6,		.
10 10 10	. . .	6.9 7.0 7.1, 7.2, 6.9,	6.9 6.9 7.1 7.1, 6.7,		. . .
10	.	6.9 7.2,	6.6 6.9.		.
10,	v s	6.2,	5.7,		.8?,
10	.	7.0 7.2,	6.4 6.8,		.

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9h

	1855 Rd.	1855 Decl.	1900 Rect.	1900 Decl.	No Obsv.	Mag Spectrum	No Plate	No Lines
9 58.4+64 54								
55	.0	+65	9 58.4+64 54	749	7.5	II	1113, 1073	2 2
9 58.6+52 50								
	.6	+53	9 58.6+52 50	1384	6.5	I	1073	6
9 59.1+65 48								
	.7	+66	9 59.1+65 48	648	8.3	II	1073	21
9 59.1+51 53								
56	.1	+52	9 59.1+51 53	1450	7.7	I	1073	4
9 59.9+70 25								
	.2	+70	9 59.9+70 25	598	7.5	I	1113, 1073, 1074,	3, 2 2
10 1.0+77 57								
	.3	+78	10 1.0+77 57	340	8.5	III	1113	2
10 0.6+71 44								
	.8	+71	10 0.6+71 44	492	6.5	III	1113,	21
57								
58								
10 1.7+69 10								
	.1	+69	10 1.7+69 10	581	7.0	I	~~1065~~ III, 1065, III 1233, II 1074, III 1208,	~~3~~, 3, 2, 2, 2
10 1.2+53 42								
	.2	+53	10 1.2+53 42	1387	8.0	I	1073	41
10 1.9+64 26								
	.3	+64	10 1.9+64 26	770	6.8	I	435	4
10 2.7+74 22								
	.6	+74	10 2.7+74 22	427	7.7	I	1065, 1113, 1073, 1233, 1208,	3, 5, 4, 4, 5,
59								
10 2.7+~~83~~ 51 20								
	.8	+51	10 2.7+51 20	1877	7.1	II	1073	2
10 3.2+63 25								
	.9	+63	10 3.2+63 25	886	6.8	III	1073	2

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K Line	L Line	Brightness	Cor Brightness	Means, Residuals,	No Comments
10,10	..	7.0, 7.0,	6.7, 6.8,		8214, .
2	.	6.2,	6.1,		-
10	.	7.1,	7.0,		-
.	.	7.0,	6.4,		-
.10,10	...	7.3, 6.9, 6.9,	7.3, 7.0, 6.8,		...
10,	.	7.0, 7.4,	7.5, 7.9		-
10	.	7.0, 3	7.4,		-
10,10,10,10	S. - -	6.9, 7.0, 7.1, 7.3, 6.9, 7.1	6.9, 6.8, 7.1, 7.1, 6.7, 7.2, 7.4,		....
.	.	6.9,	6.4,		-
.	.	6.9,	6.2,		-
.5,-.10-	....S	6.8, 6.8, 6.9, 7.0, 6.5-	7.1, 7.0, 7.2, 7.1, 7.1,		.....
10,	.	7.0, 7.1,	6.4,		-
10,	.	6.9, 7.1,	6.7, 6.9,		-

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10h

m	1855 Rd	1855 Dec.	1900 Rd.	1900 Dec.	No Dm	Mag Dm	Spectrum	No Plate	No Lines
0									
	10 5.7+79 26								
76	.8+79 39	10 5.7+79 26	328	6.4		I	458,44,1495,508,500,1065,1113,1233,435	5,5,6,5,5,7,7,6,5	
	10 8.0+50 0								
0	.1+50 13	10 8.0+50 0	1721	7.2		III	1073,	2	10
2									
	10 5.4+49 58								
	~~.4+56 43~~	~~10 5.4+56 30~~	~~1459~~	~~4.7~~		II a	500	2	10
	.5+50 11	10 5.4+49 58	1725	6.8		III	1073	2	10
3									
	10 7.5+75 57								
	.3+76 10	10 7.5+75 57	380	8.3		III	1113	2	10
	10 6.7+58 29								
	.6+58 42	10 6.7+58 29	2144	7.0		I	435,1065,1073,1233,1074 I d.N I d.N	5,5,6,5,5	10
	10 6.5+52 0								
	.6+52 13	10 6.5+52 0	1461	7.3		II a	1073,	2	10
4									
	10 7.4+51 0								
	.5+51 13	10 7.4+510	1585	6.5		I	1073	6	5

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10h

K Line	L Line	Brightness	Cor Brightness	Mean	Residuals	No Remarks
10	.	6.9 / 7.1	6.3 / 6.5		.	
10	S	6.5	6.5		16.8	
10	.	7.4	6.5 / 6.8		.	
10	.	7.1 / 7.2	7.5 / 7.6		.	
10 10 10	. . . . S	6.7, 6.5, 6.6, 6.9, 6.5	6.8, 6.1, 6.2, 6.3, 5.9,		. . . . .	
10	.	7.2	7.6		8.8 / 7	
5	.	6.6	6.0		.	

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10h

	1855 Ra	1855 Dec	1900 Ra	1900 Dec	No Diw	Mag Diw	Spectrum	No Plates	No Lines
10 8.3+60 31m									
5	.1+60 44	10 8.3+60 31	1246	6.3	III		1065, 1073, 1074,	2 2 1	10 10
	.4+83 32	10 11.7+83 19	287	6.8	III		1065, 1233, 1074, 1116, 1255, 1256, 1162,	2 2 2 3 2 1 1	10 10
10 9.6+73 35									
78	.7+73 48	10 9.6+73 35	489	6.5	I		441, 495, 435, 1065, 1113, 1073, 1233, 1074,	3 5 2 4 8 7 6 4	10
10 9.2+60 39									
6	.0+60 32	10 9.2+60 39 32	1250	6.4	II	a	435, 1065, 1073, 1233, 1074, 1208,	2 5 6 4 3 2	10, 10
10 9.8+71 34									
	.1+71 47	10 9.8+71 34	834	6.3	I		495 435, 1065, 1113, 1073, 1233, 1074, 1208,	7 6, 7, 7, 6, 7, 7 6	8 5, 10
10 11.2+79 17									
	.4+79 30	10 11.2+79 17	329	8.0	I		435, 1065, 1113, 1074, 1255,	2 2 4 3 5	10
10 9.8+70 30									
	.2+70 43	10 9.8+70 30	603	8.2	II		1074	1	
10 10.9+72 57									
7	.1+73	10 10 10.9+72 57	491	7.6	III		1065, 1113, 1073, 1233, 1074, 1208	2 2 1 2 1 2	10 10
10 10.8+65 36									
70	.5+65 49	10 10.8+65 36	767	6.8	I		495, 435, 308, 500, 1065 (2), 1065 (1), 1073 (1), 1073 (2)	6 8 6 5 5 6 7 8	3 2
82	.8+84 39	10 15.2+84 46	234	6.0	I		353, 167, 1119, 1229, 495, 435, 1065, 1233, 1074	6 4 1 9 6 10 9 8	
8									
10 13.4+78 51									
	.8+79 4	10 13.4+78 51	330	7.3	III		1065, 1113, 1074, 1208, 1255,	2 3 2 2 2	10, 10
10 11.7+50 5									
	.8+50 18	10 11.7+50 5	1732	7.3	III		1073,	2	10
9	.0+82 14	10 14.6+82 1	300	8.1	III		1255	2	10
	4+82 0	10 14.9+81 47	301	8.6	III		1255	2	10
10 12.7+51 55									
1	.8+52 8	10 12.7+51 55	1473	6.7	III	a	1073,	2	10

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10 h

K Line	H Line	Brightness	Cor Brightness	Mean	Residuals	Obs Remarks
10 10 .	. . .	6.9, 6.9 6.7, 7.2, 7.0,	6.6, 6.6 6.2, 6.9, 6.5,			. . .
10 10 10 10 10 . .	. . . S . . .	6.5 6.5 6.2 6.5 6.4 6.1 6.5 6.7, 6.6, 6.5, 6.8, 6.7, 6.4, 6.9,	7.8 7.6 7.3 7.3 7.4 7.6 7.6 8.0, 8.7, 7.6, 7.6, 7.7, 7.9, 8.0,			. . . . 9 7 4, . .
. 10 10 10 10 10 10 10	. . . S S . . .	6.9, 6.5, 6.5, 6.2, 6.5, 5.8, 6.4, 6.3	6.6 6.4, 6.3, 6.5, 6.7, 6.1, 6.5, 6.4,			. . 1 4 8, 8 6 8, ...
10, 10 10 10 10 10	S S . . S .	6.6 6.7, 6.6 6.8, 6.4, 6.5	5.8, 6.4, 6.3, 6.3, 5.9, 6.8,			1 4 2, ...
5 10 2 8, 5 10,	S S S S S S S	6.3 6.2 6.1, 6.4, 6.0, 5.9, 5.6, 6.4,	5.9, 6.3, 6.5 6.2, 5.9, 5.6, 6.9,			. . . . .
. 10 10 . .	. . . . .	6.9, 6.8 6.9, 6.6, 6.8,	7.1, 7.5, 7.5, 7.1, 7.2,			. 8 4 6, . . .
.	.	7.1	7.0			.
10 10 . 10 . 10	. . . . .	6.7 7.6 6.4, 7.0 7.0 7.3, 7.3, 7.4, 6.9, 6.6 6.8	6.9, 7.2, 7.1, 7.4, 7.2, 7.5, 7.0, 7.4, 6.9, 7.1 7.3,			. . . . .
3 2, 10, 10, . . 5 2	. . . . . S	6.1, 6.3, 6.1, 6.6, . 5.7, 6.0, 5.8	5.6, 5.7, 6.1, 5.9, . 5.6, 5.9, 5.7,			. . . . .
. 10, 3, 8, 2, 3 3 5, 10,	. . S S S S S S S	5.7, 6.5, 5.3, 6.4, 4.8 5.5 5.3 4.6 4.4, 4.9	6.8, 6.9, 6.2, 6.8, 7.8 6.4 6.1, 5.7, 6.2,			. . . . .
10 10 10 10 10	. S . . .	7.0 6.8 6.6 6.8 6.9 7.2, 7.2, 6.9, 7.0, 7.0,	7.1, 7.6 7.4 7.1 7.8 7.3 7.1, 7.8, 7.4, 8.0, 7.4,			. . . . .
10	.	7.2 7.4	7.6 7.8			.
10	.	6.8 7.1,	7.6 7.9,			.
10	.	6.9 7.2	7.6 7.9,			.
10	.	6.8	6.2			8 8 6,

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1882phae.proj..850F

10h

	1855 Ra	1855 Ded	1900 Ra	1900 Ded	No Dup	Mag Dup	Spectrum	No Calc	No Lines
10 13.5+69 16m									
7/7 10	.0+69 29	10 13.4+69 15	568.	6.0	I		495, 435, 308, 800, 1065, 1113, 1073, 1233,		7, 7, 4, 4, 10, 7, 8, 8
10 13.2+48 55	.1+84 17	10 16.8+84 4	234	8.5	II		1074		2
	.4+49 8	10 13.2+48 55	1940	6.0	III		1073		3
10 13.8+54 18									
	.9+54 31	10 13.8+54 18	1266	7.0	II		1073, 1208		3 3
10 14.7+72 41	.0+72 34	10 14.7+72 41	486	8.4	III		1065, 1073, 1208		2 2 2
10 14.8+54 43	.1+54 56	10 14.8+54 43	1367	6.5	III		1073, 1208		3 3
	.5+85 58	10 19.9+85 45	160	8.5	III		1065, 1255		2 1
10 10.9+76 11									
	.5+76 24	10 15.9+76 11	886	7.7	I		435		4
	.8+81 33	10 17.2+81 42	937	7.9	I		495, 1065, 1074, 1116, 1255,		1 3 3 2
10 16.1+75 18									
	.1+75 31	10 16.1+75 18	412	8.2	III		1208		1
	.0+83 18	10 19.0+83 4	297	5.2	I		458, 495, 435, 1065, 1233, 1074, 1116, 1255,		4, 8, 7, 5, 7, 3, 3
10 16.9+66 5	.4+85 8	10 20.8+84 55	161	7.5	III		1065, 1074, 1116, 1255		2 2 2 2
	.6+66 18	10 16.9+66 4	664	8.0	I		495, 496, 435, 436, 508, 500, 1065, 1065,		6, 8, 7, 8, 8, 5, 8, 6

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10h

K Line	S Line	Brightness	Ca Brightness	Mean	Residuals	Iris Remarks
10,5-10, ÷,2 10,5-5-	S . . . S S S S	6.2 6.3 6.7, 6.7, 5.4 5.9, 5.8, 5.7,	5.8, 5.8, 6.2, 6.1, 5.9, 5.8, 5.8, 5.5-			. . . . .
10	=	7.0,	5.2,			. 1
10,	S	6.6 6.9,	5.9 6.3,			.
10, 10,	S S	6.8, 6.6,	6.3, 6.4,			. .
10 10 10	. . .	7.3, 7.1, 6.9 7.3,	7.2 7.5 - 7.3, 7.4 7.8,			. . .
10, 10	S S	6.7 6.5- 7.0 6.8	6.2 6.5 - 6.3 6.6,			. .
10 .	. .	7.3, .	8.8 9.1, .			. .
10,	.	.	.			.
8 10, 2.5, - 10	. . S . .	6.9, 7.1, 6.9, 6.8,	7.9, 7.9, 7.4, 7.5,			. . . 96,
.	.	7.0 7.1	7.7 7.8			.
10 10, 10, 10, 10, 10, 10 10 10	. . S S . S S S	5.5 6.3, 5.2, 4.5, 4.4, 4.3, 4.2, 4.5, 4.4,	4.3 6.6, 6.0, 5.2, 5.6, 6.3, 5.2, 5.2, 5.3,			. . . 86, 90, . 95, 97,
10, 10, 10 10	. . . .	6.6, 6.6, 6.8 6.3 6.9, 6.6,	8.2, 8.0, 7.9 8.0, 7.6 7.9			. . . 98,
. 1, 2, . . , , . .	. . . S S . S S	. 5.5, . 5.8, 6.2, 6.0, 5.3 .	. 6.0 . 5.2, 5.6, 5.3 5.2, .			13 0 . . . . .

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10h

	1855 Ka.	1855 Wed.	1900 Ka.	1900 Wed.	No Mag nM	Mag nM	Spectrum	No Plate	No Lines
m 15									
10 19.0+68 10	.1+68 24		10 19.0+68 10		603-	7.2	I	485,	4
16									
10 19.7+53 8	.8+53 22		10 19.7+53 8		1404	7.8-	III	1073,	2
10 20.0+54 54	.1+55- 8		10 20.0+54 54		1390	7.0	III	1073, 1208,	2,1
	.8+82 46		10 23.4+82 32		307	8.2	II a	1065, 1233, 1074, 1116, 1258, 1256,	2 2 6 2 4 2
10 21.1+60 5	.1+60 19		10 21.1+60 5		1263	6.5-	III	1073, 1074,	2 3
10 21.5+63 24	.3+63 38		10 21.5+63 24		901	7.5-	I	1065-	4
10 21.9+49 19	.1+49 33		10 21.9+49 21		1961	6.2	II	1073	2
10 23.2+73 50	.5+74 4		10 23.2+73 50		436	7.0	III	1065-, 1113, 1073, 1233, 1074, 1208,	2, 2, 2 2 3
10 22.9+66 8	.6+66 22		10 22.8+66 8		671	6.6	III	1065- 1073.0 1073.5 (a) 1074, (b) 1208,	2 2 2 1 2 2
10 23.7+74 18	.9+74 32		10 23.7+74 18		437	7.8	II	1113, III 1073, I 1208,	2 1 4

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K Line	L Line	Brightness	Cor. Brightness	Mean	Residuals	No. Remarks
.	.	6.4,	5.9,			.
10	.	6.9 7.1	6.4 6.6			.
10 .	. .	7.2 7.0 7.4 7.1,	6.7 6.8 6.9 6.9,			. .
10 10 10 10 10 10	. . . . . .	6.6, 6.9, 6.5, 6.7, 6.5, 6.7,	7.1, 7.8, 7.4, 7.3, 7.3, 8.0,			860, ...
10 10	. S	6.9 6.7 7.1, 6.9,	6.6 6.2 6.8, 6.4,			. .
.	.	6.8	6.6			.
12,	S	6.7	6.1			.
10 . 10 10 10 10	. . . . . . S	7.0 7.0 6.9 7.1 6.9 6.7 7.3, 7.3 7.2, 7.5, 7.2, 7.0,	7.3 7.2 7.2 7.2 7.0 7.3 7.6, 7.5, 7.5, 7.6, 7.3 7.6			. . . . . .
10 10 10 . 10 10	. . . .	6.9 6.9 7.2, 7.2, . . 6.8 6.7 7.1, 7.0	6.8 6.8 7.1 7.1, . . 6.5 6.9 6.8, 7.2			. . . . . .
10 . .	. . .	7.1 7.0 7.2, 6.8,	7.3 7.3 7.5, 7.4,			. . .

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10 h

	1855 Ra. rlec.	1855 Ra. rlec.	1900 Dec.	1900 Dec.	No Mag.	Spectrum	No Plate	No Lines
m								
20	10 23.4+63 51							
	.2+64 5	10 23.4+63 51	788	7.5	III	1073, 1208,		2 2
	10 23.6+64 45							
19	.4+64 89	10 23.6+64 44 45	789	6.2	I	495, 435, 508, 500, 1065, 1073, 1073, 1233, 1074,		5, 6, 4, 6, 8, 7, 8
	10 23 H+55 20							
	.5+55 34	10 23.4+55 20	1394	7.4	~~II~~	508, 1208,		~~2, 2~~
20	.8+81 14	10 25.7+81 1	848	6.2	III	495, 1065, 1113, 1233, 1074, 1208, 1116, 1255,		2 2 3 2 3 3 3 2
	10 24.2+66 49							
	.9+67 3	10 24.2+66 49	658	7.2	~~I~~	~~1073, 1074, 1208,~~		~~2, 1 2~~
	10 24.0+51 31							
21	.2+51 45	10 24.0+51 31	1604	6.6	II	1073		2
	10 24.0+51 5							
	.2+51 19	10 24.0+51 5	1605	6.2	II a	1073, 1208		2 2
	10 24.3+56 29							
	.4+56 43	10 24.3+56 30	1459	4.7	II a	495, 435, 1073, 1233, 1074, 1208, 508 II		2, 4, 3 3 3 2, 2
	10 26.0+77 14							
	.9+77 28	10 26.0+77 14	404	7.8	III	1113, 1074,		2 2
22								
	.4+82 20	10 27.6+82 6	308	7.7	III	1255		1
	10 26.3+74 21							
	.4+74 35	10 26.2+74 21	438	7.4	II a	1065, 1113, 1073, 1233, 1074, 1208, 1162,		2, 1 6 5 4 4 5
	10 26.5+76 14							
67	.6+76 28	10 26.6+76 14	393	8.0	III	441, 495, 435, 435, 308, 500, 1065, 1065		2, 2, 2, 2, 3, 3 2
23								
	10 28.4+78 36							
24	.1+78 50	10 28.4+78 36	354	7.8	III	1065, 1113, 1074, 1208,		2 2 3 2
	10 27.5+69 22							
	.1+69 36	10 27.5+69 22	876	8.2	II	1073		2
	.0+82 41	10 29.5+82 27	310	9.0	III	1074		2
	10 27.5+54 0							
	.6+54 14	10 27.5+54 0	1381	6.8	I	508, 500, 1073, 1208,		3, 4, 4

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1882phae.proj..850F

10 h

K Line	S Line	Brightness	Cu Brightness	Mean Residuals	No Remarks
10, 10	..	7.1, 7.4, 7.4,	6.9 7.2, 7.5,	..	
5, 3, 10, 10, 10, 5, 2, 10	..... S S S	6.5, 6.3, 6.8, 6.9, 6.2, 6.1, 6.3 6.0,	5.9, 5.6, 6.1, 6.4, 6.0, 5.9, 5.7, 5.6,	.....	
10, 10	..	6.4, 7.0, 7.2,	6.3 6.8 7.0,	..	
10, 12, 10 10 10 10, 20, 10,	.. S . S S S .	6.4 6.8, 6.2, 6.4, 6.7, 5.9 6.0, 6.5 6.8 6.3 6.6 6.1 6.4,	6.9 7.3, 7.1, 7.1, 6.6 6.7, 7.7 8.0 6.7 7.0, 6.7, 7.0,	 964,	
10	..	6.9 7.1, 6.8,	6.8 6.6 6.5, 7.0,	936,	
10	.	7.0	6.4	.	
10 10	..	6.7, 6.8	6.1, 6.5,	883, .	
10, 10, 12, 10 10 10 10	S, . S S . . .	6.2, 6.0, 6.0, 5.8 5.7, 5.7, 6.3	5.4, 5.1, 5.6, 6.2, 5.7, 5.6, 5.3	131, . 871, 894, 906, 935,	
10, 10	..	7.0 6.9 7.3, 7.2	7.5 7.3 7.8, 7.6,	..	
.	.	6.7 7.0,	7.5 7.8,	.	
10, 5, 10, 10, . . 10	. S . . . S .	6.7, 6.7, 6.9, 6.9, 6.7, 6.3, 6.6,	7.0 6.9, 7.2, 7.0, 6.8, 6.9, 6.7,	871, ...	
10, 10, 10, 10, 10, 12, 10 .	. . . S S, S S S	6.0, 6.0, 5.9, 5.9, 6.3 6.4 6.7 6.7 6.4, 6.4, 6.2, 6.2, 6.5 6.6, 6.5, 5.8 .	5.9 6.1 5.9 5.9 6.3 6.3 6.2 6.3, 6.5, 6.2, 6.2, 6.5, 6.5, 6.3, .	140, 153, . 187, 841, .	
10 10 10 10	. . S .	6.9, 7.0, 6.7, 6.9, 7.0,	7.6 7.7, 7.6 7.2, 7.9 8.0	. . . .	
10	.	7.2,	7.2,	.	
10	.	7.1,	8.0,	.	
. 10, . .	. . . S	7.0 7.0, 6.5, 6.3,	6.0, 5.9, 6.0, 6.1,	156, . .	

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1882phae.proj..850F

10h

	1853- Ranked	1855- Ranked	1900 Dm	1900 Dm	No Mag Spectrum	No Plate	No Lines	
m 25-								
10 28.8+69 26	.4+69 40	10 28.8+69 26	579	7.9	II	1065-	2	10
10 28.7+57 36	.8+57 50	10 28.8+57 36	1277	8.0	II a	495, 435, 508, 500, 1073, 1233, 1074, 1208,	2, 1, 8, 4, 7, 8, 7	10, 10,
26								
10 30.8+76 58	.8+77 12	10 30.8+76 58	405-	8.3	I	1113, 1208,	3 3	
10 30.1+52 38 27	.3+52 52	10 30.1+52 38	1496	6.9	I	1208	4	
	.4+81 59	10 32.4+81 45	347	8.4	II	1074,	2	10
10 31.0+56 57	28.1+57 11	10 31.0+56 57	1178	6.5-	III	1074, 1208,	2 2	10
10 32.7+77 45	.6+77 59	10 32.7+77 45	406	8.0	I	1065, 1113, 1074, 1208, 1255-	4 2 4 3-4	10
10 31.9+60 38	.9+60 52	10 31.9+60 38	1274	6.4	II	435- 1073, 1233, 1074, 1208,	2 2 1 3 2	10, 10
69. 10 32.5+70 40	.9+81 11	10 33.6+80 57	349	6.2	I	435, 441, 495, 435, 508, 520, 509, 1065-, 1113	4, 4, 8, 6, 5-, 3, 8, 5-	10, 1
	29.1+70 54	10 32.5+70 40	620	7.7	II	1065, 1074,	2 3	10
10 33.3+74 18	.6+74 32	10 33.2+74 28	440	7.3	II	1073, 1233, 1208,	2 2 2	10 10

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K Line	S Line	Brightness	Cor Brightness	Mean	Residuals	No Remarks
10	.	7.0	7.0			.
10, 10, 10, 10, 10, 10, 10, 10, 8	. . . S S . S S	6.9, 6.1, 6.5, 6.5, 6.9, 5.9, 5.6, 5.1,	5.2, 5.2, 5.6, 5.5, 5.6, 5.3, 5.0, 5.6,			132, . . . 879, . . .
. .	. .	6.9, 7.0,	7.3, 7.8,			. .
.	.	6.7,	6.4,			.
10	.	6.8	7.6,			.
10 10	. .	6.9 6.9 7.1, 7.2	6.3 6.8 6.5-7.1,			. .
. 10 . . .	. . . . .	6.7, 6.9, 7.0, 6.6, 7.0,	7.3, 7.4, 7.4, 7.5-7.3,			. 831, . . .
10, 10 . 10, 10,	. . . S .	6.9, 6.8, 6.9, 6.5, 6.9,	6.1, 6.5-6.4, 6.9, 6.9,			. . . 914, .
. 10, 1, 2, 2, . . 2, .	. . S . . . . S .	6.5-6.5, 6.9, 6.5-6.6, 6.9, . 5.7 .	7.0, 6.4, 6.2, 7.0, 7.2-6.6, .			. . . . . , . , . . .
10 .	. .	7.0, 6.9,	7.1, 6.8,			. .
10 10 10	. . .	7.0, 7.3, 6.5-	7.3, 7.4, 7.1,			. . .

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1882phae.proj...850f

10h

	1855 Ra	1855 Dec	1900 Ra	1900 Dec	No Mag	No Mag	Spectrum	Rel Cat	No Lines
30	10 32.9+54 10m								
	.1+54 24	10 33.5+54 12	1384	6.0	III		1073, 1208,		2 2
31	10 34.5+77 57								
	.4+78 11	10 34.5+77 57	359	7.0	I		496, 1065, 1113, 1233, 1074, 1208, 1116, 1255, 435		4 4 5 4 6 5 4 6 4
32	10 34.8+68 57								
	.5+69 11	10 34.7+68 58	583	6.5	III		435, 1073, 1233, 1074, 1208, 1116, 1255, 1162,		2 2 3 3 1 1 3 3
81	10 35.1+66 14								
	.0+66 28	10 35.2+66 14	678	3.2	III		508, 500, 1073, 1073, 1233, 1233, 1074, 1074,		3, 2, 3 1 2 2 2 3
	10 35.1+53 30								
	.3+53 44	10 35.1+53 30	1427	7.0	II a		1208,		2
83	10 35.9+69 35								
	.6+69 49	10 36.0+69 37	586	4.7	III	III 495	435, 508, 500, 1073, 1233, 1074, 1208, 1116		2, 3, 2, 3 2 3 2 2
33									
	.4+86 8	10 40 34.8+85 51	574	15.4	8.2	III	1065, 1074, 1255, 1256,		2 2 3 2
34	10 36.9+51 20								
	.1+51 34	10 36.9+51 20	1621	6.5	III		1208,		2
	10 37.5+57 43								
	.6+58 58	10 37.4+57 43	1286	5.8	I		508, 500, 1073, 1074, 1208,		6, 6, 7 8 8

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1882phae.proj..850f

10h

K Line	S Line	Brightness	Cor Brightness	Mean Residuals	No Remarks
10 10	. S	6.5 6.5 7.0 6.6	6.3 6.3 6.5 6.5		..
4 . . 10 . . . 2 .	. . . . .	6.9, 6.5, 6.4, 6.9 6.4, 6.4, 6.8, 6.8, 6.4 7.1, 7.1, 6.9, 7.3, 6.8, 7.3, 6.9, 6.8, ?			. . . . .
10, 10 10 10 . . 10 10	. . S S . . S S	6.8 6.5 6.6 6.3 6.5 6.6 6.3 6.5 6.9 6.9 7.0 6.6 6.8 6.9 6.6 7.0	6.0 6.5 6.4 6.1 6.8 6.1 6.0 6.3 6.4 6.9 6.8 6.4 7.1 6.4 6.3 6.8		.881, . . 938, . . .
10, 10, 10 . 10 10 10 10	S . S S . . . S	6.6 6.8 6.3 6.6 6.9 7.1 6.6 7.0 6.0 6.3	6.0 6.1 6.2 6.3 5.7 6.3 6.4 6.5 6.7 . . 6.0		 926
10	.	6.7	6.5		929
. 10, 10, 10 10 10 20 10	S S . S . S . .	6.6 6.0 6.7 6.8 6.2 6.2 5.7 6.0 6.0 7.0 6.4 7.0 7.1 6.5 6.6 6.0 6.5 6.5	5.6 6.3 6.3 6.3 6.1 5.6 6.4 5.6 6.0 6.6 6.6 6.6 6.5 5.7 6.9 6.1		. . . 882, 895, 910, 941, .
10 10 10 10	. . S .	6.9 7.1, 6.9 . .	8.7 8.9, 8.5 . .		. . . .
10	.	6.9 7.2,	6.6 6.9,		
. . 2 . .	. . S . .	6.5 6.6, 6.1 5.8, 5.8,	6.6, 6.5 5.7, 5.2 5.7,		. . . . .

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1882phae.proj..850f

10h

	1855- Ra	1855- Dec	1900 Ra	1900 Dec	No Mag	No Mag	Spectrum	Ins Plate	Ins Lines
10 38.2+67 56m	38.0	+68 10	10 38.2	+67 56	6.7	6.2	I	508,	4,
36									
10 39.8+57 26									
	.9	+57 40	10 39.8	+57 26	1290	6.8	I	1074, 1208,	5 2
10 40.9+77 24	37.0	+77 38	10 40.9	+77 24	410,	8.3	II	1113, 1074,	12
10 40.2+57 53	.3	+57	10 40.2	+57 53	1281	6.3	III	1074	1
10 40.9+66 8	.8	+66 22	10 40.9	+66 8	681	7.9	II	1208	2
38									
10 41.2+60 38	.3	+60 52	10 41.2	+60 38	1289	7.2	I	1074, 1208,	7 2
10 42.1+65 40									
80 39	.1	+65 54	10 42.1	+65 40	803	6.8	I	498, 508, 540, 1073, 1073, 1233, 1233, 1074, 6 3, 3, 6 5 4 5 6	
10 42.3+57 51	.5	+57	10 42.3	+57 51	1283	7.7	II	1074,	2
10 43.5+76 32									
88	.8	+76 46	10 43.5	+76 32	402	7.0	I	508, 520, 1065, 1113, 1074, 1208, 1116, 1233, 3, 3, 4 6 5 7 4 6	
10 42.9+64 19	.9	+64 33	10 42.9	+64 19	810	7.0	III b	1074, 1208	3 2

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1882phae.proj..850f

K Line	L Line	Brightness	Cor Brightness	Mean Residuals	Obs Remarks.
10,	.	7.0	6.5,		.
. 10	. S	6.7, 6.7,	6.1, 6.6,		.937,
. 10	..	7.2, 7.2	7.7, 7.6,		..
.	.	6.7 / 7.1	6.1 / 6.8		.
10	.	6.8	7.0		.
10 10	S .	6.5, 6.9 / 7.0,	6.0, 6.9 / 7.0,		..
... 10 . . 10 10	.....	6.6, 6.8, 6.7, 6.3, 6.3, 6.6, 6.4 / 6.0,	6.1, 6.2, 6.0, 6.2, 6.2, 6.3, 6.4, 3.7,		.....
10	.	7.1	6.8		907,
. . 10, 10, 10, 2, 10, 10,	. . . S . S . .	6.9, 7.1, 6.6, 6.5, 6.3, 6.5, 6.7, 6.5	6.9, 7.0, 7.1, 6.9, 6.6, 7.3, 6.7, 6.7,		.....
10 10	S S	6.5 / 6.7 6.5, 7.0,	6.1 6.8 6.4, 7.1,		923, .

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1882phae.proj..850F

10h

	1855 Ra.	1855 Dec.	1900 Ra.	1900 Dec	No Mag	Spectrum	No Plate	No Lines.
m								
40								
41								
	10 45.8+79 52							
	.6+80 6	10 45.7+79 52	338	7.8-	III	1074, 1258-	3 1	
	10 44.9+56 46							
42	.1+57 0	10 44.9+56 46	1293	7.5-	I	1074, 1208	8 4	
	10 45.0+57 7							
	.2+57 21	10 45.0+57 7	1294	6.1	III	1208	3	
	10 45.2+59 51							
	.3+60 8-	10 45.1+59 51	1296	5.8	III b	1074, 1208, 1255-	2 3 3	
43								
	10 47.3+77 38							
	.4+77 52	10 47.2+77 38	412	6.8	III	1065, 1113, II 1074, 1208,	1 2 1 2	
	10 46.8+70 23							
	.6+70 37	10 46.8+70 23	634	6.0	III	1035, 1073, 1233, 1074, 1208, 1116, 1253-1162, 2, 3, 3, 3, 2, 2, 3, 2		
	10 46.5+53 6 }							
	10 46.5+53 3 }	.8+53 20 } .8+53 17 }	10 46.5+53 6 } 3 }	1439 40	6.2 6.0 }	III	1208	3
	10 46.7+52 36 44	0+52 50	10 46.7+52 36	1519	6.5-	II	1208	2
	10 47.6+55 7							
9	.8+55 21	10 47.6+55 7		1418	5.7	III	500, III b 1208,	1 3

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1982phded..thd..0005F

K Line	S Line	Brightness	Cor Brightness	Mean Residuals	No	Remarks
10 .	.	6.8 6.9 7.0, 7.2,	7.4 7.4 7.6, 7.4,		..	
..	..	6.7, 6.6,	6.1, 6.5,		..	
10	S	6.4 6.7,	6.3 6.6,		.	
12 10 10	. S S	6.3 6.5 6.4 6.5, 6.8, 6.7,	5.8 6.6 5.8 6.0, 6.8, 6.1,		911,940,	.
. 10 . 10	. . . .	6.9 7.0 7.3 6.8 7.2 7.2, 7.3, 6.8, 7.2,	7.5 7.5 7.7 7.8, 7.8 7.2, 8.1		. . .	
10, 10, 10 10 12 10 10 10	. S S S . S S .	6.6 6.3 6.4 6.1 6.4 6.2 6.3 6.4 6.9, 6.6, 6.7, 6.4, 6.7, 6.5, 6.4, 6.9,	6.2 6.4 6.3 6.0 6.8 5.8 6.1 7.0 6.5, 6.7, 6.6 6.3 7.1, 6.1, 6.2, 7.5,		. . . . . , 1031	
10	S	6.6 6.9	6.4 6.7		.	
10	.	6.7	6.4		.	
. 10	. S	6.9 6.5 7.3, 6.8	5.8 6.3 6.2, 6.6		. 932,	

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10 h

	1855 Ra	1855 Dec.	1900 Ra	1900 Dec.	No DM	Mag DM	Spectrum	Iris Plate	Iris Lines
45	10 49.3+80 20								
	.2+80 34	10 49.3+80 20	344	8.6	II	1074, 1116,		2 2	
46									
	10 50.6+80 13								
88	.5+80 24	10 50.6+80 13	347	7.8	II	1065, 1113, 1233, 1074, 1208, 1116, 1255, 1314,		3 3 2 2 2 3 3 3 2	
	10 49.8+65 5								
	.8+65 19	10 49.8+65 5	808	7.5	III	508, 1208,		2 2	
	.9+83 60	10 52.0+83 46	312	8.5	II	1065, 1074, 1116, 1255,		2 2 2 2	
47									
	10 50.4+58 2								
	.6+58 16	10 50.4+58 2	1290	7.3	III	1074, 1208, 1255,		2 2 2	
	10 51.5+76 16								
48	.0+76 30	10 51.5+76 16	406	7.3	II	1065, 1074, 1208, 1314,		2 2 3 2	
	10 52.0+78 19								
86	.2+78 33	10 52.0+78 18	361	6.2	III	508, 1065, 1113, 1233, 1074, 1208, 1116, 1255,		2 3 3 3 2 2 3 2	
	10 52.3+78 13								
	.6+78 27	10 52.4+78 13	368	8.0	II	1065, 1208,		2 2	
	10 51.9+70 21								
	.8+70 35	10 51.9+70 21	640	7.8	I	1255		4	
	10 52.4+77 10								
	.8+77 24	10 52.4+77 10	417	8.5	I	1255		4	
49									
	10 53.3+79 25								
	.4+79 39	10 53.3+79 25	348	7.3	II	1074, 1208, 1255		3 2 2	
	10 52.2+59 48								
	.4+60 2	10 52.2+59 48	1299	7.1	II	1074		2	
	10 53.0+75 20								
	.6+75 34	10 53.0+75 20	431	8.0	III	1208		2	

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1882phae.proj..850F

10h

K Lines	L Lines	Brightness	Cor Brightness	Mean Residuals	No Remarks
10 10	..	6.9, 7.3,	7.6, 7.7,		..
10. 10. 10 10 10 10 10 10 10 S . . . S S S .		6.6, 6.7, 6.8, 6.5, 6.7, 6.8, 6.5, 6.4, 7.0,	7.5, 7.5, 7.5, 7.2, 7.9, 8.0, 6.9, 7.0, 7.9,		. . . . . 960, .
. 10	..	6.8 7.0 7.1, 7.3,	6.1 7.1 6.4, 7.4,		..
. 10 10 10 10	. . . .	7.1, 6.9, 7.0, 6.8,	8.4, 8.1, 7.8, 7.8,		. . . 975,
10 10 10	. . .	6.8 6.7 7.1 7.0, 6.8, 7.5,	6.2 6.6 6.4 6.4, 6.7, 6.8,		. . .
10 10 10 10	. . S .	6.8, 6.5, 6.8,	7.3, 7.3, 7.3,		. . . .
10, 10, 20, 10 12 10 10, 10, S S S S . S .		6.8 6.1 6.6 6.0 6.3 6.6 5.9 7.1, 6.2, 6.4, 6.9, 6.0, 6.3 6.6 6.2,	7.0 6.7 7.1 7.3, 6.9, 7.0, 7.4, 6.5 7.3, 7.0 6.5 6.3 6.8 6.6,		. . . . 909, . . 954,
10 10	..	6.9, 6.8 7.1, 7.2,	7.5, 7.7 8.1,		..
10	.	6.9,	6.8,		.
10,	.	7.0,	7.3,		.
10 10 10	S . .	6.7, 6.8 6.7 7.0, 6.9	7.3, 7.9, 7.2, 8.1, 7.4,		. . .
10	.	7.0	6.5		.
10	.	7.0, 7.1,	7.7 7.8,		.

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10h

	1833 Ra.	1833 Dec.	1900 Ra.	1900 Dec.	No. Mag.	Spectrum	No. Plate	No. Lines
m								
50								
	.4	+86 20	10 57.0	+86 [illegible]	15.9	8.3	I	1074, 1255,	3	5
	.9	+64 12	10 53.8	+63 58	824	6.8	I	1074	5	
10 53.7+59 28	.9	+59 42	10 53.7	+59 28	1338	7.0	III	1074,	3	10
51										
10 55.0+76 27										
	.6	+76 41	10 55.0	+76 27	410	8.8	II	1065,	2	10
10 54.6+52 2	.9	+52 16	10 54.6	+52 2	1529	6.3	III	1208	I 1074 d	2	10
10 54.8+63 58	.9	+64 12	10 54.8	+63 58	824,	6.8	I	508, 500 I, 1208, I 1116, I 1255, I 1162,	4, 4, 6, 6, 6, 5	10, 10
52										
10 55.3+69 45	.2	+69 59	10 55.3	+69 45	397	8.2	II	1074	2	10
10 55.6+70 56										
	.5	+71	10 10 55.6	+70 56	655	7.9	dv I	1074, I 1255	3 2	10
10 56.7+81 35	.5	+81 49	10 56.7	+81 35	359	8.2	II	1074, III 1255,	2 2	10 10
10 56.0+75 59	.6	+76 13	10 56.1	+75 59	411	8.0	III	1208	3	10
10 55.8+56 56										
53	.1	+57	10 10 55.9	+56 55	1302	2.3	I	508, 500, 1074, 1208, 1116, 1255, II 1162	1, 1, 1, 9, 12, 9, 9, 9	1,
10 56.3+59 13										
	.5	+59 27	10 56.3	+59 13	1345	6.6	III	1074, 1208	2 2	10 10
10 56.8+70 35										
	.7	+70 49	10 56.8	+70 35	645	6.3	III	1073, 1074, 1208, II 1116, 1255	2 3 2 1 3	10 10
10 56.6+55 34	.9	+55 48	10 56.6	+55 34	1436	7.5	II	1208	3	10
54										
10 57.7+77 0										
	.2	+77 14	10 57.7	+77 0	419	8.4	II	1065, 1074, 1208, 1314,	2 2 3 2	10 10
	.2	+83 32	10 58.9	+83 18	318	8.2	III	1255	3	10
10 57.6+62 17										
	.8	+62 31	10 57.6	+62 18	1161	2.0	bc III	508, 500, 1074, 1208, 1116, 1255, II 1162,	2 2 2 3 3 3 2	10, 2

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K Line	S Line	Brightness	Cor Brightness	Mean	Residuals	No. Remarks
.8	..	6.9, .,	8.6, .,			..
~~.~~	~~.~~	~~6.1~~	~~5.7~~			.
10	S	6.9 7.2,	6.3 6.6			.
10	.	6.9	7.4,			.
10	.	6.8 7.1	6.5 6.8,			.
10, 10 . . 2, 2	. . S S . .	6.9 7.0 6.2 (6.1), 6.3, 6.2, 6.5	6.2, 6.2 6.3 (6.0), 5.6, 5.7, 6.1,			......
10	.	7.0	6.9			.
10, .,	..	6.7, 5.5,	6.6, 5.3,			..
10 10	..	6.9, 7.1 7.3,	7.1, 7.8 8.0,			..
10	S .	6.7 7.0	7.5 7.8,			.
1, 2, ...	S S S S S S S	4.8, 4.4, 4.0, B, B 4.0, B	3.9, 3.4, 3.4, B, B, 3.3, B			....
10 10	..	6.9 7.3 7.0 7.3	6.3 6.7 6.9 7.2,			..
10 10 10 . 10	. S . . S	7.0 7.3, 6.6 6.9, 6.8 7.0, 6.7, 6.5 6.9,	7.1 7.4, 6.5 6.8, 7.2 7.4, 6.6, 6.3 6.7			.....
10	S	6.9,	6.7,			.
10 10 10 10	. . S .	6.9, 6.9, 6.8, 7.0,	7.2, 7.2, 7.6, 7.5,			....
10	S	6.8 7.0	7.8 8.0,			.
10, 2, 25, 12, 15, 12, 25,	S . S S S S S	5.2 6.7, 5.0 5.5, B, B, B, B, 4.0,	4.4 4.9, 4.1 4.6, B, B, B, B, 3.5,			10[illegible] 15.5 [illegible] 103 4,

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1882phae.proj..850F

10h

1883- 1883-
R.A. Dec. R.A. Dec. D m. D m. Spectrum. No Plate. No Lines. No mag

m
5-5

5-6

.2+86 26 11 2.5+86 11 161 7.2 II 1065, III 1233, I 1074, I 1116, I 1255, I 1256, 435 I 12 4 4 7 2 4

0.4+80 59
.4+81 13 11 0.4+80 59 360 8.6 I 1074 3
0 59.3+65 21
.4+65 35 10 59.3+65 21 81.4 7.1 I 1074, II 1208, II 1116, 4 3 2

5-7

5-8 .0+82 31 11 2.2+82 17 325 7.0 II 1065, 1233, 1074, 1116, 1255, 1256, 1162, 2 2 2 2 2 3 2

11 1.6+72 28
11 2.6+81 29
.5+72 43 11 1.6+72 28 29 375 7.0 I 1074, 1208, I 1116, II 1162, III 1314 3 6 3 2 2
.6+81 44 11 2.5+81 29 30 362 8.2 II 1065, III 1074, a 1255, 1256, 2, 2, 2, 2

11 2.5+78 19
.9+78 34 11 2.3+78 19 20 375 6.5 III 1065, 1074, 1208, 1255 2 2 1 2

5-9

11 2.3+53 21
.6+53 36 11 2.3+53 21 22 1466 7.2 III 1208 2

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1992phae.proj..850F

K Line	S Line	Brightness	Ca Brightness	Mean Residuals	Remarks
10 10 8 10		6.4	8.1		
		6.9	7.6		
10 10 10	S	6.7, 6.8, 7.0	6.5, 7.0, 6.4		
10 10 15 10 10, 2 10, 10	S	6.5, 6.8, 6.3, 6.6, 6.3, 5.9, 6.4	7.6, 7.1, 7.2, 7.6, 7.1, 7.2, 7.3		
10 10 10 10	S	6.6, 6.6, 6.5, 6.8, 6.9, 7.1	6.6, 7.1, 6.2, 6.8, 7.1, 7.3		
10, 10, 10, 10,		6.8, 6.4, 6.6, 6.8, 6.6,	7.8, 7.2, 7.5, 7.8,	9 6 3,	
10 10 10		6.9, 6.7, 6.8, 7.0, 7.3, 7.1, 7.2, 7.4,	7.6, 7.2, 7.8, 7.4, 8.0, 7.6, 8.2, 7.8,		
10		7.0, 7.3,	6.8, 7.1,		

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1882phae.proj..850F

11h

1855 1855 1900 1900 No Mag
Ha. Int. Ha. Int. n No. Int. Spectrum Notes No Lines

m
0

11 3.0+59.45

.3 +59 60 11 3.0+59 45 1351 7.3 III 1074 2 10

11 3.3+67 45

.4 +68 0 11 3.3 +67 45 632 6.5 I 5008, 5007, 1074, 1208, 1116, 1255, 1162, 4, 6, 8, 7, 7, 6 10, 10

11 3.3+58 24

.6 +58 39 11 3.3+ 58 24 1304 7.0 III 1074, 1208, 2, 1 10

11 3.8+61 18

.1 +61 33 11 3.8 +61 18 1223 7.3 II 1074 2 10

11 4.0+54 38

.3 +54 53 11 4.0 +54 38 1425 7.1 I 1208 6

11 4.9+79 26

.3 +79 41 11 4.9 +79 26 35-2 8.0 III ~~III~~, III 1074, 9 2

2

11 5.9+68 47

3 .0 +69 2 11 5.8+68 50 602 6.2 I 5008, 5007, 1074, 1208, 1255, 1162, I 1116 5, 3-6, 9, 7, 7, 6 7

11 5.7+54 41

.1 +54 56 11 5.7+54 41 1426 7.0 I 5007, 1208, 3 6

11 6.1+61 44

.4 +61 59 11 6.1+61 44 1226 7.9 I 1074, 1208, II 1116, 5-4 2 10

11 5.8+59 27

.1 +59 42 11 5.8 +59 27 1353 7.0 II 1116 2 10

11 6.7+69 18

.8 +69 33 11 6.7 +69 18 603 8.3 II 1074 2 10

11 6.9+67 52

4 .0+68 7 11 ~~7.3~~ 6.9 +67 52 635- 6.5- III 1074, 1208, 1255, 2, 3, 2 10

11 7.0+56 56

.3 +57 11 11 7.0 +56 56 1309 7.3 III 1208 2 10, 9

11 6.9+55 26

.3 +55 41 11 6.9+5526 1446 6.7 I 5008, 5007, II 1208, I 3, 2, 6

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1982phae.proj..850F

K Lines	H Lines	Brightness	Cor Brightness	Mean Residuals	Ab Remarks
10	.	6.9 7.0	6.4 6.8	.	
10, 10, 10, 5.2, 10, 5	.SSS.S.	6.8, 6.7, 5.8, 6.0, 6.0, 5.7, 6.2	6.3, 6.1, 5.6, 6.3, 5.5, 5.4, 6.0,	.....	
10.	..	6.9 6.9 7.0 7.2	6.3 6.8 6.4, 7.1,	..	
10	.	7.0,	6.5	.	
.	.	6.9,	6.7,	.	
. 10	..	6.6 7.0 7.0, 7.1,	6.4 7.6 6.4 7.7,	..	

.10.2 2 2 2	...SSS.	6.8, 6.9, 5.7, 5.9, 6.3, 6.0, 6.0	6.3, 6.3, 5.5, 6.2, 5.8, 5.7, 5.8,	.....
..	..	7.2, 6.4,	6.1, 6.2,	..
.10 10	...	6.5, 6.8, 6.9,	6.0, 6.8, 6.1,	...
10	.	7.1,	6.2,	.
10	.	7.0	6.8	.
10 10 10	.S.	6.8 6.6 6.7 7.0 6.9, 7.0,	6.6 6.9 6.4 6.8, 7.2, 6.7,	...
10,	.	7.0 7.2	6.9 7.1,	.
.10, .	..S	7.0, 7.2, 6.4,	6.0, 6.1, 6.2,	...

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1882phae.proj..850F

11h

1855 1855 1900 1900 No Mag
Rec. Dec. Rec. Dec. Plates Spectrum No Plates No Lines

m

5

11 7.8+55 56

.2+56 11 11 7.8+55 56 1508 7.5 II 1208, 2 10

11 8.9+78 51

72 83

11 8.4+71 49

.4+79 6 11 8.9+78 51 35-6 7.2 III 1065, 1233, 1074, 1208, 1116, 1255, 1314, 1256, 2 1 2 1 1 3 1 2 10

.4+72 48 11 8.4+72 33 5-26 7.0 I 1074, 1208, 1116, 1255, 1314, 1162, 4 5-3 5-4 3 .8

11 8.7+74 1

H

.6+74 16 11 8.7+74 1 456 6.5 III 1208 1

6

.5+84 8 11 11.0+83 53 25-2 8.4 II 1074, 2 10

11 9.9+65 27

7

.1+65 42 11 9.9+65 27 823 7.0 III 1208 1

11 10.3+75 54 .1+76 9 11 10.3+75 54 421 7.6 III 1208 1

11 10.3+69 45 .4+70 0 11 10.3+69 45 684 8.3 II 1074 2 10

11 10.1+59 40

.4+59 55 11 10.1+59 40 1362 8.5 I 1074 3

11 10.6+74 53

.5+75 8 11 10.6+74 53 438 7.4 II a 809, III 1208, 2 2 10

11 10.3+53 19

.7+53 34 11 10.3+53 19 1480 6.5 II 1208 3 10

11 10.5+60 28

.8+60 43 11 10.5+60 28 1318 6.7 I 1074, 1116, 1255, 1162 5-6 6 4 .2

8

11 11.6+60 49

.9+61 4 11 11.6+60 49 1235 6.5 III 1074, 3 10

9

11 12.6+75 37

.5+75 52 11 12.6+75 37 439 7.8 III 1268 2 10

11 12.8+76 43

.6+76 58 11 12.8+76 43 423 8.3 II 1074, 2 10

11 12 7+67 13

.9+67 28 11 12.7+67 13 691 68 I div I 1074, 1208, 1116, 1255, 1314, III 1162, 5 4 4 5-3 2 .N,

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1882phae..proj...850F

11 h

K Line	A Line	Brightness	Cor Brightness	Mean	Residuals	No	Remarks
10,	.	6.8,	6.6,				
10 10 10	S S	6.7 7.0 6.5 6.6 6.9 6.7 6.8 6.5 7.0, 7.4, 6.8, 6.9, 7.2, 7.0, 7.0, 6.9,	7.4 7.5 7.0 7.6 7.1 7.1 7.5 7.4 7.7, 7.9, 7.3, 7.9, 7.4, 7.4, 7.4, 7.8,				
8 10	S	6.5, 6.7, 6.6, 6.4, 6.9 6.7,	7.0, 7.2, 6.3, 6.3, 7.1, 6.7,			969,	1033,
.	.	6.8 7.2,	7.4 7.8,				
10	.	7.1,	8.3,				
.	.	7.0 7.1	7.2 7.3 7.8 7.9				
.	S	6.7 7.1					
10	.	6.9,	6.8				
.	.	6.9,	6.3,				
10, 10,	. .	7.0, 6.9 7.1,	6.3, 7.6 7.8,			162,	
10	S	6.5,	6.3,				
2 2	S	6.3, 6.5, 6.4, 6.7,	5.8, 5.7, 5.8, 6.2,				
10	S	6.7 7.0,	6.2 6.5,				
10	.	7.0 7.2,	7.1 7.9,				
10	.	7.0	6.3				
5 10	S	6.5, 6.5, 6.9, 6.6, 6.6, 7.0	6.2, 6.7, 6.3, 6.2, 6.5, 6.7,				

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1882phae.proj..850F

11h

1855 1855 1900 1900 No Mag
R.A. Dec. R.A. Dec. D.M. D.M. Spectrum, No Plate No Lines

m
10

11 13.1+62 43
.4+62 58 11 13.1+62 43 1172 7.3 III 1074 2 10

11

11 14.8+67 38
12 .0+67 53 11 14.8+67 38 692 6.2 II 1074, III 1208, III 1116, III 1255, III 1314, III 1162, 2 3 2 3 3 3 10
11 14.6+59 19
.0+59 34 11 14.6+59 19 1368 7.8 I 1074 3
11 14.7+62 54
.0+63 9 11 14.7+62 54 982 8.0 II 1074 2 10

11 16.0+77 56
.8+78 11 11 16.0+77 56 385 6.8 I 889, II 1074, II 1208, IIa 1255, IIa 1314, II 1256, III 1162, 3 3 2 3 2 2 2

11 15.7+59 1
13 .1+59 16 11 15.7+59 1 1369 7.8 II 1074 1

11 16.1+57 37
.3+57 52 11 16.1+57 37 1316 6.5 I 500, 1208, 1116, 1255, 1162, 4 3 8 6 6

14
11 16.9+64 53
.2+65 8 11 16.9+64 53 828 6.0, I 508, 500, II 1074, 1208, 1116, 1255, 1314, 8 8 8 9 7 8 7 10,

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1882phae.proj..850F

K Line	S Line	Brightness	Cor Brightness	Mean	Records	Remarks
10	.	6.7 6.9	6.3 6.6			-
10 10 10 10 10 10	. S . S S S	6.7 6.5 6.6 6.4 6.4 6.8 6.8, 6.8, 7.0, 6.7, 6.7, 7.2,	6.8 6.8 6.1 6.1 6.4 6.6 6.6, 7.1, 6.5, 6.4, 6.7, 7.0,			. . . . .
.	.	7.0	6.4			-
10	.	7.0	6.6			.
. 10 10 10 10 2.0 10	. S . S . S .	7.4, 6.6, 6.4, 6.7, 6.7 6.5, 7.0 7.4,	6.9, 7.0 7.3, 7.0, 7.3, 7.3, 7.4 7.8,			. . , 9.5 3, 10 0 1, . .
.	.	7.3	6.7,			-
. 2. 2. 2 .	. S S, . S	6.9 6.5 6.4, 6.3, 6.6,	6.9, 6.4, 5.3, 5.6, 6.0,			. . . . .
10, . . 2 2 2 .	. . S S . . S	6.7 6.6 5.8, 5.8, 5.9, 5.8, 5.9,	6.9, 5.8, 5.4, 5.9, 5.2, 5.3, 5.7,			. . . . .

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1882phae.proj..850F

11 h

1883 1883 1900 1900 No Mag

Ra. Sec. Ra. Sec. ° ′ ″ ° ′ ″ Spectrum. No Plate No Lines

m
15

11 19.5+81 6

16 .0+81 21 11 19.5+81 6 369 9.0 II 1074 2 10,

17

11 20.6+80 19

.2+80 34 11 20.6+80 19 356 8.4 IIa 1074 2 10

11 20.4+56 24

.8+56 39 11 20.4+56 24 1578 6.2 III 1116, 1255, 1162 III 2 3 2 10,

18

11 21.5+68 59

.8+69 14 11 21.5+68 59 608 8.2 II 1074 2 10

11 21.9+70 21

.9 .1+70 36 11 21.9+70 21 661 8.3 I 1208 4

11 22.9+82 39

.3+82 54 11 22.7+82 39 332 8.3 II 1074 2 10

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1882phae.proj..850F

K Line	L Line	Brightness	Cor Brightness	Mean Residuals	No Remarks
10	.	7.0	7.8		
10	.	6.7	7.4	9.3	
10, 10 10	. S .	6.8, 6.4 6.6, 6.7	6.9 7.3	5.5-5.6 5.8, 5.8, 6.2	...
10	.	7.1	6.9		
	.	6.8	8.2		
10	.	7.0	8.0		

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1882phae.proj..850F

h

11

1855 1855 1900 1900 No Mag
Ra. Dec. Ra. Dec. m.m. m.m. Spectrum Notes No Lines

20 .0+85 30 11 24.4+85 15 183 7.5 I 1065, 1074, 1116, 1258, 1256, 3 2 2 3 2 10

11 23.3+67 59
.6+68 14 11 23.3+67 59 644 7.3 III 1074 2 10
11 23.5+67 29
.8+67 44 11 23.5+6729 701 7.2 II 1074, 1208, 1314, 2 4 2 10 10
11 23.4+62 19
.8+62 34 11 23.4+62 19 1183 6.4 II 1208, 1116, 1258, 1314, 1162, 3 7 4 4 7 10 10

21

11 24.8+81 41
.4+81 56 11 24.9+81 41 373 6.2 I 49 57, 355, 500, 1065, 1233, 1074, 1116, 1255, 5 6 1 5 7 8 6 9
11 24.1+68 41
.4+68 56 11 24.1+68 41 645 8.2 II 1074 2 10
11 24.2+57 17
.6+57 32 11 24.2+57 17 1324 6.5 I 1116, 1255, 1162, 5 6 4 2

22

11 25.1+57 17
.6+57 32 11 25.1+57 17 1326 7.2 II 1116, 1162 2 2 10
11 25.5+69 54
100 .8+70 9 11 25.5+69 53 665 3.3 III 50 8, 500, 509, 1074, 1208, 1116, 1255, 1314, 1, 2, 2 3 3 3 3 3 1

11 25.7+60 15
23 .1+60 30 11 25.7+60 15 1330 6.8 I 1116, 1255, 1162, 5 5 4 10, 8

.8+86 25 11 28.3+86 10 170 7.0 II 1074, 1116, 1258, 1256, 2 2 4 2 10 10
11 26.7+61 37
24 .1+61 52 11 26.7+61 38 1246 6.0 II 1116, 1258, 1314, 1162, 3 2 3 2 10 10
11 28.0+81 22
.7+81 37 11 28.0+81 22 375 9.0 II 1074, 2 10

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1882phae.proj..850F

H Line	I Line	Brightness	Cor Brightness	Mean Residuals	Remarks
10 10 10 10 10	- - - S -	6.8 6.6 6.8 6.3 6.5- 6.8, 6.9, 7.0, 6.5- 6.8,	8.5- 8.1 8.4, 8.0 8.2, 7.1 7.9, 8.4,	- - - .988, -	
10	-	7.0 7.3	6.8 7.1,	.	
10 10 10	- - -	6.9, 6.9, 6.9	6.7, 7.2, 6.9,	. . 1000,	
10 10 10 10 10	S S - S S	6.3, 6.1, 5.8, 6.2, 6.3,	6.3, 5.3, 5.2, 5.9, 6.5,	.925, .966, .994,	
- 10 . . 2 . 2 2	- - - - S S S S	5.9, 5.8, . 5.6, 5.3, 4.8, 5.4 5.2,	6.4, 6.3, . 6.6, 6.1, 5.6, 5.9, 6.9	. . . . .	
10,	-	7.0,	6.8,	.	
- 2 -	S S -	6.5- 6.3, 6.5,	5.6, 5.6, 6.0,	. . .	
10 10	. .	7.0, 6.5-	6.1, 5.9,	. .	
. 10, 10, 20, 10, 10 10 10	- - - S S - S S	6.4 6.5- 6.5- 5.3 5.4 5.3 4.8 5.3 6.8 6.9 6.8 5.8 5.9, 5.9 5.3, 5.8,	6.0 6.0 5.3- 5.2 5.8 4.9 4.6 5.4 6.4, 6.4, 5.8, 5.7, 6.3, 5.5- 5.3, 5.9,	. 139, 163, 912, 942, 946, 967,	
10, 5- 10	S . .	6.7, 6.5- 6.9,	5.9, 5.9, 6.4,	. . .	
10 10 10 10	. . . .	6.8- . . .	8.2, . . .	. . . .	
10 10 10 10	S S S -	5.7, 5.5- 6.2, 6.0,	4.9, 4.9, 5.9, 5.5-	947, 962, 993, 1082,	
10	.	7.1,	7.9,	.	

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1882phae.proj..850F

h

11

1855 1855 1900 1900 No Mag
Ra. Dec. Ra. Dec. Diff. Diff. Spectrum No Plate No Lines

m

25

11 28.3+68 8

.6+68 23 11 28.3+68 8 650 8.7 III 1208 2 10,

11 28.4+65 48

.8+66 3 11 28.4+65 48 7.24 7.2 II 1208 2 10

11 29.2+81 50
11 29.4+81 51

25 .9+82 57 } 11 29.2 +81 50 }
26 1+82 65 } 29.4 +81 51 } 337-8 9.0 } II 1074 2 15,

11 29.8+70 8

27 .1+70 23 11 29.8+70 8 669 7.3 III 1074, 2 10

11 29.6+55 20

.1+55 35 11 29.6+55 20 1473 6.0 II 1314 3 10,

11 30.3+69 53

.6+70 8 11 30,2+69 53 670 5.2 III 1074, 1208, 1116, 1255, 1314, 1162, 2, 2, 3, 3, 2, 3, 3 2 10,

28

11 31.4+78 9

.5+78 24 11 31.4+78 9 392 6.2 III 1074, 1208, 1255, 2 2 2 10 10

29

11 32.1+63 15

.5+63 30 11 32.1+63 15 972 7.0, II 1116, 1255, 1314, 1162, 2 4 2 2 10 10

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1882phae.proj..850F

H Line	γ Line	Brightness	Cor Brightness	Means Residuals	No	Remarks
10,	.	7.0 / 7.2	7.3 / 7.5	.		.
10	.	6.8,	7.0,			.
15,	.	7.0	7.7			.
10	.	6.9 / 7.1,	6.8 / 7.0,			.
0,	S	6.5	6.0			.
10, 10, 25, 10, 10, 10 10 10,	. S S S. S S S .	6.9 6.8 5.7 6.0 6.0 5.6 5.8 6.2 / 7.2, 7.1, 5.9, 6.3, 6.2, 5.9, 6.2, 6.5	6.4 5.8 5.6 6.4 5.6 5.4 5.9 6.1 / 6.7, 6.1, 5.8, 6.7 5.8, 5.7, 6.3, 6.4,	. . . . , 98.6, 100.2, 102.7,		
10 10 10	. . .	6.6 6.5 6.8 / 6.9, 7.0, 7.2,	7.0 7.4 7.1 / 7.3, 7.9, 7.5,	. . .		
10 10 10 10	. . . .	7.0 6.9, 7.0 7.2 / 7.4, 7.5	6.3, 6.4, 6.8 6.8 / 7.2, 7.1,	94.9, . . .		

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1882phae.proj..850F

h

11

1855 1855 1900 1900 No Mag
Ra Dec Ra Dec 1900 1900 Spectrum, Notes, Lines

m

30

11 32.8+64 43
.2+64 58 11 32.8+64 43 857 7.7 III 1116, 1162, 2 3 10.

11 33.3+64 53
.7+65 8 11 33.3+64 53 843 6.7 I 1116, 1255, 1314, 1162, 8 6 7 6 55
11 33.6+76 5
.8+75 50 11 33.6+75 35 455 7.8, III 1208, 2 10,

31

11 33.8+62 57
.3+63 12 11 33.8+62 57 974 6.8 III 1116, II 1255, II 1314, 2 2 2 10, 10

11 34.0+58 31
.57+58 46 11 34.0+58 31 1331 6.3 I 809, 1116, 1255, 1314, 1162, 5, 7, 7 7 5

11 35.0+81 8
.9+81 23 11 35.0+81 8 384 8.5 II 1074 2 10,

33

34

11 37.0+67 18
.4+67 33 11 36.9+67 18 714 5.3 III 880, 809, 1116, 1255, 1314, 1162, 5, 2, 3 3 3 2

11 38.0+83 59
.7+84 14 11 38.0+83 59 260 8.4 I 1255 3
11 38.1+82 53
.9+83 8 11 38.1+82 53 336 7.7 II 1074, III 1255 2 2 10, 10

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1882phae.proj..850F

K Line	S Line	Brightness	Cor Brightness	Mean Residuals	No	Remarks
10	..	7.0 7.3, 6.9	6.3 6.6, 6.5	..		
5 5 2 5	S S S S	6.3, 6.5 6.3, 6.3	5.6, 5.9, 6.1, 5.9,	....		
10,	.	7.0 7.3,	7.7 8.0,	.		
10, 10 10	...	6.8 6.9, 6.9, 7.1	6.1 6.2, 6.4, 6.9,	...		
.....	.. S S S	6.9, 6.2, 6.0, 5.9, 6.4,	5.4, 5.3, 5.3, 5.5, 5.8,	.....		
10,	.	6.8,	7.6,	.		
10, 10, 10 10 10 10	.. S S S .	7.0 6.9 6.4 6.2 6.0 6.5 7.3 7.2, 6.8, 6.6, 6.5, 6.9,	6.3 5.7 5.8 5.8 5.9 6.2 6.6, 6.0, 6.2, 6.2, 6.4, 6.6,	..944, 955, 999, .		
.	.	6.8,	7.9,	.		
10, 10	..	6.8 6.8 7.0,	7.8 7.1 7.9,	..		

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1882phae.proj..850f

h
11

1855 1855 1900 1900 No Mag
Ra. Dec. Ra. Dec. Diff. Diff. Spectrum No. Plate No. Lines

m
35

36

11 38.9 + 73 42
.3 + 73 57 11 38.9 + 73 42 532 6.8 III 1208, 1255, 7314, 2 2 1 10 10

11 40.3 + 86 05
.4 + 86 20 11 40.2 + 86 5 1 7 2 8.2 III 1285, 2 10,

11 39.5 + 80 33
.6 + 80 48 11 39.5 + 80 33 363 9.0 II 1074 2 10,

11 39.5 + 70 29
.9 + 70 44 11 39.5 + 70 29 674 7.3 I 1116, 1285, 7314, 1162, 3 4 3 5

37

38

11 41.2 + 79 16
.4 + 79 31 11 41.2 + 79 16 374 8.7 II[a] 1208, 2 10

11 41.7 + 64 57
39 .2 + 65 12 11 41.7 + 64 57 851 7.1 I 1116, 1255, 7314, 3 4 4 10

11 41.5 + 56 12
.1 + 56 27 11 41.6 + 56 11 1544 5.7 III 1116 1285, 1314, 1162, 3 2 1 1 10 1

11 41.8 + 61 58
.3 + 62 13 11 41.8 + 61 58 1198 6.5 I 1116, 1285, 1314, 1162, 5, 6, 3 4 5

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1882phae.proj..850f

11 h

K Line	H Line	δ Brightness	Cor. Brightness	Mean.	Residuals	Remarks.
10 10		6.9 7.0 7.0 7.2, 7.4, 7.4,	7.6 7.0 7.3 7.8, 7.4, 7.7,			
10,						
10,		7.1	7.8,			
8	S	6.9, 6.7, 6.9, 7.0,	6.5, 6.5, 7.0, 6.9,			
10		7.0,	8.1,		9.39,	
10 10		6.8, 6.8, 6.7,	6.1, 6.3, 6.5,			
10 10	S	6.6 6.5 6.4, 6.9 7.0, 6.8 6.8, 7.3,	5.6 5.7 5.9 6.2 6.0, 6.0, 6.3, 6.6,			
5 10	S	6.4, 6.4, 6.6, 6.6,	5.6, 5.8, 6.5, 6.1,			

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1882phae.proj..850F

11h

1885 1885 1900 1900 No Mag
Ra. Dec. Ra. Dec. n210 n211 Spectrum. No Plate. No Lines

m
40

41

11 43.7+67 53

.2+68 8 11 43.7+67 53 662 7.0 III 1314, 1162, 212

42

11 45.2+83 13

.3+83 28 11 45.2+83 13 339 8.0 I 1065, 1074, 1116, 1253, 1256, 3 2 2 5 4

11 45.4+75 54

.8+76 9 11 45.4+75 54 434 7.3, II 1074, 1208, 1314, 2, 5 3

43

11 45.6+51 58

.2+52 13 11 45.6+51 58 1590 7.3 I 5 09, 4,

11 46.0+69 24

.5+69 39 11 46.0+69 24 628 7.0 II a 1116, 1255, 1314, 1162 2 6 6 5

44

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1882phae.proj...850f

11h

K Line.	H Line.	Brightness	Ca Brightness.	Mean Residuals.	No Remarks.
10 10	..	6.7, 7.1,	6.7, 6.9,		..
.10 10 10 10 10	....	6.8, 6.9, 7.0, 6.5, 6.5,	8.1, 8.0, 7.8, 7.5, 8.0,		...
10, 10.	.8.	.6, 6.9, 6.8,	.7.7, 7.3,		...
10,	.	7.0	5.3,		.
10 5 10 5	....	6.7, 6.5, 6.5, 6.8,	6.3, 6.2, 6.5, 6.6,		9.5, ..

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1882phae.proj..850F

h
11

1855. 1855 1900 1900 No Mag
Ra. Dec. Ra. Dec. n'00 n'00 Spectrum Notes No Lines

m
45

11 47.9+73 51 .4+74 6 11 47.9+73 51 47.5 7.5 III 1208 2

11 48.3+74 19 .8+74 34 11 48.3+74 19 47.6 6.7 II a 1074, 1208 1116, 1255, 1314, 1258, 2 2 3 2 3 3 2

46

11 48.6+54 15 .2+54 30 11 48.6+54 15 14.5 2.5 I 1218, 1314, 8, 12

11 48.8+72 28 .3+72 43 11 48.8+72 28 58.0 7.1 II 1314, 1256 2 1

47

11 50.3+67 49 .9+68 4 11 50.3+67 49 66.6 7.0 III 1255, 1314, 2 2

48

11 50.8+57 9 .4+57 24 11 50.7+57 9 1343 6.0 III 1116, 1255, 1314, 1162, 2 3 2 1

11 51.4+65 47 49.0+66 2 11 51.4+65 47 73.7 6.5 III 1116, 1314, 2 2

11 51.7+62 6 .3+62 21 11 51.7+62 6 1204 6.2 III 1116, 1255, 1314, 1162, 2 2 3 2

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1882phae.proj..850F

11h

L Line	S Line	Brightness	Cw Brightness	Mean	Residual	No	Remarks
10,	.	7.0 7.3,	7.6 7.9		.		
10, 10 10 10 10 10 10 10	. . S . S S .	7.3, 6.7, 6.4, 6.6, 6.4 6.4 6.2,	6.5, 6.8, 7.0, 6.4, 6.4, 6.7, 6.7,		16, - 9.31, - 9.78 -, 10.22,		
2,	S S S	4.3, 5.2, 8,	2.1 2.8, 8,		. . .		
10 .	. .	7.1, 6.7,	7.3 7.1,		. .		
10, 10	. .	7.0 7.2, 6.9,	6.7 6.9, 6.9,		. .		
10 10 10 .	S S . .	6.7 6.6 6.5 7.0 7.0, 6.8, 6.8, 7.4,	5.8 5.9 6.1 6.4 6.1, 6.1, 6.4, 6.8,		. . . .		
10, 10	. .	6.9 6.6 7.2 6.9	6.3 6.5 6.6, 6.8,		. .		
10 10 10 10	. . S .	6.7 6.7 6.9 6.8 7.0, 6.9, 7.1 7.1,	5.9 6.1 6.7 6.3 6.2, 6.3, 6.8, 6.6,		. . . .		

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1882phae.proj..850F

11h

1900 1855 1900 1900. No Mag
Ha. Nic, Ha. Nic, NPH. NPH Spectrum No. Plates. No Lines

m

5-0
11 52.8+81 11
11 52.8+68 22
.2+81 26 11 52.8+81 11 388 8.0 II 1255,1256, 2,2
.4+68 34 11 52.8+68 22 664 6.7 III 1255- 2

5-1

11 54.2+61 53
.8+62 8 11 54.2+61 53 1204 68 I 1314 3

5-2
11 54.7+80 9
.2+80 24 11 54.7+80 9 370 7.5- II 1074,1208,1116,1255,1256, 2,2,2,2,2
11 55.1+81 25
.6+81 40 11 55.1+81 25 389 6.2, III 1233,1074,1116,1255,1256,1162,1245,2 3,2,2,3,1,1

11 55.5+69 45
5-3 .1+69 60 11 55.5+69 45 636 7.0 II a 1255,1256,1162, 2,3,2

11 55.7+70 47
.3+71 2 11 55.7+70 47 598 6.5 I 5-09,1116,1255,1314,1256,1162, 5-,6,6,6,6,5-

11 56.2+79 38
.8+79 53 11 56.2+79 38 381 8.5- II 1074, 2

5-4
11 56.5+65 29
11 56.5+71 25
.2+65- 44 11 56.5+65 29 863 6.8 III 1116,1255-,1314, 2,2,26
.2+71 40 11 56.5+71 25 699 7.2 III 1256 2

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1882phae.proj..850f

K Lines	L line	Brightness	Corr Brightness	Means	Residuals	No	Remarks
10 10	..	69, 6.8,	76, 80,		..		
10,	.	7.0 7.2	67 6.9		.		
.	.	72,	69,		.		
10 10 10 10 10	.....	6.3, 6.9, 6.9, 6.8, 6.6,	69, 8.0, 6.2, 7.3, 7.6,		.....		
10 10 10 10 10 . .	. S S . S S .	6.7 6.2 6.6 6.3 6.0 6.3 6.2 7.0, 6.6, 6.9, 6.7, 6.5, 6.6 6.9	7.5 7.0 7.1 7.0 7.2 7.1 7.1 7.8, 7.4, 7.4, 7.4, 7.1, 7.4, 7.8,		.,918, .961, . . .		
10 10 10	. S .	66, 6.5, 6.9, 7.0,	6.4, 6.8, 6.8, 6.9,		958, . .		
10 . . 2 . .	. S . . S .	7.0, 6.2, 5.8, 6.3, 6.0, 6.4,	6.0, 5.8, 5.6, 6.4, 6.3, 6.3,		. . . . .		
10	.	6.9,	7.3,		.		
10 10 10	. . S	7.0, 6.9, 6.6,	6.4 6.5, 6.5, 6.5,		.989.		
10	.	7.0 7.2	7.7 7.6,		.		

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1882phae.proj..850F

11 h

1855 1855 1900 1900 do Neg

Ra. Dec. Ra 1860. Dec 1860 Spectrum No Lines. Do Lines.

m

5-5

11 57.8+78 15

.4+78 30 11 57.8+78 15 404 8.8 II^N 1074, 1256, 2 2

11 58.3+82 15

.9+82 30 11 58.3+82 15 355- 7.6 II 1074, 1116, 1258, 1256, 2 2 2 2

5-6

11 58.5+69 35

.2+69 30 11 58.5+69 35 638 6.6 III 1256 3

11 58.8+76 37

.8+76 5-2 11 58.8+76 37 439 7.7 I 1074, 1208d.v, 1255, 1314, 1256 3- 4 4 3- 2

5-7

11 59.5+66 54

.2+67 9 11 59.5+66 54 730 7.5- I 809 3

11 59.8+86 9

.4+86 24 11 59.8+86 8 176 5-7 II^a 1074, 1116, 1256, 1162, 3 3 2 2

12 0.2+74 0

.9+74 15- 12 0.2+74 0 484 7.2 II 1256 2

12 0.0+77 19

.7+77 34 12 0.0+77 19 460 7.4 II 1074, 1208, 1314, 1256, 1242^a 2 1 2 2

12 0.2+77 28

.99 .9+77 43 12 0.2+77 28 461 5.8 I^v 809, 536, 1074^a, 1208, 1116, 1255, 1314, 1256, 4 2 3 2 2 2 2 2

5-8

12 0.6+63 30

.3+63 45- 12 0.6+63 30 999 6.0 III 1116, 1255, 1314, 1162, 1 1 3 2

12 1.1+69 15

6 .8+69 30 12 1.1+69 15 644 7.0 II 1116, 1258, 1314, 1256^a, 1162, 2 2 2 3 2

1 ~~.9+78 34 12 1.2+78 19 378 6.5 III 1258~~ 2

5-9

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1882phae.proj...850

// h

K Lines	S lines	Brightness	Cas Brightness	Mean Residuals	No Remarks
10 10	..	7.1, 7.1,	7.6, 8.0,	..	
10 10 10 10	.. ..	6.7, 6.8, 6.7, 6.5- 7.2, 6.8, 6.8,	7.6, 7.4 7.5-7.8 7.8, 7.8, 7.6, 8.1,	....	
10	S	6.7 7.0,	7.0 7.3,		
10 10 10 . 10	.....	6.8, 6.6, 6.9, 6.6, 6.9	7.1, 7.4, 7.1, 7.1, 7.6,	...., 1005-	
.	.	7.2	6.0,	.	
10, 10 10 10	S S ..	6.2, ...	7.9, ...	925-, 1025- .	
10,	.	6.9,	7.4,	.	
10 . 10 10	.....	6.6, 6.5, 6.5- 6.7, 6.8,	7.0, 7.4, 7.1, 7.5, 7.5,	., ., ., 1043,	
10 10, 10, 10, 10, 10, 12, 10 10	.. S S	6.8 5.9 5.9 6.0 5.8 5-6.3-7 6.6 7.1, 6.1 6.2, 6.4, 6.2, 6.1, 6.0,	7.1 6.3 6.8 6.1 6.1 6.2 6.5- 6.1 7.4, 6.5, 7.1, 6.5, 6.5- 6.7, 6.8,	., 1.72, ., ., ., 998, 1007	
.. 10 10	.. S .	7.0 6.7 6.7 7.0 7.3 6.9, 7.0 7.2,	6.3 6.2 6.5-6.6 6.6, 6.4, 6.8, 6.8,	....	
10 10 10 10 10	... S .	6.9, 6.7, 6.8, 6.4, 6.9,	6.4, 6.4, 6.8, 6.6, 6.7,	..., 1010, .	
10	.	7.0 7.4	7.4 7.8,	.	

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1882phae.proj..850F

12h

1855 1855 1900 1900 No Mag
Ka.Dec Ka.Dec. NM. NM. Spectrum No Plate No Lines

0

12 3.1+56 1
12 3.2+56 1

.8+56 16
.9+56 163

12 3.1+56 1
12. 3.2+56 1

1568-9 80 835 V III 1314, 2

1

2

12 4.9+75 13
12 5.1+77 57

.4+75-28 12 4.9+75 13
.9+78 12 12 5.1+77 57

469 6.4 II 509 536, 1116, IIa 1255, 1314, a 1256, a 1162, a
406 7.0 III 1074 1208, 1255, 1314, 1256

32,2,2,2,4,3,3
2,3,2,2,3

10,10
10,10

3

4

12 6.5+82 16
12 6.6+85 38

.4+82 31 12 6.5+82 16
6+85-53 12 6.6+8538

356 6.7 III 1065 1233 / 1074, 1116, bd 1255, bd 1256, 1245, 1387, 22: d 22322
196 8.2 III 1074, I 1255, V 1256, 134

10 10
10,

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1882phae.proj..850F

K Line	H Line	Brightness	Cor Brightness	Mean Residuals	No	Remarks
18,	.	7.2	6.5-6.7,	.		
10,10 10 10 10 10 10 10	. . . . S S S	6.8,6.8,6.5-6.1,5.9,5.9,6.2-	6.1,6.9,6.4,6.2,6.3,6.5-6.4,	.161, .987, .996, 1036, 1024K		
10 10 10 10 10 10	. S . . S	6.6 6.5-6.7 6.9 6.7 6.9 6.8, 6.9, 7.1, 6.4,	7.0 7.4 7.0 7.5-7.5 7.3, 7.1, 7.2 7.7 7.7,	. . . . .		
10 10 . 10, 10 10, 10 10	. . . S . . S . .	6.6 6.8 6.6 6.3 6.0 5.8 6.2 6.3 6.8, 6.5-6.8, 6.5, 6.4, 6.9, 6.9,	7.5- 7.5 6.9 6.9 6.8 7.1, 7.2 7.5- 7.9, 7.4 7.4, 7.3, 7.1, 7.9, 8.1,	. . . . 968, 1015- . .		
. . 10	. . .	6.8 7.1, 6.7, 6.6,	8.4 8.7, 8.2, 8.6,	. . .		

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1882phae.proj..850F

12h

1855 1855 1900 1900 No Meas
Ra, nbs. Ra, nbs. Dec. Dec. Spectrum Plates No Lines

12 7.2+78 0
105 5 .0+78 15 12 7.2+78 0 411 7.3 I 5-0 0,5-09,536 1074 1208,1116,1255,1314,1256,3446 7 4 4 5-8

12 7.6+78 11
104 .4+78 26 12 7.5+78 10 412 5.1 V I I I V I I I V 5-08 5-0 0,5-09,536 1074 1208,1116,1255,1248,1314,56,78 8 6 8 3 8

6

12 8.8+84 4
12 9.0+79 0 .8+84 19 12 8.8+84 4 269 7.5- II 1255,1256, 2 2
12 9.2+66 40 .9+79 15- 12 9.0+79 0 387 9.1 II 1074 2
7 .0+66 55- 12 9.2+66 40 78-1 6.8 III 1314 3

12 9.8+54 0
.5-+54 15- 12 9.8+53 59 1504 6.7 III 1314 3

12 10.4+70 47
8 .2+71 2 12 10.0+70 45 610 6.0 III 1116,1255,1314,1256,1162, 3 2 3 3 2
12 10.4+57 35 .2+57 50 12 10.5+57 35 1363 3.3 I 5-09,546, 1248,1314,1256, 4 4 6,1 3 8

12 11.0+73 7
12 11.1+60 49 .8+73 22 12 11.0+73 7 549 6.5- III 1255,1314,1256,1162, 2 2 2 1
.9+61 4 12 11.1+60 49 1235- 6.5- II 1255- 2
9

12 11.8+80 41
12 11.8+80 41
109 .8+80 56 12 11.9+80 41 380 8.42 I 509,536, 1074, II a 1208, II a 1116, I 1255, V 1314, V 1162, II a 1242 4 4,5 1 5 6 5 2 5
.8+80 56 12 11.9+80 41 385 8.33

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1882phae.proj...850F

K Line	L Line	Brightness	Ca Brightness	Mean Residuals	Remarks
10 10 5 2 2	5 5	10 6.8 6.8 5.9 6.5 5.9 5.9 5.5	7.0 6.3 7.1 6.3 6.8 6.6 6.2 6.5 6.3		
10 10 5 2 10 2 2	5 5	6.8 6.0 5.8 5.5 4.9 4.7 5.0 7.0 4.6	5.9 6.0 5.3 5.8 5.8 4.8 5.3 5.4 5.7		
10 10	5	6.9 6.8	5.0 5.4		
10	5	7.0	7.5		
10	5	6.9 7.2	6.8 7.1		
10	5	6.9 7.0	6.7 6.5		
10 10 10 10 10	S S S S	6.3 6.2 6.4 6.3 6.4 6.4 6.9 6.6 6.8	5.9 6.0 6.5 6.6 6.3 6.3 6.2 7.0 6.9 6.7		
2 2 2	S S S	4.8 5.5 5.8 4.9 4.2	3.9 3.9 3.2 3.6 4.0		
10 10 10		6.3 6.6 6.2 6.9 6.6 7.0 6.5 7.1	6.3 6.9 6.7 7.0 6.6 7.3 7.0 7.2		
10		7.0	6.4		
10 10 10 10 5 10 10 10 10	S S S	10 6.7 6.0 5.8 6.0 5.9	6.8 7.3 6.4 6.4 6.4 6.9 6.6	9.6 9.3 1.0 3.0	

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12h

1855 1855 1900 1900 No. Mag.
Ra. Dec. Ra. Dec. nNO nNO Spectrum No Cat. No Lines

m
10

12 12.5+53 45

.3+54 0 12 12.5+53 45 15-10 6.1, III 1314, 2 10

12 13.4+69 21

.2+69 36 12 13.4+69 21 65-4 7.1 III 1256, 2 10

12

12 14.5+75 44

103 .3+75 59 12 14.4+75 43 4-0 5-8 I 509, 536, 1116 (1) 1116 (2) 1255, 1255 (2) 1218, 1314, 7-6, 6 7-6 8 5- 10 1.

13

12 15.6+66 57

.5+67 12 12 15.6+66 57 7-2 6.8 I 509, 1314, 1256, 4 6 6 10 2

12 16.0+58 25

.8+58 40 12 16.1+58 55 10-1 6.0 III 1314, 1256, 2 1 10

14

12 16.8+62 19

.6+62 34 12 16.8+62 19 11-7 7-5 II 1256 2 10

12 16.5+83 56

.9+84 11 12 16.5+83 56 2-4 7-2, III 1256 1

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L Sens	I Sing.	Brightness	Cs Brightness	Mean Residuals	No Remarks.
10	.	6.8, 7.1,	6.3, 6.6,		.
10	.	7.1, 7.3,	7.3, 7.5-		.
10	1. . 2. . . 2	S. S, S . S . S	6.0, 5.8, 5.2, 5.4, 5.2, . 6.8, 4.8,	5.8, 5.7, 5.1, 5.3, 5.3, . 5.0, 5.2,	. . . . .
10 2.	. S S	7.1, 6.4, 6.7	5.9, 6.3, 6.8,		. . .
10.	. .	6.4, 7.0, 6.5-	6.0, 6.6, 6.3,		. .
10	.	7.0	6.9		.
.	.	6.7, 7.0	8.3, 8.6	8	.

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1882phae.proj..850F

12 h

1855 1855 1900 1900 No May
Ra. Dec. Ra. Dec. 1900 1900 Spectrum No Plate. No Lines

15

12 17.6+62 2

.4+62 14 12 17.6+62 2 1129 7.3 III 1256 2 10

16

12 19.2+52 5

17 .0+52 20 12 19.2+52 7 1626 5.2 a: III 509, 1314, III b 2 3 10

12 20.3+57 19

12 20.3+61 14

12 20.4+64 22

18 .1+57 34 12 20.3+57 19 1373 6.4 III 1314 2 10

.2+61 29 12 20.3+61 14 1294 7.3 II 1256 1

.3+64 37 12 20.4+64 22 896 6.0 I 509, III 1314, III 1256, 3 3 3 10

19

12 20.7+83 59

12 20.4+85 52

12 21.8+55 43

.3+84 14 12 20.7+83 59 2716 7.9 II 1074 1255, 1256, 2 2 2 10 10

.3+86 7 12 20.4+85 52 180 8.4 I 1255, 3

.6+55 58 12 21.8+55 43 1533 7.0 I 509, 1314, 3 3

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1882phae.proj..850F

K Lines	H Lines	Brightness	Cor Brightness	Means, Residuals, Asymmetr
10	-	6.8 7.0,	6.7 6.9,	.
10 10	S	6.9 6.0 7.1, 6.2,	5.4 5.4 5.4 5.6,	160, 992,
10	-	7.0 7.5	6.6 7.1,	.
.	-	6.9,	6.8,	.
10, 10,	S S	7.5, 6.6 6.5 6.9, 6.8,	6.2, 6.4 6.5 6.7, 6.8,	. . .
10 10 10	. . .	6.9, 6.8, 6.7,	8.1, 7.9, 8.3,	. . .
.	.	.	.	.
. .	. .	7.2, 6.8,	5.6, 6.3,	. .

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12h

1855 1855 1900 1900 No Mag
R.A. Dec. R.A. Dec. DM. DM. Spectrum No Plate. No Lines

12 22.1 + 72 29
20 .1 + 72 44 12 22.1 + 72 29 565 6.5 III 1116, 1314, 1256, 232 10 10

12 22.9 + 56 15
.7 + 56 30 12 22.8 + 56 16 1598 6.0 III 1314 2 10,

21

22

12 24.8 + 67 27
.8 + 67 42 12 24.9 + 67 27 746 6.5 II 1256, 2 10

23
12 25.3 + 58 57
.2 + 59 12 12 25.3 + 58 57 1444 5.7 I 509, 546, 1314, 1256, 7, 5, 6 8 8.
12 25.4 + 52 5
.2 + 52 20 12 25.3 + 52 5 1631 6.5 II 1314 2 10
12 25.4 + 59 19
.3 + 59 34 12 25.4 + 59 19 1446 6.2 III 1256 2 10
12 25.3 + 82 33
.8 + 82 48 12 25.3 + 82 33 365 8.0 III 1074, 1255, 1256, 1245 2 2 2 2 10, 10,
12 25.8 + 69 45
.8 + 70 0 12 25.7 + 69 45 700 4.7 III 1314, 1256, 1 3 . 10
12 26.1 + 53 37
23.9 + 53 52 12 26.2 + 53 37 1554 6.5 II 1314 2 10

24
12 26.4 + 66 27
.4 + 66 42 12 26.4 + 66 27 763 6.5 I 509, 546, 1314, 1256, 1256, 4, 2, 5 4 3 10. 5
12 26.6 + 71 52
.7 + 72 7 12 26.7 + 71 52 569 7.0 III 1256 2 10

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1882phae.proj..850F

1882phae.proj..850F

L Lines	F Line.	Brightness.	Cor Brightness	Hpaw	Residuals.	Nitrogen
10 10 10	. 5 .	6.8 6.9 6.4 / 7.1 6.9 6.4	6.5- 6.9 6.5- / 6.8 7.1 6.8			...
10 /	.	6.9 / 7.2	6.4 / 6.7			.
10	.	7.0 / 7.3	7.3			.
8. 2 2	5 5 5 5	6.6 6.6 5.7 5.3	5.1 5.0 5.3 5.1			....
10	.	7.0 /	6.4 /			.
10	.	6.4 / 6.8	6.2 / 6.3			.
10 10 10 10	....	6.5- / 6.6 6.5 6.5- 6.8 /	7.5- / 7.6 7.4 7.9 7.9 /			.971..
. 10	. 5	6.2 6.0 / 6.8 6.5-	6.3 6.3 / 6.9 6.8 /			.1011 /
10	.	6.8 /	6.5- /			995-
10. 5 5 .	.....	7.0 7.1 6.5 6.5- .	5.8 5.8 6.4 6.6 .			.....
10	5	6.4 / 6.7	6.8 / 7.1 /			.

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1882phae.proj..850F

12h

1855 1855 1900 1900 No Mag

Ra. Dec. Ra. Dec. mag mag Spectrum No Plate No Lines

m

25

12 27.5+69 3

12 27.7+72 44

.5+69 18 12 27.5+69 3 666 7.0 II 1256 3 10

.8+72 5.9 12 27.7+72 44 5.70 7.6, I 1256 4 10

26

12 28.0+75 22

.2+75.37 12 28.0+75 22 443 7.0 III 1256 1 .

12 29.1+70 20

27

.2+70 35 12 29.2+70 20 703 3.3 b I 5.09, I 5.46, I 5.36, I(1) 1218 I(2) 1218 I 1256 I(1) 1242 I(2) 1242, 9.6, 10, 5.5, 10, 11, 6 9 ...

12 29.4+73 2

.5+73 1.7 12 29.4+73 2 5.59 7.2 II 1256 3 10

12 29.8+75 45

28 .0+76 0 12 29.8+75 45 454 6.7 I 1242 8 8

12 30.5+70 35

.6+70 5.0 12 30.5+70 34 705 4.8 b III 1314, Inbl/III 1256, 1242 3 3 2 10 10

29

12 31.2+80 48

.7+81 3 12 31.2+80 48 400 6.8 a II 5.36, 12.74, I 1116, I 1255, II 2314, I 1256, VI 1162, III 1242, 2, 4, 5, 6, 2, 5, 7, 2 10, 10

X08

12 31.6+69 34

.7+69 49 12 31.6+69 34 669 7.3 ñ II 1256 2 10

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12 h

K Line	L Line	Brightness	Com Brightness	Mean Residuals	No	Remarks
10	S	66,	68,			
10		67,	71			
		69/72	75-/78			
...	.S.SSSSS	5.0, 5.0, 4.1, 4.0 6.1 B. 4.2,	4.0, 3.9, 3.9, 4.1 4.0 B., 4.4,		164,	
10	S	6.7,	72,			
8	S	55,	60			
10 10 10	SS.	5.9 5.6 6.6 / 6.4, 6.0, 6.9	6.0 5.9 6.8 / 6.5, 6.3, 7.1,		1003, 1012.	
10, 10 10 8 10 10. 10	.S.....	69, 60, 64, 63, 66, 60, 63, 66,	75, 67, 68, 69, 75, 71, 70, 76,		176, 91/7.....	
10		68	71			

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1882phae.proj..850F

12h

1855 1855 1900 1900 No May
Ra. Dec. Ra. Dec. dM. dM. Spectrum No Plate. No Lines

m
30

12 32.7+70 44
.8+70 59 12 32.7+70 44 707 6.8 III 1256 2 10

31

32
12 34.2+72 41
.4+72 86 12 34.2+72 41 578 8.1 I 1256 5
12 34.4+68 55
.5+68 20 12 34.4+68 5 690 8.5 II 1256, 1

12 34.3+79 46
10/. .8+80 1 12 34.3+79 46 389 6.7 I 569, I 536, II 1116, II a 1255, II a 1314, II a 1256, 1162, III 1242, 3,3,2 3 2 2 2 1 10,

33

12 35.6+73 33
.8+73 48 12 35.6+73 33 561 7.0 III 1256 2 10
12 35.9+60 5
.9+60 20 12 35.9+60 5 416 8.2 II 1256 3 10

34
12 36.1+69 20
.2+69 35 12 36.1+69 20 671 8.0 II 1256, 3 10

.7+86 32 12 34.6+86 17 182 6.5 I 1116, 1255, 1256, 1357 3 5 8 3 10

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1882phae.proj..850F

12h

K Line	S Line	Brightness	Ca Brightness	Mean	Residuals	Ast Remarks
10	5	65 69	68 72			
		67	71			
		71	73			
10 10 10 10 10 20 10	5 5	72 70 65 64 65 62 66 66	69 75 68 69 73 72 72 75			89 100
10		69 71	74 76			
10	5	68	67			
10	5	70	72			
10 20	5 5					

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1882phae.proj..850F

12 h

	1855 Ra.	1855 Dec.	1900 Ra.	1900 Dec.	No.	Mag.	Spectrum	Nebulæ	As Lines	
m										
35										
12 37.2	.2	+63 32	12 37.2	+63 16	1026	6.5	I	5-09, 5746, 1314, 1256,	4, 7, 6 8	5,
12 36.9	.3	+76 43	12 37.0	+76 28	462	7.2	II	1256	2	10,
36										
12 37.7	.3	+79 49	12 37.7	+79 34	400	8:7	II	1255, 1256,	2 2	10, 10
12 38.7	.7	+61 57	12 38.7	+61 42	1312	6.5	III	1256	3	10
37										
12 39.1	.2	+84 26	12 38.0	+84 12	286	7.0	II	1074, IIb 1116, IIa 1258, IIa 1256, 1245, 1357, 1328,	2 2 3 2 2 2 2	10 10
12 39.1	.2	+66 44	12 39.1	+66 29	768	7.3	III	1314, II 1256,	2 2	10, 10
12 39.1	.3	+70 44	12 39.1	+70 29	711	8.3	II	1256,	2	10
38										
12 40.2	.8	+79 2	12 40.2	+78 47	403	9.0	II	1256	2	10
39										

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1882phae.proj..850F

K Line	L Line	Brightness	Co Brightness	Mean	Residuals	No	Remarks
.5. .2	... S	6.8, 6.5, 6.1, 5.6,	5.5, 5.1, 5.7, 5.6,			....	
10,	.	7.0,	7.1,			.	
10, 10	..	7.0, 6.9	7.5, 7.9			..	
10	S	6.6, 7.0,	6.5, 6.9,			.	
2 10 10 10 10 10 10 10 10	.. S	6.7, 6.5, 6.2, 6.0, 6.3, 6.4, 6.5,	7.9, 7.4, 7.3, 7.6, 7.6, 7.9, 8.0,			:., 9.7.7, 10.20, ...	
10, 10	..	7.0, 7.3, 7.0,	6.9, 7.2, 7.1,			..	
10	.	7.1,	7.4,			.	
10	.	7.0	7.9			.	

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1882phae.proj..850F

12h

1855. 1863-1900 1900. No Mag

Ka. Nbg. Ka. Nbg. Nbg. Nbg. Spectrum. No Plate. No Lines

m
40

12 41.9 + 81 10
106. .8+81 25 12 41.8+81 10 402 6.3 I 509, 536, 1074, 1116, 1255, 1314, 1256, 1162, 5, 1, 7, 7, 10, 7, 9, 6, 5, 5, 1

12 43.0 + 63 19 41
.1+63 34 12 43.0+63 20 1034 6.0 I d 509, 546, 536, 1314, 1256, 1242, 4, 5, 5, 5-8, 6
12 42.4 + 80 28
.2+80 43 12 42.4+80 28 395 7.4 III 1256 1

12 43.4 + 67 20
.6+67 35 12 43.5+67 20 764 5.3 III 1314, 1256, 1242, 3 2 3 10 10

12 44.1 + 71 29 42
.4+71 44 12 44.1+71 29 630 7.0 III 1256 1
12 44.3 + 60 51
.4+61 6 12 44.3+60 53 1320 6.0 I 546, 536, IIa IIa 1256 5, 2, 2 10, 10,

12 44.8 + 65 17
.9+65 32 12 44.8+65 17 903 8.0 I 1256 4 10

43

12 45.0 + 72 42
.3+72 57 12 45.0+72 42 583 8.3 III 1256 2 10

44

12 46.7 + 63 31
.8+63 46 12 46.7+63 31 1037 7.5 a II 1256 3 10

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1882phae.proj..850F

K Line	L Line	Brightness	Corr Brightness	Means	Residuals	Remarks
5.5, 10 2 2 5 5	.. S S . S S S	6.9, 6.2, 4.9, 5.7, 5.4, . 4.7 5.2,	6.3, 6.9, 5.7, 6.3, 6.1, . 5.9, 6.0,		.....	
. 5, 10, 10 5 10	..... S	6.9, 6.5, 6.4, 5.9, 5.6, 6.3	5.6, 5.1, 6.2, 5.7, 5.6, 6.2,		.....	
.	S	6.6, 7.0,	7.7, 8.1,		.	
10 10 10	S . S	6.5 6.6 6.7, 7.0, 6.9, 7.1,	6.4 6.6 6.7, 6.9, 7.0, 7.1,		, 1006,	
.	.	6.9, 7.2,	7.3, 7.6,		.	
10, 10, 12	S, . S,	6.8, 6.9, 6.1,	5.8, 6.3, 6.0,		. 177, 1013	
10	.	6.9,	7.0,		.	
10	.	6.9, 7.2,	7.3, 7.6,		.	
10	S	6.6,	6.6,		1018,	

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1882phae.proj...850F

12h

1885 1885 1900 1900 No. Mag
Ra. Dec. Ra. Dec. NPD. NPD. Spectrum Nr Plate No Lines

m
45

12 47.3 + 69 50
12 46.6 + 80 57

.6 + 70 5 12 47.3 + 69 50 7.5 7.9 I 1256 5
.6 + 81 12 12 46.7 + 80 57 407 6.6 III 1255, 1256, 21

46

12 48.0 + 72 28

.3 + 72 43 12 47.9 + 72 28 550 7.1 III 1255 2

47

12 49.3 + 60 3
12 49.1 + 72 6
12 49.7 + 56 29

.4 + 60 18 12 49.3 + 60 3 1426 8.0 I 1256 3
.5 + 72 21 12 49.1 + 72 6 588 7.8 I 1256 5
.7 + 56 44 12 49.6 + 56 30 1627 2.0 I 546, 536, 1256, 1242, 10, 7, 10 9

48 .0 + 84 12 48.3 + 83 58 289 6.5 1065 1233
110 48 .1 + 84 12 12 48.4 + 83 57 290 5.5 I 560, 1116, 1255, 1256, 1162, 1221, 6, 6, 7 9 8 10 8 4

49

12 51.3 + 55 30
12 51.1 + 75 57
12 51.5 + 65 59

.3 + 55 45 12 51.3 + 55 30 1564 7.7 II 536 2
.7 + 76 12 12 51.1 + 75 57 440 6.8 III 1314, 1256, 3 2
.7 + 66 14 12 51.5 + 65 59 118 5.0 I 546, 536, (1) 1256, (12) 1256, 1242 7.8, 8 9 8

12 51.9 + 54 38

.9 + 54 53 12 51.9 + 54 39 1886 I 536, 1242 43

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1882phae.proj..850F

K Line.	H Line.	Brightness	Cor. Brightness	Mean Residuals.	No Lines.
•	•	6.4	6.7		•
10 •	• •	6.7 6.7,	7.3 7.8 8.0,		• •
10	•	6.8 6.9	6.7 6.8,		•
•	•	7.0	6.9		•
8	•	6.5	6.9,		•
• • •	S S S S	•40, B, B,	•33, B, B,		• • • •
• 10 • • • • • • • • •	• S S S S S S S S •	5.0 4.6, 4.3, 5.1 6.1, 5.2, 4.1, 4.1, 4.4, 4.0, 4.2, 6.4,	5.9 6.6, 5.4 6.1, 5.9 5.0, 5.0, 5.2, 5.6, 5.4, 5.1,		• • • • • • • • • •
10,	•	7.0	6.2,		•
10 10	S •	6.9 6.5, 7.1, 6.6,	7.4 7.3, 7.6,		• •
8, 8, 8 5-8	• S S S S	6.4 6.0, 5.3, 5.3, 5.5	5.7 5.6, 5.4, 5.7, 7.8		• • • •
• • •	•	6.7, 6.4	5.9, 6.0,		• •

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1882phae.proj..850F

12 h

1855 1855 1900 1900 No Mag

Ha. Obs. Ra. Obs. NPD. NPD. Spectrum. No Plate. No Lines

m
~~50~~ ~~.0 +54 53~~ ~~12 52.0+54~~ ~~1855~~ ~~6.2~~ ~~I~~ ~~1242~~ 3

12 53.0 + 58 14

12 52.9 + 69 8 51 .1 +58 29 12 53.0+58 14 1407 7.8 I 1256, 4

.2+69 23 12 52.9+69 8 674 7.5 III 1256 2 10

12 53.1 + 67 47 .4+68 21 12 53.1+67 47 703 6.5 III 1256 3 10

12 52.8 + 79 1 .7+79 16 12 52.8+79 1 404 7.0 III 1256 2 10

12 53.6 + 71 17 52 .0+71 32 12 53.6+71 17 636 7.8 a II 1256 3 10

12 54.4 + 65 27

12 54.5 + 69 14 .6+65 42 12 54.4+65 27 913 7.0 III 1256 2 10

.8+69 29 12 54.5+69 14 680 7.2 III 1256 1

.8+83 18 12 ~~53.2+83 3~~ 369 7.5 III 1044, 1255, 1256, 1245, 1351, 1328, 1116 2 2 1 1 1 2 2 10 10

12 54.2 + 77 45 .9+82 56 12 53.4+82 41 348 8.5 II 1044, 1255, 1256, 2 2 4 10

53 .0+77 60 12 542+77 45 495 8.5 II 1256 3 10

12 55.3 + 69 19 .6+69 34 12 55.3+69 19 681 8.0 II 1256 2 10

.9+71 23 12 55.5+71 8 638 7.2 III 1256 2 10

54

12 56.1 + 67 8 .4+67 23 12 56.2+67 8 473 5.8 III 536, 1256, 1242, 3 2 3 10 10

12 55.9 + 76 0 .5+76 15 12 55.9+76 8 473 6.0 III 509, 536, 1314, 1256, 1256, 1242, 1245, 2 2 3 1 2 3 2 10 10 1

12 56.4 + 56 53 .5+57 8 12 56.5+56 55 1408 5.0 I 546, 536, 1256, 1242, 6 2 1 7 2 10 10 1

.6+80 43 12 55.7+80 28 398 8.3 II 1116, 1255, 1256, 2 2 2 10 10

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1982phae.proj...850P

12 h

K Line	L Line	Brightness	Ca Brightness	Mean	Residuals	Notes
		6.4,	6.0,			
.	.	6.6,	6.4,		.	
10	.	7.1, 7.8	7.3, 7.5,		.	
10	S	6.7, 7.0,	6.9, 7.2,		.	
10	.	7.0, 7.4	7.9, 8.3,		.	
10	S	6.8	6.8,		10.4,	
10,	.	6.7, 7.0,	6.8, 7.1,		.	
.	.	7.3,	7.2, 7.5,		.	
10 10 . . . 10 10	. S	6.6 6.5 6.2 6.4 6.9 6.5 7.0 6.9 6.8, 6.5, 6.8, 7.1, 6.8, 7.3	7.6 7.4 7.6 7.5 8.2 7.8 7.9, 7.7, 7.9 7.9, 8.4, 8.1,	=	. . . . .	
10 . 10	. . .	6.9 6.8, 6.8,	7.9, 7.7, 8.2,		. . .	
10,	S	7.1	7.9		.	
10	.	7.1	7.3		.	
10	.	6.5 7.1,	7.4,		.	
10, 10 10	S . S	6.8 6.4 6.3 7.0 6.7 6.6	6.4 6.5 6.3 6.6, 6.8, 6.6,		., 10.4, .	
10, 10, 10 . 10 10 10	. . S . . S .	7.0 6.7 6.3 6.0 6.3 6.3 7.3, 7.0, 6.6 6.2 6.3, 6.7, 6.6	6.4 6.9 6.8 6.7 6.9 6.7 6.7 6.2, 7.1, 6.9 7.1, 7.3, 7.0,		. . . . .	
10, 10, 10, 10	S . . S	6.6 6.4, 5.3 5.8,	5.9, 5.7, 5.1 5.5,		., 7.0, ., 10.4.0	
10 10 10	. . .	7.0, 6.6, 6.4,	7.4, 7.2, 7.5,		. . .	

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1882phae.proj..850F

12h

1855 1855 1900 1900 No Mag
Ra. Dec. Ra. Dec. WM. WM. Spectrum No Plate No Lines

m
55

56

12 57.9 + 64 9

.1 +64 24 12 57.9 +64 9 9.2 6.0 I 546, 536, 1256, 1242 4,2,2 6

12 58.6 + 60 16

.7 +60 31 12 58.6 +60 16 14.9 6.5 I 546, 536, 1256, 1242, 4,3,7 4

57

58.0 + 81 39 12 59.3 +81 24 4.2 7.0 II 1116, 1255, 1256, 1162, 1245, 1351, 2,3,2,2,2,2

.8 +83 43 12 58.9 +83 28 3.3 8.3 I 1074, 1116, 1255, 1256, 1245, 3,2,4,5,3

59

13 0.8 + 72 56

.3 +73 11 13 0.8 +72 56 5.81 8.1 I 1256 5

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1882phae.proj..850F

12h

K Line	h Line	K Brightness	Ca Brightness	Mean Residuals	No Spectra
10, 10, 10 10	...S	68, 68, 60 64,	54, 63, 60, 63,	, 165, 1019	
..2.	....	68, 68, 59, 65,	53, 62, 58, 63,	....	
10 10 10 10 10 10	.SS...	65, 65, 60, 66, 63, 67,	70, 72, 72, 74, 72, 78,	.....	
.1.2.	.1....	67, 68, 65, 62, 65,	78, 75, 71, 71,	.1...	
2	.	67.	71	. . .	

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1882phae.proj..850F

13h

1833 1833 1900 1900 No Mag
Ra. Dec. Ra. Dec. Diff. in M. Spectrum. No Plate. Two Lines.

m
0

13 17+73 33
.3+73 48 13 17+73 33 5 83 6.0 I 509, 536, 1314, 1256, 1242, 1214, 1351, 5 6 6 7 7 5 5 10,8

13 24+62 35
.6+62 50 13 24+62 35 12 78 6.0 III 1256, 1242, 3 2 10

1

.8+86 39 12 59.786 ~~26~~ 25 18 7.0 II 1256 2 10

2

3

13 51+73 53
.8+74 7 13 51+73 53 5 21 7.1 I 536, 1314, 1256, 1242, 5 2, 5 4 10

13 59+62 47 4
.2+63 1 13 59+62 47 10 56 6.4 I 546, 536, 1256, 1242, 4 6, 7 6, ...

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1882phae.proj..850F

K Line	Solar	Brightness	Cor Brightness	Mean	Residual	Remarks
10, 8 2 2 2 2 10 10	. . . . S . .	69, 65, 62, 57, 63, 60, 67	61, 65, 65, 62, 67, 62, 66,			. . . . .
10 10	S .	63 71 66, 74,	63 70 66, 73,			. .
10	.	-	-			-
10 10 . 5	. . . .	70, 69, 64, 70,	70, 72, 69, 74,			. . .
. . . 10	. . . .	68, 68, 60, 64,	54, 63, 60, 63,			. . . .

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1882phae.proj..850F

13h

1885 1885 1900 1900 No Mag
Ka. Dec. Ka Dec. WW WW Spectrum Notes. No Lines.

m
5

13 6.4+77 26

.4+77 40 13 6.4+77 26 5-29 7.8 I 5-36, 3

13 7.6+63 42

.9+63 5-6 13 7.6+63 42 10 8-7 7.5- II 1256, 3 10

6

7

13 9.5+57 14

7+57 28 13 9.5+57 14 14.25- 7.0 II 1256, 1242, 2 1 10

8 .0+68 5- 13 9.6+67 51 6.7 7.0 III 1256 1

13 10.1+67 49

57+68 3 13 10.1+68 49 7.20 6.7 III 1256 1

9

13 11.0+59 56

13 10.3+77 44

13 10.7+73 20

.2+60 4 13 11.0+59 50 14.5-6 8.0 II 1256 2 10

.4+77 58 13 10.3+77 44 5-06 7.6 I 5-09, 5-36, II 1314, 1256, 1242, 2 4 2 8 4 10

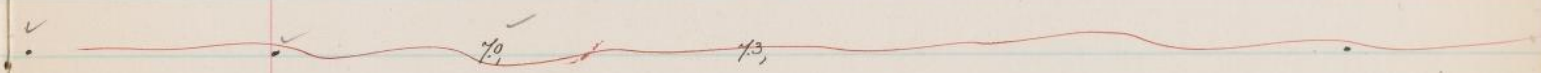
.4+73 34 13 10.7+73 20 5-87 68 I 5-36, 1256, 1242, 1245, 1351, 6 6 5-4

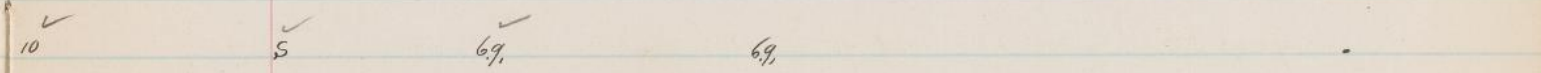
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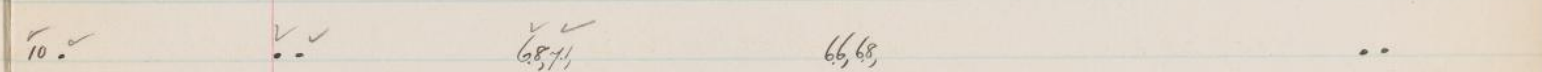
1882phae.proj..850F

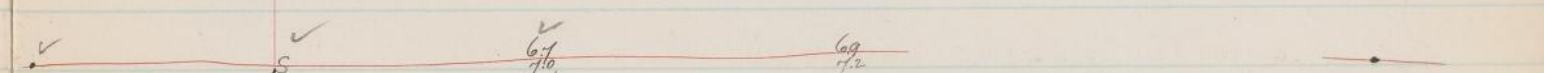
13h

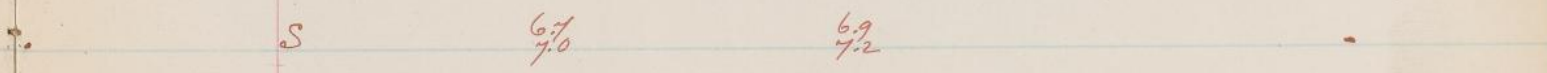
K Line | Sline | Brightness | Cn Brightness | Mean. Residuals | No Remarks

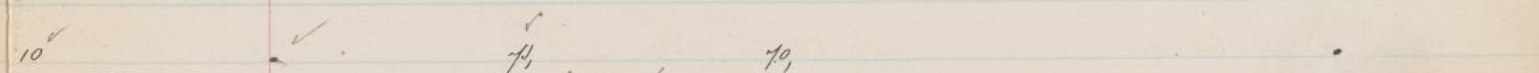












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1882phae.proj..850F

13 h

1855-1855 1900 1900. Pro Mag.

La Plata Ra. Dec. Wm. Wm. Spectrum. No Plate No Lines

m

10

13 11.3+80 11

.8+80 25 13 11.3+80 11 404 7.5 III 1256 3 10

11

.2+81 14 13 11.5+81 0 416 6.3 III 536 1116 1255 1314, 1256, 1162, 1242, 1245, 1357, 3 3 3 2 2 2 2 2 1 3 3 10 10

13 13.2+68 56

.7+69 10 13 13.2+68 56 694 6.0 I 536, 1256, 1242, 1245, 1357, 7 6 7 5 6

12

13 13.6+79 14

13 .0+79 28 13 13.6+79 14 418 7.5 II 1256 2 10

~~13 14.6+70 37~~

~~.2+70 51 13 13.6+70 37 747 7.0 I 1351~~ 3

13 14.7+71 46

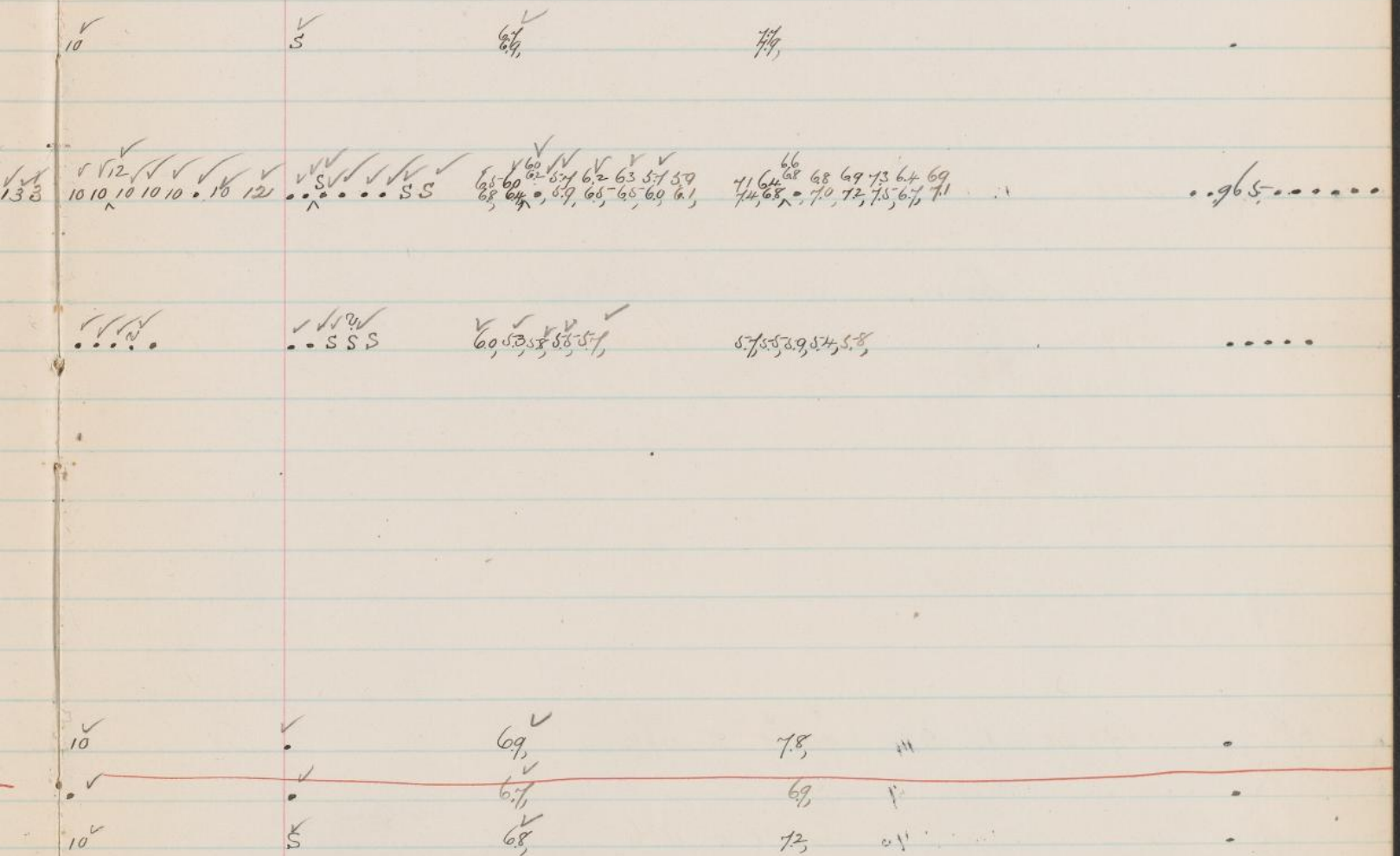
4+72 0 13 13.7+71 46 608 7.8 II 1256 3 10

14

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1882phae.proj...850F

H Line | I Line | Brightness | Cw Brightness | Mean Residuals | No Remarks



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1882phae.proj..850F

13h

1855 1855-1900 1900 Nv Mag.
Ra. Dec. Ra. Dec. nM. nM. Spectrum. Int Class. No Lines

13 16.7+61 56m

15 .0+62 10 13 16.7+61 56 1288 7.8 III 1256 3 10

16

6+82 10 13 16.6+82 2 390 8.4 II 1255, 1256, 1245 2, 2, 2 10

17

18 19.9+55 27

18 .1+58 41 13 19.9+55 26 1598 2.0 I 536, 1242, 11, 10 8

19

13 21.2+55 30

0 4+55 44 13 21.2+55 30 1603 5.0 I 536, 1242, 10, 10 4, 2

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1882phae.proj..850F

K Line	L Line	Brightness	Cor Brightness	Mean Residuals	Remarks
10	S	7.3	6.9 7.2		
10 10 10	...	6.9, 6.6, 6.5	7.7, 7.9 7.5		...
8	S S	4.4, B	3.8 B.		..
4, 2	S S	5.5, 4.7	4.7, 4.3,		..

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1882phae.proj..850F

13h

1855 1855 1900 1900 No Mag.
Ra Dec Ra Dec NPD NPD Spectrum Mt Wilson Mt Lowe

m
20

.7+85 31 13 22.6+85 17 222 7.0 II 1074, 1116, a 1255, 1256, a 1245, 1351, a 1328, 2 2 3 3 2 2 10 10

13 22.6+63 46
21
13 23.0+53 16
.0+64 0 13 22.6+63 46 944 6.5 I 536, II 1256, III 1242, 4 1 2 10,
.2+53 30 13 23.0+53 16 1622 6.3 I 536, 1242, 4, 5, 6,

.9+84 40 13 20.6+84 28 6 307 8.0 II 1074, II 1116, a 1255, a 1256, a I 1245, a 1328, 3 2 2 2 4 2 10 10
22

24 53 30 13 1622 6.3 I 1242 5 2

13 23.7+65 15
13 23.8+65 13 5
13 23.8+72 55
.2+65 23 13 23.8+65 13 935 6.4 II a 536, I 1256 1242, II a 1245 II a 1351, 2 4 2 2 2 10 10
.3+65 24 5
.4+73 9 13 23.6+72 55 592 6.0 b III 125-6, III 1242, III 1245, III 1351, 2 2 2

13 24.8+60 29 8
23
13 24.4+70 51
.1+60 43 13 24.8+60 24 8 1461 5.3 I 836, 1242, 1351 9 7 5 6 2
.1+71 5 13 24.4+70 51 651 7.2 II 1256, a 1245, 2 2 10 10

13 25.3+70 38 59
24
.0+70 52 13 25.3+70 38 741 7.3 III 1256

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13h

Ko Line	Hline	Brightness	Cor Brightness	Mean	Residuals	Nr	Remarks
10 10 10 20 10 10 10	. . S S . . .	65 68 . 61 64 65 63	80 80 . 80 80 83 81		. . 990 . 1067 .	1152	
10 . 10	. . .	70 65 68 70	65 65 67 69		. . .		
10 2	. .	69 68	61 64		. .		
10 10 10 10 10 10	S	66 67 63 61 63 63	79 71 75 78 71 79		. . 986 1021 . 1150		
2	.	68	64		.		
10 10 10 10 10	. . . . .	66 69 64 65 63	62 61 64 63 65		166 . 1038 1046 1084		
. . 10 10	. S . .	66 68 71 68 63 65 71	70 71 74 64 68 69 74		1016 . . .		
12 .	. S .	58 57 54	52 58 52		. . .		
10 10	S .	65 68	68 68		. 1069		
.	S	69	72		.		

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1882phae.proj..850F

13 h

1855 1855 1900 1900 Nu Mag
Ra. hsec. Ra. dsec. nMag. nM. Spectrum. No Plate. No Lines

13 26.5+64 42m
25 .0+64 56 13 26.5+64 42 95-1 7.0 II 1242, 2 10

13 26.2+79 9
121 .8+79 23 13 26.1+79 10 422 6.0 III 509,5-36,585,1314,1256,1242,1245,1351, 2 2 2 3 2 2 2 3 10 10

26

27

13 28.8+70 56
.6+71 10 13 28.8+70 56 654 7.3 II 1256 2 10

.9+84 3 13 26.1+84 3 8349 311 7.5- III 1074,1255,1256,1245,1351,1328, 2 3 3 2 4 2 10 10

28

13 30.3+55 52
.6+56 6 13 30.3+55 52 1667 6.0 I 5-36,1242,1245,1320 6 4 5
.8+82 1 13 28.4+81 47 395- 8.5- II 1256 1

29

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1882phae.proj..850F

13h

K Line	H Line	Brightness	Ca Brightness	Mean	Residuals	Remarks
10	.	71	7.0			.
10 10 10 15 12 10 10 10	. . . S S . . . S	66 61 64 56 68 64 68 58 53 53 58 56 56	62 65 65 63 64 68 69 65 62 66 64			. 175 . . . . 1082 .
10	.	68	71			.
10 10 10 10 10 10	. S S . . .	66 68 60 59 60 64 64	68 70 71 75 73 79 79			. 981 . . . .
. . .	. 5 . S	58 59 59 59	50 55 53 57			. . . .
.	.	65	71			.

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1882phae.proj..850F

13h

1855 1855 1900 1900 No Mag
Ra. Nro. Ra. Nro. nm. nm. Spectrum No Plate nr Lines

m
30

13 31.2+76 35
.5+76 49 13 31.2+76 35 491 6.7 III 5-3 6, 1242, 1340, 1260, 2 2 2 2 10, 10

31
13 32.4+70 37
.2+70 5-1 13 32.4+70 37 7.4 7 7.0 I 1256, 1245, 536 5-5-4 10

13 32.6+76 17
.9+76 31 13 32.6+76 17 492 7.0 I 5-3 6, 1256, 1245, 1340, 1260, 4 1 4 3 4 10

32
13 34.0+67 33
.4+67 47 13 34.0+6733 190 6.3 I 1245, 3
.8+82 44 13 32.1+82 30 394 8.6 II 1256, 1245, 2 2 10 10
13 33.4+77 4
.8+77 18 13 33.4+77 4 5-16 6.0 III 1256, 1242, 1340, 1260 2 2 1 3 10

33
13 34.8+71 45
.7+71 5-9 13 34.8+71 45 659 5.8 III 5-3 6, 1256, 1242, 1245, 1351, 2 3 2 2 2 10
13 35.7+53 25
.9+53 39 13 35.7+53 26 1640 5.8 I 5-3 6, 1242, 1226 6 5 5- 1.

34
13 36.3+51 2
.5+51 16 13 36.5+51 2 1859 7.0 II 1326 2 10

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1882phae.proj..850F

K Line	L Line	Brightness	Cor Brightness	Mean Residuals	Remarks
10, 10, 10 10	....	7.1 7.0 7.3 7.1 6.9 6.7	7.3, 7.3, 7.4, 7.4, 7.6,	....	
.10 10	..	6.2, 6.5, 7.1	6.5, 6.5, 7.7	..	
10 . 10 . 10,	.....	7.0, 6.7, 6.9, 6.8, 6.5,	7.2, 7.4, 7.3, 7.2, 7.2,	.....	
.	.	6.5,	6.4,	.	
10 10	..	6.8, 6.9	8.1, 7.9	..	
10 10 . 10	... S	6.8 7.0 7.0 7.0 7.2, 7.4, 7.4, 7.3,	7.5-7.6 7.4 7.7 7.9, 8.0, 7.8, 8.0,	....	
10 10 10 10 10	. S . . .	7.0 8.8 6.4 5.8 6.1 7.3, 6.3, 6.9, 6.2, 6.5,	6.9 6.2 6.7 6.9 6.4 6.2, 6.7, 7.2, 6.3, 6.8,	. . ., 1061, 1078,	
1 . .	. S S	6.4, 5.9, 5.7,	5.6, 5.5, 5.8,	. . .	
10	.	6.7	6.4,	.	

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13h

1855 1883-1900 1900 No Mag

	Ra	Dec	RA	Dec	nM	nM	Spectrum	Intensity	Lines		
35	13 36.8	+57 42	m								
	.1	+57	s-6	13 36.8	+57 42	1456	6.1	I	s-36, 1242, 1245, 1351,	7 s-s- 3-	5. s
	13 37.0	+55 10									
	.3	+55-	24	13 36.9	+55 12	1628-	5.5-	III	s-36, 1242, 1326,	2 3 1	10 1
	.7	+86	1	13 32.4	+85 47	193	7.5-	II	1255, 1256, 1328,	1 2 2	. 10
36											
	13 36.7	+79 52									
	.7	+80	6	13 36.7	+79 52	447	7.5-	III	1256, 1260,	2 1	10 .
	13 37.2	+78 24									
	.9	+78	38	13 37.2	+78 24	1464	8.0	II	1256, 1245-	2 2	10 10
	13 38.4	+65 20									
37	.0	+65-	34	13 38.4	+65 20	95-3	6.0	I	s-36, 1242, 1245-(1), 1245-(2), 1351,	8 8 6 6 5-	1, 2,
	13 39.0	+65 47									
	.6	+66	1	13 39.0	+65 47	816	7.5-	I	s-36, 1242, 1245-(1), 1245-(2), III(1), 1351-(2), 1351,	5- 4 5- 4 2 6	
38											
	13 40.1	+52 32									
	.3	+52	46	13 40.1	+52 32	1733	6.2	I	s-36, 1242, 1326,	6 5- 5-	. .
	13 40.4	+60 39									
	.9	+60	53	13 40.4	+60 39	1485-	6.5-	I	s-36, 1245, 1351,	4 4 3	. .
39	13 39.7	+77 20									
	.3	+77	34	13 39.7	+77 20	519	6.2	I	s-36, 558-, 1256, 1242, 1245, 1351, 1340, 1260,	7, 5, 6 6 7 7 6 7	8.
	13 40.4	+75 8									
	.7	+75-	22	13 40.4	+75 8	516	8.0	I	s-36	2	10
	13 41.6	+56 24									
	.9	+56	38	13 41.6	+56 24	1683	7.0	II	s-36, 1242,	2 2	10 10

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1882phae.proj..850F

K Line	L Line	Brightness	Mar Brightness, Mean Residuals. No Remarks!
2 5 5		68-63 64 65	58 60, 58 62,
10 10		68-68-65 68, 70, 71,	57 60, 61 63 66, 69,
10 10		67 65,	87, 84,
10		70 66 74, 70	80 76 84, 80,
10 10		70, 79	79, 66,
1, 2, 5,		62, 59, 56, 57,	58, 59, 57, 57,
10 5		65-65-66 64, 65	61, 65, 64, 62, 65
		66, 65, 60,	67, 60, 57,
		73, 66, 68,	67, 62, 66,
8 5-8 8 5 5 10		65, 68, 55, 62, 60, 64, 59, 61,	68, 68, 63, 69, 65, 71, 64, 69,
10		70	66,
10 10		70 68,	62, 64,

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1882phae.proj..850F

13h

1855 1855 1900 1900 No Mag
Ra. Dec. Ra. Dec. nM. nM. Spectrum nvPlate No Lines

m
40

13 42.9 +54 41 56

.21 +55 10 13 42.9 +5456 1634 6.5 I 5-36, 1242, 1326, 5-66

13 43.5 +49 49

.7 +50 3 13 43.6 +49 49 2024 2.0 I 1326, 9

13 42.3 +78 33

42.1 +78 47 13 42.2 +78 34 466 5.8 bc III 5-36, III 1256, III 1242, 1245, 1351, 1340, III 1260, a III 1328 2 3 2 2 2 3 2 2 10

.6 +80 5-8 13 42.3 +80 47 421 7.1 I 5-36, III 1256, III 1245 2 2 2

43

44

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1882phae.proj..850F

13h

K Line	H Line	Brightness	Sw Brightness	Mean Residuals	H Remarks
...	.S.	6.2, 6.0, 5.8,	5.4, 5.6, 5.6,		...
V	S	B	B		-
10 20 10 10 10 10 10 10 10	.S. - - S..	6.5-5.8 6.0 6.2 6.2 6.3 6.1 5.8 6.8, 6.1, 6.4, 6.5, 6.5, 6.5, 6.3, 6.0	6.9 6.7 6.8 6.8 7.0 6.9 7.0 6.6 7.3, 7.0, 7.2, 7.1 7.3, 7.1, 7.2, 6.8,		12.73 10.99 17.3, 10.42, 10.80,
10 10 10	...	6.7 6.6 7.0 6.9	7.8 7.4 8.1, 7.1,		...

1882phae.proj..850F

13h

	Ra.	Dec.	Ra	Dec	mm	mm	Spectrum	Mt Wilson	No Lines
13 46.5+61 59									
45	.0	+62	12	13 46.5+61 59	13 18	6.0	I	s-3 6, 1242, 1245, 1351,	3 2 2 2
13 47.1+59 2									
	.5	+59	18	13 47.1+59 2	18 33	6.5	I	s-3 6, 1242, 1245, 1351,	3 3 3 4
13 47.3+53 47									
	.6	+53	60	13 47.3+53 47	6 63	7.5	I	s-3 6,	3
13 46.4+76 4									
	.9	+76	14	13 46.4+76 4	s-00	7.5	I	s-3 6,	3
46									
133	.7	+83	29	13 45.1+83 15	39 7	6.5	III	s-6 0 1116, 1255, 1256, 1162, 1245, 1351, 1328	2 3 2 2 2 2 2 2
13 48.5+65 14									
47	.2	+65	24	13 48.5+65 13	9 63	4.8	III	s-3 6, 1242, 1245, 1351,	2 3 3 2
13 48.6+68 49									
	.5	+69	2	13 48.6+68 49	7 24	6.0	III	1245	3
13 48.5+76 4									
48	.0	+76	14	13 48.5+76 4	s-02	7.0	I	s-3 6, 1242, 1340, 1260,	4 4 4 4
13 50.2+54 13									
	.5	+54	26	13 50.1+54 13	16 30	6.0	I	s-3 6, 1242, 1336,	6 6 6
49									

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1882phae.proj..850F

K Line	L Line	Brightness	Cor Brightness	Mean Residuals	Remarks
10 10 10	S S S S	70, 69, 71, 63, 66, 65, 68,	64, 67, 69, 59, 62, 63, 66,		
2	S	68, 64, 63, 65,	61, 61, 58, 62,		
		72,	64,		
		73,	75,		
10 10, 20, 10 10 10 10 10 12	S S S S S S S S	64, 66, 64, 63, 63, 62, 58, 54, 64, 63, 57, 56, 65, 56, 61, 58,	70, 68, 64, 68, 74, 64, 72, 68, 72, 74, 67, 71, 76, 65, 75, 72,	976, 1017, 1063, 1080, 1147	
10 10 10	S S S S	64, 68, 62, 68, 66, 62, 68,	60, 62, 58, 62, 64, 68, 64, 68,	1037, 1068, 1083,	
10	S	66, 68,	66, 69,		
10 10 10 10	S S S S	71, 67, 69, 69,	73, 73, 73, 76,		
S	S	63, 59, 57,	55, 55, 55, 55,		

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1882phae.proj..850F

13h

1855 1855 1900 1900 No Mag
Ra. Dec. Ra. Dec. DM. DM. Spectrum. No Plate No Lines

m
5-0

.3+80 38 13 49.9+80 25 4.22 7.4 III 1256, 1245, 1328, 1 1 3

13 50.3+79 30
.6+79 43 13 50.4+79 29 4.31 6.6 III 538, II-a 1256, 1242, 1245, 1351, 1340, 1260, III-b 1328 2 2 2 2 2 1 2 1 3 10,

5-1

5-2

13 54.4+61 59
5-3 .0+62 12 13 54.4+61 62 59 13.25 6.7 III 1245 3 10

.3+81 29 13 52.4+81 16 4.52 6.8 III 1256, 1245, 1357, 1328, 3 3 2 3 15-10

~~.4+79 6 13 53.2+78 53 4.33 7.4 II 1242~~ 2 10

13 55.3+53 35
.6+53 48 13 55.3+53 35 16.76 7.3 I. 1326. 5 10,

~~.8+62 5~~

5-4

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13h

K Line	A Line	Brightness	Low Brightness	Mean	Residuals	Remarks
.. 10	.. S	64 66 68 / 67, 68, 70,	75-74 78 / 78, 76, 80,		. . .	
10, 10, 10, 10, . 10 . 12	. . . . S . . S	68 69 63 67 68 69 65 63 / 71, 65, 71, 68, 70, 70, 71, 69,	75 10 76 75 79 74 / 78, 80, 78, 79, 77, 81, 78,		. . . . . , 1135,	

10 S 6.8 / 7.2

18-10 18 10	S S . S	63 63 65 63 / 66, 66, 68, 67,	75 72 76 74 / 78, 75, 79, 78,	. . . .
10	.	69	77	.
10,	.	66,	64,	.

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13^h

	m	R.A.	Dec.	R.A.	Dec.	DM No.	DM Mag.	Spectrum	No Plate	No Lines	
	55										
13 55.2 + 78 53		.4	+79 6	13 55.2	+78 53	433	7.7	II a	536, 1256 (II), 1245 (II), 1351 (II), 1340 (II), 1260 (IIm), 1328, 1242 (II)	2 3 2 2 1 1 2 2	10
13 55.2 + 79 28		.5	+79 41	13 55.2	+79 28	434	7.7	III	1256, 1245,	2 2	20, 10
	56										
13 56.2 + 79 11		.5	+79 24	13 56.2	+79 11	435	8.1	II	1256, 1340 (III),	2 1	10
	57										
13 59.3 + 51 28		.6	+51 41	13 59.3	+51 27	1889	6.0	I	1326	6	2
	58										
13 59.8 + 62 10		.4	+62 23	13 59.8	+62 10	1327	7.1	II	1245	2	10
13 59.7 + 69 10		.7	+69 23	13 59.6	+69 10	733	6.3	I	536	4	
	59										

1882phae.proj..850F

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1882phae.proj..850F

K Line	L Line	Brightness	Cu Brightness	Mean	Residuals	Remarks
10 10 10 10 . . 10 10	. S	7.0, 6.3, 6.3, 6.9, 6.7, 7.0, 6.7	6.9	7.2, 7.2, 6.9, 7.1, 7.3, 7.9, 7.5, 6.2	1.74 . . . . ., 1.132, .	
20, 10,	S.	6.8 6.8 7.0, 7.1,	7.8 7.5 8.0, 7.8,		. .	
10 .	. .	6.6, 7.0 7.2,	7.5, 7.6 7.8,		. .	
2	.	6.0,	8.1,		.	
10	.	6.8,	6.4,		.	
.	.	7.0,	6.1,		.	

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14h

1855 1855 1900 1900 Ho Mag.
Ra. Dec. R.A. Dec. Nb. Obs. Spectrum Notes No. Lines

m
0

14 1.6+64 51
.4+65 4 14 1.7+64 51 948 3.4 I 536, 550, 555, 1242, 1221, 1245, 1351, 1340, 8 9 10 8 6, 12, 11, 9
.5+82 19 1359.1+82 6 404 8.2 I 1256, 1245, 1328, 4 2 4

1

2

14 41+48 41
.4+48 54 14 41+48 41 2174 6 II 1326, 2

14 46+49 56
.9+50 9 14 46+49 56 2044 5.5 III 1326 1

3

4

14 57+59 48
.3+60 1 14 57+59 48 1516 6.0 III 1245 1

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K Line	H Line	Brightness	Or. Brightness	Mean	Residuals	No. Remarks
. . . . . . : : .	S . S S . S S S	4.2, 4.7, 4.1, 6.5, 4.0, 4.0, 4.0,	3.7, 3.9, 4.0, 4.1, 3.7, 3.9, 3.7,			. . . .
. 10 .	. . .	6.6, 6.7, 7.0,	7.9, 7.7, 8.0,			. . .
10	.	7.0	6.7			.
.	S	6.5 7.2,	6.2 6.9,			.
.	.	6.8 7.1	6.4 6.7,			.

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1882phae.proj..850F

14h

1855 1855 1900 1900 No Mag.
Ra. Dec. Ra. Dec. 1900. Diff. Spectrum No Plate. No Lines

m
5 .1+86 27 13 89.4+86 14 201 7.8 II 1256, 1245, 1357, 1328, 2 2 2 6 12,

14 5.3+77 27
.4+77 40 14 5.3+77 27 5-29 7.8 I 536 1242, 1245, 1357, 1340, 1260, 1328 3 4 4 2 2 4 3 3 .10,

14 6.2+75 4
.8+75 17 14 6.2+75 4 5-29 6.7 I 536, 550, 555, 1242, 1245, 1357, 1340, 1260, 7, 3 5 7 6 6 7 7 2

6

14 7.6+70 4
.7+70 17 14 7.6+70 4 7.4 7.2 I 1242, 1245, 1357, 1340, 1260, 4, 4, 5, 4, 3 10

14 8.1+69 20
.2+69 33 14 8.1+69 20 7.6 6.5 III 1245

8

14 9.9+52 14
.3+52 27 14 9.9+52 16 1782 4.5 I 555, 1326, 69 10 5

9
14 10.2+69 54
14 9.2+78 1
.4+70 7 14 10.2+69 54 7.8 8.3 III 1242, 1245, 1357, 1340, 1260, 1 2 2 2 2 .10
36, .5+78 14 14 9.2+78 1 4.8 8.0 III 536, 560, 1242, 1245, 1357, 1340, 1260, 2 2 2 2 2 2 3 12,

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1882phae.proj..850F

14h

K Line	H Line	Brightness	Ca Brightness	Mean	Residuals	No	Remarks
12, 10, 10, 10,	... S	.. 6, 6.	.. 8, 6.				....
.10, 10, 10, 10 10 ..	.....	7.0 7.0 6.7 6.9, 6.7 7.1, 6.6, 6.9 10, 7.3, 7.5, 7.6, 7.2, 7.8, 7.1, 7.1, 7.1,				1048	....
2. 2 2 2 2 2 2	..... S.	6.4 6.5, 6.1, 5.8, 3.9, 5.7, 3.8, 6.5	6.3, 6.6, 6.1, 6.4, 6.0, 6.5,				.....
10 . 2 . .	.....	6.7, 6.3, 6.6, 6.7, 6.8,	6.9 6.3 6.8, 6.7 7.1,				.....
.	.	6.7 7.0	6.6 6.9,				.
10 5	. S	6.2, 4.7,	5.0, 4.4,				..
. 10 10 10 10	S	6.5 6.7 6.4 6.5 7.0, 6.6, 6.9 7.1, 5.6,	6.7 6.1, 6.6 6.5 7.2, 6.6, 7.1, 7.1, 5.9,				. 1055, 1044, 1101 1118, 1098, 1116,
12, 10, 10 10 10 10 10 10	.. S .. S S	6.2 6.6 5.8 5.5 5.6 6.3 5.9 6.5, 6.9, 6.3, 6.0, 6.1, 6.4,	6.5 6.5 6.5 6.0 6.3 6.7 6.8, 6.8, 7.0, 6.5, 6.8, 5.4, 7.2,				186, 1041, 1049, 10 12 12

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14h

1883 1855	1900 1900							
Ka.	Dec.	m	s	m	m	Spectrum	No Plates	No Lines
14 11.8 + 52 59								
.2	+53 12	14	11.8	+52 59	1699	7.0 I 1326	6	2
14 12.6 + 46 33								
.9	+46 46	14	12.6	+46 33	1949	4.0 I 1326	9	
14 12.7 + 51 49								
11	.1 +52 2	14	12.7	+51 50	1784	4.5- I 5-5-, 1326, 1340, 1260	~7 7 5-	10,
14 12.8 + 57 9								
14 13.0 + 57 9	.3 +57 22 v .5- 57 225	14	12.8 13.0	+57 9	1498-9	6.5- 6.5- I 1245, 1351, 1340, 1260,	4 2 2 2	10 10
14 13.8 + 51 46								
.2	+51 59	14	13.8	+51 46	1908	6.8 I 1326, 1340,	3 4	
14 14.1 + 48 27								
.4	+48 40	14	14.1	+48 27	2188	6.6 II a 1326,	2	10
14 13.5 + 65 18								
.4	+65 31	14	13.5	+65 18	987	7.2 I 1340, 1260,	3 3	
14 14.5 + 55 53								
13	.0 +56 6	14	14.5	+55 53	1725	7.3 I 1245, 1326, 1340, 1260,	4, 3, 4, 3-	
14 15.1 + 52 30								
.5	+52 43	14	15.1	+52 30	1788	7.3 I 1326,	4	
14 15.6 + 55 20								
14	.1 +55 33	14	15.6	+55 20	1678	6.8- I 5-5-, 1326, 1340, 1260,	3, 3, 3, 4	10, 5

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K Sine	H Sine	Brightness	Cor Brightness	Mean	Residuals	Remarks
2	.	65	63			.
.	S	44	4.0			.
10, 2, 10, 10,	. . S S	64, 49, 56, 57,	52, 46, 49, 53,			. . . .
10 10 10 10	. . . .	66, 68, 65, 66,	61, 65, 60, 64,			. . , 1095, 1113,
. .	. .	61, 68,	58, 61,			. .
10	.	69,	66,			1069
. .	. .	70, 70,	68, 71,			. .
. . . 10	. . . .	. 67, 68, 68,	. 65, 62, 65,			. . . .
.	.	68,	65,			.
10, 5, 2 .	. . S .	70, 66, 64, 64,	59, 64, 58, 61,			. . . .

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1882phae.proj..850F

14h

1883 1883 1900 1900 Rev Mag
Ka Dec, Ka Dec, nm. nm Spectrum No Plates No Lines

m
15

16

14 18.0 +68 15

17 .1+68 27 14 18.0+68 15 777 6.8 I 5535, 1245, 7351, 1340, 1260, 3 5 4 6 6

14 18.6 +53 59

.1+54 11 14 18.6+53 59 1668 7.5 II 1340 1

14 18.8+65 49

.8+66 1 14 18.8+65 59 842 7.0 II 1245 2

18

14 19.2+68 16

.3+68 28 14 19.2+68 16 781 7.4 I 5535, 1245, 7351, 1340, 1260, 5, 4, 4, 4, 3

19

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1882phae.proj..850F

K Line	L Line	Brightness	Cu Brightness	Mean	Residuals	No	Remarks
10		69 68, 64, 65, 66, 66,	56 62, 63, 66, 65, 68,				
		7.1	6.5				
10		7.0	68				
		69 66, 67, 69, 7.0,	63 65, 68, 65, 7.2,				

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1882phae.proj..850F

14h

1855 1855 1900 1900 No Mag
Ka Dec. Ka Dec. Diff. Diff. Spectrum. No Plate No Lines

m

20

14 21.9 + 52 19

.3 + 52 31 14 21.8 + 52 19 1804 4.0 II a, 555, 7326, 1340, 1260, 3 3 3 2 10 12

21

14 22.3 + 63 24

.2 + 63 36 14 22.3 + 63 24 1131 7.2 II 1245, II v 1340, 2 2 10 10

22

14 23.7 + 56 29

.3 + 56 41 14 23.7 + 56 29 1737 8.0 I v 1340, 1260, 2 3

14 23.3 + 66 26

.4 + 66 38 14 23.3 + 66 26 847 6.8 II 1245, II v 1340, 2 2 10 10

23

14 25.2 + 50 18

.6 + 50 30 14 25.2 + 50 17 2084 3.8 II 1326 2 10

24

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1882phae.proj..850F

14h

K Line	H Line	Brightness	Cor Brightness	Mean Residuals	Remarks
10 12 15 15	S S S S	60, 46, 52, 54,	48, 43, 45, 50,	1.9, 1.0, 7.0, 10.8, 10.4,	
10 10	--	70, 72,	67, 69,	--	
--	--	71, 70,	66, 68,	--	
10 10	--	71, 71,	69, 69,	--	
10	-	65	63	-	

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14h

1855 1855 1900 1900 Mw Mag.
Ha. Obs Ha Obs Obs Obs Spectrum Notes No Lines

14 26.2+60 50m
25 .0+61 2 14 26.2+60 50 1432 7.2 I 1245 3

26

14 28.4+63 38 27
.3+63 50 14 28.4+63 38 1136 6.2 II a 1245, 1351, 1340, 1260, 2323

14 29.0+60 39
.8+60 51 14 29.0+60 39 1547 6.2 I 5-5-5, b 1245, 1351, 1340, 1260, 4 8 5-6 6

14 27.7+76 9
35
.8+76 21 14 27.7+76 8 527 5.0 bc III 5-36, 5-5-5, 5-60, 5-60, 1245, 1351, 1351, 1340, 2 2 2 2 2 3 3
1242

14 29.4+55 50
28 .0+56 2 14 29.4+55 50 1746 5.9 III 1340, 1260, 11

14 29.1+68 31
.4+68 43 14 29.1+68 31 787 7.2 II 1245 2

14 28.3+78 57
14 30.7+55 40 29
.1+79 9 14 28.3+78 57 447 6.8 II a 1242, 1245, 1351, 1340, 1260, 1328, 1343, 2 2 2 2 3 2 2 2
.3+55 52 14 30.7+55 40 1695 8.0 III 1340, 2

14 31.2+57 30
.9+57 42 14 31.2+57 30 1519 6.3 II a 1245, II 1340, 1260, 2 2 2

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1882phae.proj..850F

14h

K Line	H Line	Brightness	Cor Brightness	Mean K Residuals	No	Remarks
. .	.	6.7	6.3		.	
10 10 10 10	. S . S	6.2, 6.5, 6.2, 6.3,	5.9, 6.4, 5.9, 6.3,		1064, 1081, 1089, 1106,	
10, 8, 10, 8, 8	. S . . .	6.9, 6.3, 6.3, 6.4, 6.5	6.0, 5.9, 6.1, 6.0, 6.4,		. 1056, . . .	1085, 1094,
12, 15, . . 13, 10 10 10 10	. . . S . S S	5.7 5.8 6.3 5.4 5.6 5.4 / 6.1 6.1 . 6.6 5.9 6.2 5.6 5.9 / 6.0	5.9 5.7 6.1 5.8 6.2 5.8 / 6.3 6.0 . 6.4 6.3 6.8 6.2 6.3 / 6.6		169, 181, 183, 193, 1045, 1039	
. .	. S	7.0 6.9 / 7.4 7.3	6.4 6.6 / 6.8 7.0		. .	
10	.	6.8	6.7		.	
10 10 10 10 10 10 10	. . . S . . .	6.7 6.5 6.7 6.5 6.7 6.5 6.6	7.5 7.1 7.5 7.1 7.0 7.3 7.8		. 1057, . . 1117, 1129, .	
10	.	7.3	6.5 / 6.7		.	
10 10 10	. . .	6.8 6.5 6.9	6.3, 6.0, 6.7,		1047, . 1112,	

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1882phae.proj..850F

14h

1855 1855 1900 1900 No Mag.
Ra. Dec. Ra. Dec. dM. dM. Spectrum. No Plate. No Lines

m
30

14 31.4 + 65 49

.5 + 66 1 14 31.5 + 65 50 855 6.7 II 1245, II a 1340, II a 1260, 122

31

32

33

14 35.1 + 54 27

.7 + 54 39 14 35.1 + 54 27 1693 5.8 I 355, d 1326, 1340, 1260, 6476

34

.8 + 81 27 14 33.0 + 81 15 482 6.7 II 1256, 1245, III b 1351, III 1340, III a 1328, 1357, 2332

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1882phae.proj..850F

14h

K Lines	K Sing.	Brightness	Cor. Brightness	Mean Residuals	W. Remarks.
10 10	...	6.9, 6.7, 6.9,	6.7, 6.5, 7.0,		.1092, 1109,
?	S	6.5, 6.0, 5.6, 5.7,	5.4, 5.8, 5.0, 5.4,		....
10 10 10 10 10 10	S S S. S.	6.0, 6.3, 6.4, 6.6, 6.2, 6.7, 6.8, 6.5, 6.7,	7.2, 7.2, 7.5, 7.4, 7.3, 7.6, 7.6,		., .1074, .1138,

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1882phae.proj..850F

14h

	1855 R.A.	1855 Dec	1900 R.A.	1900 Dec	No Mag	Spectrum	As Plates	As Lines	
m									
35									
	36.0	+81 12	14	43.3	+81 0	483	8.4 III	1236	2
37									
14h 36.5+80 5	36.8	+80 17	14	36.5	+80 5	448	6.3 III	1242, 1245, 1351, 1340, 1260, 1343,	2 3 3 2 2
38									
14h 39.5+61 40	39.4	+61 52	14	39.5	+61 41	1457	6.0 IIa	1245, IIa 1351, I 1340, I 1260	3.2 5-3
39									

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K Line	H Line	Brightness	Cw Brightness	Mean. Residuals	O-C Remarks.
10		68 72	79 83		
10 10 10 10 10 10	S S	67 63 64 67 69 66 71 67 69 70 73 79	76 80 70 73 74 79 79 74 78 74 83 83		1054
10 10 10	S S	64 64 66 70	6.0 6.2 6.2 6.9		1058 1077

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14 h

	1855 Ra.	1855 Dec.	1900 Ra.	1900 Dec.	No.	Mag.	Spectrum	No. Plates	No. Lines	R
m										
40										
14 41.6+61 32	.5	+61 43	14 41.6	+61 32	145-4	6.3	II	1260,	2	10
41										
42										
14 43.3+65 47	.5	+65 5-8	14 43.3	+65 47	1011	8.5	III	1340, 1260,	2 4	10 11
43										
14 44.1+65 3	.2	+65	14	14 44.1	+65 3	1012	7.8	III	1340,	2	10
14 44.5+60 8	.3	+60	19	14 44	+60 8	156-7	6.8	II a	1340.	2	10
44										
14 46.3+51 48	.8	+51	8-9	14 46.3	+51 48	195-7	6.3	II	1340	2	10
14 45.7+65 39	.9	+65	8-0	14 45.7	+65 39	1015-	7.5-	III	1340	1	

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14h

K Lines	H Lines	V Brightness	Cn Brightness	Mean Residuals	Remarks
10	-	7½	7⁹		
10 10	- -	7⁵ 7²,7½	6⁸ 7⁰,7²	- -	
10	-	7⁰ 7²,5	6⁷ 6⁹,	-	
10	-	7⁰,	6⁶,	11⁰⁰,	
10	-	6⁹,	6²⁵	1086,	
-	-	7⁰ 7³⁵	7⁰ 7⁰³,	-	

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14h

1855 R.A.	1855 Decl.	1900 R.A.	1900 Decl.	No	Mag	Spectrum	As Plates	As Lines	R
m									
45									
14 45.44	72 23								
.2+	72	34	14 45.3	+72 23	6.5	6.8	I	1245, 1340, IIa 1260, 1328,	4 4 2 5	10
46									
47									
14 48.9	+59 42								
.7+	5.9	53	14 48.9	+59 42	16.5	5.7	III	5 5 5, 1340, 1260, 1328,	2 3 2 3	10
48									
14 49.6	+56 9								
.3+	5.6	20	14 49.6	+56 9	1.67	7.2	I	1340, III 1260,	3 1	
14 48.1	+76 29								
.6+	7.6	40	14 48.1	+76 29	5.36	7.5	I	1245, 1340, 1260, 1328, 1343,	3 5 3 4 6	
49									

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14h

K Line	L Line	Brightness	Cor Brightness	Mraw	Residuals	Remarks
10 10 10 10	....	6.7 6.9 7.1 6.5	6.8 7.0 7.5 7.1		.1103.	
10 10 . 10	. S S S	6.9 6.7 6.5 6.7 / 7.3 7.1 7.1 7.0	5.9 6.2 6.6 6.4 / 6.3 6.6 6.9 6.7		....	
..	..	7.0 7.0 / 7.4	6.4 6.7 / 7.1		..	
.10 S 10 10	..... S	6.8 6.6 6.5 6.9 6.5	7.2 7.0 7.2 7.5 7.5		.....	

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14h

1855 Red.	1855 Red.	1900 Obs	1900 Red.	Mag	Spectrum	As Plates	As Lines	K
14 50.2+73 27								
.2+73 38	14 50.2+73 27	646	8.0	I	s-s-s, 1245, 1351, 1340, 1260, 1328,		4 4 2 5 4 5-	10 10
~~.2+74 45- 14~~		~~595 2.1~~		III	1340,			~~2~~
14 51.0+74 34								
.2+74 45- 14 ~~50~~ 51.0+74 34		595- 2.1	bd	III	s-s-0, 555, 560, 1221, 1245, 1351, 1260, 1328,		3 3 2 2 2 2 3 3	12,

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1882phae.proj..850F

14h

	K Line	L Line	Brightness	Cor Brightness	Mean Residuals	Remarks
	10 10 10 . . 10	. . . . .	7.3, 6.6, 6.8, 6.6, 7.0, 6.7	7.0, 6.8, 7.2, 6.8, 7.5, 7.1	. . . . .	
	12, 15, 15, 10	S S S . . S	46 55 62 40 B B B 49, 38, 68, 43, 42, 41, 40	4.3 5.0 3.8 4.2 B B 46, 53, 4.4, 4.5, 4.6, 4.6, 4.4		1090, 1107, 1149 178, 180, 191, . 166, 1082

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14h

1855 R.A.	1855 Dec.	1900 R.A.	1900 Dec.	No.	Mag.	No.	Spectrum	As Plates	As Lines	R
m	° ′									
14 56.0	+ 66 20									
.3	+ 66 31	14 56.0	+ 66 20	8	7.8	4.5	III	5 5 5, 1340, 1260, 1328, 1328,	2 2 2 3 1	10,
14 56.5	+ 62 4									
.5	+ 62 15	14 56.5	+ 62 4	1	3.8	0	6.8 I	1340, 1328,	5 4	10 8
14 56.6	+ 54 15									
14 56.6	+ 54 16									
.3	+ 54 26	14 56.6	+ 54 15	1	4.2	4	5.5 I	1340, 1260,	5 4	10 10
.3	+ 54 2									
14 57.6	+ 56 1									
.3	+ 56 12	14 57.6	+ 56 1	1	7.4	7.0	I	1260	4	10
14 55.4	+ 78 34									
.6	+ 78 45	14 55.3	+ 78 34	5	0.1	6.5	III	1357, 1340, 1260, 1328, 1343,	2 3 3 3 3	10, 10
14 56.6	+ 56 9									
.2	+ 81 20	14 56.6	+ 81 9	4	9.5	6.8	I	536, 555, 560, 1245, 1357, 1340, 1260, 1328,	4 5 5 5 6 6 5 6	10 10
14 58.3	+ 65 52									
.6	+ 66 3	14 58.3	+ 65 52	8	8.2	7.2	III	1340,	1	
14 59.1	+ 60 35									
.1	+ 60 46	14 59.1	+ 60 36	1	5.8	2 6.0	I	5 5 5, 560, 1340, 1260, 1260, 1328,	3 4 3 3 4	
14 57.6	+ 75 17									
.0	+ 75 28	14 57.5	+ 75 18	5	4.7	7.0	II	1340, 1260, 1328, 1343,	2 2 2 2	10, 10
.5	+ 86 33	14 49.6	+ 86 22	2	1.7	6.8	III	1328	2	10
14 57.5	+ 79 56									
.2	+ 80 7	14 57.5	+ 79 56	4	5.9	8.2	II	1245, 1328,	2 4	10
14 59.6	+ 71 0									
.4	+ 71 11	14 59.6	+ 71 0	7	0.6	6.8	II	1328	2	10,

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K Line	L Line	Brightness	Cor Brightness	Mean Residuals	Remarks
10, 10, 10	S S S	68 60 63 62 / 71, 64, 66, 66,	61 65 64 62 / 64, 62, 67, 66,	.1093, 1110, .1156,	
10 8		69, 68,	65, 66,		
10 10	S	68, 67,	62, 64,		
10		71,	68,		
10, 10 10 10 10	S S S S	67 66 65 67 65 / 69, 68, 67, 69, 68,	78 72 74 75 77 / 71, 74, 76, 71, 80,	..., 1124,	
10 10 2 2 2	S	68, 67, 57, 59, 60, 57,	72, 70, 66, 70, 69, 68,		
		70 / 73,	68 / 71,		
2 2 2 2	S	66, 65, 59, 62, 57,	57, 55, 55, 61, 55,		
10 10 10 10		70, 67 67 69 / 69, 70, 71,	73, 74 72 78 / 76, 75, 70,		
10				1158,	
10		68, 70,	75, 79,	1053,	
10,		71,	73,		

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1882phae.proj..850F

15h

	1855 Ka.	1855 Ked.	1900 Ka.	1900 Ked.	No nM.	Mag nM.	Spectrum.	No Plates.	No Lines	
15 0.4 +72 8	.3 +72	19	15 0.4	+72 9	664	6.3	II	1245 1340, 1260, 1325, 1343	3 2 2 2 4	10 10
	.4 +83	6	14 56.9	+82 56	431	6.0	II	5-5-0, 581, 1256, 1245, 1351, 1328, 1354, 1450	2 2 2 2 3 2 2	10. 15
15 1.4 +66 10	.7 +66	21	15 1.4	+66 10	886	7.5-	III	1340	1	
15 1.9 +59 55	.8 +60	6	15 1.9	+59 55	1886	7.2	I	1328	3	
15 0.2 +76 55	1.0 +77	6	15 0.2	+76 55	5-65-	7.1	III	1260, 1328,	1 2	10
15 2.5 +66 18	.8 +66	29	15 2.4	+66 18	88	5.8	I	5-5-, 1360, 1360, 1340, 1260, 1328, 1328,	6 5-5- 6 6 5- 6	
15 3.4 +54 56	.2 +5-5-		15 3.4	+54 56	1430	5.5	I	5-5-5, 1340, 1260,	4 3 3	10 1

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15h

	H Dino	H Sino	Brightness	Cor. Brightness	Mean Residuals	Ast Remarks
	10 10 10 10 10	S	64 68, 70, 64 68	65, 69, 74, 67, 75	. . . . .	
	10, 15, 20, 12, 12, 12, 12	. . . . S . . S	67 46 46 47 64 60 57 60	69, 63, 59, 65, 61, 64, 66	196 - - 1143, 1191	
	.	.	70 72,	68 70,	.	
	.	.	71,	69,	.	
	. 10	. .	73 72 73, 75	77 78 80, 81,	. .	
	. . . 2 . . 2	. . . 1 . . .	67, 68, 56, 59, 60,	60, 60, 54, 60, 60,	. . . . .	
	10 10 10	. S S	63 62 68 64 64,	57, 58, 59 61,	1091,	

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1882phae.proj..850F

15h

	1855 Ra	1855 Dec	1900 Ra	1900 Dec	No nm	Mag nm	Spectrum	No Plates	No Lines	
15 5.9 +63 30 m										
5	.1+63 40		15 5.9+63 30		116	6.7	II 1340, II a 1260, II a 1328,		2 2 2	10 10
15 5.6+72 16	.0+74 26		15 4.7+74 16		602	7.5	I 1343,		1	
15 6.7+57 30	.6+72 26		15 5.6+72 16		670	7.0	I 1343		6	10
	.6+57 40		15 6.7+57 30		1554	7.3	II a 1260,		1	
15 5.7+74 16										
6	.0+74 26		15 5.6+74 16		602	7.5	I 555, I 1340, I 1260, I 1328, I 1343		4 5 5 4 3	10 10
	.8+84 31		15 1.6+84 20		335	7.5	III 1256, 1245, 1328,		2 1 1	10
15 6.3+77 45										
	.4+77 55		15 6.3+77 45		571	7.8	II 1340, III 1328, 1343, 1333,		2 2 2 2	10 10
8										
15 8.5+70 3	.2+70 13		15 8.5+70 3		827	7.2	I 1328, II 1343,		6, 2,	10
15 8.3+76 22										
9	.1+76 32		15 8.3+76 22		551	8.0	I 1340		3	
15 10.3+56 26	.1+56 36		15 10.3+56 26		1790	7.3	I 1340, I 1260,		4 3	10
15 9.7+68 10	.2+68 20		15 9.7+68 10		823	6.5	I 856, 1340, 1260, 1328, 1343 555		5, 6, 5, 7, 5, 5	10
15 10.0+64 0	.2+64 10		15 10.0+64 0		1052	7.5	II 1340		2	10
15 10.1+64 1	.3+64 11		15 10.1+64 1		3					

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15h

K Lines	S Lines	Brightness	Cor Brightness	Mean Residuals	Nd Remarks
10 10 10	...	70, 70, 68,	67, 70, 67,	-, 105, 144,	
-	-	67,	78-	-	
10	-	64,	71,	-	
-	-	69,	67,	111,	
10 10 - 10 -	.....	71, 68, 68, 65, 67,	68, 70, 73, 69, 75-	.....	
10 - -	...	65 66 66 68, 70, 71,	81 78 81 84, 83, 86,	...	
10 10 10 10	....	71, 72 74, 70, 70,	76, 78, 81, 79,	....	
10 10	S.	65, 68,	67, 74,	..	
-	-	71,	75-	-	
10 -	..	72 72	66 69	..	
10, 2, 0, 2, 10, 10	... S ..	66, 69, 63, 57, 58, 68	59, 58, 65, 58, 63, 55	.....	
10	-	70,	67,	-	

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15h

	1855-	1855-	1900	1900							
	R.A.	Dec	Rd.	Dec.	No.	Wk.	Spectrum.	As Plates		As Lines	R
m											
10											
11											
12											
13	15 13.5+67 44										
	.0+67 54	15	13.4	+67 44	8½6	5.2	II a2	5-5-5, 860, 1340, 1260, 1328, 1343,	IIa IIa IIa IIa IIa	2 2 2 2 2 3	10,
14	15 14.1+69 18										
	.8+69 28	15	14.1	+69 18.	789	6.5	I	5-5-5, 860, 1340, 1260, 1328, 1343,		4 5-7 4 5-4	10 5
	.6+86 4	15	6.3	+85 54	221	8.1	II	1245, IIa 1328,		2 2	10 10

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15 h

K Line	L Line	Brightness Cor	Brightness Mean	Residuals	Remarks
10, 10, 12, 15, 10, 20	....S, S	60, 60, 55, 57, 53, 52,	57, 53, 54, 59, 54, 57.	182, 185, 1096, 1114, 1122	1172
10 5 2 ..	.. S ...	68, 66, 61, 63, 60, 60	62, 59, 65, 65, 66, 65	.....	
10 10	..	68, 65,	65, 84,	, 1157,	

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15h

1855 Rt. Asc.	1855 Decl.	1900 R.A.	1900 Decl.	No	Mag	Spectrum	No Plates	No Lines	K
m	° ′	h m s	° ′						
15									
16									
15	17.3	+61	43						
.4	+61	53	15 17.3	+61	43	1495	6.8 II	1328	1
.6	+85	41	15 9.2	+85	31	249	8.0 III	1256, 1328,	2 2
15	18.0	+60	44						
17.1	+60	54	15 18.0	+60	44	1606	7.4 II	1328,	2
15	17.1	+72	10						
.2	+72	20	15 17.2	+72	11	678	5.5 bc III	560, IIIb 1340, IIIb 1260, IIIb 1328, IIIb 1343,	2 3 1 2 2
15	17.2	+71	34						
.2	+71	44	15 17.2	+71	34	722	7.1 a: II	1328	2
18									
15	18.2	+74	24						
.7	+74	34	15 18.2	+74	24	609	6.7 III	1340, 1260, 1328, 1343,	2 2 2 2
19									
15	20.7	+62	23						
.9	+62	33	15 20.7	+62	23	1410	6.0 I	560, 1340, 1260, 1328, 1343,	5 5 5 4 5

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15 h

K Line	L Line	Brightness	Cor Brightness	Mean Residuals	Remarks
		7.1	6.9		
10, 10		6.5, 6.8,	8.3, 8.6,		
10		7.0,	6.8,		
10 10 10 10 10		6.4 6.4 6.4 5.9 6.0 6.8, 6.8, 6.8 6.4, 6.6,	5.9 6.5 6.8 6.2 6.7 6.3, 6.9, 7.2 6.7 7.3,	189, 1087, 1102, 1140, 1158,	
10		6.6,	6.9	1139,	
10 10 10 10		6.7 6.8 6.4 6.8 6.9, 7.0, 6.8, 7.0,	6.9 7.3 6.8 7.6 7.1, 7.5, 7.2, 7.8,		
2		6.2 5.9 6.0 5.6 5.8	5.2 5.5 5.9 5.4 6.0		

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15 h

1855 – RA.	1855 – Dec.	1900 RA.	1900 Dec.	No Mag	Mag	Spectrum	Authorities	No Lines	
m 20									
15 20.9+63 42									
.2+63 5-2		15 21.0+63 42		11 92	6.0	III	1340, 1328, 1343,	3 2 1	10
15 20.9+72 10									
21.0+72 20		15 20.9+72 11		6.9	2.8	I	555, 560, 1340, 1266, 1328, 1343,	10, 12, 9, 9, 14, 9	5.2
15 22.7+59 18									
.7+59 28		15 22.7+59 19		16 54	3.0	III bre	560, 1328, 1343,	2 2 3	12
22									
15 22.4+73 48									
.8+73 5-8		15 22.3+73 51		6.2	7.2	II	1340, 1260, 1328, 1343,	2 2 2 2	10
23									
24									

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1882phae.proj..850F

15h

H Line	K Line	Brightness	Cor Brightness	Mean Residuals	Remarks.
10 . .	S S S	69 69 65 72, 70, 70,	66 68 68 69, 69, 73,	. . .	
5, 2, . , . , 5, .	S S S S S S S	44,0 B, 40, B B	40 35, B, 44, B, B,	. . . . .	
12 15	. . S	56 50 50 60, 54, 54,	45 47 51 49, 51, 53,	. ,	187, 1128, 1176,
10 10 10 10	. . . .	69, 71, 68, 70,	72, 76, 72, 78,	. . 1146, 1162,	

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15 h

	1855 Ra.	1855 Dec.	1900 Ra.	1900 Dec.	No Mag	Spectrum	No Plates	No Lines
15 25.9+62 37m								
25	.1+62 46	15 25.8+62 38	14 14	6.7	I	s 60, 1328, 1343		4 6
15 25.9+61 2								
	.0+61 11	15 26.4+61 1	15 09	6.2	III	1328,		1
15 26.8+62 5								
	26.0+62 14	15 26.8+62 5	14 15	6.5	I	1328, 1343, 560		4 5-4
15 27.6+62 27								
	.8+62 36	15 ~~25.9+62 38~~ 27.6+62 27	14 16	6.1	III	1328,		1
27								
28								
15 29.5+64 31								
	.9+64 40	15 29.6+64 33	10 14	5.8	III a	1328, 1343,		2 3
29								
	.6+81 33	15 26.6+81 24	5 10	7.8	III.	1328,		3

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1882phae.proj..850F

15 h

K Line	L Line	Brightness	Ca Brightness	Mraw	Residuals	As Remarks
5 2 10	. . .	67, 62, 64	67, 69, 63			. . .
.	.	70, 74,	68, 72,			.
5 10	. .	63, 66, 68	68, 61, 5.7			. . .
.	.	70, 74,	78, 72,			.
10 10	. S	62, 64, 65, 66,	61, 67, 64, 69,			114 8.
10	S	68, 70,	79, 81,			.

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15h

m	1855 Rd.	1855 Wed.	1900 Rd.	1900 Wed.	No Mag	Mag	Spectrum	No Plates	No Lines	
30										
31										
	15 32.6 +54 16									
	.4	+54.2	5-	15 32.6	+54 16	1756	6.0 III	1343	2	10
	15 32.4 +64 14									
	.8	+64 2	3	15 32.4	+64 14	1044	8.0 I	1328,	4	10
	15 33.3 +52 24									
32	.0	+52 3	3	15 33.3	+52 24	1886	6.0 II	1343	2	10
	15 33.4 +54 57									
	.2	+54 5	6	15 33.4	+54 57	1766	6.0 I	1343	5	
33										
	15 34.0 +65 36									
	.5	+65 4	5-	15 34.0	+65 36	1062	6.8 I	1328, 1343	4 4	
	15 35.0 +54 51									
	.8	+54 6	0	15 35.0	+54 51	1758	6.0 III	1343,	3	10
34										
	15 32.2 +80 7									
	.3	+80 1	6	15 32.4	+80 7	478	7.8 II	1260, 1328	2 2	10

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1882phae.proj..850F

15 h

	K Line	L Line	Brightness	Cw Brightness	Mean Residuals	No Remarks.
	10	.	6.9 7.1	6.9 7.1		.
	10	.	7.0	6.9		.
	10	.	6.9	6.8		.
	.	.	5.6	5.6		.
	..	..	6.9 6.9	6.9 7.3		..
	10	S	6.6 6.9	6.6 6.9		.
	10 .	..	6.7 7.1	7.7 8.0		..

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15 h

	1855 Ra.	1855 Dec.	1900 Ra.	1900 Dec.	No. Mag.	No. Spectrum	No. Plates	No. Lines
15 36.2+56 13	.1+56	22	15 36.2	+56 13	1820	7.5 I	1343,	4
15 34.4+77 42	.8+77	51	15 34.4	+77 41	5.92	5.0 III	5-5-5, 560, 1340, 1260, 1328, 1343, 1354,	2 2 2 2 2 3 3
15 38.4+69 36	.3+69	34	15 37.4	+69 36	806	6.0 III	1328, 1343,	3 3
15 34.3+80 47	.8+80	56	15 35.1	+80 47	480	7.0 II	1245, 1351, 1340, 1328, 1260, 1343, 1354,	560 2 2 2 2 2 3 2 2
15 36.7+76 46	.9+76	55	15 36.7	+76 46	563	7.5 I	5-5-5, 1340, 1260, 1328, 1343,	4 4 3 4 4
15 38.4+69 8	.2+69	14	15 38.5	+69 8	808	8.0 II	1328,	2
15 38.0+71 28	.2+71	37	15 38.0	+71 28	741	7.2 III	1328	3
15 40.1+52 41	.9+52	50	15 40.2	+52 40	1898	8.0 I	1343,	6
	.9+81		15 36.0	+81 6	517	6.8 III	560, 1245, 1351, 1328, 1343, 1354,	2 2 2 3 2 3

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K Line	L Line	Brightness	Mod Brightness	Mean Residuals	Remarks
10 10 10 10 10 10	S S	6.3, 6.7, 6.2, 6.6, 6.4, 6.7,	7.9, 8.2, 7.7, 7.9, 6.6, 8.0,		1023,
		6.7,	6.7,		
10 10 10	S S	7.0, 6.7, 6.7,	6.4, 7.7, 7.9,		
10 10 10 10 10 10 10 10	S S S S	6.3 6.7 6.0 5.9 5.9 5.8 6.4 6.8 7.0, 6.6, 6.6, 6.6, 6.5, 7.0,	6.3 6.6 6.8 6.7 6.6 6.9 6.9 6.8 6.9, 7.1, 7.4, 7.3, 7.6, 7.5,		1174 1180 , 1841, 1897, 1115, 7125
		6.5 6.7,	7.9 8.1,		
10 10	S S	6.5 6.5 7.0, 6.9,	6.7 7.1 7.2, 7.5,		1131, 1175,
10 10 10 10 10 10 10 10	S S S S S S	5.7, 6.1, 6.0, 5.7, 6.0, 6.0, 6.1, 6.4 6.7	6.5, 7.1, 6.8, 6.7, 7.1, 7.4, 6.9, 5.3 5.6		1137, 1175, 1187,
10		7.0, 6.7, 6.5, 6.8, 6.5,	5.9, 7.1, 7.2, 7.4, 7.5,		
10		7.1,	7.2,		
10,	S	6.9 7.2,	7.3 7.5,		
		5.6,	5.5,		
10 10 10 10 10 10	S S S	6.4 6.4 6.7 6.3 6.8 6.7, 6.7, 7.0, 6.6, 7.2,	6.6 7.2 7.7 7.3 7.6 6.9 7.5, 8.0, 7.6, 8.0,		

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15h

	1855-	1855-	1900	1900	No	Mag.			
	R.A.	Dec.	R.A.	Dec.	Dm	Dm	Spectrum	No Plates	No Lines
m									
40									
41									
42	.2+82 44	1538.1	+82 36	463	7.5	I	560,	IIa 1245, IIa 1351, IIa 1328, IIa 1354, Ir IIa 1395, 1450,	4 3 2 4 2 42
	15 44.2+55 47								
43	.1+55	55	15 44.2+55 47	1444	6.5	III	1343		
	15 45.2+55 41								
44	.1+55	49	15 45.2+55 41	1479	6.0	I	1343		
	15 444+68 59								
	.3+69		15 444+68 59	812	7.0	I	1328, 1343,		34
	15 45.2+62 55								
	.5+63 3		15 45.1+62 55	1225	5.8	I	560, 1328, 1343,		486

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1992phae.proj..850F

K Line	L Line	Brightness	Cu Brightness	Mean Residuals	No	Remarks
2	10 10 10 10 10 10 10 10	S	65, 58, 61, 58, 59, 60, 59	69, 68, 73, 71, 69, 69, 69	1062, 1079, 1142, 1190, 1258	
			72,	72,		
	10,		67, 67,	68, 72,		
	2, 2	S	59, 48, 49	50, 47, 52,		

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1882phae.proj..850F

15h

1855 1855 1900 1900 No Mag
Ra Dec Ra Dec Diff Diff Spectrum No Plates No Lines

m
45

.9+81 4 15 43.0+80 56 5-23 7.3 III 1245, 1351, 1328, 1343, 1354, 3, 2, 2 2 2 10

46

15 46.9+69 47
.9+69 35 15 46.9+69 47 813 7.1 I 1328, 1343, 5-4 5-
15 47.0+70 41
47 .1+70 49 15 47.0+70 41 846 7.5 III 1328 2 10

15 48.6+53 13
.4+53 21 15 48.6+53 13 1816 6.5 I 1343 5-

14h .8+80 26 15 45.1+80 18 487 6.4 II a 5-60, 1245, 1351, I 1340, 1260, I 1328, I 1343, I 1354, 2 3 2 4 2 7 64 18

48

15 49.1+65 6
.6+65 14 15 49.1+65 6 1081 6.8 I 1328, 1343, 4 5-

15 49.9+56 8
.9+56 16 15 50.0+56 7 1838 6.4 b III 1343, 2 12

49

15 47.6+78 5
143 .3+78 13 15 47.6+78 6 5-27 4.7 I 5-55, 560, 5871, 601, 1340, 1260, II 1328, 1343, 8 9 8 7 9 9, 11, 11

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K Line	A Line	Brightness	Cw Brightness	Mean	Residuals	W	Remarks
10 10 10 10 .	S . . . S	65 64 63 68 67 68, 68, 66, 70, 70,	73 74 73 82 78 76, 78, 76, 84, 78,				. . 1136 . .
5 10	. .	68, 68,	70, 74,				. .
10	.	71, 73,	73, 75,				.
.	S	65	65				.
764	18 10 10 10 10 10 10 10 10 S . . . S . .	67, 59, 59, 63, 64, 60, 60, 63,	68, 66, 68, 70, 74, 69, 73, 70,				188, 105, 107, 5 . 1119, . .
. 5	. .	67, 66,	66, 69,				. .
12,	.	68 68,	65 68,				1168,
11	2, 10, 8, . . .	S S . . S S S S	47, 44, 54, 57, 40, 83, 83, 86,	47, 42, 48, 48, 45, 83, 83, 86,	.		. . . . .

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1882phae.proj - 850F

15h

	1855 Ra.	1855 Dec.	1900 Ra.	1900 Dec.	mm	Mag	Spectrum	No Plates	No Lines	
m										
50										
	.2	+85 18	15 42.5	+85 10	263	7.2	III–	1245, 1381, 1374, 1450, 1395,	1 2 2 2 2	.10
51										
	.6	+80 34	15 48.8	+80 26	489	8.0	II	1245, 1328, 1343,	1 3 4	
52	15 52.5	+65 34								
	.1	+65 42	15 52.5	+65 34	1084	6.5	III–	1343	1	
53	15 53.4	+69 0								
	.3	+69 8	15 53.4	+69 0	825	6.8	II a	1328, 1343, 1354,	3 2 1	10
	15 53.9	+59 12								
	.0	+59 20	15 53.9	+59 12	1691	6.6	I	1328, 1343, 560	5 6 3	
54	15 55.5	+55 2								
	.4	+55 10	15 55.4	+55 1	1793	6.1	I	1343	8	8
	.3	+81 45	15 50.8	+81 37	530	8.4	III	1326,	1	
	.7	+81 22	15 51.4	+81 14	531	7.4	III–	1245, 1328, 1450,	2 2 2	10 10

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1882phae.proj..850F

15h

K Line	H Line	Brightness	Cor Brightness	Mean Residuals	No	Remarks
10 10 10 10	. . . .	5.5-6.6 6.5-6.4 6.4 7.1, 6.8, 6.6, 6.1,	7.0 8.2 8.0 7.9 7.8 7.2, 8.6, 8.3, 8.1, 8.1,		. . . .	
. . 10	. . .	6.8, 6.7, 7.0,	7.3, 7.7, 8.4,		. . .	
.	.	6.9 7.1,	7.3 7.8,		.	
10 10 .	8 . .	6.7, 6.6, 6.7	6.8, 7.1, 6.6,		11 2 7, . .	
. .	. 8 .	6.5-6.2, 6.8	6.2, 6.3, 6.8		. . .	
8	8	5.2,	5.3,		.	
.	.	7.0 7.8,	8.4,		-	
10 10, 10	. . .	6.4 6.7 6.9 7.0, 7.1, 7.1,	7.3 7.8 7.8 7.9, 8.2, 8.0,		. . .	

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15h

m	1855 Ra	1855 Dec	1900 Ra	1900 Dec	No Mag	Spectrum	No Plates	No Lines	
55									
56									
57									
58									
	15 57.5	+75 52							
	.6	+78	60	15 57.4	+75 52	57.9	6.5 III	1343,	2	10
	.8	+83	23	15 53.8	+83 15	48.3	7.3 I	560, 587, 1245, 1328, 1354, 1395, 1458,	4 3 5 5 5 3 4	10
	15 58.9	+71 12								
59	.1	+71	20	15 58.59	+71 12	76.2	7.0 III	1328	2	10
	16 0.1	+58 49								
	.2	+58	57	16 0.1	+58 50	160.8	3.5 II a	1328, 1343,	3 5	30,
	.6	+82	48	15 55.1	+82 40	44.0	8.2 I	1328, II 1354, III 1458,	5 2 2	1, 1
	16 0.0	+65 12								
	.6	+65	20	16 0.0	+65 12	109.5	6.5 I	1328, 1343,	5 4	5 5
	15 59.9	+67 54								
	.8	+68	2	16 0.0	+67 54	88.8	7.1 II	1343,	2	10

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15h

K Line	L Line	Brightness	Cor Brightness	Mean	Residuals	Wt	Remarks
10	.	6.7 6.8,	7.6 7.1,				
10 . 10 2 5 . 10	. . . S S . .	6.9, 7.3, 5.8, 6.1, 6.3, 6.0, 6.1,	7.4, 7.3, 6.9, 7.4, 7.4, 7.0, 7.2,				. . . . .
10	.	7.8 7.2,	8.0 8.2,				
3.0, 10,	S S	5.0, 4.5,	4.7, 4.6,				1126, 1173,
10 10	. . .	6.8, 7.0, 6.9,	8.1, 8.1, 8.0,				. . .
5 5	. .	6.7, 6.5,	6.6, 6.8,				. .
10	.	7.0,	7.5,				.

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16h

1855 Ra	1855 Dec	1900 Ra	1900 Dec	No DM	Mag DM	Spectrum	No Plates	No Lines	
m	°								
0									
1									
2									
3									
4									
16 4.6	+71 24	.9	+83 13	16 0.8	+82 6	45-y	8.5 II	1328, 1450,	2 2	10 10
		.9	+71 31	16 4.6	+71 24	164	8.2 II	1328	2	10

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16h

K Line	H Line	Brightness	Ca Brightness	Mean	Residuals	No	Remarks
10 10		68, 69,	81, 80,				
10		71,	73,				

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16h

1855 RA	1855 Dec	1900 RA	1900 Dec	No	Mag	Spectrum	No Plates	No Lines	
m	s								
16 5.2+70 32									
.4+70 39	16 52+70 32	863	6.5	I	d	560, 1328, 1343, 1354,		35 65	
16 6.1+68 4									
6.0+68 11	16 6.0+68 4	864	6.0	I		560, 587, 1328, 1343, 1354,		65 67 6	
.0+81 14	16 26+81 7	538	8.0	II		1245, 1328, 1450,		25 1	10 10
16 6.5+73 25									
.1+73 32	16 55+73 25	704	6.7	II	a	1328, 1343, 1354,		234	10 10
.6+85 43	15 57.4+85 36	269	7.5	I		560, 587, 1245, 1328, 1354, 1395, 1450,		54 68 65 6	5 10
16 7.2+56 6									
.2+56 13	16 42+56 6	1864	6.7	III	b	1343,		2	10
16 7.1+58 12									
.2+58 19	16 75+58 5	1622	6.7	I		1343, 1354,		64	2
7.0+84 2	16 1.0+83 55	351	7.7	II	a	560, 1245, 1351, 1328, 1354, 1395, 1450,		24 45 5 5 3	10 1
16 8.3+60 8									
.5+60 15	16 8.3+60 8	1658	6.8	I		1343, 1354,		63	5
16 8.2+63 40									
.7+63 47	16 8.2+63 40	1253	6.3	I		1343, 1354,		53	10
.8+84 60	16 0.2+84 53	352	8.4	II		1328, 1450,		22	10 10
16 6.9+77 4									
149. .5+77 11	16 6.9+77 4	616	6.0	I		560, 587, 601, 1340, 1260, 1328, 1343, 1354,		666 769 98	2
~~.6+81 4~~	~~16~~	~~568~~	~~7.3~~	~~III~~		~~1328~~		3	10

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16h

K Line	S Line	Brightness	Cor Brightness	Mean. Residuals	No Remarks
. . 5 .	. S . S	6 8 6 2 6 4 6 5	6 2 6 4 7 0 6 5	. . . .	
. . . . .	. . . . .	5 8 6 8 5 0 4 8 5 4	5 1 5 6 5 7 5 8 5 3	. . . . .	
10 10 .	. . .	6 5 6 6 7 0	7 3 7 6 7 8	. . .	
10 10 10	. S .	6 5 6 6 6 8	6 9 7 4 7 0	1145 1161 .	
5 10 2 5 5 10 2	. . . S . . .	6 4 6 9 6 0 5 3 5 9 6 2 5 7	7 4 7 4 7 6 7 1 7 5 7 1 7 3	. . . . .	
10	.	7 0 7 2	7 0 7 2	1167	
2 .	. .	5 9 6 5	6 9 6 9	. .	
10 10 10 5 5 10 10	. . . . . S	6 7 6 2 6 5 6 0 6 2 5 9 5 8	7 4 7 5 8 0 7 5 7 5 7 1 7 1	190 1261	
5 .	. .	6 4 6 5	6 6 6 1	. .	
10 .	. .	6 6 6 8	6 9 6 5	. .	
10 10	. .	6 6 6 8	8 2 8 2	. .	
2 2 . 5 5 2 2 2	. . . S S S S S	5 9 6 7 6 7 5 3 5 5 5 3 4 8 5 3	5 7 6 0 5 7 5 7 6 2 5 9 5 8 5 7	. . . . .	
10	S	6 3 / 6 6	7 3 / 4 6	.	

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16h

	1855 Ra	1855 Dec	1900 Ra	1900 Dec	No Mag	No Mag	Spectrum	No Plates	No Lines	
m 10										
	.8	+81 1	16 7.5	+80 54	541	7.3	III	1480	2	10
11										
16 12.0+67 24	.9	+67 31	16 12.0	+67 24	9.30	6.3	III b	1343	3	10
12										
	.1	+82 56	16 7.3	+82 49	475	8.6	II	1328	2	10
16 18.4+53 29	.3	+53 36	16 13.4	+53 29	1856	7.0	II a	1343,	2	10
16 11.9+72 39	.4	+72 46	16 11.9	+72 39	7.18	7.0	I	1328	4	
13										
14										
16 15.5+59 58	.8	+60 5	16 15.6	+60 0	1665	5.5	III	1343, 1354,	21	10

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16h

K Line	L Line	Brightness	Cor Brightness	Mean Residuals	No Remarks
10	-	74 74,	78 82,		-
10	S	65 65,	69 72,		1169,
10	-	69,	82,		-
10	-	70,	70,		1160,
-	-	70,	73,		-
10 -	S S	69 68 73, 72,	71 64 76 - 68,		- -

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1882phae.proj..850F

16h

	1855 Ra. Red.	1855 Ra. Red.	1900 Dec.	1900 Dec.	No. Mag.	Spectrum	Ad. Rating	No. Lines	
146.	16 13.6 +76 9m	15.0 +76 16	16 13.6	+76 8	5.94	6.0	I	560(01), 560(01), 584(01), 587(2), 601(2), 1328(2), 1328(2), 1343,	6 6 2 6 6 8 4
	16 15.0 +75 27	.2 +75 34	16 15.0 17.7	+75 27	5.86	6.8	III	1343, 1333,	2 3
	16 16.2 +73 39	17.0 +73 46	16 16.2 17.4	+73 38	7.13	6.2	I dv	560, 1328, 1343, 1354, 1333,	5 6 7 6 6
	16 18.8 +52 17	.7 +52 23	16 18.8	+52 17	1960	6.8	I	1343	3
18		.1 +83 47	16 12.2 12.2	+83 4 X 0	4.68	8.2	III	1245, 1328, 1354, 1450,	2 2 3 2
19		.4 +81 4	16. 16.0	+80 58	5.42	8.5	III	1328, 1450,	2 2

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1882phae.proj..850F

	K Line	H Line	Brightness	Cor Brightness	Mean Residuals	No	Remarks
344	.....	.....	.....	.....	.....		.....
	10 10	S	66 63 70 66	70 70 69 73			1213
	2 2	S S	64 54 53 53 58	60 58 61 67 61			.....
			66	65			
	10 10 10 10	S	66 65 70 66 63 66 72 68	78 79 82 78 80 80 84 80			....
	10 10		70 71 72 73	78 79 82 81			..

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16h

1855 Ra	1855 Dec.	1900 Ra	1900 Dec	Int	Mag	Spectrum	No Plates	No Lines	
m									
20									
16 20.1	+70 36								
.4	+70 42	16 20.1	+70 36	8	7.3	II	1343	2	10
16 21.9	+52 31								
.8	+52 37	16 21.9	+52 31	19	6.4	I	1343,	4	
21									
16 22.3	+55 26								
.3	+55 32	16 22.2	+55 26	18	5.7	I	1343	6	
.6	+81 30	16 17.9	+81 24	5	8.2	III	1328,	2	10
16 20.4	+75 59								
1486 .8	+76 5	16 20.4	+75 59	5	5.3	I	1560, 1560, 1584, 1601, 1328, 1328 (a) 1343, 1354,	5 5 6 5 6 8 7 6 7	16
22									
16 22.7	+61 43								
.1	+61 49	16 22.6	+61 44	15	9 1	2.5 bc III	1584, 1343, 1354, IIIb? IIIb	3 3 2	12,
16 22.1	+69 21								
.2	+69 27	16 22.0	+69 20	8	4 5	5.5 III	1343, 1354, b	2 3	10, 1
23									
24.0	+82 26	16 19.5	+82 20	4	8 1	8.8 I	1328, 1354, 1395, 1450, II?	3 4 2 4	10
16 23.0	+76 22								
.5	+76 28	16 23.0	+76 22	6	0 0	7.2 I	1328, 1343, 1354, (a) 1354 (a) 1333,	5 4 3 4 5	10 5

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16h

K Line	H Line	Brightness	Cor Brightness	Mean. Residuals	Ad Remarks
10	-	7.0,	7.6,	-	
-	-	6.6,	6.5-	-	
-	-	5.5-	5.5,	-	
10	-	7.1/4,	8.2/5.5-	-	
10 10 10 10 10 10 10 10	- - - - S S S -	-, 5.9, 6.4, 6.3, 5.3, -, 4.4, -	-, 5.6, 5.6, 5.2, 5.8, -, 5.3, -	- - - - - - -, 1.1, -	
12, 2.5, 2.5-	S S S	5.5- 6.3 4.0 5.7, 4.6, 4.1,	4.6 6.3 3.6 4.2, 4.2, 3.7,	19.4, 11.5-, 11.8,	
10, 10	- S	6.3 6.3 6.5, 6.6	6.8 6.2 7.0, 6.5-	-, 1.8.2,	
-10 10 10	- - - -	6.4, 6.2, 6.1, 6.7,	7.6, 7.8, 7.6, 7.7,	- - - -	
10 5 - - -	- - - - - -	6.7, 6.2, 7.0, -, 6.2,	7.3, 7.2, 7.4, -, 7.0,	- - - - - -	

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16h

	1855 Ra.	1855 Dec.	1900 Ra.	1900 Dec.	No Mag	Spectrum	No Plates	No Lines
m 25								
26								
16 26.5+71 36	.9+71 42	16 26.5	+71 36	789	71	II 1333	2	10
27								
	.8+82 26	16 23.2	+82 20	484	8.7	I 1328	3	
28								
16 28.2+68 59	.3+69 5	16 28.2	+68 59	850	5.2	I	587, 601, 1343, 1354, dv 1333,	65, 9, 89	
	29.1+82 58	16 24.1	+82 52	485	8.0	I	560, II.a dv 1245, 1351, 1328, 1357, 1395, 1488,	42 36 43 4	10

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16h

H Line	K Line	Brightness	Cor Brightness	Mean Residuals	No Remarks
10	.	79	75	.	.
.	.	79	82	.	-
v v v v v	v S . S . S	60, 65, 45, 47, 57,	48, 50, 50, 46, 53,	. . . . .	
34 . 10 . 2, 19 . 10	. v -	70, 65, 66, 63, 64, 65, 63,	75, 76, 79, 76, 75, 78, 74,	. 1065 -	

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16h

1855 Ra.	1855 Red.	1900 Ra.	1900 Red.	No. Mag.	DM	DM.	Spectrum	No. Plates	No. Lines	
m										
30										
16 34.0	+61 2									
.4	+61 8	16 31.0	+61 2	1898	6.0	I	5.8, 1343 (1), 1343 (2), 1354,		666	2
31										
16 31.7	+63 2									
.2	+63 8	16 31.7	+63 2	1281	6.8	II	1343, 1354,		22	10
16 32.0	+61 26									
.4	+61 32	16 32.0	+61 26	1899	7.8	I	1354		2	
32										
16 33.6	+53 5									
16 33.8	+53 7									
.6	+53 11	16 33.8	+53 6	1845-6,	5.3	I	1343,		3	
.8	+53 13	16 33.9	+53 8		5.0					
33										
16 33.2	+72 49									
.8	+72 55	16 33.2	+72 49	734	6.3	III	1343, 1354, 1333		223	10
16 31.3	+79 10									
1354, .9	+79	16 31.3	+79 11	498	5.5	I	5.6, 5.8, 601, 617, 1328, 1343, 1354, 1332,		766489	78
34										

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16h

K Line	H Line	Brightness	Cw Brightness	Mean	Residuals	No	Remarks
2 2	S	68, 62, 59, 57,	53, 64, 61, 53,				
10 10		71, 74,	74, 68, 71,				
		68,	64,				
		57,	57,		1159.		
10 10 10	S	69, 68, 66, 72, 71, 69,	76, 69, 71, 79, 72, 74,				
8 8 8 10 2 5 5 5	S S S S S S	58, 64, 65, 67, 49, 45, 48, 48,	55, 59, 57, 61, 57, 57, 54, 66,				

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16h

	1855 Ra.	1855 Dec.	1900 Ra.	1900 Dec.	No. Mag.	Spectrum	Ar. Rates	No. Lines
16 36.0+56 13m								
35	.1+56 18	16 36.0+56 13	1907	5.4	III	1354,	2	10
16 35.8+63 17								
	.4+63 22	16 35.9+63 17	1289	6.5	III	1354	1	
36								
16 34.9+77 38								
	.9+77 43	16 35.0+77 38	627	6.5	I	601, III 1328, III 1343, III 1354, III 1333, II 1395, III 1450	3 2 3 2 3 2 2	
37								
38								
	.2+84 52	16 30.2+84 47	360	8.5	I	1328	3	
16 38.4+69 22								
	.6+69 24	16 38.4+69 22	860	7.1	II	1343	2	10
39								
16 40.0+62 30								
	.5+62 35	16 40.0+62 30	1501	7.2	I	1354,	3	
16 37.8+77 53								
	.9+77 58	16 37.8+77 53	628	7.8	I	1343, 1354, 1333, II 1395, 1450,	4 3 6 2 5	10
16 40.2+64 46								
	.9+64 51	16 40.2+64 47	1145	5.2	III	5.8? 1343, bc 1354, bc 1333	2 2 2 3	

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K Line	L Line	Brightness Ca	Brightness Mean	Residuals	As	Remarks
10	-	-	-			
-	-	71.4,	68 7.1,			
2	10, 10, 10 10 10 10	- - S - S' - -	69 64 67 69 65 65 7.1, 6.7, 7.0, 6.3, 6.5, 6.8,	63 7.6 7.5 7.2 6.9 80 7.8, 7.8, 7.5, 7.2, 6.9, 8.3,		- - - - - -
-	-	67,	8.3,			
10	-	71,	7.6,			
-	-	70,	66,			
10 - 5 10 10	- - - - -	65, 7.0 6.4, 6.6 6.7	7.6, 7.3, 7.3, 7.0, 7.2,			- - - - -
10 10 10 10	- S - S	7.0 5.8 6.1 5.8 6.3 6.4 6.5 6.1,	5.6 6.1, 5.8 5.9 5.9, 6.4, 6.2, 6.2,			1163, 1192, 1208,

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16h

	1855 Ra.	1855 Dec.	1900 Ra.	1900 Dec.	No	Mag	Spectrum	As Plates	As Lines	
m 40										
	.2+840	16 33.6	+83 55	361	1.2	I	5.6	0, 587, 1245, 1381, 1328, 1354, 1395, 1450,	5 4 4 3 7. 6 4 6	5
16 37.7+80 0	.8+80 5	16 37.7	+80 0.	519	1.0	II a	1328,	1343, 1333, 1395, 1450,	3 2 2 2 2	10
16 40.1+73 31	41.0+73 36	16 40.1	+73 31	733	8.0	III v	1333		2	10
16 39.8+77 57	42.0+78 2	16 39.8	+77 57	562	6.8	I	1328,	1343, 1354, 1333, 1395, 1450,	4 2 2 3 2 2	10
16 43.4+56 58	.6+57 3	16 43.3	+56 57	1402	5.0	I dv	587,	1354,	4 8	10
16 42.9+68 16	43.0+68 21	16 42.9	+68 16	883	7.6	III	1354		1	
16 42.5+73 51	.2+72 56	16 42.5	+72 51	745	7.0	III	1333		2	10
44										
16 41.8+79 25	.6+79 30	16 41.8	+79 25	508	7.8	III	1328,	1343, 1354, 1333,	2 2 2 4	10

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H Line	K Line	Brightness	Cor Brightness	Mean Residuals	No	Remarks
46	5 10 10 5 8 10 5	. . . . . S . S	67, 71, 61, 63, 55, 59, 58, 57	74, 73, 74, 78, 70, 72, 70, 70,		. . . . .
	10 10 10 10 10 10	7	62, 65 67, 65, 61, 62,	71, 78 80, 84, 67, 69,	134,	. . . .
	10	.	72 73,	78 79,		.
	10 10 10 10 10 10	. . . S . .	70, 64, 69, 63, 64, 66 67,	77, 76, 74, 72, 68, 71 72,	122,	. . .
	10 10	. S	68, 58,	52, 53,		. .
	.	.	71 74,	70 73		.
	10	.	74 74,	76 79,		.
	10 10 10 10	. . . .	69 71, 70, 73, 68,	77 79, 82, 79, 86,		. . .

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16h

	1855 Ra	1855 Dec	1900 Ra	1900 Dec	No Mag	No Spectrum	No Plates	No Lines
46	16 44.2	+74 5	16 44.2	+74 5	10	680	6.5 I	1343, 1354, 1333,
46	16 43.5	+79 6	16 43.5	+79 6	11	571	6.3 I	1328, 1343, 1354, 1333, 1395, 1450,
47	16 40.5	+84 12	16 40.5	+84 12	17	365	8.5 I	1245
48	16 47.9	+69 14	16 47.9	+69 14	19	872	7.5 I	1343, 1354, 1333,
49	16 47.5	+77 40	16 47.5	+77 41	45	634	6.0 I	1328, 1343, 1354, 1333, 1395, 1450,

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1992phae..proj..050F

16h

K Line	S Line	Brightness	Cor Brightness	Mean Residuals	No Remarks
5 5 5	. . S	6.2, 6.4, 6.9,	7.0, 6.6, 6.6,		. . .
10 10 10 10 10 10	. S . . S . S	6.8 6.7 6.4 6.6 6.8 6.3 6.6 7.0, 6.8, 7.0, 6.7, 6.6, 7.0,	6.8 7.5 7.6 7.2 7.3 6.8 7.7 7.8, 8.0, 7.6, 7.1, 7.1, 7.6,		. . . 1130, 1174, 1181, 1226
.	.	6.9,	8.2,		-
. 10 .	. . .	6.8, 7.0, 6.5,	7.3, 6.9, 6.8,		. . .
. 10 10 10 10 10 10	. . S S S . . .	6.9, 6.8, 5.8, 5.6, 5.9, 5.3, 5.6, 5.7,	6.3, 5.9, 6.5, 6.7, 6.4, 6.2, 6.0, 6.2,		1122, 1242 . 203, 1123, 1170, 1179, 1211

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16h

1855 1855 1900 1900 Ap Mag
R.A. Dec R.A. Dec Dec Spectrum Ap Plates Ap Lines

m
50

51

52

16 52.1 +68 5

.2+68 9 16 52.1+68 5 893 7.1 II 1354, I 1333

2 3

53

54

16 52.7 + 75 32

.1+75 36 16 52.6+75 32 605 7.0 II 1343, I 1333,

2 4

16 55.3 + 62 32

.9+62 36 1655.4+62 31 1521 7.0 I 1354, 1383

3 3

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16h

K Line	G Line	Brightness	Ca Brightness	Hδ Raw	Residuals	No	Remarks
10.	..	7.2, 6.6,	7, 6.9	..	..		
10 10	..	7, 6.7	7, 7.4	..	..		
..	..	6, 6.4	6, 6.4	..	..		

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16h

1855 Ra.	1855 Red.	1900 Ra.	1900 Red.	No. Obs.	No. Mag.	Spectrum	No. Plates	No. Lines
16 55.4	+65 17							
.2	+65 21	16 55.4	+65 17	115	5.3	II a	584, 601,	1354, 1333,
16 55.9	+65 11							
.4	+65 15	16 55.9	+65 12	115	6.7	I	1354, 1333,	
16 55.4	+70 37							
.8	+70 41	16 55.4	+70 37	906	7.0	I	1354, 1333	1333,
16 55.8	+67 38							
.9	+67 42	16 55.8	+67 38	977	6.5	I	1354, 1333,	601
16 57.5	+56 50							
.7	+56 54	16 57.5	+56 50	1934	6.0	III	1333	
16 54.1	+79 40							
.1	+79 44	16 54.1	+79 40	517	6.8	III	1328, 1343, 1354, 1333, 1395, 1450, 1384,	
16 58.9	+52 44							
.9	+52 48	16 58.9	+52 44	2018	6.8	I	1333	
16 56.2	+74 27							
.4	+74 31	16 56.2	+74 27	690	7.4	II	1343, 1354, 1333,	
16 56.0	+75 34							
.5	+75 38	16 56.0	+75 34	608	6.8	I	1343, 1383, 1450,	1450
16 58.2	+58 36							
.5	+58 40	16 58.2	+58 36	1689	6.3	I	1354, 1333,	
16 56.8	+77 0							
.7	+77 4	16 56.8	+77 0	639	7.2	I	1343, 1333, 1395,	1450,
16 58.3	+73 15							
.2	+73 19	16 58.3	+73 17	751	6.0	I	587, 601, 1343,	1354, 1333, 1450
17 0.1	+60 47							
.5	+60 51	17 0.1	+60 47	1728	6.5	III	1354, 1333,	
16 59.7	+68 48							
.9	+68 52	16 59.7	+68 48	908	7.8	I	1333,	
16 59.7	+69 20							
.9	+69 24	16 59.7	+69 20	884	6.5	III	1354, 1333,	

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K Line	H Line	Brightness	Ca Brightness	Mean Residuals	No	Remarks
10 10 10 12	S . . .	6.7, 6.5, 5.3, 8.0,	5.3, 4.8, 5.0, 5.7,		19, 20, 19, 3, 20,	
10 10	. S	6.6, 6.4	6.3, 7.5		..	
5 . .	. . .	6.4, . 6.1	6.4, . 7.3,		. . .	
. 2 .	. S .	6.7, 6.0, 7.2	6, 6, 6.3, 5.4		. . .	
10	.	6.7, 7.0,	6.6, 6.9,		.	
2.2 10 10 . 10 10 10 10	. . . . .	6.8, 6.8, 7.0, 6.6, 6.5, 6.9, 6.6, 7.2, 7.1, 7.3, 7.0, 6.8, 7.2, 7.0,	7.1, 8.1, 7.1, 8.5, 7.1, 7.6, 7.5, 8.4, 8.0, 8.9, 7.4, 7.9, 7.9,		. . . . .	
.	.	6.6,	6.3		.	
. 10 10	. . .	7.1, 7.3, 6.6,	7.9, 7.5, 7.2,		. . 1203	
. 10 10 10	. . . .	6.1, 6.2, . 6.5,	7.0, 6.9, . 6.8,		. . . .	
. 8	. .	7.1, 6.5,	6.6, 6.4,		. .	
10 8 10 10	. . . .	6.5, 6.4, 6.6, 7.0,	7.5, 7.2, 6.9, 7.4,		. . . .	
6 10, 10, 10 8 8 5	. . . S . S	7.0, 7.2, 6.0, 5.9, 5.7, 6.0	6.1, 6.0, 6.8, 6.1, 6.3, 6.2,		. . . . .	
10	S .	6.9, 6.9, 7.3, 7.1,	7.9, 7.9,		. .	
10	.	6.8,	7.1,		.	
10 10	. .	6.7, 6.3	6.7, 6.6,		. 122	

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14h

		1855 Ra.	1855 Dec.	1900 Ra.	1900 Dec.	No. Mag.	No. Mag.	Spectrum	No. Plates	No. Lines	
	16 58.8 +74 27 pm										
0		0.0	+74 31	16 58.8	+74 27	6.9	7.2	II a	1343, 1354, 1333,	2 2 2	10 10
1930.		1.0	+82 16	16 56.2	+82 12	4.9	4.0	III	560, 587, 617, 682, 1328, 1354, 1395, 1450,	3 2 2 3 2 3 2 2	1.5, 1.2
	17 1.9 +57 38										
		1.1	+57 42	17 1.9	+57 38	12.9	8.2	I	1333,	4	
	17 1.6 +64 45										
		1.4	+64 49	17 1.6	+64 45	11.7	6.5	III	1354, 1333,	3 3	10 10
2											
	17 3.2 +54 36										
		3.3	+54 40	17 3.2	+54 36	18.5	4.8	II a	601, 1333,	2 3	10 12
3											
	17 0.9 +77 48										
		1.1	+77 52	17 0.9	+77 48	64.1	6.5	I	601, 1343, 1354, 1333, 1395, 1450 1384	5 5, 8, 11, 6 6, 5	
4											
	17 5.8 +50 58										
		5.7	+51 2	17 5.8	+50 58	21.8	6.5	I	1333	5	

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17h

K Line	L Line	O Brightness	Ca Brightness	Mean Residuals	No Remarks.
10 10 10	. . .	67, 72 63,	75-73, 74, 69,	1164. 1202,	

2 2 15, 12, 15-10 30, 20, 12, 12 S . . S S S . S 50 66 53 62 13 42 49 40 54 65-53 58 13 52-58 50 195-209 . 1141, 1189, 1155
54 68 57 64 43 52 42 68 67 56 62 53 61 52

. . 72, 71, .

10 10 S S 68 64 70, 66, 65-65- 67, 67, . .

10 12 . S 68, 56, 48, 54, 200, 1204,

5 . . . 2 . . . . . S . . . 68, 58, 63, 56, 57, 60, 56 59, 69, 68 65, 61, 65- 50 . . . . . .

. . . .

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200

17h

	1855- Ra	1855 Dec	1900 Ra	1900 Dec	No Mgrs Dm	No Mgrs Dm	Spectrum	No Rates	No Lines	K
17 3.6+75 21m	5- .0+75-25-		173.7+75 21		612	6.5- II	1343, 1333, 1395, 1458,		3 2 2 2	10 10
6										
17 4.9+75 27	.3+75-30		174.8+75 26		613	5.8 I	601, 1343, 1384, 1333, 1458,		4 7 6 8 6	10 10
17 7.0+61 17	.5+61 20		177.0+61 17		1640	6.8 II	1384,		2	10
7										
17 8.2+52 32	.2+52 35-		17 8.2+52 32		2032	6.0 I	1333,		5-	
17 5.3+78 16	.7+78 19		175.3+78 16		580	7.0 III	1333, 1384,		2 5-	10
179.0+51 53	.9+51 56		179.0+51 53		2184	7.2 I	1333,		4	5
8										
17 8.5+65 51	.4+65 54		17 8.5+65 50		1140	3.0 I	58, 601, 1357, 1354, 1333,		9, 10, 7, 10, 12	10
179.3+56 47	.5+56 50		179.3+56 47		1954	7.5 II	1333, 1343		2	10
	.6+81 4		174.8+81 1		568	7.3 III	1384, 1333, 1395, 1458,		3, 2, 2, 2, 2,	10
9										

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K Line	H Line	Brightness	Cor Brightness	Mean Residuals	Remarks
10 10 10 10	S - - -	6, 6.3, 5.7, 6.9,	7.4, 8.0, 5.9, 7.2,		, 1211, 1439,
10 10 8-8-10	- S - S -	6.9, 5.6, 6.9, 6.3, 6.0,	5.8, 6.5, 6.3, 7.2, 6.3,		- - - - -
10	-	7.1,	6.7,		-
-	-	6.3,	6.0,		-
10 -	-	7.4, 8.6,	8.0 8.3, 6.3		-
5	-	7.0,	6.7,		-
10 - - - -	- S - S, S	4.8, 5.0 - B, B,	3.5, 3.4 - B, B,		- - - - -
10	-	7.0	6.9,		-
- 10 10 10 10 10	S - - - - -	6.3 6.6, 6.5 6.8, 6.3 6.0 6.4, 6.3 6.6,	7.3 7.6, 7.3 7.6, 8.3 8.3, 7.0 7.1, 7.1 7.4,		- - 1155, - - -

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17h

	1855 Ra.	1855 Red.	1900 Ra.	1900 Red.	Dm	Dm	Spectrum	No Plates	No Lines	E
17 10.9+54 16m	10.0+54 19		17 10.9+54 16		1869	7.0	I 1333	5	5	
17 9.2+75 15	.6+75 18		17 9.2+75 15		616	7.0	II 1333	2	10	
17 10.9+66 23	.8+66 26		17 10.9+66 23		999	8.2	I 1333,	4	10	
11										
17 11.6+63 0	.3+63 3		17 12.3+62 59		1336	5.8	I 5-8, 7.6,	3 4 6 8	2	
							1354, 1333,			
17 11.0+73 17	12.0+73 20		17 11.0+73 17		759	7.8	III 1333, II 1450	1 2	10	
13										
14										
17 14.9+60 49	.4+60 52		17 14.9+60 49		1742	6.7	I 1333,	a II 1354	3 2	
17 15.3+60 46	.8+60 49		17 15.3+60 46		1743	6.3	II 1354, III 1333,	2 1		

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17h

K Line	H Line	Brightness	Cor Brightness	Mean. Residuals	Remarks
5	.	6.7	6.5		
10	.	6.7	7.4		
10	.	6.7	6.9		
.. 2 5	.. 5	6.7 7.1 5.7 5.5	6.5 5.4 5.4 5.6		....
.10	..	7.2 7.9 7.1	7.6 7.8 7.3 7.2		..
.0	..	6.7 6.9	7.5 6.5		1186
.0	..	6.9 7.1	6.5 7.9		1184

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17h

1855 Ra	1855 Dec	1900 Ra	1900 Dec	No Mag	No Mag	Spectrum	No Plates	No Lines	
m									
15									
17 14.0	+75 13			14.0					
.4	+75 16	17 13.9	+75 13	614	7.5	I	1333,	3	
16									
17 17.0	+64 7								
.8	+64 10	17 17.0	+64 7	1191	7.5	III	1333,	2	10
17									
17 18.3	+63 50								
18.0	+63 33	17 18.3	+63 50	1343	7.3	I	1333,	3	3
17 19.6	+53 31								
.6	+53 34	17 19.6	+53 31	1937	6.0	III	1333,	3	10
19									

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K Line	H Line	Brightness Cor	Brightness Mean	Reseduals	No	Remarks
		68	78			
10		70 / 71	71 / 72			
5		67	68			
10	S	69 / 71	67 / 69			

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17h

	1855 Ra	1855 Dec	1900 Ra	1900 Dec	No. Mag.	Spectrum	No. Plates	No. Lines	
m 20									
17 20.4+65 45	.3+65 48	17 20.4	+65 45	11	7.6	7.8 II	1333	1	
17 21.7+57 5	.9+57 8	17 21.7	+57 5	17	8.6	8.3 I	1333	6	
17 20.2+70 53	.7+70 56	17 20.2	+70 53	9	2.8	7.0 I	1384, 1333 (1), 1333 (2), 1450	4	3 6 4
17 20.9+66 39	.9+66 42	17 20.9	+66 39	10	1.3	7.0 III	1333	3	
21									
17 19.1+77 27	.1+84 54	17 12.3	+84 54	3	7.8	8.2 I	1328, 1334, 1450, II 1519 N	4	3 4 2
	.2+77 30	17 19.1	+77 27	6	5.4	7.8 III	1384	2	
22									
17 23.2+52 53	.2+52 55	17 23.2	+52 53	20	5.4	6.5 II	1333	2	
23									
17 24.4+60 8	.8+60 10	17 24.4	+60 8	17	5.4	5.5 I	601, 617, 1333, 1450	6	4 9
17 24.6+58 46	.9+58 48	17 24.5	+58 44	17	3.1	6.0 I	601, 1333	4	7
24									
17 21.5+79 39	.7+79 41	17 21.5	+79 39	5	3.6	8.0 I	1333, II 1384	4	2

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17h

H Line	K Line	Brightness Cal	Brightness Meas	Residuals	Remarks
		72	74		
		64	63		
		66, 64, 63	66, 76, 63		
		69, 72	71, 74		
		60, 65, 64, 69	76, 79, 78, 80		
		69, 71	76, 75		
		70	67		
		65, 66, 55, 58	47, 50, 63, 54		
		73, 64	54, 63		
		70, 68	89, 71		

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17h

1855 Ra	1855 Dec	1900 Ra	1900 Dec	No	Mag	Spectrum	As	Rates	No Lines	
m										
25										
17 25.3+67 24										
.4	+67 26	17 25.3	+67 24	1014	6.5	b III	1333, 1395, 1450,		3 1 2	10
26										
17 26.7+67 51										
.8	+67 53	17 26.8	+67 51	1015	7.8	II	1333		2	10
17 25.5+74 45										
.9	+74 47	17 25.5	+74 45	710	7.0	I	1333, 1450, 1384,		5-4 1	10 10
27										
17 28.2+52 22										
.2	+52 24	17 28.1	+52 23	2065	8.0	bc III	601, 1333,		2 3	12 12
28										
17 29.4+54 26										
57.5	+54 28	17 29.4	+54 26	1889	7.8	I	1333		6	
17 29.1+57 55										
.4	+57 59	17 29.1	+57 57	1774	6.7	III	1333		2	10
17 25.8+79 25										
.8	+79 27	17 25.8	+79 25	540	7.3	I	1343, 1384, 1333, 1395, 1450, 1384,		5-4-6 5-5-6	10
17 27.3+76 8										
29.0	+76 10	17 27.3	+76 8	647	7.0	III	1333,		3	10
17 30.2+55 15		30.2	+55 15				1333,			
.3	+55 17			1944	5.2	I	601, 1333,		4-7	12
17 30.3+55 14		30.3	+55 15							12
.4	+55 16									

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17h

K Line	H line	Brightness Cw	Brightness Mean	Residuals	W	Remarks
10 . 10	S . .	63 65 70 / 64 68 71	65 62 68 / 66 65 69	12 16 . .		
10	.	69	72	.		
10 10 .	. . .	65 69 65	72 72 70	. . .		
12 12	. S	63 64 / 65 68	42 38 / 44 40	14 14 / 14 14		
.	S	67	65	.		
10	.	70 / 73	69 / 72	.		
10 2 . 8 10	. . . . S	64 64 61 62 63 63	76 70 79 67 69 71	. . . . .		
10	S	70 / 73	78 / 81	.		
12	.	55	54	.		
2	. S	66 53	46 51	. .		

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17h

	1855 Ra.	1855 Dec.	1900 Ra.	1900 Dec.	No Mag	No Mag	Spectrum	Av Rates	Av Lines
m									
30									
	.7	+80 18	17 27.2	+80 13	844	6.2 III	1343, 1354, 1333, 1395, 1450, 1384,	2 2 2 2 2 2	10 10
31									
17 31.9	+57 38								
	.2	+57 40	17 31.9	+57 38	1780	6.3 I	1333, II 1450,	6 2	10.
32									
17 32.3	+68 11								
	.5	+68 13	17 32.4	+68 12	938	5.5 III	601, 1333, 1395, 1450,	2 2 2 2	10 10
17 31.2	+74 34								
	.6	+74 36	17 31.2	+74 34	713	7.7 II	1333, II 1384,	2 1	10.
33									
17 33.9	+61 57								
	.5	+61 59	17 33.9	+61 58	1678	6.0 a II	1833, 1395, 1450,	2 2 2	10 1
34									
17 32.9	+75 42								
	5	+55 50	17 33.3	+55 48	1960	7.4 III	1333. 1359 I?	2 3	
	.5	+75 44	17 32.9	+75 42	634	8.3 II	1833.	2	10

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H Line	K Line	Brightness	Ca Brightness	Mean Residuals	O-C Remarks
10 10 10 10 10 10 10	S	6.5 6.3 6.3 6.0 6.0 5.7 7.0, 6.9 6.8, 6.4, 6.5, 6.3	7.8 7.0 8.2 6.6 6.7 6.6 8.3, 7.6, 8.7, 7.9, 7.2, 7.2,	1183, 1231, 1428, 1246,	
10	S	6.3, 6.9	6.2, 6.4,		
10 10 10 10	S	6.8 5.6 5.8 6.0 7.0, 6.1, 6.2, 6.3,	5.3 5.9 5.6 5.9 5.8, 6.4, 6.0, 6.2,	1219, 1421, 1241,	
10		7.1, 6.8,	7.1, 7.2,		
10 10 10		5.8, 6.2, 6.0,	5.8, 5.9, 5.6,	1198, 1436, 1254,	
10		7.1 7.2	7.0 6.9		
		7.3,	8.0,		

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17h

	1855 Ra.	1855 Dec.	1900 Ra.	1900 Dec.	No	Mag	Spectrum	Ar. Relates.	Ar. Lines	
	m 35.0	+82 51	17 29.4	+82 49	521	8.5	I	1328, 1384, 1450, III 1519,	3 3 4 2	
17 36.7+55 48										
	.9	+55 50	17 36.7	+55 48		1961	7.3	III 1333	2	
	36									
17 35.4+74 17										
	.7	+74 19	17 35.4	+74 17		714	7.0	III 1384	1	
	.37.0	+84 44	17 28.6	+84 42		383	7.7	III 1328, 1334, 1395, 1450,	2 2 2 2	
17 37.5+68 47										
	.8	+68 48	17 37.5	+68 48		949	4.8	II a, 601, IIa v, 617, 1333, 1395, 1450,	2 2 5 2 5	
17 37.6+69 38										
	38.0	+69 39	17 37.6	+69 38		933	6.5	II a, IIb v, 1333, 1450, III 1395	3 2 2	
17 38.9+57 22										
	.2	+57 23	17 38.9	+57 22		1791	7.0	III 1333, 1450,	2 2	
	.6	+83 49	17 31.7	+83 48		571	8.3	I 1328, II a 1384, 1450,	4 2 4	
17 36.8+77 25										
	.8	+77 26	17 36.7	+77 25		666	7.8	III 1384	2	
	39.0	+83 26	17 32.6	+83 26		572	7.5	II 1328, II a 1384, 1395, 1450,	2 2 2 2	
17 38.0+73 7										
	.0	+73 8	17 38.0	+73 7		782	7.8	I 1333, 1384	4 4	
17 38.5+72 7										
	.3	+72 8	17 38.5	+72 7		799	7.3	I 1333, 1450, II a 1384,	3 5 1	
17 39.6+63 44										
	.4	+63 45	17 39.6	+63 44		371	6.9	II a 1333, 1450,	3 2	
17 39.0+72 31										
	.9	+72 32	17 39.0	+72 31		800	6.0	III 1334, 1333, 1395, 1450, 1384	2 3 2 2 3	

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K Line	H Line	Brightness	Ca Brightness	Mean Residuals	Remarks
10		6.8, 7.0, 6.8, 7.7, 7.5	8.1, 8.1, 7.9, 7.9, 7.3		
		7.1, 7.3	6.9, 7.1		
		6.7, 6.9	7.1, 7.3		
10 10 10		6.4, 6.9, 6.5, 6.5, 6.7, 7.2, 6.6, 6.7	8.0, 8.3, 6.4, 7.9, 8.3, 8.9, 6.6, 8.1		
10 10 10 10 10		6.7, 6.6, 6.4, 6.2, 5.3	5.2, 5.3, 5.0, 5.0, 5.2		1243, 204, 207, 1223, 1424
10 10 10		6.2, 6.5, 6.5-6.6	6.5, 6.4, 6.0, 6.1		1229, 1245
10 10		7.0, 7.1, 7.1, 7.4	6.9, 6.6, 7.0, 6.9		
10 10 10		6.6, 7.0, 6.7,	8.0, 8.2, 7.9,		
10		6.7, 6.9,	7.4, 7.6		
10 10 10 10		6.5, 7.0, 6.5, 6.5,	7.9, 8.2, 7.6, 7.7,		
10		6.7, 6.7,	7.2, 7.0,		
2		6.8, 6.6, 6.9,	7.3, 6.7, 7.2,		
10		6.8, 6.8,	6.9, 6.5,		1247
10 10 10		6.4, 6.3, 6.3, 6.3, 6.1, 6.7, 6.5-6.8, 6.6, 6.3	6.5-6.8, 6.5, 6.4, 6.4, 6.8, 7.0, 6.8, 6.7, 6.6		1200, 1253

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17h

1855 Ka. Dec.	1855 Ka. Dec.	1900 Dm	1900 Dm	Mag	Spectrum	No Plates	No Lines
17 38.7+74m							
40.0+74 5	17 38.7+74 4	720	74, III	1333, 1450,	1384,	2	2 2
17 41.9+53 50							
41.0+53 5	17 5 41.9+53 50	1918	8.7	I	601, 1333,	4	6
17 41.0+69 11							
.3+69 12	17 41.0+69 11	939	7.0	II a	1333, 1450,	II	2 3
42							
17 42.0+73 1							
43.0+73 2	17 42.0+73 1	787	8.0	II	1333, 1450,		2 2
17 44.4+53 37							
.4+53 38	17 44.4 ~~+25~~ +53 37	1984	7.5	I	1333,		4
44							
17 43.6+72 12							
17 43.7+72 13	5+72 13	17 43.7+72 12	804 5	485	a		
	6+72 14	17 43.7+72 13	623	II	601, 617, 628	I an	1333, 1450, 1384, 1395
						III an	2 2 4 5 4 3 2

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17h

K Line	L Line	Brightness	Cor Brightness	Mean. Residuals	W	Remarks
10 10 10	...	6.9 7.1 7.3, 6.8,	7.5 7.3 7.7, 7.5 7.2,			...
10, 2	.S	7.1, 6.9	5.1, 5.8,			..
10 10	.S	6.7, 6.7,	7.066,			1224, .
10 10	..	66, 6.7,	7.1, 6.8,			..
10	.	7.0,	6.8,			.
10, 10, 10 10 10 10 10	...SSS.	6.4 6.7, 6.0 4.1, 4.4, 4.6 4.8, 4.7,	5.7, 4.6, 5.2, 4.6, 4.5, 4.9 5.1, 4.2			1434 1982 1252, 1266

2

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