

1951pbaa.prof.2513H

Dorrit Hoffleit

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* 8 prob. overlap * I have br. only not # 8

	MF 36419	MF 36612	36505-	36661	35737	38684	35880	Adopt
30	K2? K0	G8: K0 ^M K5: 10: ^x	K0: -	M0 ¹				K
31	F8 4009	F5 4077?	F8	G0	F8	F5:	F8	
32	A0	A0	A0	A0	A0	A0	A0	A0
33	G5 G3:	G3 K0:	G0, G0 ³	g	G2	G5	G3	
34	G5: G5:	G	G2:	g5	g5	G5	G5	
35	K? G5:	G5:	g	G5:	g		G5:	
36	G? G0:	G0	F8		F8		F8	
37	G G0:	G F8	F8		G0:		F8	
38	G5? ✓		G0 ¹		g ²		G0:	
39	G0 ? K?	G3 K?	G5:		G2	G5:	G3	
40	Eor. F8	G: ✓	G0:	f8:	G0:	g	G0	
41	F: poor	F G0:	g		G0		G0	
42	G0	G0:	G0		G:		G0	
43	F	G:	g0:				G0	
44	G5:	G5:	G5		h	G5:	G5	
45	4009, 4171 Pop F2?	F5 ¹	G0 F5		G0 F5	F: G0:	F5	
46	G5? G3:	G: G0 ³			K0 K0	G5:	G5	
47	G F8:	f F8:			F8:		F8	
48	K0? K0	K	G5		G5:		G8	
49	G5 G5	G5:	G5			G0:	G5	
50	G?	G:	G5:	00:			G5	
51	K G3		G5:				G5	
52	G?	G0: weak F0:	G0:		G0:		G0:	
53	F? F8:	F? ^{G0:}	g0 ⁵⁷		g:		F5:	
54	F?	G0: ^{G2}	f/g			g0	G0:	
55	K? G3:	G0 ^{G0}	G0: ✓		G5: G2		G2:	
56	K? G3:	G5: -	G2:		G5:		G3	
57	G G0	G0	G0			G0	G0	

* bands but 4227 not strong

14733 A black

	MF 36419	MF 36612	36505	36681	36880	Adopt
58	F8: 8	F8	G0			F8
59	G	g5	G0			G2:
60	A2	A5 Si?	F2	A5+FA	F0:	Var?
61	G?	G5	G3:			G3:
62	*	G	g			
63	K? 95:		g5			G5:
64	F2 X	K?	g5			G5:
65	F8	F8:	F8	F8	F8	
66	G		G0	G0:	G0	
67	K5:	G8:	g5:	g5:	G5:	
68	G5	G8	G0:	G5	G8	
69	F0	G:	G0 F2		F5:	
70	K0	G0	G3 K0:	G0:	G3	
71	F5 F8	F8:	G0 G0	G3:	G0	
72	K0 G8	G0	G2:	G5:	G2:	
73	K0 G5	G??	G5		G5	
74	G:: X		g5:		G5:	
75	M1 K0:	K:	k5: m0 k5:	K5:		
76	G? X		f8			
77	F? g:	K? G8:	g: 93		G5:	
78	G5: G3	F8: G0:	G3: 92		G3:	
79	F?	F0: G0:	g2		G	
80	F8 F8	G0	F5:		F8	
81	G0	K? g:	g0		G0:	
82	A5: F8	G0 G2	g0		G0:	
83	G5: r	G0 G2	G2		G2	
84	G: X	F5: m8	G0:		G0:	
85	F: X	G5: g0:	G0:		G0:	
86	F5: F4	F5: 8	G0		F8:	

38684 = F0:

f? var?

* overlay, blurred

38684 G5

k5: 4F38684

24

14733 A Rad Numbers

	MF 36419	MF 36612 35913	36612	38681	35737	38684	Adopt
84 -				Weak g	G2 g		G2:
85 -				k g	Weak f5:		
86 -				G5	G2		G3
87 -					g		G
88 -				k5	k ^{G8}		K
89 G5				G5:	G2 G0		G5:
90 K2			K	K2	K0	K0	K0
91 -				g5:	g5		G8 G5
92 G5:			K?	K0	G5	G5	G5
93 -		None					-
94 -				F01	F0		F0:
95 -		None					-
96 -		None					-
97 G0			G:	G21	F8	F8:	G0
98				g1	f8:		F8:
99 -		None					-
100 -		None					-
101			G/K?	G5:	G0	g	G
102				k ^{G2}	G2:	G5	G3:
103 G5:			G/K??	k	G5:	G5	G5
104 K			K5:0	m:	K0	K2:	K0
105 -		None					-
106 -		None					-
107 -					g	G:	G:
108 K?			G5: K0:	g5	G3	G3	G3
109 G0				f?	F5	F5 G0:	F8: G0:

107? - 109
marked 109overlap
prec. of two marked 109

	✓	✓	✓	✓	✓	✓	✓
	MF 36 419	36 412 35 913	36 612	36 505-	38 681	35 737	38 684
							Adopt
110				ff	F8:	F8	γ F8:
111	—	None	—	—	—	—	—
112	—	None	—	—	—	—	—
113	4097 F5		F0	F2:	F0	F0	F2
114	N>K G? G0:					G0:	G0:
115	K?			K2: K5	K5-7 M:	K2	K5:
116	G0		G	G2:	G0	G0	G0
117	—	None	—	—	—	—	—
118	—	None	—	—	—	—	—
119	G5:		K	K0:	G3:	K	G5:
120	—	None	—	—	—	—	—
121	F			F5	G0: F8 G5: F8	F2:	F8:
122	G0:			f	G0:	F8:	G0:
123	—	None	—	—	—	—	—
124	neg Kod?	ff	neg	neg	neg	neg	neg
125	G5:		G3	G3	G5:	G8	G0 G5
126	γ:	ff	ng	g0:	ng	g3:	ng G:
127	G0				G2	G0:	G0: G0
128	F5		F5?		g	G0	g F8
129	F0 ⁸ :				G0	G0	G0: G0
130	G0					F8	g8: G0
131	G0 ⁵		G5	G5	G5:	G3	G5: G5
132	F8:	G1: g	G?		F8	F8	F8
133		A2.3		ff	F0 ¹⁵	A5	A3 A5
134	F: G?			g	G5: M8	G2:	K5: G2:
135	F: G0		G:	γ	g5:	g3	G5: G3:

Too faint on all these

14733 A real

	✓	✓	✓	✓	✓	✓	✓
	MF 36419	35 913	36612	36505	38681	35737	38684
136	F8: G2		^g A5: i	G3: ^{g2} F5	G3: ² G3: ²	G2	
137	F8: G2			F5: 15	f-g	F5:	
138	K: ^{mg} mg			G5	g5	K98	G8
139	G5		G5/K	G5	-	G5:	G5
140	G0: ²		G5			G5:	G5
141	G3		G0: go		off		G0:
142	F0 ⁵	G: ^{mg} mg	F0:	G0		F5 G0:	F5:
143	F5 F2			F0 2nd		F2	F2
144	G? /	G0:		G:		G0: G3:	G0:
145	A2? F0:		F5: ^{G0:} G3: def			f:	
146	A7: F8		² G0: G0:			f: G0:	
147	A5	mg	A3: [*] weak	F5:		F8: ⁵ F5:	
148	G0 F8		F0: F8			F8: F8	
149	F? ^{g?}			g0		G0 g5	G0
150	K5: ⁰	mg K2?? K5:	K0:	m:		K88	K0:
151	G0		G0	g		g0	G0
152	G0:		F5: g0	g		g0	G0:
153	G0					g	G0:
154	F0 (Ia?) ^{4171 g0?}		G: 0: G0			g0	G0:
155	-						
156	G5:		G5:	G5:		L0: K5: G8:	
157	G5:		²¹ 42 mg	L0		g-k G5:	
158	F8		(F) ^{g?}	F0 ²	F8	g0: F8:	
159	K0: ^{G5}	⁴¹⁷¹ mg	K0 G5	G5	G5	G5: G5	
160	F0: F5?			F0 ²		J: F0:	
161	- None					-	

comp?
 H strong others as to c

overlap

overlap

	✓	✓	✓	✓	✓
	MF36419	35913	36505	36612	38681
162	None				-
163	Kline weak G?	g	ngK	G0:	G:
164	K: G51	g5	ngK5	g5: G5	G5:
165	-			g0	G:
166					
167	None				-
168	F5	g0:		F5 [✓] G0:	F5:
169	F? ng	g0:		G3 g5	G
170	None				-
171	G5: 3	g5	g-k		G5:
172	None				-
173	None				-
174		g5:	g		G:
175	None	K	ng		-
176	None				-
177	None				-
178	None		F0i:		-
179	Fii	g01			F:
180	None				-
181	None				-
182	K:	k0:	K21	9/16	K
183	K:	g5??	K0:	9/16	K
184	None				-

14733 B Black

	M F 36 419	36612	33977 35738	38730	Adopt
51	F8 _{mg}	G0			F9
52	G0	G0			G0
53	F8 4171?	F5			F7
54	F5:	F5			F5
55	-		off 80: weak	off	
56	G0 ^v		f5		G0
57	F5	F2	off		F3
58			K0 ^v _g		K0 _g
1			F5 F8		F6
2			G5 g		G5
3			G0 G3		G2
4			A0 ✓		A0
5			G5 G3		G4
6			G5 G5		G5
7			G0 ✓		G0
8			F5 ✓		F5
9			G0 f5		G0
10			F8 ✓		F8
11			K0 ✓		K0
12			G2 F8? G0: weak		G2
13			G2 g		G2
14			G5 G5		G5
15			G0 F8		F9
16			-	overlap	
17			G2 g5		G2
18			G0 G2		G1

overlap

overlap

14733B Hack

	MF 35738	38730	Adopt
19	G5 G5g		G5
20	G2 G6d Sr, Cr?	A: edge	G3
21	A0	B3?	A0p
22	A2	A2	A2
23	G2 G5		G3
24	F5 ✓		F5
25	F8 G0		F9
26	G2 G5		G3
27	G5 G5 g3		G5
28	K0 K2		K1
29	A2 A2		A2
30	G2 G5		G3
31	G2 G5		G3
32	G2 g0i		G2
33	G1 G0 F5? f0?		G0
34	G5 G3		G4
35	G5 G3		G4
36	G2 G5		G3
37	G2 g5		G3
38	K0 d		K0
39	G5 K0		G6
40	G2 g0		G2
41	G3 G2 ag		G3
42	F2 F2 g0		F2
43	G5d K0		G8
44	G5 K0		G8

14733B Black

		MF35738	38730	
45	⁴⁶⁶⁸ Q2?	F8	G0	
46	G2	G5	G3	
47	G5:	G5 ⁺	G5	
48	F0 R2		F1	
49	G2 G3		G2	
50	K0	G5 [✓]	G8	

14733B - red

	MF 36419 Range = 35713	MF 35738	MF 38730
175	G5??	K: G5:	G5:
178	G0 G0	G0	G0
185	G10:	G0:	G0
186	^{g. judge} F8:	F??mg	F8:
195	G0:	G	G0:
209	A2: A?	A0: ^{+17, 4472} A0 (ag?)	A3 [✓] A2
1	G0	G0:	G0: G0
2	G0	G	G3 G0: G0
5		F8 4481 (4227)	F8 F8
6		F2	F5 F3
7		4063 F5	F8 F6
8	(K5) A0		K5 [✓] K5
9	F5 F5:		F8: F8 ⁶
10	(G5) K1	G5	G5 ⁺ G5
11	K: King	G5	G5 G5
13		G0	G2 G1
14		F7:	G0 F8
16		G0	G2 G1
17		M0	M0 ^{MO} M0
21		G0	G0 G0
22	G	G0:	G0 G0
24		G0:	F8 F8
26	F	F5	F5 F5
30		F5:	G0 G0:
31		G2	G0 G2
32		F2	F5: F3

14733 B real

	MF 355913	35736	38730	
33		G5	G5	G5
34	edge MOT	G5	G5 [✓]	G5
35		G2	G5	G3
39		G0:	F5?	F8
40		Gomg	G0	G0
41	f-g def	off	F8 F5?	F8:
42	G:	Gomg	G0:	G0
43	G5:	Gomg	G2	G3
45	F5:		F5	F5
47	F::		F8	F8
48	Gmg	g	G0	G0
49		G2	G0	G1
50		G0	G2	G1
51		G0	g	G0
53	A0 edge		A2 A1	A1
54	edge MOT	K0 G5	K2 [✓]	K1
55	G:		F8 [✓]	F8
56	G:		G0	G0
57		4227 G2:	G0	G0
58		K0	G5:	G8
60	only G5:		G5 [✓]	G5:
61	G8 K5:	G2:	G5 [✓]	G5
62		G5	G5	G5

*4227 not strong

*4227 not strong as in 125

overlap

14733 C:Black

	MF	35738	38730	36636	
1	F2 ✓				F2
2	F0 ✓				F0
3	G5 K0				G8
4	F8 ✓				F8
5	G5 K0				G8
6	G5 ✓				G5
7	F5 ✓				F5
8	G3 G5				G4
9	G0: G3				G2
10	A5 F0				A8
11	F5 ✓				F5
12	overl. F0?				F0:
13	G2'	g			G2
14	F8	G0			F9
15	F5	f8			F6
16	F8	g?			F8
17	G0	g	F5mg	G0	
18	F8?		F5mg	F8:	
19	G0	g0		G0	
20	F8? F8	df	gmg	F8	
21	G2		G0	G1	
22	G0		f5mg	G0	
23	A8, F2			F0:	
24	G5 G5g	bo:; g??	Kg: k5	K	
25	K0		k0	K0	
26	G2		g0	G2	

14733c - black

	MF	35-738	38-730	36-636	Adopt
27	F?? [✓]	off		g0	G:
28	A2	A2		a0	A2
29	F0	F0:			F0
30	G3 [✓]			G3	G3
31	} F0 ⁻				
32		F0			F0:
33	G2	G5 ⁻			G3
34	A5 ⁸ [✓]			F5 [✓]	F0:
35	F2 ^{F5}			F8	F5 [✓]
36	F5	f0		f8	F5
37	F5?	F2		g	F3
38	F8	f0		f8	F8
39	G3 ^{G8}			K0	G8
40	G5	K0			G8
41	G0:	g		g5	G2
42	G0:			G0	G0
43	F8			G0	F9
44	F7 ^{8?} *			G0	G:
45	F8:			G0	G0
46	F5			G0	F8
47	F5			F5	F5
48	G5 ^{K0⁺}			K2	K0
49	G2			G0	G1
50	G0			g0	G0

overlap

overlap

overlap

14733 C - red

	MF	35738	38730	Adopt
64	G1	G0-	G0	G0
67	⁴⁰⁷⁷ F8	F7	F8	F8
69	F8	F5	F6	F6
70	G0:	g0	G0	G0
71	G5	G5	G5	G5
72	G5:	G2	G3	G3
73	^{F0} F2	^{F5} G0	F5	F5
74	F8:	F5	F6	F6
75	F2:	F5	F4	F4
76	G ^{None}	F5	-	-
77	^{G0} F	F8(G0)	G0	G0
78	F2	F2	F2	F2
79	G0:	G5	G3	G3
80	^{None}	-	-	-
81	G3	G5	G4	G4
82	G:	G5	G5	G5

14733D - black

	MF	38651 38651	35737	
1	g	G3	G3	
2	g5	G5:	G5	
3	F5:	F0	F2	
4	^{G5:} g	g ✓	G	
5	^{A5:} g0	F8:	F8	
6	A2:Si:	g0	A5:	
7	g5: f-g0	F5	F5:	
8	k0	K0:	K0	
9	^{K0g} k5:	k G5	G8	
10	g5:	G2	G3	
11	G5	G0	G3	
12	G5	G5 G3	G5	
13	g5	G5:	G5	
14	g5	G5:	G5	
15	g5:	g0:	G	
16	g5:	G5:	G5	
17	A0	A0	A0	
18	F8	F8:	F8	
19	F8:	F8: g(mg)	F8	
20	F8: ✓	F2r ✓	F5	
21	G0: ✓	g0:	G0:	
22	F5:	F8'	F8	
23	A5: ✓	^{A2} A2, p?	A3:	
24	g0:	f f8:	G	
25	F8:	f8:	F8	

* Two estimates

	MF 35913	38690	38681	35737	
26			g0:	g0	G0
27			g	G2	G2
28			A2	A0	A1
29			G0:	g:	G0
30			g5:	g	G5:
31			F8 FS	F8 FS:	F8
32			K0 FS	✓ G5	G8
33			FS G5:	G2	G8:
34			FS:	F0+	FS:
35			g0	G0:	G0:
36			k:	ng	K0:
37			FS FS:	ng	M:
38			✓ G0	ng f-g	✓ G0:
39			<u>FS</u> G2:	<u>FS</u> f-g	<u>FS</u> G5:
40			G2:		G0:
41			G5* G3:	F5/ F2	FS:
42			F8 G0	f g	G0:
43			g	g	Q
44		gi	ng	off	G
45	G5	g5:	K0		G8
46	F5	f5ng	g	f	F5
47	F8		F8'	F2	F7
48	A0		FS B:	FS A	A0
49	F5:	g:ng	F8:		F8:
50	G0:	g ng	G5:		G2:

MF38681:

ng

ng

G0

FS

G

Hyd. weak for F0 but G not in

K0 on MF38659

G8g on 38659

f8 "

F5-8 "

F8

confusing H₂ + G band?Poor focus at H₂ gives impression of G5

G0: on MF 38659

14733D - black

	1	✓	↓	↓
	35-9/3	38690	38681	35737
	MF			
51	G5:	mg k5	G8	G5 G6
52	M0:	k mg	G5	G5 G5
53	K0	k mg	K0:	G5 G8
54	AS F0	AS F0: ^{MSW} G5:	F0 G1	off F0:
55	G5:	G5 mg	K0	G5 G8
56	K0:	k mg	G5	G5 G5
57	K2	M0:	K2	K0 K2
58	G0 G3	G3 K0:	G5	g0: G3
59	M2: K5	K5:	k5 K3	K1 K5
60	G5: (K)	G5	G5:	G5
61	F2	F5:	F8	F5
62	G5	G5	G5	G5
63	G2	F8	G2	G0
64	K2	K	K2: K	K2
65	G0:	F8	g	F8
66	F5 ✓ F2	A5 F2	F0 ✓ ^{??} A-F	F2
67	G0 G2 (p?)	F8	g0	G0
68	overlap	overlap	g0: mg	
69	G5	G5	G0	G3
70	G0	G0	g0	G0
71	G5: ✓	overlap K5: G5	G8 K0	G6
72	P5: F8	G0	G3 G5: ²⁰⁰ g0	G0
73	F8	F5	F5	F5
74	F5	F8	F8	F8
75	G2	G5	G2	G3

MF 38659 = K?

overlap

14733 D-Hack

	MF 35-913	38690	38681	
76	^{4077, CN} G5 [*]	^{e?} K5Q8	G8 G5	G7g
77	G0	G0	G3	G1
78	F5	F8	G0	F8
79	G0	G2:	g	G0
80	⁴³⁸³ G0	G0	g	G0
81	G5 [✓]	K2 ^{K0}	K3 ^{K2:}	K0
82	G5	G5	G5:	G5
83	G5	G5	G5:	G5
84	F5:1 [✓]	G2 [✓]	g0:	G
85	G0:1 [✓]	g:	<i>mudh</i>	G
86	K0:1 [✓]	M0 ^{K0}	K K0	K0
87	K0	K:	G5	G8
88	G0:		g	G0:
89	F5 [✓]	^{mo CN} G5?	G F5	F5
90	G5: G3		g G2	G3
91	F5	G	g:	F8:
92	K0 G8	M0 ^{K0}	M0 ^{K0}	K0
93	F5 /	^{G3} G5	g:	F5
94	K5 /	King	K0 [✓]	K5 ³
95	F0	F0	F2	F0
96	G5	G5:	G5:	G5
97	K5 [✓]	K5:	K0 [✓]	K5
98	G5	G5:	G0	G3
99	G5:	G:		G5:
100	F5:	-	g0	F8:

strong line near 4045-77

} *mudh*

F5 on 33530

K5[✓] " "

14733 D- black

	M/F	35	9/13	
			38	690
			38	681
101	K0	G5	K2	K0
102	G0	G0	g:	G0
	⁴²²⁷ F5:	F5	G0:	F5
	⁴¹¹ A3:	A2	A2:	A2
104	A3:	A2	A2:	A2
105	G0	F8 _{mg}	g0	G0
106	G0	F8	g0:	G0

14733 D - red

	MF 35913	38680 38681	35737	Adopt
93		G5:	G5 ✓	G5
95		G0	g	G0
96			G0:	G0:
99		G5	G3	G4
100	none			-
105		g1	g5: ✓	G1
106		g5-h		
111		g F8:	F5: ✓	F5:
112		g2:	g3	g G3:
117		g0:	g3	G
118		g1 f8:	g5: ✓	F8:
120		g5: ✓	g5	G5
123	fr	g F5:	F0 ✓	F2:
161	G:mg	F8		F8
162	KO G2: *	G2 ✓		G2 Var
167	G5:mg	g		G
170	G5: ✓			G3:
172	g0:	g0		G0:
173	G:			G0:
176	g0:	f		G0:
177	K: g5:	G5:		G5:
180	F2	F0:		F2
181	G5			G5
184	F0	g0 f0:		F0
187	G5: poor	g5:		G5:
188	G0	g2 g5		G2
189	G5:	g3:		G4

~~line faint~~
~~overexposed~~

35530?

162 { * 4227⁺ nearly as strong as G-band; stronger
" practically absent on 35530 where
H δ , G are better exposed. (than on 38681)

MF 35-913

38730

38681

191 GS⁹⁰:

Go:

Go: ~ 35530

192	A7		F0	A8
-----	----	--	----	----

193	G5 ^{F5}	g	F5
-----	------------------	---	----

F5 "

19 ⁴ 5 G5	9.5! G5
---------------------------------	---------

196	GO	g	GO
-----	----	---	----

197	G5	95	G5
-----	----	----	----

198	4272? G5	95:	G5
-----	-------------	-----	----

199 G ng		G
----------	--	---

G2: an 35530

200 F8: 18 g F8:

201	Go	15	Go
-----	----	----	----

Go ..

202	Go	go	Go
-----	----	----	----

203 G3: 95 95 G3:

204 G0: G0: g: G0

205 K⁰₅: 65[✓]: 95[✓]: 68

206	G	G2		G2
-----	---	----	--	----

207	F5: ⁵ ✓	90	95:	F8:
-----	--------------------	----	-----	-----

GO-2 on 35530

208 Mo[✓] K5 M' MO

K5

210	K5:	K2		K2
-----	-----	----	--	----

3	A0:	A2		A2
---	-----	----	--	----

		4017:	
4	F8:	F8:	F8

12	F0	A5		A8
----	----	----	--	----

14733 E - black

	MF 35913	38690	38730
1	G0	G0	G0: G0
2	K:	k ng	k: k
3	K	K0/G5	K5: K0
4	F5	F0	F5 F5
5	F2	F5:	F5 F5
6	G5 ²	F5	G0 ³ G2
7	A0 Si?	A2	A0 A0
8	G5:	G5:	G3 G4
9	M _a *	K5:	K5 K5
10	F8	F8	F8 F8
11	G5	K0	K0 G8
12	F0	F0	F2 F0
13	G5	G5:	K0: G6
14	F2:	F8	F8 F7
15	G5 ^{K2} M0	K2:	K5 K3
16	K5: G5		G2 G3
17	F8	G0::	F5 F8
18	G5d	G5 u.v. strong	G0 G3
19	F7	F0:	F8 F7
20	K: G0	G ng	F8 G0
21	F8	G0	G0 G0
22	B8	B9	B8 B8
23	G5 F2 [✓]	A5: ^{blended}	F2 F2
24	G5d	G5	G5 G5
25	G5 G5	G/K:	G5 G5

G5: on 35530

* overlap

14733E - black

	MF 35913	38690	38730	36613	35914
26	F2	A1:	F2		F2
27	G0 KS: K0:	K1: K5:1	K0		K0:
28	G5 G5	A1: A1:	G5		G5
29	G5 G5		G2		G3
30	G5		G0		G3
31	G5	G5	G2		G3
32	G2:	G0:	G0		G0
33	M0: G8	K1:2	G5 G8		G8
34	F8: G0	-	F2 F5		F8:
35	K1: ✓	K	K0		K0
36	G3 F5	A0:1	F5		F5
37	F5 K0:		K0		K0
38	F8: G2:	G5:	G0		G2
39	G5 G5	K1: ✓	G5		G5
40	G5/K	K2:	K0		K0
41	G2	G5:	G2		G2
42	F0	F5:	F2		F2
43	G0	G0:	G0		G0
44	G0: M0: ✓	M1: M1: M0	M0: K5		M0
45	F5: G2: A?	G0:	G0		G0
46	F8 A5	A0	A3		A3
47			G2 ⁸		G5
48			G5	G5 K0	G8
49			K0	K3 K0	K0
50			F8	G0 G0	G0

KS: on 35530

G0: on 35942
K0 on 35530

14733 E-black

	MF 38730	36613	35914	
51	AS+F5	^{P0} F2	F0	F0
52	K0 G5	K0	G5	G8
53	-	None	-	-
54	F5	F5	F8:	F5
55	F5	F8	F5	F5
56	G0	G2	G0	G0
57	G0-	G0	G0	G0
58	G0-	G0	F8	G0
59	M0 F8	G0	G0	G0

14733 E - red.

	MF 35913	38690	38730
15	G5 ✓	G0 ³	G3
18	K5: K0	K0	K0
19	^{only} - G: K	F8	F8
20	K: K2	K0	K1
23	G5	G2	G3
25	G5	G5	G5
27	G0'	F5✓	F8
28	G5	G5	G5
29	G5	G5	G5
36	G3	G2	G3
37	F5	F5	F5
38	F8:	F8	F8
44	G0:	G0-	G0
46	F8	F8	F8
52	K0:	G5	G8
59	^{K2} K5	K0	K1
63	K2: G5:	G5	G5
65	K5: K0 h	G5	G8
66	G: ng	^{G0} F8 ⁺	G0
68	^{G2} g: comu	G0(2)	G2
76		F5'	F5
80		F5'	F5
83		F5'	F5

10964A - black

	MF 35738	88730	36636	
1	F0 ⁵		F8 ⁵	F5
2	F8 ^{GO:}	g	g5 ^{ng}	GO:
3	G5:	g5	g5	G5
4	G2 ¹	g0	k0 ^{g5:}	G3
5	GO:		F8	F8
6	G5	k		G5
7	G5 ⁱⁿ g ^{fx}			G?
8	G3 G8		k0 ^{G8:}	G8
9	G2	g5	g0	G2
10	G2		g	G2
11	G0/F8		G0	G0
12	G2d		G0	G1
13	G5		G5	G5
14	M0 ²	M2		M2
15	F8 ¹		f F8:	F8
16	F5 [✓]		F5 Gv?	F5
17	F8 ¹	f	g ⁵	F8:
18	M0 ¹ ✓	k5	g ⁶	M0:
19	F8		f5	F8
20	F5		F2	F3
21	F8 ^{dx} F5:		F0??	F
22	F8		F5	F6
23	F5:		mg	F5:
24	F8		F5	F6
25	G:		G2	G2

F5 on 38719

F8 "

G5 "

g 35719

10964A - black

	MF 35738	38730	36636	38710	Adopt	38687
26	F ² ₈		G0		F9	
27	F ⁰ ₈		G ⁰ ₀		G0	G0: on 35742
28	F ⁰ ₈	<i>overlap</i>	G ⁰ ₅		G	G
29	K0		K2		K0	G8
30	F5		F5		F5	F5
31	G2 ¹		F5 ¹		F8 ¹	
32	<i>del</i>		<i>off</i>			G ¹ : on 35742
33	G ¹ ₂		G ⁵ ₃		G	
34	f ⁵ ₈		G0		G	G ¹ :
35	G2		G5		G5	
36						<i>overlap</i>
37	G0 ¹					
38	G0	f ⁸			G0	
39	G ⁰ ₈		G ⁸		G	
40	G ³ ₅₋₅		G ⁵ ₀		G5 ¹	
41	F ⁸ ₀		G ⁰ ₁		G0 ¹	
42	F8		G0		F8	
43	F5		F8		F6	
44	G5		G5		G5	
45	G3	G5	G5		G3	
46	G5	G [?]			G5	
47	F8	G	F8		F8	
48	F ¹	G	G0		G0 ¹	
49	G ⁰ ₅	K ⁰ ₅	K ⁰ ₂	K ⁰ ₅	K0	K ¹ : 35968 K on 35942
50	F ⁵ _{mg}		f5		F5 ¹	

10964A-blade

	MF 35738	36730	36636	36710	36687	35903	35942	85968
51 27	G5 ^v	k	off	k	k	k2:		G8
52 28		G0 ²		g3:	g3	-	g0	G2
53 29		g5		g5	g5	-		G5
54 30				g??	g5:	g:		G
55		F0		f0	F0	a:	f	F0
56		k2		k	K0	k0	g5:	K0
57				g	g	g	g0	G
58				g	g	g5::		G
59		F5'		g0?	F5	f8		F5
60		g2?			g2	-		G2:
61		g0		g5::	g	g		G0:
62				-	off			
63					?	g	f5::	G
64		F8			m3	-	-	F8
65		G2			G0:	g	G0	G0
66		G			g::	-	-	G:
67		G2:			g::	-	F5::	G
68		f8 ^v			-	-	-	F8
69		G5		k	-	k	g5	G5
70					G5	g	g5:	G5
71		G0	g2		G2	G2		G2
72		g:			g	-	-	G:
73		F5		f?	F8	-	-	F6
74		off G5				-	calc f?	overlap
75		G0			G2:	g	g	G0

overlap

overlap

10964A-black

	14 F 36636	38710	38687	35903	35942	35968	Adopt
76					1/8	-	
77				g0	g0:	F8:	G:
78	F5		f	F5	-	f	F5
79		k2	k2	K0:	k	G5	K0
80			g	g0:	-	g0	G0:
81	G0:		g0:	g		F8	F8:
82	^G F5:		g0??	g0:		-	G
83				g0?		-	G0:
84	f8:		g	g0		-	G0:
85						g/k:	
86	f8:		f:	f8		-	F8:
87	g		g	G0	g0:	g:	G0:
88	k		k	K0	k	-	K0:
89	k5:		k5:	k	K5	k:	K5
90	k0		k	K0	g5:	k	K0:
91		g5	k2:	g8	k:	g5:	G8:
92	^{F8} f5?			G0	g:	-	F8:
93				g0:		-	G:
94	G5		k0	K0	k	k	G8
95	f8		g0	F8	-	-	F8
96	g0			G0:	-	-	G0
97	f8			F8	f8	g	F8
98	g5		M0:	G8	k	-	G8
99	f5ng			F8	-	g:	F8
100	k0ng		K:	K0	k	g5:	K0

overlap

10964 A - red.

	MF 35-738	38730	Adopt	
1	g5mg	G5	G5	G5 on 38719
2	G2:	G0:	G1:	G2 ..
3	F8:	G0(F8)	F8	
4	K0:	K2	K2	
5	G3:	G2	G2	
6				Too weak
7	F5	F8	F6	
8	F	F5	F5	F5 on 38719
9	G2	G0	G1	
10		F8	F8	F8 on 38719
11	F0	F5:	F3	
12	g	G0:	G	
13	G2	G3	G2	
14	G0	G0	G0	
15		overl. 0: F5: F5: F5: F5:	F5: F5: F5: F5:	F5: on 38719
16	G5	G5	G5	
17	—	—	—	
18	K2	K5	K3	
19	K0	K0	K0	
20	G5:	K0	G8	
21	G5	G5	G5	
22	G0	G0	G0	
23	G0 ^v	G0?	G0	F8 on 38719
24	F8	G0:	F8	
25	G0	G2	G0	

10964A red

	MF 35738	38730	38710
26	G2	G0	G1
27	G2	G5	G3
28	G3	G5	G4
29	G0	F8	F9
30	F5	F5	F5
31	G0	G2	G1
32	F2	F5	F3
33	F5	G0	F8
34	F5	F0	F2
35		^{F8} G0?	F8: FS on 38719
36	G0 mg	G0	G0
37	B5	B5	B5
38		G0	F9 F8 on 38719
39		G0	F9 F8 38719
40	G5d	G5	G5
41	G5	G5i	G5
42	G3	G5	G4
43	^{F8??} f	G0	F9 G0 F8 on 38719
44	K2	K2 K0	K2
45	G5	K5	K0 K on 38687
46	- none		-
47	F0	^{F5i} G5	F5i f: " "
48	-	^{G5i} G0i	G
49		G0i	G:
50	f mg	G0	G0

10964A-rod

	MF 35738	38730	38710	↓ Adopt	35903
51	g0	F8	F8	F8	
52		K0	-		
53	G5	G5	K5	G5	k on 38687
54	None		-		
55	None		-		
56		G8	G8		
57		K2	K0	k	k on 38687
58		G5	G5	g5	k " "
59		F8	F9	g0	
60		F5	F5	-	
61		g5:	G5	G5	
62			G:	-	
63		k	K0	K0	k " "
64		G2	G3	G5	g " "
65		G	G	-	
66		B5: ^{B8-A2}	A0	A0 A0	A0: A2 " "
67		G2	G3	G5	G5: " "
68				-	
69		F2 ¹	F5	F8	F " "
70		g	G	g:	
71		g5:	G	g:	g: " "
72		G0	G0	-	g: " "
73	None		-		
74	None		-		
75	None		-		

overlap

10964 A-red

	MF	38710	38687	35923	Adopt
76	G5 ⁺	g	g3:	G5	
77	G5 ⁰	18		G0	
78	G5 ⁰	g	g	G6	
79			g:		
80	G0		15:	G0	
81	G0			G0	
82	G2 ^v		g	G2	
83	F8		g:	F8	
84	G0		g:	G0	
85	none			-	
86	G5 ⁰	g-k	k:	G5	
87	G5	g	g5:	G5	
88	G0	g:	g0:	G0	

combined
79 red 85 black = g? overlap

10964B - black

	MF 36636	38 7/10	35903	
1		k	K0	K0:
2	f5:		G0	G0
3		g::	^{G0:} F8	G0:
4		g::	k:	G1
5	^{f5:} F0mg		g::	F5:
6	g5'		g5	G5
7			⁵ g8	G8:
8	f8:		F8 G0	F8 G0
9		g3::	g	G
10	g0		G2	G2
11	k2		K2g	K2
12	F2		F2 F2	F2
13	G2		G5-	G3
14	f8		g:	F8
15	g:		g0	G0:
16		g	g::	G
17	G0		g5	G2
18	F8		G0	F9
19		^{f8}	g0	F9:
20	F5		F5	F5
21	G5		G8'	G6
22		^{G0} f8	G0	G0
23			f	
24		g5'	^{g5} F8	G5
25	g0:		g5	F8

k m 38687

4226[±] strong

10964B - black

	MF	10964B 36686 35739 38710	35903	
26	G0:		g0	G0
27	G0:	g0:	F8 ^{1/5}	F5:
28	G0:		du F? du	G
29	F8	g0 g0 ³	G0	F9
30		F8 ^v	F5	P6
31	G5		K0 G8	G8
32	g		F5	F8
33		k'	K0:	K0:
34	g		G0	G0
35	f5		P5	F5
36			g5 ^u	G
37		k ^u	g5:	G8:
38	g	g?	G2:	G2:
39	g2n		g5:	G5:
40	G2		G0	G1
41	g0ii		G0	G0
42		f0'	F0*	F0
43	F2		F5	F3
44		k	K2:	K2:
45		f0 ³	F0	F0
46	G2		G5	G3
47	k		du g5:	K:
48		g2 g0	G2	G2
49	G5		G5	G5
50		<u>g0</u> G0 ^u	G0	G0

G2 on 38687

g on 38687

overlap k: on 38687

4171⁺ very strong

k: on 38687

10964 B-black

	MF 36636	35739	36637	36644	36621	38710	↓ Adopt	35903
51		F8:				g:0:	G0:	G0:
52	F5					F5	F6	F8
53	F5					f8	F5	F5
54	F5					g0:	F8	F8
55	F5:					f5	F5	F5
56	F2	F5			g0?		F2	F0
57						g2	G3	G5
58	g?					g2	G3	G5
59	F5					G0 F8	F7	F8
60	g5				f8		G7?	g0:
61					g			-
62	F5				g0		F8	F8
63	4227 G0	f8	G0	G0	G0		G0	F8
64	4171 F0	F0 A5	4077? F5?	F2	F2		F2 F0	F0:
65	F5	F2	F5	F2	F2		F3	F5
66								
67	4227 F2	mg G5			F2	F2:	F2	F5 F5-8
68	F8:						F8	F8
69	G0					g0:	G2	G5:
70	F2 G0	F2 A5	F2?	A5		F5 F0:	F5 F0:	F2 F5
71	F5	F5/8	F5	F5			F5	F8:
72	G2					g5	G5	K0
73	F5	F5	F5	F2			F04	F5
74	g8	G5:	g8	K0			G8	K0
75	g0	G0	G0	G0			G0	G3

Many but
lines weak, except H, K

wrong star?

f on 35596

F5 on 35596

G5 on 35596

10964B- black

	MF	35739	36637	36644	36621	38710	↓ Adopt	35903
76	G3	G0:	G0	G2			G2	
77	F2 ^{57*}		G3:			g::	G0:	G0 [✓]
78	G5	G5	G5	G5			G5	
79	K2	K2	K2	K0			K2	
80	G5			G0:	g5:	G5	G5	
81	F8	gong	F8	F8			F8	
82	G5	k	K0:				G8	G5
83	g-k?		k				K:	-
84	K5 [✓]	k		K0 G5:	k ⁺	K0	K0 ⁺ K2 ⁺	

* def, G or Hγ??

overlap

10964 B - red

	MF 35739	38710	↓ Adopt	35903
89		G2:	G0	G0
90		g0:?		-
91		F8: G0: g:	G0: G2	g3:
92		G5:	G5:	g
93		g:0	G01	g0
94		G5:	G5:	g:
95		G5 F5:	G5:	g5:
96		G0:	G2:	g5:
97		F8	F9	G0
98		F8:	F8	g0 f8-
99		K2	K1	K0
100		G5:	G8	K0
101	None	-	-	-
102		F8	F9	G0
103		G5:	G5	g5:
104	f8	G0:	G0	g0:
105	G5	G2	G3	G5
106	G0	G0	G0	G3
107	F5	F8	F6	f5
108	None	-	-	-
109	None	-	-	-
110	G0	G0	G0	ff
111	G5	G5	G5	G8
112	G5 F2-5	K0 [✓]	K0	K0 [✓]
113	F2	F2 [✓]	F2:	-
114	G5/K	K0	G8	ff

k: 35942
envelop

K0: on 38687

G5: on 38687 poor

10964 B-red

	MF	35739	38710
115	F2	F2	F2
117	G0	G2	G0
118	F8:	*	F8:
119	None	-	-
120	F8	G0	F9
121	G5	G5	G5
122	None	-	-
123	G0	G2	G1
124	F2	F2	F2
125	G5	G2	G3
126	G0:	G0:	G0
127	F5	F8	F6
128	None	-	-
129	G5	G5	G5
130	None	-	-
131	G0	G1	G0
132	G5	G5	G5
133	F2 F0	F2: G2	F2
134	G5 None	-	-
135	G5	K01	G7
136		¹⁵ F5	F5
137	} None	-	-
138		-	-
139		-	-
140		-	-

F8:: 35596

G0: on 35903

Lost in halo of br. star

³
G5 on 35903 ¹⁰ G3, 1F5⁺ on 35903

10964 B-red

	MF 35739	38710	
141	None	-	
142	G3	G0	G2
143	G0	F8	F9
144	F2	F5:	F3
145	G0	G0:	G0
146	F8	g0	F8
147	G2	^{G3} K0:	G3
148	G3	G3	G3
149	F8	F8:	F8
150	None	-	
151	[✓] F2	^{F2} A5 ^{F0:} ^{combin}	F2

G5: on 35903

F0 comb
A5: on 35903

10964C - black

	MF 35-739	36637	36644	36621	35901	38710	38686
1	B8?	B9	A0	B8			B9
2	B8 F8	G5	K0	G5			G8
3	B8	G0	G0	G0		f8?	G0
4	F5					f	F5
5	F8	F5:	F8:	F5			F7
6	G3		G0+	G2			G2
7	G0:	G0	G0	G0			G0
8		F3	F5	F2			F3
9	G2	G3	G2	G2	G2:		G2
10	G0	f?	F8	F8	f		F8
11	g5	k?	g5	G5:	f8?		G5
12	g		f		g0		G0
13		G3	G2	G2	g0??		G2
14	G3:	k0	G2	G0	g0		G2
15	K0:				k5	K5:	K2
16	F0	F2	F2	A8	F2		F0
17	F5	F8	F8	F8	F8		F8
18	F8	F ⁵ F4	G0	F5	F8		F8
19	K0			G5	G5	g5:	G5
20	G0		g	G0	g0?		G0
21		G5	G2	G5	g3		G3
22	G5~				k ⁴⁵	k ²⁵ :	G8
23	F5	F5	F5	F5	F8		F5
24	K0 edge K2:	G8 K5?	G5	G8 G5	G5~		G8
25	4227, 4555 K2:	K5	K2 F8	K0	K0: G5		K2

D964C - Black

	MF 35739	36637	36644	36621	35901	38686	
26		G0	G0	G0	F8		G0
27	G3	K0	K0	G5	G5		G5
28	F5:	F5	G0	F8	F5		F8
29	G0	G0	G0-	G0	F5		G0
30		F0	F5	F5	F2		F3
31							
32	K5	K5:	M0	K5	M0	M	K6
33	G5	K0:	G5	K0	K0		G8
34	G0	G0	G0	G0:	F8		G0
35	F5				G0	G0:	F8
36	G5	K0	K0	G5	G5		G8
37	G5	G5	G5	G5	G5	k	G5
38	G0	G5	G0	G0:	G2:		G2
39	G5		k	G5	K0	k	G8
40	G5	G0?	F8	F8	F5:		F8
41	F8	F8?	G0	G0	G		F8
42	K0	K0	K2	K0	K0		K0
43	G5	G5	K0	K0 ⁰	G2 ⁵		G8
44	F2	F2	F0	F5	F0		F2
45	G0	G0	G0:	G0	G0		G0
46	G0	G5	G5	G5	G2		G5
47	A2			A0:	A2	A0	A2
48	K5 ³ K5 ¹		off	G5 ¹ K5 ¹	G0?	G5:K2 ¹ K2: var?	
49	G0	G0	G0	G0	G0		G0
50	G2	G0	G0	G0	G0		G0

K31
K0: on 35596 densif.

10904C - black

	MF 35739	36637	36644	36621	35901	38686
51	G0				G2:	G0
52	G5		k0	G5	G5	K0: G5
53	G5	K0	k0	G5	k0	G8
54	F5	f8?	g0	F5	f8	F5
55	G0	h		g0?	G5	G3
56	K2:	k0	K3	g5?	K0	K0
57	G5				G5	k G5
58	F5	g0?	F5	F5	f8	F5
59	F8				g0	g F8
60	F5:				g0	G0: F8
61	G2			G3	f8	G5: G3
62	F5:	g0?	F2?	F2:	f0	F5:
63	K0 ^{G6}		K0 ^{K0} K0?	g5	G5	K0 K2 G8
64	F5	f8?	f2	F5	F5	F0: F5
65	g0'	g0'		g0'	f8	g0': G0:
66	g2:	g0	G0	G0	G0	G0
67	K0 g6			G5	G3	K0 ^{G5} G5
68	k5(m)	F0	F2	F2	comp?	F2
69	k5(m)	K0	K0	k5	K0	K0
70	G5		g5	g5	G2	G3
71	K0			g5?	G2	K0: G8
72	K0	k	g5	k0	K0	M: K0
73	K0	K0		g5	K0	k K0
74	K0:				G5	k G8
75	K0		k0	g5	K0	K0

10964C-black

	MF 35739	36637	36644	36621	35901	38686	
76		F2	F2	F2	F0		F2
77		G0:	F8:	F8	G0		F8
78		G5	G5	g5	^G F5		G5
79		F5	F5	F5	F8:		F5
80	k0	G5	g5	G5	K0		G5
81	K5 ⁰			k2	K2	^{k0:} k0:	K1
82		F5 F5	F2	F5	F5		F5
83		k0	K0	g5	K0		K0
84	K5 ⁰ :			k2	K0	K0	K0
85	K5:				K0	⁰ k5:	K0

10964C - red

	MF	35739	35901	38710	38686
152	F8	g	f8	G0: G5:	F8
153	F2		F2	F0	F2
154	K0		G5	K0	G8
155	K0	g5?		K0	K0
156	F8		F8	F5	F8
157	G0		G3	G0:	G2
158	F8			f	F8
159	F2			F2:	F2
160	G5			G5:	G5
161	G0			G0	G0
162	K0	g5		K0	K0
163	G0			f8	G0
164	F5			G0:	F8:
165	G0			F8:	G0
166	K0			K0:	K0
167	G5			G2	G3
168	F5	F8 ⁺		F5:	F5
169	G0	F8		g	G0
170	}	G0:			G0:
171		g5: G5		G5	G5:
172	G0			f8:	G0
173	g5	None -		-	-
174	g5	K?		K2:	
175	K0			K0	K0
176	F8			F5:	F8

} overlap

10964C - 2nd

	MF 35739	35901	38686	
177	G0		G0	G0
178	None	-	-	-
179	G0	F5 ^{??}	G:	G0
180	G0	G0	G:	G0
181	G0:	F8:	G0	G0
182	G3		G	G3
183	G0 ^{F2}		F2: A5:	F2
184	F8		F5	F7
185	F5	F5	F5	F5
186	None			-
187	G5		G5 ^{multiple}	G5
188	G0	G0	G0	G0
189	G5?	G5:	G0:	G3:
190	None			-
191	F8	G0	G0:	G0
192	K0	G5	K0	G8
193	F5 ²	G0 ^{g0}	F5: G5:	F5:
194	G5		G5:	G5
195	None			-
196	G0		G0	G0
197	K0	K0	K0	K0
198	F0	F2	F0	F0
199	G0		G0	G0
200	None			-
201	G0	G5	G5	G5

G3: on 35596

10964 C - red

	MF 35 739	35 901	38 686	
202	G0		G0:	G0
203	None			-
204	K2:	K0	K2	K1
205	K0		K0	K0
206	^{9171!} F0	F0	F0	F0
207	^{4045!} G5:		⁴⁰¹ G5:	G5:
208	F5?+	G0:	^{F8} G:	F8
209	G0	G0	G0	G0
210	K0		K0	K0
211	G0		G0	G0
212	F8		⁸ F5	F8
213	G0 None			-
214	G0	G2:	G	G0
215	^{4045=H8} K0:+	^{G5:} G2	^{K2:} K2:	K0:
216	G0		G0	G0
217	None	~~~~~		-
218	None	~~~~~		-
219	F5		G0	F8
220	G0		G2	G1
221			G2	G2
222		G2	G5	G3

G2 m 28693, 38764

10964D

Wack

	MF 38761	35739	36613	35914	38710	
1			G5		G5	G5
2			F5? F0:	F0: F0:	G0: F0:	F
3			G5	K0	K2	K0
4			G0	G0	G2	G0
5			G0	F8	F8	F8
6			G5	K0	G5	G8
7			G5	G5	G5:	G5
8			F5:	F5:	G0:	F6:
9			G0	G0:	F8:	G0
10			G0	G0	F8:	G0
11			K5 ^m	M0	M0	M0
12			G2	G2	G2	G2
13			G5	G5	G3	G5
14	G2:		G0	G5	G5:	G3
15			A5	F0	A5	A8
16			F2	F5	F2	F2
17	G:		G0	G0	F8	G0
18		K0: K0:	A++? K5	K5 K0	K0: K0:	K3d K0:var?
19	G2	K	K0d?	G5	G5	G5
20	G0:mg	F5:	F8	G0	F8	F8
21	-	None				-
22	G0:	G2	G0	G0	G0	G0
23	G0:mg	G5 ⁴	G5	K0	G5	G5
24	F5??	F5	G0	F5		F6
25	G2:		G5:	G5	G3	G3

on top of H& of br. star.
overlap in such way that G band,

* strong line near 4060! ⁴⁵ corpus??
not complete on other plates

10964 D-black

	MF 38761		35739		36613		35914		38710	
26	F0	F5	F0	F5	F2	F2				
27	F5	g0	F5	F8	F5	F6				
28	G0		G0	G0	G0	G0				
29	G0		G2	G0	G2	G0				
30	G0	g2	G2	G3	G2	G2				
31	G5	K0	G5	K0	G8	G8				
32	G2	⁵ g 8	G5	G5	G2	G3				
33	F2	g0	F8	F5	F8	F8				
34	G0	f	G0	G0	F8	G0				
35	F5	⁵ m 8	⁵ G0	⁵ F2	F0	F2				

10964 D - red

				MF 35739 36613		
				35914		
				38710		
1						G5
17						F5
46	rs: ^{overlapped}	MO	MO	45: ^{MO}	MO ^{2e}	?
73	G5	K0	G5			G7
74	G2	G3	G5			G3
75	G5	K0	K0			G7
85	K0	K0	K0			K0
101	-	-	-			

k: 38660 G5 38730

g0 " ; f: 35968; F5, 38730,

M2 " ; Me " ; M0, 38730;

See Book J p 122

overlapped by br. star

10964E - black

	MF 38761	35739	36613	35914	38710	38686	Adopt
1	k1	G5	K0	G5			G8
2	G2:	g	G2:	G0	G0		G0
3	G0:	G0	G0	G0	F8		G0
4	G0			G0	F8		G0
5	G0	G0	G0	G0	G0		G0
6	G2	G5	G5	G5	G5		G5
7	F8		G0	G0	F8:		G0
8	G0:	G0	G0	G0	G0		G0
9	^{F8-G} D7 ^{5th row} F2:	^{#171} F2:	^{F2-5} F0?	G0	F5		F5:
10	G0	g5	G5	G5	G3		G3
11	^{5th row} G0:	K0	G5	K0	G8:		G8
12	G5		k0	G5	G5:	k5:	G5
13	^{4th row} G2	G5	k0	K0	G5:		G8:
14	F2	F0 ^h	^{#171} F2:	² F0	F2	^F G0:	F2:
15	F8	F5	G0:	G0	G0:		F8
16	^{K0+} G5	K0	K5	K2?	K0	K5	K2
17	K0	k5	k2	K0?	K2:	K5:	K2
18	G0:	g2	g5	G2:	G3:		G2
19	F5	f0	f2	F8	F0		F5
20	G0	G0			G5:	G0:	G0
21	G0	G0			g0	G2	G0
22	⁵⁻⁸ G4	k0			⁵⁺ g3	^{G5} K2:	G8
23	F5	f5:			f:	^{K0} f	F5
24	G5	k2:			K0:	K2:	K0

10 964 E - black

	MF 38761	36739	38710	38686	Adopt
25	F8	g0	g1	G0	G0
26	G0 stark	f8	g1	G0	G0
27	K0	K2	K2:	K2:	K2
28	F8	F5	F5	F5	F5
29	G5	G5	K01	K0	G8
30	G5	G5	K01	K2:	G8
31	⁴⁰⁷⁷¹ F5:	f5	^{neg} g:	F5:	F5
32	G0:	G0		G0:	G0
33	G0	G5		K0	G5
34	F8:	G2		G	G0
35	K01	K2		K0:	K1
36	F	G0		G2:	G0
37	F8	F8		F8	F8
38	G0:	g0		G5	G3
39	G3			G8	G5
40	G0 ^{K0} g	⁰ k5		⁰ k2	K0
41	^{neg} F?	Ging		^g G2:	G
42	F8	F8		F0	F7
43	F0:			⁵⁸ F8:	F5:
44	^{neg. dy} F0:	G0		^g G0	G0
45	G0:	G0		G0	G0
46	F:	g0		G0	G0
47	G5	G5		K0	G5
48	^{K0:} G5	⁰ K2		⁸ G5	G8
49	G0	g5		G0	G0

misread

10964E - black

	MF 38761	35739	38686	35909	88688	
50	A??	A5	F0			A8
51	G0:	G2	G5			G2
52	G3		G5	g5::		G5
53	G0	g0	G0	-		G0
54	G2	k0	G5	G5		G5
55	K0g	K2	K2	m?		K2
56	G5 [✓]	k0:	G8 K0	5 K0 K5:		G8
57	F8		g	G::		F8
58	G0	G0	G0	f8		G0
59	G2	k0	G5	k	g5	G5
60		F5	F8 [✓]	F8: G8		F8
61	F8	g	G0		G0	G0
62	G0	g5	G5		g5	G5
63	F8:		g		g0:	F8
64	G0:	G5	G8 ⁵ K2 K5:	5 k5 ⁵ K2 K5:	k1 ⁵	G5
65	mg		K5:		K2	K2
66	G5	G5	G5	k	k::	G5
67	G5:		g		g	G5:
68	K0	k2	K2 [✓]	k5:	k0 ²	K2
69	G5)	K0		g5	G8
70	K5	k5	K5		k5:	K5
71	F5		F8		F8	F8
72	F5		G0		G0	G0
73	g ^x	F2	F0 ² K0	edge A5:	F2 ² A5:	F2:
74	K2:	k			K0::	K0

*
from overlap

10964E black

	MF 38761			
		35739		
		38686		
		38685		
75	F8		F5: G0	F8
76			K0 K0: K0:	
77	G0		G3 G0	G0
78	G0: k		G5 G5	G5
79	F0		F5: G0 F2: F2	
80	G0	g0	G0 G0	G0
81	G5		G5 G3	G5
82	K2 ^{very}	very	G5 K0	
	K2 ^{low}	K2	G5 K0: K0:	
83	F8 ^{G0}		F5: F6: F6:	
84	G2 ³		G0: F5: F5: F6:	
			F0: F5: F6:	

Ampl
= 38686

overlap

10964 E-red

	MF 35739	36613	35914	38710	38686	35909	35945		38693	35596
108	G5	G5	G5	G5				G5		
109	K0	K0	K0	K0				K0		
119	F5	G0	F8	F8				F8		
122	G0	F8	G0	F8				F8		
128	K0	K0	K0:	G5				K0		
130	G5	G5	K0	G5				G5		
134	G0	long		G0:				G0		
137	K0	K0	K0 (M?)	K0				K0		
138	F2	4171 F0:	F8	F5				F5		
139	F5	long	F2??	F8				F5		
140	G5	G0?	G0:	G0				G2		
141	K5	M0?	K5	K5				K5		
150	G3				G2			G2		
173	^{G3} G5				G2			G2		G
178	^{G0} G2				G3			G2		
186	^{F2} F2				F2			F2	A8	F2
190	^{F8} F8				F5			F8	F8	F8
195	G3				G3	G5	G4		G5!	
200	F8					f5	F5	F5		
203	K0					k0	K0	K0		
213	G0					g	G0	G0		
217	F8					g2	F8	F8		
218	G0					G2:	G5	G2		

12337A - Black

12337

	MF 35-901	38686	35-909	35-945	86618	
1	F8 G0				F8	F8
2	F5				F2	F4
3	G0				G0	G0
4	G0				G0	G0
5	G5				G5	G5
6	G5	G5	G5	K0		G5
7	F5	G0	F5	F5		F5
8	F2				F0	F1
9	G0					G0
10	K0	G5	G0	G5	G5	G5
11	K0		^{corner} K2	K2	K5	K2
12	F5	G	F5	F2		F5
13	F5	f	G0	G0		F8
14	G0				G0	G0
15	F2				F2	F2
16	G5		G5	K1	G8	G8
17			ES			
18	F?				F5 G0	F5
19	G5		G5		G2	G3
20	G2				G5	G2
21	G2				G2	G2
22	G2		G5	G5		G3
23	A0	A0	A0	A0		A0
24	G5	G5	G5	G5		G5
25	G2		G	G3		G2

overlap with overhead star
overlap

12337 A - black

	MF 35-901	38686	35909	35945	36614
26	F0			F2:	F2
27	K0 [✓]		⁸⁵ 2	K0	K0:
28	F0		^{F0} A5:	F0	F0
29	F5		F5	F2	F5
30	G2		8	G3	G2
31	F0:			F5	F3
32	F8			F5	F7
33	F5		f0	F2	F2
34	f8? g		G0:	G0	G0
35	K5		⁸⁵ K0	⁸⁵ K5:	K0:
36	G2 ³				G2:
37	K0	K0	G5:	K0:	K0
38	g2	G5:	G0:	G0	G2
39	G5	K2:	K0:	G5	G5:
40	K2 [✓]		^{conv} G5ii	K0	K0
41	g0 [✓]				G0:
42		g5:	G0:	G0	G0
43	F8		F8:	F5	F8
44	G5	G5	G5	K0:	G5
45	K0		K	K2:	K2
46	g0		G5:	G0	G2
47	K0	²⁻⁵ K5:	G5:	G5:	G8:
48	g3		G5:	G5:	K2 G5
49	g0:	^{3:} g5	^{3:} G2:	^{3:} K2	G3
50	G0		G0	G0	G0

12337A-red

	MF 35 901	38 686	35 909	35 945
3	K0	G8	K0:	G5 G8
4	K0:	K08	K0:	G5 K0
5	k2:	K0	K	G5 K0
8	g5	K0	G5	K0: G8
9	g2	F2:	15: G5	F5 F5: F5
10	k2	G8	G5	G5 G7
11	^{edge} m??	^{acc} M:	M0:	M0 M0
12		G5	K0	G5 G8
13		G0	F8	F5 F8
14	K5	K	K2:	K2 K2
15		G2:	G	G0 G0
16		F2	F0	F5 F2
17		F5 G3	F5	F0 ² F4
20		g:		G:
21		g:	g2: G5:	g2 G2:
22		K0	K0:	K0: K0
25		F8	F8:	G0 F8
26	F8	F8	F8:	G0 F8
27	k	G5	K0	G5 G8
28	ff	F5:		
29	ff	G5		G5: G5
30	ff	K5:	K2	K5 K3

g:: 35915

overlap

12337 B- black

	MF	35901	38686	35909	35945	36619	38763	
1	G2	K0	g5:	G3		G5	g	G3
2	F8 ⁵	K0	g:		208 F8:	F2'	f	F5
3	g5	k				g5		G5
4	A0	A5		A5	A5	A0		A3
5	g2	G2		G5dy	G2		g:	G3
6	g0	G2:		G0:	G0	F8:	f:	G0
7	K0	G0		g5	k	K0	k	K0
8	G0	F5:			G0	F8	g	G0
9	g5	G0			G5	g5:		G5
10	g0	G5		G5:	G	G2		G2
11	f5	g5:		f	F2	f0	f	F2
12	A0	G2	B9- A0	A0	A0	•	A0	A0
13	g2	k			G2:	g	g	G2
14	k	G5		k	208 K0 mi	mi k5'		K2:
15	f5	M0			P8 g	f5	poor f0	F5
16		G5	f8	G0	G0		g0	G0
17	g2?	G2:		g5	G5	G5	k5	G5
18	g2	k5:		g5	G3	G5:	g0	G3
19	g0	F8		G2:	G	G2	g0	G2
20	m0	G5:				M0	M0	M0
21	g	G5		G0	F8:		f	G0
22	k5	F5			k5'	k:	K5:	K5:
23	g5	K0	k5:	G5	G5		K	G5
24	k2	F8	k	G5	K0-	G5-	M0:	G8
25	k	G0	g	g:	K2:	K2:	K5	K2

12337 B - black

	MF 35901	35686	35909	35945	36614	38763	35740 from 12337B
26			G0	G2	G0:	f	G0
27	k0		g5	G5	K0	K2:	G8
28			g5	K0'	g5	g-K1:001 G2	G5:
29	g5	g5:	G5	G5	-	G3	G5
30			K0:	G5	G5	G2:	G5
31			g5	G5:	^{3:1} K1:m3	G5:	
32			A0	A0	A0	A0	A0
33	g		G0	G0		G0	G0
34					K0	k	K0
35					G0	g	G0
36			g5:	K5:	g5	g5	G5:
37			F0:	F2	F0: G5 comp?	F1:	F2
38			g	g0	F8:	G0	G0
39			G5	G5:	G5		G5
40					G5	G5	G5
41				F8		G0:	F8:
42			k	K5:	K5	K3:	K5
43				^{5:} F0:		f	F5
44				^{k:} K5:	K0:	k	K0
45					g5	k:9:	G5:
46			G0:	G0:	F8	F8	F8
47			G2:	P6:	P0	F5	F5:
48					F8	F8	F8
49					G0	G2	G1
50					g	F89	G0

F8 on 35740

CONTINUED 12337 B - Black PAGE 219

12337 B

red

	MF 35901	38686	35909	35945	38763	38694	
33		k2:	K2:	^{0:} g5	k2		K0
34	g0			G0:			G0
36	k5 ² k5	K5:	K0:	⁰⁻² K0	k		K2:
37		F8	F8	⁵ F2			F7
40		f8	G0	F8	f:		F8
41	G5	G5	G5	G8	k		G5
43	F8?	g0	G0	F8	G2:		G0
44	g5	g5	g5	K0	K		G8
45	F0		F5	F5	F0		F2
46	k		K5	K0	K		K2
48		k5:	G0	G5	k		G3
50	g5		² G0:	G5:			G3
51		G5:	G5:	G5		G5	G5
52		g0	G2:	G5		G3	G3
53			K5 ² K5				
55	g5	k5 ¹ G5:	G5:	k	K		G8:
56			G3	G0	g5	G2	G2
58	k5	G5:	K0:	k	G5	G8	
60		G0	F8	g	F8	F8	
61		F5	F8	¹ f5:	F8	F8	
63		G0	G0	g0	G0:	G0	
64		g	G0	G	G0:	G0	
65		G0	G0:				G0
66		F0	^{F0} A5	A2	F0	F0	var?

faint star s of br.

12337 B-red.

	MF 35909	35945	38763	38694	35740
68	G21	G5:	g5	K0:	G5
69	F0	F5	F0	F2	F2
71	G0	G0	f5:	G0:	G0
73	G5	K0	K21	K0	G8
75		F8:		G0	G0
76	G3	G5	G5	G5	G5
77	G5	K0:	K0	G5	G8
78		G0:	G0:	F5	F8
79	F8	f8:	G0:	F5	F8
80	G5	G5	G2	G3	G3
81	G5	G5	G2:	G5	G5
84	G5	G5	G2	G8	G5
87	G0	g:	G0	G0:	G0
88	G0:	G0:	F8:	G0	G0
90	F8:	G5	G0	F5	G0
91	F5::	F8	F8:	F5:	F8

12337C T3lack

	MF	35909	35945	36614	38763	35937	35740
1			^{weak} 181	g	g	G1	g G0:
2			K0:	K2:	g	K1	g
3		G0	G0		F5	G0	F8
4			g0:	g	G0	G0	G0
5			G0	g	G5	G0	G0
6		G3	g0	G2	g	G2	G0:
7			g3	G5:	G5:	G3	G2
8			g0	G0		G0 2	G5:
9			G0:	G0:	G5:	G0 F8:	F5:
10	k	K0		K2	G5	K1	K0
11			k	k	Gp	K2	K2
12			G2	g		G3 G3	G5
13	F8	g:		F5		F5 F6	F5:
14			G2	G2:		G2	G3
15			g2:	G0		G0	G0
16			F8:	G0		G0 F9	F8
17	G2	g		g		G2	G2
18			G5:	G5		G5	G5
19			G5:	K0:		G8	K0
20			G5	K0		G8	G5
21			F2	^{F0-2} A5		F0	A5
22			G2	G0		G2	G5
23		g0		g		G0	G0:
24	A5	A5		A2		A4	A5
25			g5:	K0:		G5:	G5

12337C - black

	MF 35909	35945	36614	38763	35740
26			g ¹ k ¹	G0	G0
27			g ⁰ k ¹	G5	G5:
28	G5	G5	g ⁵ k ³	G5	G5
29	F5:	F ²	G ⁰	F5:	F0
30			g ⁰	G0:	g
31			F ⁰	F2	F5
32			F ⁵	F5	F5 [*]
33			k ¹	K2:	K2
34	F0	F ⁵		F5:	F3:
35	F0	F ⁵		F5:	F5
36			G5	K0	G8
37	M2		M0	M0	M0
38			g	G0	G0:
39	K0:	G5	G5	G5	G5
40	F2	F0	F2:	F2	F2
41	G5:		k	G5	G5
42			k ⁰	G5	G8
43			f ⁵	f5:	F5:
44			G0	G0	G0
45			g5	K0	K0
46			g0	F8	F8
47			g0	F8	F8
48			G2:	G8	K0
49			K	K2	K2
50			F8:	F6	F5

g⁰: 38721

F5: on 38694

38614 = F5

* 4215 = H8 one plate only

F5 38694

12337C Black

↓

	MF 38763						
		36622					
			38694				
			37688				
			35921				
							35740
51	G0	g		g0::	G0	G0:	
52	g:				G1	g	
53	g				G	g	
54	G5			g5:	G5 G8	K0:	
55	K2	K ⁺		K #	K2:	K5	
56	G2	G		G5	G3	G2	
57	F8:			g5:	F8 F7	F5	
58	M0	M0		M3	M?	M0	
59	G5	G			G5	G5	
60	A0	A0		A0	A0	A0	
61	K5 ²	K0		K0	K1	K0	
62	F8:	g			G0	G0	
63	K0				G5	G8	
64	F0	F2			F1	F0	
65	G0	g			G0	G0	
66	g	g			G0	G0	
67	g	G5:			g5	G5	
68	Me?	M0 ²		M2:	M2	M0	
69	F8:	g:			F5:	F8:	
70	G0:		F5		F8	F8	
71	G	F5		F5	F5	F5	
72	K5:		K3:		G8 K0	K0:	
73	g		G5:		G3	G3	
74	F5	F0		F2	F2	F0	
75	g	F5		F5:	F5	F0 ⁵	

overlap

M2

K2: on 38694

12337 C-black

	MF 38763	38769	38762	38768	38761	↓	38740
76	f	Go	Go			Go F8	F5
77	A0	A0	A0			A0	A0
78	G5 ⁺	g F5 ⁺	f F5 ⁺			G	g ⁺
79	g0	Go	f F5 ⁺			F5 ⁺	F0
80	g	g0	f F5 ⁺			G	g ⁺
81	g0 ⁺	Go	g0			Go	Go
82	f5 ⁺	f F0 ⁺	f F5 ⁺			F5 ⁺	F0
83	K5 ⁺	f G5	f K0			K0	G5
84	G5 ⁺	G5	g5			G5	G5
85	G0	G3	g0			G2	G3
86	G5⁺	G0 F8 ⁺	g			G0 ⁺	G0
87	F0⁺ K					G5⁺ F5 ⁺	F5 ⁺
88	G5 ⁺	K0 ⁺	K0 ⁺			K0	K0
89	g	G ⁺	g			G	g
90	K7 ⁺	G8	G5 ⁺			G8	K0
91		G5 ⁺	f F8 ⁺			G	G5 ⁺
92						G2 ⁺ G3	G5 ⁺
93						F8 ⁺ F8	F8 ⁺
94		G0	G2			G1	G0
95	G5⁺	F2	F0			F0	F2
96		F2	F2			F2	F2
97		f5 ⁺ G0	f F8 ⁺			F5 ⁺ F8	F5 ⁺
98		f F0	f F0 ⁺			F0 ⁺ F0	F2
99		F8 ⁺	G0			F9	G0
100		F8⁺ F8 ⁺	G0 G0 ⁺			F9 ⁺	G0 ⁺

rec. 7 massive pair (f)

12337 C - black

	MF 38769	36622	37688	35921	35946	35740
101	g5	G5		G5	G5	G2
102	g8 4077	G0	F8	G0:	F9	P8
103	g5:	F0		F2	F2	F5 G0
104	F2:	F0		F5	F2	F5:
105	f	F8	g0		F8	F5
106						
107	A5: a3	4077 A5p	F5p: H. strong	F0V A3:	A5F2 A4+F2 - pe	A+F G0 A5F2, 4077
108	k	G5	K0:		G8	K
109	F5	F5 F5:	H. strong F2:	F2:	F5	F5
110	A5	A3	A2	A5	A4	A5
111	f8	F5	F8		F7	F5
112	g5	G5	K0		G8	K0:
113	K0	K0:		G5	G8-K0	H0 K0
114	g5	G0	G0		G0	
115	g5	5+ G3:	K0:		G8:	K0:
116	g5	K		G5	G8	K0:
117	g0	G3	G0:		G2	
118	k2	K:		K5 M0	K5:	K2: K5: 38694
119	F5	F5	F5	F5	F5	F5

overlap

12337 C - red

12337 C - red

	MF 38763	35951	38694	35946 ^{black} typ T.	35921	35740
92	G2	g0	G5	G2	G3	
93	G0		F5	F5	F6	
94	F8	g	F5	F5	F6	
95		K	F8	^{def} F8:	F8	
96	G0	g	G2	G2	G2	
97	K2i		K2i	K0	K1	K0
98	g		G0	G0:	G0	g
99	g2		F5	F2	F5:	F5
100	G0i		G0	G0	G0	G0
101			G5	G5	G8 G4	G2
102	F5:		F5	F5	F5	F2
103	F5:		F5:	F2	F5	F2
104	G5:		G0:	G2	G2.3	G5
105	k		K0	k	K0	
106	g st		G	g0	G	
107	ko'-		K ^o	K0	K0 G8	G5
108	g0		G0	G0	G0	
109			G0	G3	G2	G0
110	K2 ^o		K0	A5	K0	K0
111	^{ASF5} A5		F2	F0	A5 F2?	F2
112	A2, F2		F0	A5	A8: (A5-F2?)	F0
113	None				-	
114	g		G0	K0	g0	G0
115	k		K2i		g5	G8
116	None				-	
117	^{my} A5	A5	A5	K0:	A5	

as the faint one above or?

12337 c-red

	MF 38763					
	MF 38769					
		35951				
		38694				
		35946				
		35921				
						35740
116	A0:	A5:	A5		A5	
117	K		K0:	K2	K2	K5
118	G		G0	G0	G0	
119	None		K5		-	
120			G5:	k	G8	G5
121			F8:	F8	F8	
122	g5	g3:	g5	k*	G5:	G2
123	g5	f5	F8:	F5:	F8 8	G0:
124	g5:	k:	g5	G5:	G5	
125		g3	G0	G3	G2	G2:
126	k:	g8	K0:	g5	G8	
127	k	g5	G5:	G5	G5	
128	k:	g5	G5:	G5	G5	
129	k:	g5	G5	G5	G5	G5
130	k:	k0	g5	G8	G8	G5:
131		g	g	F5	F8	F5:
132		k	k	k	K	K
133			F0:	F5:	F2	F2
134		g0		F5	F8	G0
135		g0		G0	G0	G2
136		K0		k0	K0	K5:
137		F2:	F0:	F5	F3	
138	None				-	
139		K0		G5	G8	
140		g5:		G5:	G5	

* overlap

12337C-red

	MF 38769		
	35921		
141	G0	F8	F9
142	F8	F5	F6
143	G5	G5:	G5
144	G	G5	G5
145	K0	G5	G8
146	G0:	F8	F8
147	G0:	G0	G0
148	K5	K2:	K4
			35740

12337 D- black

	M = 38686	35909	35945	38686	
1	K0			G5	G8
2	K0			G8	G9
3	K2			K2 K2	
4	F0			K2 F0	
5	G2			G2	G2
6	G2:			G3	G3
7	G0	G0		G0	G0
8	F5:			F8	F7
9	G0	G0		G0	G0
10	G5	G5	G5	G5:	G5
11	G5 G5	G	G	-	G
12	G2	G	F8	G0	G0
13	K	G5	G3	K0: K0:	G5:
14	G5	G5:	G5:	-	G5
15	M0	M0		M0	M0
16	G5	G5	G5	K0	G5
17	G2:	G	G3	G3	G3
18	K5: G5:	G5	G5:	G8	G8
19	F8		F8	G0	F9
20	G5:			G5	G5
21	G5			G5	G5
22	F5		F8	F5:	F5
23	K0 K0	G5		G2	G5:
24	F8	G0	F5	G0	F8
25	G0 G0	F0: F0:	F5	F5:	F5

K2 on 38761

mg " "

12337D - black

	M1=38686					
		35909	35945	38688	38694	
26	G01			G0		G0
27	K2	k	K0			K1
28	F8 [✓]	F5:		F2 ⁵		F5
29	F0 ^{F22}	A2 ^{A2-F0}		F0 ²		F0 ^{F2}
30	G0			F8		F9
31	G5	G5	k:	G5:		G5
32	G5	g5		G5		G5
33	K5	K3	M0: K5	K2		K5
34	g			F8		F8
35	g0::			G0'		G0
36	F0	g:	F5	F5	F0	F3
37	k			G5		G5
38	g0	F8	G0	G0:	G0	G0
39	g0:		f8	F8	G0:	F9
40	K5:	m?	M0	M0	K5	K6
41	K5	g5	G5 ⁸	G3 ⁵	K0	G8
42	g	g0	G3	G0	G5	G3
43	k5			G5	G5	G5
44	G5:	g5	G5 ⁸	K3: K0	G5'	G8
45	k	K:	K3:	k5	K2:	K2
46	G5	g:	G0:	G5	G5:	G5
47	k	G5	k0	G5	K0	G8
48	g		g5	G2		G3
49	k	k	G8	K0	G5	G8
50				F8: G0	g:	G0

12337 D - black

	MF	38 686	35 909	35 945	38 686	38 694
51				G2'	g	G2
52		g	G5	G2	G5	G4
53		g:	g:	^{5'} F2:	^{F8::} G3:	F5:
54		G5:	K0	K	G5	G8
55		G0:	G0	G2	G3	G2
56			G0	F16:	G0:	G0
57		G5	G5	K0:	G5	G5
58	^{mg} K5:			G5:	K0:	G8

12337 D-red

12337 D-red

	MF 38686	35909	35945	35954 J8694	
1	K0	g5	G5		G8
2	F8	g5	G0		G0
6	K0	K0	G5		G8
7	G5	G51	G3		G5
18	G5	G2	G5		G4
19	G51	G5	G5		G5
23					
24	g		F5		F5
24	k5	^{K5} K2	^{K5} M0		K5
31	G0	G0	G0		G0
32	G2	G2	G51		G3
35	F0	F0	F0		F0
38	F8	g	F8		F8
39	K	K51	K5		K5
42	A2 ³	^{diff} F0	A2 ³		A3
47	G51	G5	G5	k0	G5
49	G01	F8	G0	g	F9
54	³ A2 ⁵	F0	⁸ A3	A2	A5
57	k	k	K2	K2	K2
59		g	F8	G0	G0

12337 E - black

	MF 35909	35945	38688	35951	38694	38691
1			F0 ²		F5 G0	F2
2			G0		G0	G0
3	G5	G5	G5		K0	G5
4			G3		G0	G2
5			G2		G ¹⁵⁻⁸	G0 ¹
6			F8		G0	F8
7			G5		G5	G5
8			G0 ²		G ⁸ F5 ¹	G0
9			G5	K0 ¹	G5	G5
10			K0	G5 ¹	G5	K0
11	F0	F0	F0	A2	F0	F0
12			K0	K0 ¹	K0	G5
13			F5 G2	F5 ¹ G2 ¹	F5 ¹ G0 ¹	F5
14			G2	G	G	G2
15		G2 G2 ²	G0 ¹	G0 ¹	G0 ¹	F5 ¹
16		G0	G0	G0 ¹	G	G0
17			G0 ¹	G	G0	G0
18			A0	A0	A0	A0
19			G0	G0	G	G2
20			F5 ¹	F0 ¹	F	F2
21	G0 ¹	G2	G	G0 ¹	G0	G0
22			G5	G5	G5	G5
23			F8 ¹	G2 ¹	F8 ¹ G0 ¹	F8
24			K0 ¹	G5 ¹	K0 ¹ G5 ¹	K0 ¹
25			K2 ¹		F5 ¹ G ¹	F5 ¹

*
overlap

12337 E black

	MF 38688	35957	38694	38691	
26	G5:	G5	G5		G5
27	g5:	Ki ^{only}	g:	g5:	G5:
28	G51	G0:	G5	G2	G3
29	F5:	F5:	G5 F5	F2	F5
30	G0:		G0	G0	G0
31	Ki ^{overlap}	Ki ^{g0:}	Ki ^{g5:}	Ki ^{g:}	Ki ^G
32	G51	G5	G5	G5	G5
33	g	G0	G0	G	G0
34	None				—
35	G0:	G0:	G0:	F8	G0
36	K0:	K0	G5:	G5	G8
37	K2:	K2:	K	K0	K1
38		F5:	F5:		F5
39	^{F0 8A8} A2 ⁵ ^{AS F2} F0:	⁵ F0:	^{AS F2} A5	^{F2} F2	^{F0?} A5-F2?
40	k:	G5	k	K0	G8
41		K0	k0	K0	K0
42		g	g0	F8:	G0
43		k	g0	g	G
44		g0:	g5	g5	G5:
45		G5	g5	K0:	G6
46		G0:	g0	G0	G0
47		G5:p:	G3:	G2	G3
48			G2:		
49		g:	g0:	G:	
50		G0:	G0:		G0

overlap

overlap

*

overlap

12337E - black

	MF35951	38694	38691
51	F5:	g0:	F6
52	F5:	g0:	F2 F5
53	G3:		G0: G2
54	F5		F8 F6
55	F0	F0:	F0 F0
56	g		F8 F8
57	G0:	F8:	F9
58	G0:		G0 G0
59	F5	G0:	F5 F2
60	G3		G3 G3

12337E-red

12337E-red

	MF 35909	35945	35957	38694	35921
67	K2	K2		K2	K2
70	G0	G5		G2	G2
72	G2:	G0		G5	G2
74	K3	K2		K2	K2
82	F8	F8		F8	F8
83	F5	F5 ⁺		F8	F6
85	G5	G8		K0	G8
86	g5	K0:	K0:	G5	k G8
89	g5	K0	K:	G5	G8
112			G2:	G0	g G0
115			G:	F8:	g F8
119			G0:	G5	G3 G3
138			G0:	G5:	G3: G3

Pages 101-104 Removed from
this second-hand note-book.

14276 A - Black

14276A-black

1	35769 F5 g2	36622 F8 Go	37688 Go	38722 F3 F5: F8:	35946 g5 F5 Go	35921 g5 F5 Go
2	G5	G5	G3	F3	g5	G5
3	F8	F8	F8	F5:	F5	F8
4	F5:	F8	F8	F8:		F8
5	F2	F5	F8	F2	F5 Go	F5
6	K0			K0:	G5	G8
7	G3	G3	G2	G3		G3
8	K0	K0:	K0:	K0	k	K0
9	G0	G0:	G0:	G5: K0:	F5 G5G2	G2
10	K0	G5	G5	G5	g5	G5
11	g8 g8			g8 g8	g8 g0:	G0:
12	F8	G0	G0:	g0		G0
13	G5	K0:		G5	G5	G5
14	G0	G0:		g0	G0	G0
15	G3:	G0	G:			G
16						
17	F8	F8		F8	G0:	F8
18	F0	A5:		F0:	F2	F0
19	K0			G5	k0	G8
20	G5	K0	K0:	G5	g5	G8
21	F2:	G0	G0: component		g0	F8:
22	K0	k		k0	k	K0
23	F5	F8	G0	G0		F8
24	G5	g		G5	g5	G5
25	K5	G5:	g5	K0: F5	G5	G6
26	G0:			g0	F8:	G0
27	G0	F5	F5	F5		F5
28	K0	K0	G5:	G5	K0:	G8
29	F2	F	a:	F5	F0	F2
30	G5	G5	g5	K0:	g5	G5

overlap

(K5 = wrong star)

14276 A	Black cont	36622	37688	35946	35921
31	F5	F8:		F8	F8
32	G3	G3	G2	G5:	G3
33	G0	F8	F8	G2:	G0
34	G0	g		G0	G0
35	G2	G5	G3:	G0:	G3
36	G5	g5		G5	G5
37	K0	k	K0:	k	K0
38	F5 ^u	F8		F0 ⁵	F5
39	F8	F8		G0	G0:
40	G3	g5		G3	G3
41	G0	F8	G0	F8:	G0
42	G5 ^u g5:	K1 ^u g5:		K ^u g5:	G5:
43	Kp ^u g5:	: } -		g:	G:
		overlap			
44	G3	G0:		G5	G3
45	F5*	F5:		F2	F8

} overlap

* overexposed

14276 A - red

1	38769 g0:	38722	35946 F0: ✓	35921 F5:
4	18890	15	F0: ✓	F5:
5	995	9	✓	G
7	overlap g2*	90	G0: + +	G0:
8	1/8 93	-	-	G:
9	A2 A0	A0	A0	A0
10	K0	K0	G5	K0
11	G3	G5:	G0:	G3
12	K2		K2	K2
13	G0		G0:	G0
18	18	F5:	F5:	F5
16	F8		G0:	F8
20	F8		F5	F6
21	G5	G5	K0	G8
22	K0	K0	K0	K0
24	K0		K0	K0
25	4077 F02	F5:	F8	F5
26	G2		G0	G1
27	F0	F0	F0	F0
28	F5:	G3	G2	G2
30	G0	G0	G0:	G0
31	F5 F0	F5	F5	F5
32	100 g0 day	off	F5	F8
	none		-	-
34	G0	F8	G0	G0
35	G0	F8	G0:	G0
36	G5 ko	g5	G5	G5
37	f5?	G3	G0:	G2
38	G0		F5	F8:

* 1st in spec 7, H γ = em
+ overlap

f8:: 38722

14276 B

T3 laek

	38769	35910	36622	37688	37689	35921	38766
1	K0		k		K2:	G5:	k
2	G0:		F8	G0:	F8:		F8
3	G3		G0:		g0		G2
4	F8		F8		F5		F8
5	F8		g		F8	F8:	F8
6	K0				g		F8
7	G3				G5	G5	g5
8	G0				F8	G0	G0
9	G0		G2		G2		G2
10	G5				G5	k	G5
11	G3				G5	G5	k
12	G0				G0	G0:	k
13	F5		F5		G0	F0:	F5
14	G5				G5		G5
15	G0				F8	G0:	G0
16	F8				g		F8
17	F5				F5:		F5
18	g2				g2		G2:
19	A0		A0:		A0		A0
20	F8				F8		F8
21	K0		G5		G5		G6
22	G5		G5:		g		G5
23	g0	G0			G0		G0
24	K0	K0			k0		K0
25	G0	F5			F8-G0		F8
26	G3				G5		G4
27	G5				G5		G5
28	g0				g		G0
29	F5	F0			F0		F2
30	K0	K0:			K0		K0

K0 = wrong

overlap

37689 = G0

14276 B - black

	38769	35910	37689	35946	
31	F8	G0			F9
32	G2		G5	G5	G5
33	G3	g5	G5	g	G5
34	G5	K0		G5	G8
35	F0	A5:		A5	A8
36	K0	G5:		G5	G8
37	G	G0:		g:	G0
38	g	G2		F8	G0
39	G6	G0		G2	G2
40	G3	G3		G5	G3
41	g	F8: ft.		G0	G0
42	G5	g5		G5	G5
43	G2:	g5		g	G2:
44	K	k	K0	G5:	K0
45	G5	G5		G5	G5
46	K2	K2		K0	K2
47	G0	G0		f	G0
48	F5	F8		F5	F5
49	^{18:1} g0:	g0:		g	G0
50	K5 ⁰	K0		K0	K0
51	G5	G5		G5	G5
52	G0			F8:	G0
53	g	G0:		F5:	F8:
54	g0	G0		F8:	G0
55	a2		A2	A0: [*]	A2
56	g5		G3	G5	G5
57	F8	F8		G0	P8
58	^g A5			G5:	G5
59		F8:	G0	F8	F8
60	F4:	F5		F5 G0:	F5

ft: ga 35910

* overlap

14276 B black cont

	38769	35910	37689	35946	38766
					Adopt
61	FS:	F5		F0	F3
62	g	off	g	g'	G:
63	k	k		K0	K0
64	FS:	FS:		A2	A5FS
65	mg	K	K2:	mg	K2:
66	f	F5:		F5	F5
67	K0	k		G5:	G8
68	f	G0:		F5:	F8
69		G2:		G0:	G1:
70			G0	G0:	G0
71	K0	G5		K0	G8
72			G2	G5	G3
73	f	F0		F0	F0
74	F0	F2		F0	F0
75			g0	F8:	F8:
76	f	g0		F5	F5
77	FS:	off	FS:	FS:	F8:
78	A0		A2	A2	A2
79	g	g5:	g5:	g5:	G5:
80	f	F5		F2	F3
81	g'	g	g	g	G
82		F5		F0	F3
83	G5:	G5	G5:	G5:	G5
84		G3:		g	G3:
85		F5		F5	F5
86		G5		g5	G5
87		G3		g	G3
88		K0		k	K0
89		K0:		K	K0
90	G0	G0:	mg		G0

overlap

overlap

14276 B - black

	38769	35910	37689	35946
91		G3:	G5	G3 G3
92		G5:	G5	G3: G5
93			K0	K0 K0
94		G5		G5 G5
95	ko:	g5 F2	K1	g5 G8
96	f	K0	F01	F2: F2
97		G5:		g5 G5
98	A3:	A3		A2 A3
99			F2:	F5 F4
100	K	K5	K2	K K2
101	off	<i>Am F</i> <i>edge</i> <i>MS/UV</i> A	<i>AS, FS</i> Pec.	<i>AS:</i> AS F5: AS:
102		G8		G5 G6
103		F5		F5 F5
104			A2	A2 A2
105			K	K0 K0
106			A0	A0 A0
107		K2		K0 K1
108		G3:		G0 G0
109		g5		g0: G3:
110		g3		G5: G5:
111		f8'		f5 F6
112		A0	A0	A0 A0
113		k0		k: K0:
114		G5:		K0 G8:
115		g5:		g5 G5:
116		G0	g0: g5:	F8 F9

* ~~check~~

14276 D	red.	38769	35910	38722	35946	35921	38766
39	G3		G5		G3		G3
40	^{overlap} K0 ^{G5}				G5	K0*	G8
41	^{G0} F8				G0	G0	G0
43	G3	G5		G5	G5		G5
44	G3	G5	G5		G3		G5
45	G5	G5			G5		G5
46		none					-
47	F0	F0		F2	f0		F0
48	A5	A5P		A2	A5		A5
49	F2	F0 ²	F5	F5	f0	F8	F5
50		none					-
51							-
52	F8	G3!		F8			G0
53	F8	F8					F8
54	G0	G0		G			G0
55	F5?	F5	F8	G0			F8
56	F5	F0	F5	F5			F5
57	K0	G8	K0	K0			K0
58	G0	F5	G0				F7
59		K2 mi	K0 AS			K	K2
60		F2	A5	KFO		A3	A5-F2 F0
61	K0	G5	K0	G5			G8
62	F8	G0	G0	F8			G0
63	K0	G5					G8
64	G5	G2			G		G3
65	G3	G3	G5				G3
66	G5	G5	G5	G5			G5
67	G5	G5		G5			G5
68	f8?	F5				F5	F5

*overlap

overlap

14276 B red

	38769	35910	38722	35946	38766
69	k:	k0		g5	G8
70	k0	k0		k0	K0
71	g0:	g5		g5	G5
72	k0	k0	k0:	k0	K0
73	f5?	F8:	G0:	g0	g:
74	k:	k0		K	K0:
75	A2	A: F0			A:
76		A: F0		a:	A:
77	none				-
78	g5:	G5		g5:	G5
79	k	K5'	K2:	K0	K2
80	none				-
81	none				-
82	f8	F5			F6
83	f	FD'	F0	a5	F0
84	none				-
85	none				-
86		G5	K2:	K0:	K0:
87	none				-
88		F2		F5:	F3
89		F2	F5::	F	F2
90		K0:	g3	g3	G5
91		F'		f:	F:
92		G5:'	g	K*	G5:
93		G5		G8:	G6
94		G5		K0:	G7
95	none				-
96		G5	K0		G8
97		K0'	G8:	K0:	G8
98	none				-

overlaps

overlap
overlap

14276 B red cont.

35910

38766

35946

99	G5	G	G5	
100	K5	K	K5	K:
101	F8		G0	G10:
102	F8	g:	F8	

14276 C - black	35910	37689	36700
1 ^{metah} g f8	^{metah} f		
2 g0:	F8		
3 g0:	G3:		
4 g g	off g		
5 G3 f8	F2:		
6 g	G5:		
7 G0	G0		
8 g:	g0:	g	
9 A0	A0		
10 G2	G3		
11 F5	f5:	F5:	
12 G2 F5	F2		
13 G0	F8		
14 F2	F2		
15 ^{overlap} k? g-k	^{overlap} g-k:		
16 G0	F8		
17	off	over	
18 f	off	over	
19 k-g	off	G5'	
20 F5	f		
21 G0	g3		
22 K0	k0		
23 G5		G5:	
24 G5:	k	k	
25 k2:	G5	k ⁹⁵	
26 ^{AF5 34074 weak} G4 f5	^{AF5 weak} f0	^{AF5 weak} f	
27 k5:	K5:		
28 g ⁵	F5:	g0	
29 f5	f5		
30 G5		g0	

14276 C

overlap

} overlap

spectra all weak. Possibly met. but omit ^(comment as)

14276 C - Black

	MF 38779	35910	38720	37689	36700
31	g0	g3			G2:
32	g5 [✓]	g3			G5:
33	g0:	g			G0:
34	g0:	f5:		g0:	G
35	A0	A0	a0	A0	A0
36	G3	g0		g0	G2
37	G0	F8:		F5-8	F8
38	F5		F0	F2:	F2
39	F8	f5			F8
40	K0	K0		K ^K M0:	K0
41	A2	≠	A0:	A3	A2
42	g-k	K-8	-		K:
43	F2	F2		F0	F2
44	G5		k	K0	G8
45	g3 [✓]	g		g0:	G2:
46	g0		f	G0	G0
47	G5		G5	G5	G5
48	K0			G5:	G8
49	F8		F8:	F8	F8
50	G5		K0:	G5:	G6
51	f5 [✓]	F0 ²		F ^F G2:	F2
52	f0 [✓]			F5:	F2:
53	F2		F0	F2	F2
54	F5	F5		F2:	F5
55	G5	G5		G5	G5

overlap

overlap

14276 C - Black

	MF 38779	35910	38720	37689	36700
56	K0			K0	K0
57	G5	G2		G5:	G4
58	F0	F2		F0:	F0
59	G0	g		G0	G0
60	^{overlap} G0?2?	^{F6:} G3		^{F5^{OK}} F2:	F5
61	k1	g5		g5	G6:
62	q0	f5		G0	G0
63	F5	F5 f0		F0	F3
64	^{K0d} G5	K2' g5		G5:	G8
65	G0	F8		F8	F8
66	G2	g			G2
67	A2	A2 a2		A2	A2
68	K0	k0 k		G5:	K0
69	G5			G5:	G5
70	K5	K0' k		K0 ²	K2
71	F8		f	F5	F6
72	G5			G5	G5
73	G5	K0		G5	G8
74	G2	K0		F8:	G3 ¹ G2
75	G0	G0:		G0	G0
76	K0			K2	K0: K1
77	A2	A2 A0		A2	A2
78	F2			F0	F2 F2
79	F5	F5:		G0:	F6
80	F			G0:	F5 F5

overlap up to G from uv

Wrong * marked !!
do this an eclips. var?*
overlap

14276 C - Black

	38779	35910	38720	36700	
81	K2: ^v	K2		G5: ^v K0	
82	K0	K2		G5	G8
83	^{F2} K	^{F5} K:		A8 F2	F2
84	F2	f5:		F0	F2
85	F0	f0		F5	F2
86	G5 ^v	K2		G5	G7
87	^{F5} F2	^{F5} g:		F5	F5
88	A3	A2		A5	A3
89	G0	G0	Kefeng G0	F8:	G0
90	G5	g5		G5	G5
91	G5	g5 K		K0:	G6
92	A2	A2:		A2	A2
93	G5	G3:		G5	G5
94	G5	g5		G5	G5
95	G3:	g0:		G ^{very} ft	G2
96	F2:			F0	F0
97	² g0:	g0:		g	G0:
98	A2	A0		A0	A0
99	F8	g		F8	F8
100	K0			G5	G8
101	^{overlap} g0: ¹⁻³	¹⁻⁵		g-f?	F-G:
102	F5?			F0	F2
103	K0:	K		G5	G7
104	G0			G0	G0
105	F0	A5		A5	A7

ident ^K F

overlap

14276 C-Black

	38779	MF35910	36400	
106	G0		G0	G0
107	G0	G0	G0	G0
108	F5		F5	F5
109	K0	G5	K0	K0
110	G0		G0	G0
111	K0		K0	K0
112	G5		G5	G5
113	G5		G5	G5
114	G0		G0	G0
115	F0 F2-5	K0 A2	F2 A8	F2 A8
116	K0		G5	G8
117	overlap G5		G5	G5
118	F5	F8		F6
119	G3		G3	G3
120	F8		F8	F8
121	F8		F5	F6

4171

*
corner

14276 C-red

	MF 38779	MF 35910	38720	36700
106	G5	G0		G3
107	G5	G3		G4
108	G5	G5		G5
109	F0	F0		F0
110	g	G5: G3		G3
111	None			-
112	G3	^{G5} K0:		G4
113	F5:	F5	F2	F4
114	F2	F2	^F F2:	F2
115	f8	F8	G0	F8
116	f5	F5	F8:	^{g0} F8
117	K2	K5	K5' ^{MO} m	K5
118	F8	F8	F5:	F8
119	* None	-		-
120	K0	G5	G5:	G8
121	K0:	K0	K0	K0
122	g5	G5:	G5	G5
123	F0:	²⁵ A5 ^{A4 F2} ^{F0 SN}	A3, F2	F0, v
124	g5	G5	G5	G5
125	f8	F5	F8:	F7
126	A3	A3	A2	A0 A2
127	K0	G5:	K0:	G8

14276C - red

	MF 38779	MF 35910	38720	36700	
128	F2	F2	^{F2} A5	F0	F2
129	f5:	F2:	F5		F5
130	None				-
131	F5	F5	F2		F4
132	f8	G0	G0		G0
133	perhaps k?	G5	K0		G8
139	g5	G5	G3		G5
135	k0	K0	K0		K0
136	F2	F5	F8	*	F5
137	^{F?} F8	^{F?} F0	F0		F0
138	g5	None			-
139	g5	G3	G3	G5	G4
140	g3	G3:	G3		G3
141	Kog	K0	K2	K0	K0
142	G5	K0	K0:	k	G8
143	None				-
144	F5	F5	G0	F0	F5
145	None				-
146	A0	A0	A2	A0	A0
147	F0	A5	F0	A5	A8
148	F8	F8:	F8:		F8

overlap

* lines double?

14276D - black

	MF 35910	35951	38689	38691	38722	35921	38766	
1		overlap G1			k0:	g	g8:	G8:
2		F5 ^v		F8	f5:	G5	g	F6
3		G0:		G3			g5	G3
4		g0		G2			f:	G2
5		K0:		K0	k	k	K2	K1
6		F5		F5			F0:	F5
7		G5		G5			K0:	G5
8		G0:		G0			G5:	G0
9				G2: ft			g	G2:
10		G5	G5	G5	g5:		G5:	G5
11				G2			g	G2:
12				G5			k	G5
13		K0'	K0	G5	k'		k	K0
14		G5	G5	G5	g		g	G5
15		g5	G5:	G5			g0	G5
16	g0:	g	g0	g0	g0		g	G0:
17		F0'	F5	F2	f		F	F2
18		f	G2:	G2	f		F8:	F5
19	G5:	K0:	k		k0'	Mo:	Kog	K0:
20	a5 a-f	A8	A8: 5	A5:	A5:	A	A	A5
21	F0	A5	A5	A8	A8	A8	F0:	F0
22		A3	A5	A5	A2		A5	A5
23		G0		G0			f5	G0
24	F5-g	G5	g				f8	F8

*overlap

14276 D - black

	MF 35910	38689	38691	38722	38766
25	F5:			F8	g0 F8
26	g	k0: g5:			k K
27		F8:			g F8
28	ff	k	k: k+	k	K0:
29		k		K0:	K0
30	G5:	g5 G5: G5	G5	G8:	G5
31		g0		G0	G0
32	G0	g	G0	G0:	G0
33	ff	k:	g+ G5	G5*	G5
34	g	g5 g5		G5:	G5
35	k	K0 K0 K0	K0	K0g	K0
36		G5		G3:	G5
37		G0		g	G0
38	ff	A3 A3 ³³	A2 A1	A0:	A2
39	-	k2	K2:	K	K2

K0, 35951

g, 35951

* overlap

A, 35951

* overlap

K2 35951

14276 D-red

	MF 35910	35951	38722	35921	38766
2	A5	A5:	A5	A0	A5
3			F8	g	F8
6	F	f5:	F5 G0:	f5:	F5
14			f8	f:	F-G:
15		g5	G5:	g5	G5
17	K5'	^{m for} K2: ^{red} K2:	^{m for} K2: ^{red} K2:	^{m for} K2: ^{red} K2:	Modumy 45: var
19	G5		g5	g5	G5
23	G5:	g5	G5	g5	G5
29	G5	k	k	k	G7
33	K5 ²	k0	k0'	k	K2
42	G5	G5	G5:	G5	G5d G5
46	G2		g	G0:	G3:
50	g5		G5:	g5	G5:
51	F5		G0:	G0:	F7

overlap

pre. 4227 very strong & suppressed

14276 E-Black

14276 E-Black

	MF 35-910	38689	38722
1	g5	K0:	G5 [✓] G6
2	g5 com g5	K0:	g8 G8:
3		G2:	g5 G3
4	F5		f8: F5
5	g5	G5:	G5:
6	f5	f0: ¹¹	f5 F5:
7	g01	F8:	F8 F8
8		K0:	G5: G8:
9	g5	G5	G5 G5
10	g3		g0: G2:
11	g5	g5	G5: G5
12	ff	f0 ⁸	F8
13	F45	a ^{F0}	F8 F5
14	1/1	G0	f8: G0
15		G5	K0 G8
16	g3 ²		g G
17	K2	K0	K0 K1
18		F0	F5: F2
19		F5 F0	f: F2
20	g0 ¹	F8	F5 F8
21		G0	g0 G0
22		G3	g3: G3
23		F0:	g3: F0

f8: on 38766

f8: on 38766

M276E-black

	MF35910	38720	38689	38722
24		G5	g5	G5
25		K	K2:	K
26		K2	K	K2
27		K2:	k	K2
28		k	K0	K0
29		k	K0:	K0
30		K0	k	K0
31	A0	A0	A0	A0
32	g5:	K0	k	K0
33	None	—	—	—
34	f8	G0		G0
35	¹⁵ f	G2	f	F5:
36	G5	G5	G5	G5
37	g0	G0	F5:	G0
38		K0	K	K0
39	g5	G5	G5	G5
40	⁵ F8	F0:	F5:	F5
41	g3	G5	K:	G5
42	g0	g0		G0
43		g0'		G0:
44	G5	G5		G5
45	F2	F5	G0:	F5
46	g0			G0:
47	K0	K2	K2	K1

k: overlap on 38766 overlap

F0: on 38766

F5: on 38766

f3: on 38766

14276 E - black

	MF 35910	38720	38659	
48		F0:	F2	F2
49	g		g0	G0
50	F2	^{F0} A5	F0	F0
51		G0	G0	G0
52		G2:	g	G2:
53		G0	g	G0
54		F8	f8	F8
55	^{F5} g	^{4077:} F0 ^{F5}	g ^{F5}	F5
56	G0	G0	g0	G0
57	F5:	F2	F2:	F3
58	G5	G2	g5	G3
59		G5:	g5	G5
60	^{F5} g	²⁻⁵ F0	gf	F5:
61		G5	g5	G5
62	g5	G5	G5	G5
63	A0	A0	a0	A0
64		G0	g0	G0
65		G0:	F5	F6
66	f0:	F0:	F0	F0
67	f0	F0	F0	F0
68		G3	G0	G2
69		G2	G5	G3
70	K0	K0	K0	K0
71	g5:	G5	G5:	G5

overlap

g2 = wrong star!

4276 E - black

MF 35910

38720

38689

72	g5	G5	G5: p	G5
73		F8	g0:	F8
74		K0	k	K0
75	F2:	³ F0 A5		F2
76	g5	A0:	very A3 p	M2
77	K0 g0	F8	g0 F8	F8
78		F5:	G0	F8
79		F8	g0:	F8
80	K0:	G5	k	G8
81	k	G5	k	G7
82	A0	A0	A0	A0
83	g0	G0 F8		G0
84		K0	k	K0
85		F8	G0	F9
86	a2	A0	a0	A0
87		G0	g	G0
88		F8	g:	F8
89	A5:	A5	A2:	A4
90		F5	G0	F8
91		G5	k	G5
92	g10:	g0:	no	G0:
93		A0	a:	A0
94		K2	k	K2

14276 E - red

14276 E - Red

	MF 35910	38720	38722
77	G2	G3	G3
80	A5	A5	A5
81	G3	G5	G4
84	K0	K0:	K0
85	F5	F5:	F5
87	G0:	G3	G2
95	F5	G0	F8
98	F5 [✓]	F8:	F5
102	^{G5} K0 ^{day.}	^{G5} 1	^{G5} 1
104	F8	F8:	F8
105	F0	A5, F5	F0
111	F5-8	F8 ⁵	F8 ⁵
119	F5	F5	F5
130	G5	G5	G5
138	G0	F8:	G0
143	F0	A5	A8
145	A2	A0	A1

16069 A - Black

	MF 38779	37957	36700	35916	35911	35922	
1	F5		F2	F5:			F3
2	G5		G2:	G			G3
3	K0		K0:	te			K0
4	F2		F5	f5			F3
5	G5		G5	g5			G5
6	F8:		G:				F8
7	F8:		G0:	F8	F5		F8
8	F8:		G0	F8:	G0:		F9
9	mg	mg	f ^o g	ms	*		
10	F0	A8	F0				F0
11	G0:		G0	G0:	*		G0
12	G0:		G0:	g			G0
13	K0	k	G5				G8
14	f ^o g	mg	f ^o g	f:	g:		F8: overlap
15	k5	-	A2:	-	-		A:
16	a0:	-	l ^o us:	-	-		A:
17	G2 ³	-	G5:	-	-		G:
18	G5	-	G ³	-	-		G:
19	g ^o	g ^o	g ^o	G0:	F8:		G0: ✓
20	f ^o :	#	f ^o :	-	-		F-G:
21	g5					G5:	G5 ✓
22	A0		A0			A2-	A0
23	g3		G2				G2
24	A5:		F2	F0:	F0:	F0	F0
25	A0	A0	A0				A0

N + .7 ft

* overlap

* overlap

35810 F8: brighter star that overlaps it

overlap

* overlap

overlap

G0: 35810

overlap

16069A-Black

12961

	38779					
		37957				
		36700				
			35916			
			35911			
			35922			
26	G0		G0			G0
27	A0	A0	A2			A1
28	A5		A5			A5
29	F8:		F8	G0:		F8
30	K5:	K2 ^{K2*}	K5	K0 ^{K0*}		K5
31	G0:		F8	g		F8
32	F0		A5			A8
33	k2	K2	K5			K2
34	k0 ⁸⁵⁸	k0 ^{K2}				K0
35	g2	G5	G5			G5
36	F0 ^F	G5 ^{F2*}	F2	F2:		F2
37	G2		G5:	G3		G3
38	K0	K0	K0			K0
39	g0		G0			G0
40	f8 ^{F5}		G0:	B3:		G0
41	G0	F2:	F2:	F8:	F5	F5
42	F8		F8		F8	F8
43	g5	K	G5		G5	G5
44	F2	G	F5		F5	F5
45	A0	A0	A2*			A1
46		G5:	G0:		G2:	
47	k	K0	K0:			K0
48			F8	F8		F8
49			F8	F5	F5	F6
50	10:	A5	F0			A8

* wrong *
overlap*
overlap

MF 38779

37957

36700

35916

35911

35-922

	F_2	A_5	F_2	F_2	A_5	A_5	F_0
51	F_0	A_5	F_0	A_5	A_5	A_5	A_5
52	A_2	A_0	A_0			A_2	A_1
53	A_2	A_1	A_3			A_3	A_2
54		F_0	F_5	F_0	F	F_5	F_2
55	G_5		G_5			G_5	G_5

16069 A-Red

	MF 38779	38720	36700	35916	35911	35922
2	K0	G5	K0	G5g	G5g	G8
3	G5	K0		G5:	G5d	G6
4	F2	F0		F2	F2	F2
5	G5	G3	G5	G5	G5	G5
6	G5:	G5		G5	G5d	G5
7	F5:	F2:	A8	F5:	F0	F5 F2
9	K0	K0	K	G5g	G5g	G8 G8
10	G5	K0		K0:	G5	K0 G9
11	G5:	G2:	G5	A2 K0: A2	G5d	G5 G5d
13	K0	K0	K0	G8	K0g	K0
14	f0	F8		G0:	F8	F8 F8
15	g2	G5:	G5ft	G5	G5	G5
16	^{A3} a2	A2	² A0ft	A5	⁵ A8	A5 A3
17	g5	G5	G5	G5d	G3	G5
18	f			F0:	[*] F0	F F0
19	A3	A2	A2	A5	A3	A3
22	G0:	G0:	G0	G0:	G0	G0
23	g2	G3	G0:	G3	G3	G3
24	F8	G0:	^{ft} G0	G0	G0	G0
25	K2			K0:	K0g	K0
27	G5			[*] G:		G5
28	F0			F5:	F5:	F3
29	A5			F0	A8	A5 A8
30	K0	K0	K0	K2	K0	K0
31	K0			K0g	K0g	K0

*4077:

*overlap

16069 B - Black

	MP 38147 37957	36700	35916	35911	35922	
1	F8	F5				F6
2		G5	G3		G5	G4
3		F0:	F5	F2		F2
4	F8	F5	f	F0	F2	F3:
5		G5		G5:		G5
6		G0:		G2:		G1
7		A5:	F0:	F:	A5	A7
8		G:	G3:	G5:	G3	G3
9		G3	G5d	G5		G4
10		F5	F5			F5
11		G5:		G:		G5
12		G5	G5d	G3		G5
13	A3	A5	a			A4
14	G0	G0:		G0		G0
15	K0	K2:	K0g	K0	K0	K0
16		K0	G0::	f:	F5:	
17	G5:	G8	K0	K0	G8	
18		G5:	G3:	G5	G4	
19		F	F5	F5:	F5	
20	K0	K0:	G5g	G5g	G8	G8
21	K2:	K0	k	k	K0	
22	M0	M2	M0		M0	M0
23	G0	G0:		G0	F8	G0
24	F8:	F0:	F5::	G3	F5	F5
25	A0	A2	A2	A3		A2

F2: 38810

overlap

overlap

overlap

overlap

F0: 38810

16069 B - Black

	MF 38720	37957	36700	35991	35916	35911	35922
26		G5	G3		g		G4
27		g	G5		C5g		G5
28			G5 F8:		F8:	F2-5 G5	F2 F5
29		G5			G5		G5
30		k	K0		k		K0 K0
31		F8:	F5:	F2:	F5	F8	F5
32		A0			A0:	A	A0
33					F8:	G0	F5 F8
34			F8:		⁵ F8:	¹ F5:	F8 F7
35	Wing F8				G8	G8	G8 G8
36	" " F8	K3 K2:					K2
37							G1
38		g2					G0:
39	As	F0 ⁺		F5:			F2
40		F0 A5		F0			F0
41					K0	G8	K0 G9
42	As				K5	K5	K5 K5
43					G0:	F8	F8 F8
44		K0:			g5	G5L	G7
45		K0 overlap?		K0			K0
46		A3:		F0	A F2	F0	F2 F1
47				A2: def	A8	F2	A8 F0
48		G0:			g	g	G0 G0
49		F0		A5			A8
50				F0	F5	F2	F2 F2

K2: 38793, 37962

g: 37962 overlap

G0: 37962

+ overlap

16069 B - Black

	MF 38147				
		37957	35991	35916	35911
					36922
51			k	K2g	K0g
52			g5	G3: G5d	G5d
53			f0	F5: F2	F2
54			g5	K0	G5
55			f	f	F2:
56		G0:	F8	g	G0:
57		F0:	F0	F0:	A2:
58		A5:	F0	F0:	A8:
59		(A8) F0	f5:	f:	F2:
60			f F0	A3	F0
61			g0	F	F8
62			g5	G5:	G5
63	K0		g	G0:	G3:
64		G5:	g5	G5	G5
65	K0:		g5	g5:	g5:
66	g0:	f8:	g	g5:	g
67	F5:	f8:	F8	G5:	F0:
68	K0		g5	G5	K0:
69	K2		k0	G8g	G5:
70	k	K5	k	K2:	K2
71	A0	K2:	A0	A0	A0
72	G3		g5	G5d	G5
73		A0	A0		A0
74		G0	F8		F9
75			g	G3: G5:	G3

F0: 38993; F2, 35976

(G5 was # 64)

16069 B-Black

	MF 38147	37957	35991	35916	35911	35922	
76		F0:	F0:				F0
77	K0		g5	G5		G5	G6
78			g		G2:	g0:	G2:
79		+/ f511	g0:				G
80	M	M0	m	m:		M0	M0
81			F0:	F5	F5	F5	F5
82	⁵¹ F0:		f	f	F0	⁵¹ F0:	F2:
83	G3		g	g5		G5	G5
84					F8	F8	F8
85	A2	a0	a0	A2		A2	A1
86			g		F8:	F5	F8
87					F5:	F8	F7
88	G		g5	G3:		G2	G3
89	G	G0					G0
90	G3		g			G0	G2
91	G3:		g3	g: G3d	G3	G3	G3
92	⁰¹ G3:		f		ms	7 family	G
93	⁰⁵ K:		g5		ms		G5
94	^{F5} G				⁵ F2:	F8	F5
95	G0:				F8:	g	G0:
96	g0:		g			g:	G0:
97	A0	a0	A0				A0
98	K2:	k	M0:		^{g5:} k	K2	K2:
99	G2:		G0:	g	²⁴ F0	G0	G0
100	^{F5} K		F0:	F5:	G2:	F2:	F2

g0: 37962

g5: 38793 g0: 35776

g0 37962

16069B- Black

	HP38147				
		35991	35916	35911	35922
101	K0	G5	g8	G8	G8
102	F5:	g5	F5 g5	F5	F5:
103	g		g	G5	G5
104	K0:		F5	G3:	G2
105	^{5/4} f+				G:
106					
107	k0		k	k	K0:
108	g0		g	G5	G5
109	G0:	G0:	g0	G0	G0
110	g0:	g0:		g5:	G
111	g0:				
112	g0:				G0:
113	K0:	G5:	G5	G5	G6
114	g0:	g8			G
115	F8:	G0	g0	F8	F9

F0 = wrong * overlap

g0: 37962

overlap f-g 38793 pure

g3:: 38793; g8-g, 37962; f5: 35976

k: 38793

g0:: 35976

g: 38793, 37962

16069 B - Red

16069 B - Red

	MF 38147	36700	35916	35911	35922	
35			F8:	F8	F8	F8, 38720
36			F2	F0	F1	F0 "
37			F8:	F5	F6	
39		Kn40	K5	K5	K5	K5 "
42			G8	K0g	G9 ^{K0}	K2: "
43			K0:	G5	G7	
45			F0	F2	F1	
48			K0	G8	G9	
49	G5		G5	G5d	G5	
50	f8:		F8:	G0	F9	
51	F0:		F0	F0:	F0	
53	G2		G3	G2	G2	
54	K0		G8	G5g	G8	
55	F5		F2 ⁵	F8	F2	F5
56	F8		G0:	G0	F8	F9
57	F2 ⁵ :		F8	F8'	F5	F6
58	A3		A3	A3	A2	A3
60	^K A0:		g5	K0:	K0	K0
61	K0		k	G5g	G8	
62	F0		A8	F0	F0	
63	F2		-	F2		
64	F2-5		F0	F0	F0	F1
65	i		G3	G3		G3
66	F5:		F8	Fp	F5	F6

overlap

F5: 38810

54 ft of bright
overlap

16069 B-Red

	MF 38147			
	35916			
	35911			
	35922			
67	F2:	FO:	F2	F2
68	K0	K0g	K0	K0
69	F5	F2:	F5	F2 F3
70	F8	g	G0	G0: G0
71	A5	A5	A8	A5 A6
73	F5	G0:	F8	F5 F8

16069 C - Black

16069 C - Black

MF 38147

35927

35991

~~35991~~
38148

1	A0 G0		F0 F0	G0:	for 38793
2	A2		A0	A1	
3	G5	G5	g5	G5	
4	G0:			G	k: 38793
5	G0: def			G-K	k: "
6	f8:11			F8:	f8: "
7	A0		A0	A0	
8	G5	g5	g5	G5	
9	G0:		g0	G0	
10	A2		A2	A2	
11	F0		F0:	F0	
12	G3:	comm g5:1	g:	G	g0: 38793
13	G0	g0	G0:	G0	
14	G5	g5	G5:	G5	
15	F	F5:	F8	F7	
16	F0:		F2:	F	f8: 38793
17	F2	F2 G0:	F5: G2:	F5	F5 "
18	K0:		g5: K	K0:	K0 "
19	k1:	g5: K	g5: K	K	G5-K G5 " overexposed + poor
20	G5:	g3:	g3:	G4: G2:	G8 " g5-K
21	K0-2	g5-K:		K0:	K0 "
22	{ F8 G5 }	{ f8 g5 }	{ F8 G5 }	{ F8 G5 }	{ F8 G5 }
23	f8:	f5:	f2:	F5 F6:	
24	f8:	g	G	G	g "

ps and br.

* G5 near G band, strong line
To rest H8 may be overlap

* identify

16069 C - Blach

	MF 38147	38148	35927	35991
25	K0:		g5:	G8:
26	F5:		F5:	F5
27	G2		g	G2
28	^{PO} A5:	^{AS-FU} a5 ✓	^{AS} g0	A8
29	F8		f8	F8
30	K0:		g5	G8
31	k:		g5	G5:
32	G0:		g:	G0
33	F8		f5 f5	F6
34	G0		g5 g5	G3
35	k:	K0:	K2:	K0:
36	A2	A0: A0	A2	A1
37	F5	^{F2} ✓	F2	F3
38	g:	g0	G0	G2:
39	M0		m	M0
40	G2		g	G2
41	F5:	^{F2} ✓ f0	f5:	F2:
42	K0:	k	G0:	K0:
43	A0		A2	A1
44	F8:	G0	g	G0
45	F8		f5:	F8
46	g0:	^{G0} ✓	g	G0:
47	G2		g5:	G3
48	k	^{G5} ✓	G5:	G5:

f, and ftr

K0, 38993

MF 38147

38/48

35-927

35-991

49	G ⁵		g ⁵ :	G ⁵
50	k:	K A0:	g⁵: K0'	K0
51	A8		A5	A7
52	g ⁰	ng K		G ⁰
53	G2:	G3	G ⁰	G2
54	f8:		f ⁵ F ⁵ :	F ⁵
55	G ⁵ :	g ⁵	k G ⁵ :	G ⁵ :
56	F ⁵ '		F ² F ⁰	F ² :
57	A ⁵ '		F ⁰ ' a ⁵ :	A ⁸
58	G ⁰ '		g:	G ⁰
59	K0:'		g ⁵ :	K0
60	G ⁵ :		g ⁵ :	G ⁵
61	ng		F ⁸ :	f ⁸ : F ⁸ :
62	A2		A2	A2
63	f		F ⁰	F ⁰
64	F ⁰		F ⁰ :	F ⁰
65	A3	A0	A2	A2
66		F2	f ²	F2
67	G ⁰ :	G0	g	G ⁰
68	A5	A3	A2	A3
69		A0 A0	A2	A1
70	K0:		k:	K0
71	g ⁵ :	G2 g ⁵	k:	G ⁵
72	F ⁰ :	F ⁸ :	f ⁰⁻⁵ :	G ⁰ F ⁵

K: 38793

60 38793
K5: " \uparrow
~~60, 38793~~ G5: , 35976

16069 C - Black

	MF 38147	MF 38785	38148	35927	35991
73	K0			G5	G8
74	K0		K0	g5	k K0
75			F5, F5X	G0	f5 F8
76			F5 ⁺	F ⁺	F5
77			F0:	F0:	F0
78			F5	f8	F5
79			F8	g	F8
80			F5	f	F5
81	F5:!	F:	F8:	F8:	F8:
82	g	off	F5-8		F5
83	A3	A2	A0	A	A2
84	K0	G5	g5	k:	G8
85	k		K0:	k:	K0
86	G3	G3:	G0	g:	G2
87	k:	k5:	K5	g5	K5:
88	F8	f8	F5:		F8
89			A0	A0	A0
90	F8:	F8	F5:		F8
91		G0:	G0:		G0
92	A2:	A3	A3	A7	A5: A4
93	g ^{F5:}	G0		f8:	F8
94		G3	G5		G4
95	A2:	A0	B8:	A0	A0
96		F8	g		F8
97	A0	A2	A0	A0	A0

overlap

g:: 35926

N. pr. of marked pairs
overlap

N. pr. of three

s. pr. of marked pr.
overlap

16 069 C - Black

	MF 38147	MF 38785	38148	35927	35991
98	A2	A0	A2:	A0	A1
99	G5:	G5	G5:		G5
{ 100	F5:	^{del} F5:	F5:		F5
{ 101	F5:	F5	F5:		F5
102		F5:	F2	F2 ⁵	F3
103		K5	K2	K2	K5: K3
104		G5	g2	G0:	G3
105		G0	g5		G2
106	g5	G5:		G2	G3
107		G2:	G0		G1
108		F5	F0	F0	F2
109		K5	K5	K5	K5
110		G5:	K0:	G5:	G7
111		G5	G5		G5
112	K0	G5	K0:	K0:	G8
113		A2	A2	A2	A2
114	A0	A0	A0	A0:	A0
115	g11		^{G0} F8	G0:	G0
116	A0	A2	A2	A0:	A1
117	K0:	G5			G6

overlap

16069 C-Red

	MF 58147	MF 38785	35927	Adopt
72	A5		A5	A5
74	A0		A3	A2
75	A0		A0	A0
76	G		F8	F8
77	K0		K0	K0
78	G		G0:	G0
79	F8		F8	F8
80	G5		G5	G5
81	F5: F8:		F5: A5ft	F5
84	G5		G5	G5
85	F8		G0	F8
86	None		-	-
87	G5		G2	G5
88	K0		G5	K0
89	F5		G0	F8
90	F8		G0:	F8
91	G2		G5	G3
93	A2		A3	A2
94	F8: G	F8:	G0	F9
95	F2	F	F0	F1
96	F2	F0:	F0	F1
98	F8:	G0	G0	G0
99	AFL F5: A2	A5F5 A2 F5	A5 G5	ASF5:

overlap

new

F5

S. pr. of massed pair

wab overlap overlap

16069 C - Real

	MF 38147	MF 38785	35927	Adopt
101	G0	G0		G0
102	G0	F8	g0	G0
103	^{F8} F5:	F5	g	F5:
104	F8	F8:		F8
105	F5:	F5	F5:	F5
106	G0	g0	F8:	G0

overlap

20.17 To be done in other states

16069 D - Black

	MF38720	38782	35916	35911	35922
1	f ₀		f		F ₀ F ₀
2	f ₀ ² , History	mg	f ₀ ²⁷	f ₀ ¹⁵	F F
3	F ₂	F ₅	F ₁	F ₅	F ₂
4	G ₀		g	g ₅	G ₂
5	F ₂	f ₁	F ₈	f ₈	F ₈
6	F ₀		a	F ₂	F ₀ F ₀
7	G ₀	G ₀			G ₀
8	F ₅		F ₀	F ₈	F ₅
9	g ₂	mg	g ₀	F ₈	G ₀
10	A ₃	A ₃			A ₃
11	G ₃		g		G ₃
12	G ₈		g	g	F ₈
13	F ₈	F?			? omit had overlap
14	G ₂		G ₃	G ₃	G ₃
15	G ₂		g ₁	g	G ₂
16	F ₂ , History		F ₀	F ₅	F ₂
17	g ₅	mg	f	g ₁	? overlap
18	G ₅	G ₅	G ₅		G ₅
19	G ₅	G ₅	G ₅	G ₅	G ₅
20	F ₅		F ₂	F ₈	F ₅
21	F ₀		F ₀	F ₅	F ₂
22	K ₀	K ₂			K ₁
23	F ₈		F ₅	F ₈	F ₈
24	G ₅		k	G ₅	G ₅

F₈: 36008

overlap

omit had overlap

overlap

N pr. + ftr

16069D-Block

		MF 38720				
		38782				
		35916				
		35911				
		35922				
25	G0	G5			G5	G3
26	G5:	k	k::	g5		G8
27	G0	g		g0?		G0
28	G0	G0:	G5	G3		G3
29	G5	K0				G8
30	A2	A0		A2		A1
31	G0:	G0				G0
32	G0:	g3	f	g0?		G2
33	F8:	F8:	F8	F5		F8
Go?	34	k	F8	G0:	⁺	G0:
35	K0	k0		k		K0
36	K0	k		K0		K0
37	G0	g0		g2?		G0
38	F8:	f8	f	G0		F8
39	G5:	g5:	k::			G5
40	g		G0:	g		G0:
41	F8		F5:	F5:		F6
42	F8	g0				F9
43	F2:	f	F0			F0
44	F0	F0				F0
45	g0:	g	F8	g0		F9
46	g:	F8				F8
47	F2:	F0:	F5	F0	*	F2
48	G0	G0:				G0

† HST 4178? high background
= halo effect
confusion of 2 stars which * overlap

* 4178, 4128
4128?

16069 D - Rod

	MF 38720	35916	35911	35922	
1	F5:	f	F5:	F5	
* 8	F5: <i>2: F5: line weak</i> F0: H strong	F5: <i>F0: F5: 1: *</i> F5: <i>B: F0</i>	F5: <i>F5: 1: *</i> F2: <i>F5: 2: *</i>	F5	38810 F5: H strong 38810 * H γ weak, H δ \approx K \approx H = strong H slightly stronger
12	G5:	G5: K0:	G3'	G3 G4	
20	F0	F5	F2c	F5 F2	
21	F5:	F5	F2:	F2 F3	
26	G5:	G8d	G5d	G5 G5	
32	F0	F5	F5: <i>F5: *</i>	F2 F2	
33	F2:	F5:	F0: <i>F0: *</i>	F0 F2	
34	G0	F8:	F8: <i>F8: *</i>	G0 F9	
38	M5:	Red	M5	M5 M5	
40	F8:	G0	F8	F8 F8	
41	A0	A2	B8	A0 A0	

* overlap
* overlap

8 35916 H δ < H γ * 8 35911 F0 lines strong & weak & suspected on H δ * 35922 F5: emission suspected on H γ possibly H δ

16069 E-Black

16069 E-Black

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	MF38147	37838	35927	38791	36006	38782	35916	35911	35922															
1		G5			g5																			
2	neg	GO				g5	g5	g5																
3		G3:				G2:																		
4		F8:			G0:	F8																		
5	f5:	F8			G0:																			
6		F8:			G0:		G0	g:	F8	F9														
7	off	F0			F0	AS	F5	F0	fo:	F0														
8	GO	G0			f		G0:																	
9	FO:	F0			F5		FO:																	
10		F0			F0	F2																		
11	A0	A0			A0	A0	A0																	
12	A2:	A5			A5	A5:	A8:																	
13	g:	G0			F8:		f		F8	F8														
14		F2			AS	F0																		
15		F8:			G0		g3		F8	G0	G0													
16	M0				M2	K5	M		M2		M0													
17		G2				G0	G3:																	
18		F8				G0	G0:																	
19		A0			A2:	A0	A2																	
20		AS:				AS	F0																	
21		G0:			g5	G5	G3																	
22		G5			k	G3:																		
23	G5	K0:				G5																		
24		A2			A0	A0	A0:																	

* overlap

overlap

16069 E - Black

	MF3814A	32838	35927	38791	36006
25		G0			G0 G0
26		F8		F8	F8 F8
27		F5:		G0:	F5: F7
28	A0	A0	A0:	A0	A0 A0
29	G5	G2	G3		G3 G3
30	K0	K0	K0:		K0 K0
31		G0			G0 G0
32		G0:			F8: F9
33	-	g5:		g:	F5: F8, 38196
34	K0:	K0	q5-K	g5	K0: K0, 38196, K0: 38818
35	K0	G5		g5	G5 G5
36		G5:		g	G5 G5
37		F5		F5	G0: F5
38		F5		F5:	F5 F5
39	A3	A5	A5		A3 A4
40	k				K0: K0
41	le	K0:			K0: K0
42	A2	A0	A2	A0	A0 A1
43		G5		G5	G5 G5
44		A0	A0	A0	B9 A0
45	F8	g0			f5: F8
46		G5		A	G5 G5
47		F5:		g	F8: F8:

F8: 38818
F8: 38196

16069 E-Black

	MF 38148	37838	35927	38791	36006	
48	F5 [?] F0 ⁺ F5	A5 [?] F0:	F0: A8:	A1 [?] A0	A8 F0 ⁺ A3	F0 ⁺ possibly met. F2 38196 too faint F2 38818 F0 Lines to V of H γ , H δ imply companion
49	A2	A2	a	G0	A2	A1
50	F2:	F0:	g		F5	F2
51		G5		k	G0	G3
52		F0	a		F0	F0
53	F2 F0:	5 f0	F8'		G0:	F5:
54	F		* G0:		neg F:	
55	K0	k ^v		k	k	K0
56	g0	g0:			g0	G0
57	A0	A0	A0	A0	A0	A0
58	A5	A5	A5	A0	A3	A3
59	qf	G2 ⁺	neg	G5 K0: 4077.7	G5	G5
60	qf	F0 f5		F0	F8:	F5:
61	g	g			G:	
62	G5	g5			K0	G8
63	F8'	g0	F8:		F5 ⁺ k	F8
64	qf	g2:			G:	
65	qf	f5 overlap			F5 G2	F5
66		A5:			A5:	A5
67		F5:			G0:	F8:
68	K0	k			k	K0
69	G5	k	G5	G5	k	G5
70		G5		g5	g	G5

f8, 38196

overlap

K0, 38196

F2, 38818
F5, 38196

G0, 38196

overlap

16069E - Black

	MF 38148	37838	35927	38791	36006
71	g	g	g3:	g0	G0:
72	K2:	k			K2:
73	k2:	k	5 ^p	k	g8 K
74	G0	g		g0	G0
75			F8	f8	F8
76	g0:		g0:	g0	G0:
77	K0	k	G5	K0:	G8
78	G5	k	K0:	K0:	G8
79	F5		f8		F6
80	1/8	F5		F0:	1/2
81	A0	A0	a	A0	A0:
82	F5:		F0:		F0:
83	F5 ^v	1/5:	F5 G0	F0	F5
84		k+			
85		g			
86		f			
87				k	K
88		F8	G0 F8:	G0	G0

K: 38818
 g5: 38176
 K, 38818
 K, 38196

F8-G, 38196

~~overlap~~

overlap

overlap

16069 E-Red

16069 E-Red

	MF 38148	35927	35916	35911	35922
44			F8: G2	Go::	Go
47			F8	F5: F2:	F5
52			G5g K0	G8	G8
59	G5		G5d G5	G8	G6
82	G5, def.	g5:			G5
83	F2 F5-	g5			F5
86	F5: overlap F02	F02			F2:
92	G3	g			G3
97	F5:	F0			F2
100	K0	k			K0
107	G3	g5			G3

15417 A - BLACK

	MF 38147	MF 38785	38148	35927	35929
1		F5	F0:	F5 G8	F5
2	B9	A0		A2	A0
3	A0	A0	A0	A3	A0
4	K2	K5	K2:	K	K2
5		G5	G5	G3	G5
6		F0	F0	F0	F0
7		A2	A2	A2	A2
8	A0:	A2	A0	A2	A1
9		A5	A5	A2?	A5
10		F8	F5:	G0	G0
11		B9	A0	A0	A0
12	F8	F8		F8	F8
13		F5 ¹	F0 ²	F8	F0 ⁵
14		F5:	F2	F0 ²	F2:
15		F5		F5:	F5:
16		F5		F8:	F8
17		A0	A0	A2	A0
18		A2:		A3	A2
19		G5:	overlap g5	K	G3:
20		F2:		A5	F0
21		G5		G5:	G
22		A0	A0	A0:	B9
23		F2	A0 F0 A5	F2:	F0:
24			overlap A0	-	?

overlap

MP 38785

38148

35929

25 $\frac{FOIC?}{FS}$ corner $FO:$
20 $GS:$ $FO:$

FO: 35927

26	F8	g	g	F8
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27 ^{A2} ~~12~~ 10 10⁺ A1

28	F5	45	F5
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29	F8	30	F8
----	----	----	----

30	A2		A2	A2
----	----	--	----	----

15417 A - Red

	MF 38147	MF 38785	35927
1	F8:	F8:	-
2	F8	F8:	F8
3	G3	G2	G5
7	F8	F8	F5
8	A0	A2	A1
9		F8	F8
10	G5-k:	K	K
14	G0	G	G
17	A0	A0	A0
20		F2	F1
21		F5:	F8:
22		G3	G3
23		G2	G0:
28		G5	G5:
30		F5:	F5
31		A0	A0

15417 B-Black

15417 B-Black

	MF 38785	35927	36009	35929
1	F2	F0:	F2:	F2
2	G0 ¹		f8	G0
3	G5		g3	G5
4	F2 ⁵		F8 ¹	F5
5	G5 ¹		g0:	G3
6	g0 ²		g0	G0:
7	G0 ^{F8}		f8	G0:
8	F8		g0	F8
9	F2		f0	F2
10	F8		f5	F8
11	F5		F2	F3
12	F8		f5	F7
13	G2			G2
14	G0		g	G0
15	K2		g0	K2
16	G0:		g	G0
17	F2	F0	F0	F1
18	g5		g5	G5
19	G0	G0:	g	G0
20	F2 ²⁻⁵⁻²	F8 G0:	f2 ⁻ g0:	F5:
21	F8	F8:	g	F8
22	A0 ¹	A0 B5	g ^{A2}	A0
23	G2	G0:	g	G2
24	F0	*	F2	F1

3 of the two stars

* overlap

15417D - Black

	MF 38785	37860	36009	35929	38788 overexposed
25	G2:			G3	G3
26	A0		A3	A0	A1
27	F5 ^v		F5 G2	F5 g	F5
28	G3 ² :				G2
29	F8		G0:	g	F8
30	A2		A0	A0	A1
31	G5:	G5		g	G5
32	m ₂	overlap G5:3		G:1	G3:
33	g0		F8	G0:	F9
34			G0	F8::	G0
35		A0		A0	B8:
36		A0	A0	A0	B8:
37		A*		A::*	A:
38			F5	f8	F8::
39		only A0:		A0:	A0:
40		F8 ^v :			F8
1					

* overlap

overlap

F8, 38794

15417B - Red

15417B - red

MF 38785

35927

25 A2 A2 A2

34 F0 A8 A9

35 A2 A3 A2

36 G5 G5: G5

37 A3 A2 A2

38 ^{FS:}F0: ^{FS:}G0: ^{FS:}F5:

39 none -

40 A0 A0 A0

41 A A A

42 ⁸G5 G8

43 None -

44 K0 k K0

45 G8 k G8

46 A2 A2 A2

47 G5 k G5

48 G5' G5

49 ⁸G5 G550 ^{10d 8d}G5: G8 ✓

51 F0: F0:

52 ⁵G3: G3

53 G5 g5 G5

and dr. of marked pr

overlap

^{G5:}
G5: 35927

overlap

G2: "

15417 B-Red

	MF 38785	35927	36009
54	none		
55	^{MO:} K5:		K6
56	A0 A2		A1
57	G0' ¹ ^{none} ⁸⁵		G0:
58	F5'		F5
59	G5' ⁸⁵	⁸⁵	G5
60	F8'	F5	F7
61	A0 A0	A0	A0
62	F5' ²	F0	F2
63	A3	A3	A3
64	G3' ⁸³		G3
65	A0 A2	A0	A1
66	F0 F0:	F0	F0
67	G2	G5	G3
68	G3' ⁸⁵	G5	G4
69	A0 A0	A0	A0
70	K2	K2	K2
71	^{85-M} K0	G3:	G5:
72	K	K:	K
73	G3	⁸	G3
74	none		-
75	F5:	F0:	F2:

15: 35929

11. pr. 9 ftu

15417 B-Red

	MF 38785	36009	
76	A3	A5	A4
77	F2	F0	F1
78	K0	K0	K0
79	A2	A2	A2
80	G5	G5	G5
81	none	-	
82	F5	F0	F2
83	^{F5(45)} F2	^{F2} A0	F2
84	F0:	F2: [*]	F1:
85	F0	F0	F0
86	F0 [✓]	^{F2} A0	F1
87	A0 ²	^{A2:} F0	A2:
88	A0	A2	A1
89	A3'	A5	A4
90	F8	G0	F9
91	A0	A0	A0
92	A3	A3	A3
93	^{G0} g	G2:	G2:
94	G3	G0:	G2
95	G5	G5	G5
96	F8:	F5	F6
97	A2	A3	A2

* Line to red of H

15417 B-Red

MF 38785

36009

98	g:	G0:	G0
99	A2	A2	A2
100	G3	G5	G4
101	A0	A2	A2
102	F8	G0	F9
103	F5	G0	F8
104	A0	A2	A1
105	^{PO-2} A2	F2:	F2:
106	K0	G5	G6
107	G5	G5:	G5
108	A2	A2	A2
109	f	F5:	F5:
110	F8:	F5:	F7:
111	A2	A2	A2
112	K	G5	G5
113	G5	G5	G5
114	A0	A0:	A0
115	^{overlap} g5	G5:	G5
116	A0	A2	A1
117	G5	G5	G5
118	K0	G5	G8
119	G0	F8	F9

overlap

15417 B - Red

	M = 38785		
	36009		
	35929		
	38788 overexposed		
120	K0	K0	K0
121	K0:	K0:	K0
122	A0	A0	A0
123	^{M0} K2	M0:	M0
124	G3	G5	G4
125	K0	K0	G5:
126	F8:	F8	F8
127	G5	G5	G5
128	A3	A2	A2
129	F0	F0	F0
130	A3	A5	A4
131	G5	G5	G5
132	F5.8:	F8:	F8:
133	G5	G5	G5
134	G5	G5:	G5
135	G0	F5	F8
136	A0	A2	A1
137	G0	F5	F7
138	none		-
139	A5	F0	A3 A5
140	none		-
141	F0:	F2	F2

S and stars

15417B-Red

	MF 38285			
	36009			
	35929			
	38788			
142	G0	G0	G0:	G0
143	⁵ A2	F0	A5	A5:
144	⁵ F0:		f0:	F
145	none		-	
146	A0	A0 a0	B9	A0
147	^{F2} A2 :		F3:	F3:
148	A0	a0	B9	A0
149	none		-	
150	G0	^(v) A0	G0:	

15417 C - Black

15417 C - Black

	MF36009	36080	38794	38788	
1	A	A0:	A*	A*	A0
2	B9	A0	A0	A0	A0
3	AS- F0	AF _{inner} A2-5	A3 ^s	AS ^v	AS
4	off	edge A:	A0 B9	A: ^{my}	B9 A0
5	F5	F2:	F2	F5	F3
6		F8	G0:	f	F9
7	15 ft	F8:	F5	F5:	F6
8	F8:		F5:	F5::	F6
9		A*	A:	SE	B9:
10	F8:	G0:	F8	F8::	F8
11	AS-F0 F0	F0 ^v	F0 ^v AS	F8: ^v	F0:
12		F0	F0		F0
13		F0	AS		A8
14	F	F5:	F5		F5
15		F0	F2		F1
16		f	F	F5:	F5
17		f	G0:	F8::	G0:
18		A0	A0		A0
19		AS	F0		A8
20		G0:	G3:		G2
21		G3	G5		G4
22		F0	F0		F0

overlap

B9 on 37860

*
blurredB9
A0: on 37860*
overlap
*
blurred

15417 C - Black

	MF	36080			
		38794			
		35966			
				38788	
23	B9	B9	A0	B9 ¹	B9
24	A0	A0			A0
25	F8	F8	F8		F8

15417C - Red

15417C - Red

	MF 36009	36080	38794	38788
152	A0	A0	A0	
153	f8:	f	F8:	
154	A0	A0	A0	
155	G2	g5	g	
157	A0	A0	A0	
159	A0	A0	A0	A2
160	G2	K0	G5	
161	B ^B g5 %	A1:	^{B A2:} B ^{A5 F8}	
162	A0	A0	A0	
163	F0	^{A3} A2 off	^{A5 F8} F2	
164	A2	A0	A2	
165	A2	A3	A0	
166	A0	A0	A0	

15417C still to re-check
 not #161

double lines
 sep by $\approx H-K$

see MF 38794

$$\frac{3970}{33} \\ \Delta \lambda \approx 37$$

-64° N 078
 N 062° 6383
 = on one plate

$$\Delta \lambda = \frac{\lambda V}{C}$$

$$37 \times 3 \times 10^{15} \text{ km/sec} = 3000 \text{ km/sec} \\ \lambda = 4000 \quad \text{not binary}$$

37.4 at 400 A/mm $\approx 0.1 \text{ mm}$

42 mm/degree

$$\frac{60'}{42 \text{ mm}} = 1.4'/\text{mm} \quad \text{comparison } \approx 1.4' = 8.4''$$

15417C - Red

15417C - Red

	MF 36009	36080	38794	38788
152	A0	A0	A0	A0
153	f8:	f	F8:	F8
154	A0	A0	A0	A0
155	G2	g5	g	G3
157	A0	A0	A0	A0
159	A0	A0	A0	A2
160	G2	K0	G5	G5
161	B ^B %	A:	^{A2:} B ^B	B? double see 38794
162	A0	A0	A0	A0
163	F0 ^{off}	A2	^{A3} ^{A5 F5} F2	AS:
164	A2	A0	A2	A1
165	A2	A3	A0	A2
166	A0	A0	A0	A0

* Double? A0: from 36009

AS: 36009

15417 D-Black

MF 38147

37836

35927

38791

38793

1	F5:	F2:	F5	
2	M3 Red M	M3 ft	M3	F5 + 38818
3		g: ft	G3	M 3783
4	F2 F0 ⁵	A5 A3-5	A5	G3: 12988 A5: 38818 A8 A5: 11274
5	f5:	f8:	F5:	
6	g: ft	f-8	F8:	
7	A5 ⁵ F0	F0	A3:5 A5:	38818, A8 edge A5: 12981, 12995
8	F8	F8:	F8	
9				
10	F0	K0	K0:	
11	F0-A5	A5: F0	A3-5 A5:	38818 F0 A5: 12981
12	K0	K0	K0:	
13		g5	G5:	
14		F0	F0	F0 12981 F5 F0, 12995
15	g	f8:	G	
16	K0	K0	K0	
17	K2 K5:1		K2:	
18	K0:1	G5:	K0:	
19		g5:	G5	g: 12988
20	g	g0	F8:	
21		f0:	F0	f5: 11274
22		f8:	g0	
23		F2:	F2:	F0-5 edge, from F5: 36006 *A8 G-band > H, K

15417 D-Black

	MF 35927	38791	
24		f5:	F5:
25	G5:1	K0:	G8:
26	G3:	G2:	G3
27	^{k5:} mo::	⁰⁸ k	K:
28	^{off}	F5	F5:
29	K5:	M0 ²	M0
30			
31	A3	A3	A3
32		^{k:} f:	K:
33		^{k:} f:	F:
34	g0:	g0:	G0:
35	A0	A0	A0
36		k	K
37	g5:	k	K
38	k5:	k5:	K5:
39	g0:	⁵ g3	G3:
40	k5:	⁵ k2	K5:
41	w	A0 ¹	A0
42	A5:	A3 ⁵	A5
43	A2:	A3	A3
44	A5	F0	A8
45	A0	A0	A0
46		g	G:

G3: in 38785

M0 + 38785

N. m. of massed pair Overlap

15417 D - Black

	MF 35927	38791	38783	36009	36007	
47	g ₅ k ₁	k ₀				G8:
48	A0	A2				A2
49	f ₁₁	g ₀				G ₀ :
50		k ₀ ²				K
51		g ₅		g ₅	G5	
52	G ₀ :		F8		F8	
53		g ₁			G ₁ :	
54		g ₅	K ₂ :	k ₀	K ₀ :	
55				k ₀	K ₁	
56		g ₈		g ₀	G ₀ :	
57	A ₅ : A ₀ : A ₃ :		A ₂ 3-5 g ₁	A ₀ A ₃ :	A ₃ :	
58	F ₅ :	F5		F5	F5	
59	G ₅ K ₀	G5		G3	G5	
60	A ₀			A [*]	A ₀	
61	A2	A ₀		A ₀	A ₁	
62	F8:	F5		F8	F7	
63	A0	A3	A2:	A5	A3	
64		g ₁ :		g	G ₁ :	
65		f ₈ :		f ₅	F5:	
66	k ₅ :	m ₀ :		K ₅	K5	
67	F ₀ :	A ₅ F		F ₀	F ₀	
68	a ₀		A2	A3	A2	
69	f/g	G ₀		F8	F9	
70	g		F8:	f	F8:	

k: 38785 overlap

*
4077 ≈ H8*
overlap

B 15417 ^D/_B - Black

	MF 38791			
		38783		
			36009	
			36007	
71			gi	Gi
72	g0	G0	g	G0
73	g0		G0:	G0
74	A3	A3	A2	A3
75	A0	A3	A2	A2
76	K2:	K0	K0	K0
77			g5	G5: G5
78	F01	F2	F0	F1
79	A0	A2	A0	A1
80	F8:	F5 ^{Hatching}	F8	F7
81	gi	g5:		G

15417 D - RED

	MF 38147	35927	36009	36007	
1	G5 ⁸	K05			G8
4	G3 ^v	G3			G3
5	F0 ^v	a5F0			F0
6	F8	f5:			F8
11	A0	A0			A0
12	A3	A5:			A3
13	g0	G0:			G0
14	K0 ^{G3}	G3			G3:
15	K0 ^{G5}	G			G5:
18	A2:	A0:			A1:
19	A2:	A3			A3
24	g0 ^{Hohong}	g0 ^{pec}			F2:
26	g0 ^{pec}	F0:			F2 on 38785
27	g0 ^{g0}				A8 "
29	F8 ^{g0}	P8			G0 "
32		A5::			F5
33	G3 ^v	G5:			F8 "
39	F8 ^{g0}	F5-6			A5
54		A3	A5	A5	G8
74			G5	G5	F0
81			F2	F0:	F2

15417 E - Black

15417 E

	MF 38783	36009	36007
1		G0	G0
2	F2	F0	F1
3	G2	G2	G2
4	A0	A0	A0
5		F2 F0	F2
6	F0	F0 F0	F0
7	G5	K0:	G7
8	F2:	F0	F0
9		G3	G5:
10		G3	G5
11	G5	G2	G3
12		F8	F8
13		A0	A0
14		F8	F8
15	F2-5	F8	F5
16		A3	A3
17	A2	A2	A2
18	G0	G0:	G0:
19	G0	F?	F?
20	F0	F0	F5
21	G5	G5	G5
22	F0	F0	F2
23		K:	K:
24		F8:	F8:

*
wing to red of H{ overlap
overlapbetter omit?
Overlapoverlap
overlap

15417E - Black

	MF 38783	36009	36007
25	G0:	G0	G0
26		A0	A2 A1
27	G2		G0 G1
28		A0	A0 A0
29	A2		A2 A2
30	G0	G2:	G0: G0
31	G5	G5	G5 G5
32	G0		^{def} G0 G0
33	F8		F8 F8
34	F8:	F5:	F5 F5
35		G5	G5 G5
36	F8:	F8	F: F8
37		K0	K0 K0
38	B9:	B9	B9 B9
39	1	A0	A0 A0
40	G2	G2	G5 G3
41	None		-
42	None		-
43	None		-
44		A0	B9: A0
45		F0:	F5 F5
46		A0:	A A0
47	A2	A	A2 A2
48		F ⁵ F9	F3: F5

* overexposed

* overexposed +
overexposed overlap

* overlap N.p.v.

15417E-Black

	MF38783	36009	36007	
49	A0	A2	A0	A0
50	A0		A0	A0
51	G0		F5:	F8
52	F8	F5	F5	F6
53	F0		F0	F0
54	F8		G0	F9
55	F5		F2:	F4
56	F0	A5	F0	A8
57	F8:	F8	F5:	F8
58	A0		A0	A0
59	A0	A0	A0	A0
60	A3		A5	A4
61		A *		: overlap
62	A2	A2	A5	A3
63	K0	K0 ²⁸	K0 ²⁸	G8
64	A5	A5	F0	A7
65	F8		F5:	F7
66		G0	g	G0
67	A0	A0	A2	A1
68	A2		A2	overlap
69		A	A	A:
70	F0		F2:	F0
71		K5 *	K5:	K5:
72	A0		A0	A0

overlap & overexposed

* very fl

15417E - Black

	MF 38783	36009	36007
73	G0:	8	G0
74	F0	10	F0
75	ASP5 B9	² A3	⁵ A3
76	8	G0:	F8:
77	F2	F2	F2
78	F8:	⁸ F2	F5:
79	A0	B9:	A0
80	None	-	-
81	A5	F0:	A7
82	A5	A5:	A5
83	A3	A3	A3
84	G2	G5	G3
85	A5	F0	A8
86	A2	A0	A1
87	K2	K5:	K3
88	G0	G0	G0
89	A3	A5:	A3
90	A5	A0	A3
91	F0	A5:	A8
92	A0	A0	A0
93	8	g0	G0
94			G0-3
95	A0	A0	A0
96	8	F0	F0
97	8	⁵ A3	G2

A2: 38789⁹⁸ A0: ~~overexposed~~(8898, F8); 13025 G0; 40088 G3, 40095 G0 *
V Can. F8- G3 prob G0-K2 overexposedA0: ~~overexposed~~

15417E - Red

15417E - Red

MF 36009

36007

138 A2 A0 A1

140 *
G5: G5: G5*
overexposed

145 A0 B9: A0

149? 147 G3 G5 G4

Two stars of this No. ind. all this one 149.

151 A0 A0 A0

156 A2 A5 A⁵₃

48,38798

158 A0: *
A * A0:*
overlap

16240 A - Black

Charts Marked

	MF 36080	38794	38149	35966	38788
1	G0	g	g		G0
2	F5:p:	F8:	f8:		g: F8
3	A0:Si	*		3: Bx:	B3:
4	A2	A2		A3	A2: A2
6	F ⁺	x		F0:	F0:
7	g5 ⁺	k	k:		K:
8	G3:		*		g:: G3:
9	A2	A0		A3	A A2
10	A2:	^{A0-2} B9		A3	A: A2:

identify

overlap?
using 1st
* overexposed

* overexposed
† overlap

overlap

overlap

16 2404 - Red

16 240 A-Red

	MF 38794		35966		38788	
1	A2 ³	A2	A3 ⁵	A2 ³	A3	
2	F6 ²	F5	F1	F2	F2	
3	B8 ⁸	B5	A:	A2 - B	B8	
	A0	B9				
		B8				

Very noisy
photo region

16240 B - Blacks

	MF 38098	36080	38149	35966
1	A2		A2 B8	A2
2	g0		G2	G2
3	A2		A3	A3
4	f8:		G0	G0
5	A2		A3	A3
6	G0:		G0	G0
7	A0		A2	A1
8	f8		F8	F8
9	A0	A0:	A0	A0
10	A3	A0:	A2	A2
11	*			
12	K0:		* g & K0:	
13	F0		F5	F2
14	A5 A8		F0	A8
15				
16	a?	A	A0: a:	A
17	A0: 07		A0: A5	A
18	A2'	B8		A0
19	g0:			G:
20			B8	

overlap

* overlap

Sand fainter
overlap

Bad overlap

overlap

Overlap

16240 B - Red

16240 B - Red

	MI=86080	35966	
3	B8	B8	B9, 38794
4	G2	G2	
5	A0	A0	A0 "
6	K0	K0	K0 "
7	F0	F0	F0 "
8	K0	G5	G7
9	A0	A2	A1
10	A0	A0	A0
11	K	K2	K2 "
12	a	A0	A0 B9 "
13	a	A3	A3 B9 "
14	a	B9	A0 A0 "
15	A0	A0	A0
16	f	F0	F0
17	F8	F8	F8
18	None	-	
19	None	-	
20	A0	A0	A0
21	None	-	
22	off	G5	G3
23	"	A2	A2
24	"	G2	G3
25	None	-	

16240 B - Red

	MF 36080		35966
26	g ⁸	G5'	G5
27	A:	B9'	B9
28		A2 ⁶	A3
29		F0:'	F0:
30	A	A3 ^v	A3
31		A0 ^v	A0
32	a	A2'	A2
33		A0 ^v	A0
34	F5:	F5	F5
35	F0:' [*]	F2	F1
36	F0:' [*]	F2:	F1
37		G5'	G5
38		A5:)*	A5:
39		A5:)*	A5:
40		A	A
41		F2 ^v	F2
42		A0, B9'	B9
43	None		-
44	None		-
45		A ^K	A:
46		A2 ³	A3
47		A5 ^{F0}	A8
48		K2	K2
49		F5 ²	F2

*
for
* "

* overlap

overlap

* overlap & def

162403-Red

MF 35-966

50	G5 [✓]	G5
51	A0	A0
52	A2 ³	A2
53	A3 ²	A2
54	A5	A5
55	A3 ⁵	A5
56	A0	A0
57	F5	F5
58	F8	F8
59	A0	A0
60	A2	A2
61	A5 [✓]	A8
62	A2	A2
63	A8	A8
64	None	-
65	F2	F2
66	G5	G5
67	G5	G5
68	G0:	G2:
69	A0 G4	A0
70	F2	F2
71	G2	G2:
72	None	
73	None	
74	F8:	F8

C - Black

16240 B - Red

	MF 38079	35353	38098
1			[✓] _C A3 _{ng} ? A3
2	B? double	A0 B9 [✓]	B9:
3	cont B	* A2? B:	B:
4	H X B em? red?	?* B:	B:
5		A? A? ng	A:*
6	F8	F8	F8
7	k:	K0: K0	K0

lines narrower

Kline

* all lines narrower + weaker
 * all lines weaker, the
 strongest being narrower H-line
 overlap

16240 C - Red

16240 C - Red

MF 35353

75 A₁: A₂: A

overlap

16240 D- Black

	MF 35966	36009	38796	99005 ^{ing} repeat
1		g:	g3:	G:
2	a2:	a0:	A-B	A0:
3			f8: ✓	F8:
4			ng	
5		a5	A8	a5 A5
6		f8:	f8:	f F:
7		g	g	G2 G
8	F8: ✓		g0:	g0: F8:
9			f8	f8 F8:
10	g		f8:	g G
11	g5:		g5:	g5 G5
12	g		g	G:
13	a5		a5	a5 A5
14			k0	k2 K
15	a2		a0:	a+ A
16	f8:		f5:	F8:
17	f5		f5:	f5 F5
18	g			overlap
19			k:	k K?
20	g5:		g5:	g5: G5:
21			f8:	f8: F8:
22	g5		f8:	f8: F8: <u>mix</u>
23	g5 F0:		f5:	f+ F2:
24	g5 g5:		k	k K?

two stars

overlap on 7 narrow filters on 28916 star 28998

16240 D - Black

	MF 36078	35966	Adopt	38792	39005
			↓		
25		a	A0:	³⁹ A0	
26		f::	F5:	f ⁵	
27		A0	A0	³⁹ A0	
28		g5:	G8:	^{g8} K0	
29		g5	A2	G3	A2
30		G		f:	
31		G0*	G0:		
32		F5	F5		
33	A0	A2	A2	A2'	
34	A2	B8-A2	A2:	A0'	A2
35	K0	g5	G8:	^{g5} edge	
36	g0	g5	G:	g5:	
37	g0	F2	F8	F8'	
38	G5	G3	G4	g	
39	f8?	G0	G0		
40	g0? dy	G0:	G0		
41	k: overlap	^{edge} K?	K?	k	k:
42	K0	K0	K0	K0'	
43	F0	A5	A8	A5'	
44	A0	A0	A0	A0'	

G0, 8895
f8: 13025

* overlapped

16240 D-Red

		36078	35966	
18		F5 ⁸	F8	F8, 38798
19		F5: A2	F5	✓
21		F2 [✓]	F2	✓
25		A0 [✓]	A0	A0 ..
43	A2	A0	A0	DS: 38798
44	A0	A0	A0	A0:
64	F2	F2	F2	F0: 38798

A = wrong star

change!

16240 E - Black

16240 E Black
and
Red

MF 36028

35966

1 F0 F2 F0

2 F0 F5 F5

3 A0 A A0

16240 E - Red

72 A2 A2 A2

73 F0 F0 F0

10521 A-Black

	17F35377			
		38093		
		38366		
		38080		
1	K0			K0 K0
2	K0			K0 <i>overlap</i>
3	F5	F2	F2	F3 <i>overlap</i>

10521 B - Black

10521 B - black

	35366	38093	35354	36075	38092	35341	35342
1		off	off				?
2	K5		K5	K5	K2:	K5	K5
3	F8	G0	G0		G0	F8	F8
4	A0	B8dy?	A0		A0	A2	A0
5	F8	F8	F5		F5	F5	F5
6	A2	B8?	B8		B8	B8	B5
7	A8 ^{F0} A5	F ^{F5} F0	A5 ^{F5} A3, F2		F2 ^{F2} F2c	F2 ^{F2} F0	F2 ^{F2} F2 [point]
8	G2	G5	G0		G0	G0	G3
9	A8 ^{F2} A5, F5	F0 ^{F2} F0	A8 ^{F2} A3		A8 ^{F2} A2, B9	A5 ^{F2} A3	A5 ^{F2} A5?
10	K2	K2	K2		K0	K	K2
11	A2	A2	A0		A2	A2	A0
12	A3	A2	A3		A3	A3	A2

overlap

K sometimes weaker H

10521 B3 - Red

	MF 35484		35366		36075		35341	
1		B9	AO:		B9			
2		B3 ⁸	B9:		B8:			
4		G5	G5		G5			
5	A2	A2	A2		A2			
8	A0	A0	A0		A0			
9	A0 _m	* A2?	A3	A3	A3			
11	a0	A2	A2		A2			

* overlap

10521 C - Black

10521 C - Black
and
Red

	MF	35354	38092	36082	35341	35342	38176
1	F5	F2		F2	F0*		F2
2	F2	^{F0} A5		F5	F2	^{F2} A5	F2 [m: omit m]
3	A2	A2		A2	A0	A2	A2
4	G5	G5		g	G5	G5	G5
5	F5	F2		F2	F0	F2	F2
6		f ⁵ :			f ⁵ :	f ⁵ :	F5:
7	A0:	a		A	A0:		A0
8	^{F0} A2:	A0 ^{f⁵:} A0 F0:	^{f⁵:} F0:	^{f⁵:} F8:	^{f⁵:}	^{f⁵:} ^{mf}	F

* 4171 or 4178 strong

overlap
overlap
overlap

10521 C - Red

13	A:	[✓] B8	A:
14		[✓] B8:	
15		B8:	

B9

B9 m. 35571

overlap

B8:

B5-8? MF8008; B8, 23106

196

10521 D- Black and Red

Black

1				
2	F0	F5:	F0	F1
3	MO K5	g0.*	g?o	Mo:

overlap

F0: 35366

overlap → overlap and

overlap

* very poor

10521 D-red

3	g? def.	g0	G0:
---	------------	----	-----

G0, 35366

10521 E-Black

10521 E-Black

	MF36072	23106	23164			
1	* ? B:	B0:	B*	B		
2	B9	B8	B8:	B8	B2,35484	
3	B5 07	B8: A2h	B	B5:	B0 "	
4	B8'	B5	B*	B5	B5 "	
5	B8:	*	*	B8:	B8:	
6	B0	B	B*	B8	B8	
7	cont	B	B	B0	B,35484	
8	B8'	B8:	B	B8	B5: "	
9	B8'		*	B8:	B5: "	
10	F5'		*	F5	F5: "	
11	A2	A5	A2	A2	A2	
12	B8??	B9	B	B8	B8	
13	K A0	K A0	K: A0	MO ft A0 which *?	MO = ft K ~ A0.0v	
14	B8	A0	A0	A0	A0	
15	A0		A2	A1	A0+	
16	A0	A2	A0	A1	A:	
17	B: a?	B2	B8	B8:	B:	
18	A?		A:	A:		
19	"	A0	B	A0		
20	"		F8	F8		

overlapp.

*

overlap

H, HS strong, K as for A3, others weak

*

overlap

* overlap

overlap

* overlap

ident

H very strong

overlap

Nearly all overlapped

10521E - Red.

		MF36072			
			23106		
			35-5-71		
			23184		
6	A2 ^{B8}	B8		B8	88:1, 35484
7	A3	A3	AO	A3	A5, 35484
10	B ⁰ Cont	B?0?	B:	B0	B0
12	A0	B8: A/B?	B A0	B9	B8

3981A-Black

3981A Black

	MF 36281	36082	38178	
1	k	g5	K0	G8
2	F2	f	F ⁵	F3
3	A3		A2	A2
4	G2	G0:	G2	G2
5	A3		A2	A2
6	G0		G2	G1

overexposed

3981 B

Black

	MF 36281	MF 36300	38179	
1	A5-		A3	A2, 38178
2	A5		G5	G5 "
3	B9		B8	B8 "
4	G0:		G0:	G2: "
5	G2		G3 G2	
6	G5		G5 G5	
7	F8 F5		F6	
8	F8		F8 F8	
9	G5		K0 G8	
10	F0: ^{F0:2}		A3 F0: ^{A0:1}	A8 MF 8020 F0 A2 MF 7944 F0: ^{F0:1}
11	A3 a	A3	A3	
12	B9 [✓]	A0 [✓]	A0	
13		G5: ^{G8}	K0 G8	
14	F2 ⁰	F5: ^F	G5: F2	
15	A	A0	A0	
16	G3:	G3	G3	
17	K	K0:	K0	
18	g ^{F5}	G2	G2	
19	G3	F5	F5	
20	A2 a	A5 ^{F5}	A3	
21	F5 F0:	A5	F5	
22	g F5:	F8	F8	
23	G5	G3	G4	

overlap
overlap

overlap

3981 B - Black

3981 B

Black
and
Red

	MF 36281	36300	38179	
24	g5		G5	G5
25	A0 ²			A0
26	g: ^{no:} G5	F5	G8:	
27	B5:	A0:	B8	B8:?? A, 7944
28	A2	A2	A2	

3981 B - Red

9	A5	A5
10	A0	A0

3981 C - Black

	MF 36300	38179	36301	
1	G0		F8:	G0
2		A0 ft.	A0: ft.	A0
3		A2:	A3	A3
4	A0	A0	A0	A0
5	A2		A0	A1
6	FD:		A: B8	B9:
	A2:			
7	B9:		A0 B9	A0 ✓
8	A0:	B8:	B5 ✓	B5
		A0		
9		A:	A:	A:
10		A:0	B8:	A0
11	A0:		A0	A0
12		A2	A0	A1
13	a		A0	A0

f: MF7878 weak lines

overlap

3981 C-Red

3981 C-Red

MF 36300

30319

30279

~~13~~13 ~~22~~: 9:: 60: G:*same as 2 on another chart*

3981 D-Black

	MF 36082	36271			
1	B?	pe?	B0:	B0: 35571, B? 35367	History all others weak
2	f	B5	B5	B5:	
3	A0	B8	A0	A0, 35571	
4	B:	h?	B:	B: 35524	overlap
5	g5	G5	G5		
6	^{B8} A0	B9	B9	B8, 35571	overlap
7	^B A:	p?	B:	B:	lines weak
8	cont	h?	B:	B "	
9	off	B9'	B9	off " B8, 35367	
10		h?	B:	B: "	
11		A0	A0	A0 " A2, 35367	
12			B:	B: 35367	overlap

3981 D - Recd

3981 D - Recd

MF 360 82

36271

1 ^{A2:}
~~FS:~~ A2 A2:A2: 35524
B8, 35571

overlap

2 ~~A~~ A0 A0

3 A0 A2 A1

4 G5: G5: G5

overlap

5 ~~g0~~ F8 F8

6 A2 A0 A1

7 FS: G0 F8

8 A2: A0 A1

overlap

3981 E Black

	MF 36300	36271	35524	30299	30819	35367	35524	35525	36282	A d. p.
1	^{ASFO} A5	^{F9} FO:	^{HJK} A3P2	^{AS} A3F		^{AP2} ^{HJK} ^{ALF} B	^{AS} A3:F		^{FO43} FO43	H strong
2	^{AQ10} A2:	A0?	^{F8} F8:?	A2: B8:	A0	AD:			A0	overlap
3	B9:			B: B					B:	} overlap M28468
4	FO:			^{tt} A: A					FO:	
5	AD:			A:0 B8:	AD:				A0	
6				B: B	B				B #6	} * overlapped
8	FO:			F: FO:	F				F: #8	
9	A2:			A: A2:	AE				A: #7	
9				A2 B9	B8				B9	overlap
10	A:			A: AD:					A: A3	overlap
11				B8 B8					^x B8 B8	superposed on an overlapped
12				A: B8:					A5 A5	
13				^r B5: ^{B8} A5:					B:A B8	overlapped

3981 E - Red

3981 E - Red

	MF 36300	30299	30319		35320	36282	
11	A2	* A:		A:	A		A2:
12	^{may} F0:	¹ F: B:	A5:	A5:	A5:		A5:
14	A0	¹ A0 B	a?	A:	A0	A0	
15		A: B:	B?	A:	A:	A?	
16	A0:	^{A0} B5: A0		A:	A0	A0	
17	B9:	^{A0} B8 B		-	B8	B8	
18	A0	^{A0} B8 B		A:	A0	A0	

UV only, overlap
overlap

overlap

13189A

Black
and
RedBlack

	MF	38187		
		36301		
		36414		
		36388		
1		G5?		G5:
2	g:	g2		G
3	A5	A5		A5
4	A2	A3	A2:	A3
5		F0 ^(A5)	A5	A8

* overlap

4171 or 4178

A5: MF7872; P0,7885

Red

2	a:	A	A0:	A0
---	----	---	-----	----

overlap

13189B - Black

13189B

	MF 35568	38187	36301-	36273	36414?	36388	36283	
1		* G2						G:
2		A: A0		A0	a		A0	A0
3	A2	A2		A2 ⁺	A2 ⁺	A2 ⁺	A2 ⁺	A2 ⁺
4	A2	A2		A2 ⁺	A2 ⁺	A2 ⁺	A2 ⁺	A2 ⁺
5	F0	F0		F0	F0	F0	F0	F0
6								
7	F0:			f0	1?		F0:	F0:
8					a?			
9	A0	A0		A5	A5	A5	A5:	A5:
10	A2			A0	A0	A0	B5:	A0:

* lines weak, CN
overexposed * overlap

F0, 39250

overlap

A8, 39250

B9, 39250

overlap

X means wrong!!!

13189 C - Black

	MF 36273	36283	38094	36474	38222
1	F5	F5			F5
2	A0	B8			B9
3	A2	A3			A2
4	A0	A0			A0
5	G0	G2			G1
6	A5F2	F0.55			F0.1
7	K0	K0*			K0
8	A3	F0.55			A8
9	A5	A5			A5
10	F2	F5			F3
11	A3	A0			A2
12	F8	F8			F8
13		B0:			
14	A0	B			A0 A0
15	A5	A3			A5 A5
16	G3	G0			G3 G2
17	A0	A2	A0:		A2 A1
18	A0	B8	A0		A0 A0
19	F2	F2	F2		F2 F2
20	G3	G3d	G5	G5	G4
21	G5	G5d:	*		G5
22	A2	B8	A0		A0 A0
23	A3	A2	B8:		A2 A2

B8: 39250

F0: 39250 F2.5
A5: edge 38187[* 4077 overlap]
* overlap

39250 F2.5

G, 39250

overlap

ident.?

* overlap

13189 C-B lack

	MF 36273	36283	38094	36474	38222		
24	F2 [✓]	F2 [✓]	A2 [*] F0	A [*] F	F2	F0 [*] 39250	* overlap at 14K
25	A9 [✓]	A2 [✓]	A [*]	B8 [✓]	A0:	B9, 39250	* overlap
26	A0	B8	B8:	B	B8		
27	A0	B8	B5:	B	B8		
28	G5	K0	K0:	G8	G8		
29	G0 [*]	G5	G0	G0	G0		* overlap
30	A2	A0	A [*]	A0 [*]	A1		* overlap
31	K [✓]	K??	K ³⁸ K2	K2	K2		
32	A2	A0	A3:	A0	A2		
33	G5	G3	G2 [*]	G0	G2		* 4077
34	G5	G5	G5	G8 ^g	G5		
35	G0	G0:	G3	G3	G2		
36	F2 [*]	G5 [*]	A [*]	B-A [*]			* overlap at 14K
37	F8 [?]	F8	G0:	F8	F8		* overlap
38	F2	F5 [✓]	F2 [✓]	F0 [✓]	F2		
39	a	A0:		A0	A0		
ident! 40	a [?] 5:	A5:	A3:	A3 [✓]	A5: ident?		overlap ident?
41	F0 [*]	A2 ³	A2 ³	A3 ³	F0A3?		H8 fuzzy
42	A0	A0	B9	a	A0	A0	
{ 43		A0:		B9:	B9: overlap		overlap ft.
{ 44		1/2 ^{B9}		B9:	B9: overlap		
45	A0	B9	B9	B8	B9		
46	A2:	B	B	B	B:	H8 weak B5, 7958	lines weak and sharp except H8 fuzzy † H8 very weak

13189C - Black

	MF 36273		38094		36474		38222
		V6283					
47	A3:	A5	A5		A5	A5	
48		F5:	F5	F0:	F8	F5	
49		** F5(A3)	* A3, F5	A3, F8	A5, F5	A3 F5	
50			G0	G5:	F8:	G0:	
51			B8	B8:	B:	B8	
52			A0:		A0:	A0	

A5, 7958

No G band but H γ weak

* H strong.

** Weak K-line

13189 D - Black

13189 D and
Red

	MF 35568					
		36414	36282	36407	36388	
1	A0	A0	A0	A0	B9:	A0
2	F8	F8	F8	F5::	G2	F8

13189 D - Red

1	A2	A3	A2:	a	A1	A2
3	a	A0	B9:	a	?	A0

overlap

214

13189 E Black and Red

13189 E Black

	MF 35568							
		36414	36282	36407	36388	35526	36421	36474
1	A3	A2	A3	A2	A2			A2
2	B0:			B0			Q:B	B0
3	A5			A2		A3	A3	A3
4	B ^{1?} *	B8'		B8:	B8:	B8:	B8:	B8: B8
5						F8: F8		F8
6						F5 F5		F5
7						G5 G2		G3
8						B ⁵ : B9	A B	B8:
9						K2: ft.		K2:
10						B5 B8	B ⁹ B8:	
11						A2 A0		A1

* weak lines * Heavy strong

K⁺ 39234

4481 strong

13189 E Red

4		a?	a?	a?	overlap
5	A0:	A0	A0	A0	A0

overlap

overlaps

12337 B-Black continued from p. 81

51	k		G5	K0		G8	K0
52			K2:	K2:		K2'	K0
53			G0:	G2:		G2	G3
54	G0:	F	F5:	g		F8	F5
55	G2:	G0		G3		G2	G0
56		G3:	} G0	} G5:		} G3:	G2
57							
58			G0	G0:		G0	G0
59		G2:		G0		G0	G0
60		K ^r		K ₂ :		K ₂ '	K5
61	G0:	G0	G0	G2		G0	G0
62	F0	F2		F2:	F0	F1	F2
63	F5	F5		F5:	F0	F5	G0
64	g:	F:	F8	F5		F6 ^m	F8
65	G5:	G5	G0:	G0		G3	G2
66			F8	G0		F9	F8
67			K0:	K2		K2'	K0
	MF 35-909						
		35945					
		36614					
		38763					
		38694					
							35740

E33-2905

1951phae.proj.2513H