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2

4

Qualit

2

Spir. Temp.

Fos.

Spir. Temp.

Enlir Secm

Spectr. Temp. 45.....

Dome Temp./Hum.

Transparency Conditions

Focus 100 R

Spectr. Temp.

Dome Temp./Hum.

2

[illegible]

Date April 17-18, 1978 Observers B.D. R.

Emulsion Batch

1...L2...
Time 24-...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Compon. Type/Filter Exp.
42539	HD 96003	10 ^h 39.3	+13° 12'	19:49	21:46	00 ^h 09 ^m 00 ^s	+12° 45'	F. APC N.H. 10
42540	HD 135679	15 ^h 11.3	+26° 01'	21:59	23:53	0	+12° 41'	PC 1. D.M.O.
✓ 4254091	spot cal in plate 42539-43			15 min @ 15V		04 3900	03 4500	P- 7.2
4254022	spot cal in plate 42539-43					91000		
42541	HD 138406	15 26.8	+62° 05'	00:21	02:06	0	4	
42542	HD 156547	17 13.1	+26° 00'	02:15	03:44	00	5 5	
4 543	HD 163506 (89 Her)	17 51.4	+26° 04'	03:48	04:11	00 1	+2	
42544	HD 172002	18 ^h 32.9	+33° 23'	04:20	04:41	0	E +33 26	
425441	slip cal in plate 42544			90 sec				
42544F1	focus test out/in							F. APC N.H. 10
2	standard focus test							
3	full aperture "focus" test							
4	standard focus test							
5	full aperture "focus" test							

Spectr. Temp.
Focus.....
Spectr. Temp.

Exp. Mtr. Secs.

8/20

8/20

8/20-3

8/20

40/10

40/10

Temp 10

Spectr. Temp. 38° F......

Dome Temp./Hum.

Transparency Conditions: GOOD - SOME NEEDS

6

[illegible]

7

Emulsion Batches:

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Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr. Sec.

[illegible]

Transparency Conditions 7

8

Dome Temp./Hum.

[illegible]

9

Observers

Bln-Ta / Fgi-Tn

Emulsion Batches:

Emulsion Batches:
 ... $\Pi_{20-E} 23087 = 17048$
 ... $098-02E 30096 = 05048$

098-02E 30096 - 05048

[illegible]

Spectr. Temp. 38° F.....

Dome Temp./Hum. 36°/67%

Transparency Conditions Excellent

Focus . . . 100R . . .

Spectr. Temp. 34°F.....

Dome Temp./Hum. 78 / 72 %

10

[illegible]

3

11

2 Large Tours 2.5 hrs

Sat-Sun

Date 22/23 Apr. 1978 Observers Zd-Tn / Tn-Fgi

Emulsion Batches:

098-02 E 30097-22048

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr	Secs
42551	HR 3572 = α Cnc	08 53	+12 15	22 05	22 47	3 35 W	+12 03	Fe Arc None	4-5-6	200/170	2.5
42552	HR 3572 = α Cnc	08 53	+12 15	22 48	23 24	4 12 W	+12 03	Fe Arc None	6-6-6	200/173	3.6
42553	"	"	"	23 25	23 45	4 33 W	"	Fe Arc None	6-6-6	200/172	"
42553T	Spot Cal'n for 42551-			15 min @	15003 4810	TV DI HX	7V D2 5450				
42554	HD 106677	12 ^h 11.0	+73 07	23 52	00 56	2 26 W	+72 42	Fe Arc None	4-4-4	200/170	2.5
42555	BD +36° 2344	13 ^h 06.0	+36 28.0	01 03	03 17	3 52 W	+36 08	Fe Arc NONE	3-3-4	800/192	2.5
42555T	Strip Cal'n for 42551-					90 sec					
42556	HD 146361	16 ^h 10.9	+34 07	03 33	03 55	1 27 W	+34 00	Fe Arc NONE	4-4-4	400/89	5.0
42557	HD 146361	16 ^h 10.9	+34 07	03 56	04 19	1 51 W	+34 00	Fe Arc NONE	4-4-4	400/91	"
42558	HD 146361	16 ^h 10.9	+34 07	04 20	04 44	2 16 W	+34 00	Fe Arc NONE	4-4-4	400/91	"
42558F	Focus Test G16		in in / out out			"	+34	"			
42558F2	Focus Test G43		"	"		0-0	+ 0°	"	5-5		5.5
T1			out / in			0-345W	+ 0°	"	"		
T2						345W → 0	+ 30°	"	"		
T3						0 → 345E	+ 30				

} all out
in meridian

Spectr. Temp.

Focus....100

Spectr. Temp. +

22098

Spectr. Temp. $+40^{\circ}\text{F}$Dome Temp./Hum. $35^{\circ}\text{F}/69\%$ Transparency Conditions *Excellent - s/haze*.....Focus *100R*.....Spectr. Temp. $+36^{\circ}\text{F}$Dome Temp./Hum. $32^{\circ}\text{F}/67\%$

12

Comparison
Filter Exp.

Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4-5-6		200/150	2-3"	V=4.23	A5m	G16R	G16/.7B	9/1.5	09802E	A	2d-Amstd		vsl str
6-5-5		200/63	3-6"	V=4.23	A5m	G16R	G16/.7B	9/1.5	09802E	B	2d-Amstd		fine
6-6-6		200/32	"	"	"	"	"	"	"	A	"		s/wh
									09802E				
4-4-4		200/40	2-3"	7.55	KD	G16R	G16/.7B	13/1.5	09802E	B	RSCVn-Fgi		
3-3-4		800/192	2"	9.31	F4	G16R	G16/.7B	18/1.5	098-02-c	A	RSCVn/Fgi		vsl wh
									098-02 E				
4-4-4		400/89	2"	V=5.76	DF6	G16R	G16/.7B	13/1.5	098-02-e	B	RS CVn/Fgi		fin
4-4-4		400/91	"	V=5.76	DF6	G16R	G16/.7B	13/1.5	098-02-e	A	RS CVn/Fgi		fin
4-4-4		400/91	"	V=5.76	DF6	G16R	G16/.7B	13/1.5	098-02-c	B	RS CVn/Fgi		fin
					"	"	"	13	IIIaJ	A	Temp 36°F Set 100R		vsl to blue
5-5		50°F	Set	80R						B			
"									09802	4 ^m D19	68°F		
										A	18166		
										B			
										A			

Mon - Tues

Emulsion Batches:

Emulsion Batches:
098-02E (30097) - 24048
* 098-02e 30097 - 22048

Spectr. Temp.

Focus... 92

Spectr. Temp.

[illegible]

24048
2098

Spectr. Temp. $+50^{\circ}\text{F}$

Focus $\rightarrow 90\text{R}$

Spectr. Temp. $+46^{\circ}\text{F}$

Dome Temp./Hum. $+48^{\circ}\text{F}/50\%$

Dome Temp./Hum. $+41^{\circ}\text{F}/62\%$

Transparency Conditions $\dots \text{Free} \dots \text{SI haze} \dots$

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Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4-6-5		400/128	1.2"	$V=5.42$	K0	G16R	G16/7B	13/5	098-02E	A	RSCVn/Fgi		
3-3-3		800/185	2"	$B=9.0$	G5	G16R	G16/7B	18/5	098-02e*	B	RSCVn/Fgi		
									09802E				
3-3-3		800/190	2-3	$V=8.4$	F4	G16R	G16/7B	18/5	09802e*	A	RSCVn/Fgi		
									09802e				
3-3-3		800/200		$V=7.4$	F4	G16R	G16/7B	18/5	098-02e*	B	RSCVn/Fgi		vsl wk
4-3-4		200/50	3"	3.93	K2 III	G16R	G16/7B	13/5	098-02e	A	STD VEL		vsl str
30-30			"		"	"	"		LinaJ	B	Temp 46°F Set 90R		
									098 02		19 239		
									098 02*		21 183		

3

15

211

Tues-Wed

Date Apr. 25-26 / 1978... Observers ZA-Tn / KK-Ty.....

Emulsion Batches:

III 9 F-E 23117 - 24048
 098-02E 30097 - 24048
 II 0 C 23087 - 17048

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr	Secs
42564	HR 3572 = α Cnc	8 ^h 53 ^m	+12° 51'	19 59	22 12	3 12 W	+12 01	Fe Arc Dv Filter	13-13	200/1369	2-5
42564F	Taken before 42564			Focus Test		in in / out out		Fe Arc none	30-30		
42564T	Spot Cal'n for 42564			15 min	@ 7V	D4 5100	D2 Hx 5450				
42565	HD 106677 = HR 4665	12 ^h 11 ^m	+73° 07'	22 17	23 05	00 48 W	+72 42	Fe Arc no filter	4-4-4	100/99	2-5
42565T	Spot Cal'n for 42565-66			15 min	@ 15V D3 4810	7V D1 Hx	7V D2 5450				
42566	HD 106677 = HR 4665	12 ^h 11 ^m	+73° 07'	23 06	00 00	01 43 W	+72 42	Fe Arc no filter	4-4-4	100/117	2-5
42567	HD 131511	14 48.9	+19 33	00 10	00 47	0 07 E	+15 16	Fe Arc ND 1110	8-8-8	100/70	
42568	HD 124897	14 11.1	+19 42	00 52	00 53	0 36 W		"	12-12	90/16	
42569	"	"	"	00 55	00 56	0 39 W		"	12-12	40/16	
42570	HDE 226868 ^{Cyg X-1}	19 54.6	+34 56	01 06	04 26	1 27 E	+35 11	Fe Arc ND 1110	6-7-6	800/94	3-5
42570T1	Strip Cal'n for 42564					3 min					
42570T2	" "	42565-66				90 sec					
42570T3	Spot Cal'n for 42567-70			15 min	@ 15V	D4 3900	D3 4300	D2 4810			
42570T4	Strip Cal'n for 42567-70					90 sec					
42571	HD 172167 ^{Vega}	18 33.6	+38 41	04 30	04 32	0 06 E		Fe Arc none	8-8	40/32	2
42572	"	18 31.6	+37 41	04 33	04 35	0 03 E		"	8-8	40/32	2

4048
4048
048

Spectr. Temp. 53°F

Dome Temp./Hum. $+50^{\circ}\text{F}/60\%$

Transparency Conditions ... *Very good... sl. hazy*.....

Focus 90R

Spectr. Temp.

Dome Temp./Hum. $+43^{\circ}/65\%$

16

Comparison
filter Exp.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200/368	2"-5"	4.23	AmV	G16R	16/7B	9/5	IIIaF-E	A	2d-Am std	UV filter inst. 2r	v sl wk
				G16R	G16/7B	9	IIaJ	B	Temp 53°F set 90R		sl to red
							IIIaF-E				
100/99	2"-3"	5.42	KD	G16K	G16/7B	13/5	098-02E	B	RSLVn-Fgi		fine
							II				
400/117	2"-3"	5.42	KD	G16R	G16/7B	13/5	098-02E	A	RSLVn-Fgi		v sl str
100/70		6.84	AKI	G12	G12/7B	13/5	IIa0e	B	Asm-Sp/KK		fine
40/16				"	"	13/5	"	A	std vel	Focus 90R a Bow	v sl str
40/16				"	"	13/5	"	B	std vel	Focus 40R	v sl str
800/94	3"-2"	9.71	09.70b	"	"	18/35	II	A	SB Blh		harrow v sl wk
							IIaF-E				
							098-02E				
							IIa0-e				
							II				
40/38	2			G12	G12/7B	9/5	IIaJ-e	B	std vel	Focus 90R a Lyn	sl str
40/37	2			"	"	"	"	A	"	Focus 40R	sl str

17

Date _____

Emulsion Batches:

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[illegible]

Spectr. Temp.

Focus.....

Spectr. Temp. .

Exp. Mtr.	Sec.
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
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82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

42/80

1016

Spectr. Temp. Dome Temp./Hum. Transparency Conditions

Focus

18

Spectr. Temp. ... 46°F Dome Temp./Hum. 42°F/65%

Comparison
Filter Exp.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
8-16	40/80		ADV	G12	G12/.498	9/5	III ₂ J	A	STVel	140R old III ₂ J	v sl sm
12-15	in in / out out			"	"	9	"	B	46°F	90R	v sl to blue
					II ₂ 0	6 1/4"	D19	68°F	20	166	
					III ₂ J				11	200	
					III ₂ J	5"	D19	68°F			
					098				18	152	

#1
19

Date April 26-27/1978..... Observers Zia-Tn./Fgi-Tn.....

Emulsion Batches:

IIa-e 23087-17048

IIIaF 23117-24095

IIIaI-e 01126-05048

098-22E 30097-26048

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
42574	HD 47105 (sGem)	6 ^h 31.9	+16° 29'	19:45	19:52	3 17 W	+16° 29'	Fe arc D.D. 41	12-12
42574T	Spot Calc for 42574		15 min @ 15V		D4 3900	D3 4300	D2 4810		
42575	HR 3572 = Cnc	8 ^h 53 ^m	+12° 51'	19:59	22:26	3 31 W	+12° 00'	Fe arc D.D. 41	14-14
42575T1	Spot Calc for 42575		15 min @ 7V		D4 5100	D2 Hx	D3 5450		
42575T2	Strip Calc for 42575				3 min				
42576	HD 91316 = Leonis	10 ^h 27.5	+9° 49'	22:31	23:07	2 37 W	+9° 26'	Fe Arc none	4-4
42577	"	"	"	23:08	23:26	2 56 W	"	"	4-4
42578	"	"	"	23:27	23:35	3 05 W	"	"	5-5
42578T1	Spot Calc for 42576-78.			15 min @	17.5V D4 3900	15V D4 4300	15V D4 4810		
42578T2	Strip Calc for 42576-78.				3 min				
42579	BD +36° 2344	13 ^h 06.0	+36° 28'	23 44	02 45	3 37 W	+36° 05'	Fe Arc NONE	3-3
42579T	SPOT Calc for 42579-82			15 min @	15V D3 4810	7V D1 Hx	7V D2 5450		
42580	HD 146361	16 10.9	+34 07	02 49	03 21	1 10 W	+33 57	Fe Arc NONE	4-4
42581	HD 146361	16 10.9	+34 07	03 22	03 55	1 48 W	+33 57	Fe Arc NONE	4-4
42582	HD 146361	16 10.9	+34 07	03 56	04 28	2 16 W	+33 57	Fe Arc NONE	4-4
42582F	Focus Test for 516R							Fe Arc NONE	

Spectr. Temp.

Focus 8

Spectr. Temp.

Exp. Mir. Seeing

40/22 2"

200/373 2.3"

200/259 3.5"

200/127

200/62

800/188 2.3"

400/95 3"

400/99

400/100

1700
140
5048

Spectr. Temp. 53°F Dome Temp./Hum. 50°F / H=556 Transparency Conditions Fine - sl haze

Focus 80R

Spectr. Temp. 45°F Dome Temp./Hum. 43°F / H=727

111F 15 200
1110 54 20 161
098 02 5 1/2 21 200
20

Comparison
Type/Filter Exp.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/32	2"	1.93	A0II	G12	G12/.7B	9/9	IIA0-E	A	Std Star-Bln		vs sl str
							"			✓	
200/373	2"-3"	4.23	Am II	G16 R	G16/.7B	9/5	IIA F-e	B	2d-Am Std	UV filter in	
							IIA F-C			✓	
							IIA F-e			✓	
200/259	3"-5"	3.85	B1 Ib	G12 B	G12/.7B	13/5	IIA J-e	A	std-Bln	2x normal	
200/127	"	"	"	"	"	"	"	B	"	normal	fine
200/62	"	"	"	"	"	"	"	A	"	1/2 normal	fine
							"			✓	
							"			✓	
800/188	2'-3'	9.31	F4	G16 R	G16/.7B	18/5	098-02-e	B	RS CV _n /Fgi	some thin cloud haze	sl wh
							"			✓	
400/95	3"	V=5.76	DF6	G16 R	G16/.7B	13/5	"	A	RS CV _n /Fgi		
100/98		V=5.76	DF6	G16 R	G16/.7B	13/5	"	B	"		
100/100		V=5.76	DF6	G16 R	G16/.7B	13/5	"	A	"		fine
			"	"	"	13	IIA J-e	B	Temp 45°F	set 80R	vs sl blue

21

Thurs - Fri

Date Apr 27-28/78... Observers Fgi - Tm / Rm - Tm...

Emulsion Batches:

098-2E 30097-26048

110-0E 23087-17098

110-1E 01126-27048

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp	Exp. Mu.	Seeing
42583F	Focus Test					2 0W	+57	Fe Arc none	30-30	100/100	2"
42583	HD 65626	7 ^h 54.5	+57 33	20 02	21 14	3 18W	+57 24	Fe Arc NONE	4-44	100/100	2"
42584	HD 65626	7 ^h 54.5	+57 33	21 17	22 48	4 53W	+57 24	Fe Arc NONE	4-44	100/75	0
42584T	Spot Calc for 42583	-87			15 min @	15V D3 4810	7V D1 H2	7V D3 5450			
42585	HD 118216	13 ^h 30.3	+37° 42	22 52	23 11	0 17E	+37 21	Fe Arc NONE	4-44	100/112	3"
42586	HD 118216	13 ^h 30.3	+37 42	23 12	23 38	0 09W	+37 21	Fe Arc NONE	4-44	100/110	"
42587	"	"	"	23 40	00 09	0 41W	"	"	4-44	100/114	"
42588	HD 163506	17 ^h 51.4	+26° 4	00 20	01 31	02 17E	+26 07	Fe Arc ND 1-10	8-85	100/112	3-5"
42588T	Spot Calc for 42588				15 min @	D4 15V 3900	D3 4300	D2 4810			
42589	HD 186688 = SU Cyg	19 ^h 40.8	+29° 01	01 35	03 52	01 45E	+29 16	Fe Arc ND 1-10	7-77	100/140	2-5"
42589T	Spot Calc for 42592-94				15 min @	V175 D4 3900	15V D4 4300	15V D4 4810			
42590	HD 161096	17 38.5	+4 37	03 58	04 10	+0 ^h 34W	+4° 39	Fe Arc ND 1-10	14-14	100/13	"
42591	HD 172167 = Vega	18 33.6	+38 41	04 18	04 19	0 ^h 10E	+38 48	Fe Arc ND 1-10	14-14	100/9	"
42592	"	"	"	04 20	04 22	0 ^h 07E	"	Fe Arc none	8-8	100/25	"
42593	"	"	"	04 28	04 29	00 ^h 00	"	Fe Arc None	8-8	100/27	"

2608
1708
27048

pectr. Temp. $+54^{\circ}\text{F}$
ocus 80R
pectr. Temp.

Dome Temp./Hum. $+50^{\circ}\text{F}/60\%$
Dome Temp./Hum.

Transparency Conditions *thin cloud*
22

Comparison Type/Filter Exp	xp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	in/out				G16R	G16/.7B	13	IIaJ	B	Set 80R - $+54^{\circ}\text{F}$	center Far red	
	400/100	2.4	7.1	G0	G16R	G16/.7B	13/5	098-02-e	A	RSCVn/Fgi cloud		slut
	400/75	"	7.1	G0	G16R	G16/.7B	13/5	098-02-e	B	RSCVn/Fgi thick cloud		wk
								"				
	400/112	3"	5.3	F2IV	G16R	G16/.7B	13/5	098-02-e	A	RSCVn/Fgi		vs/wk
	400/110	"	5.3	F2IV	G16R	G16/.7B	13/5	098-02-e	B	RSCVn/Fgi		slut
	400/114	"	"	"	"	"	"	"	A	"	100k. 11.5e 88? Prob labn' 88	"
	400/112	3-5"	5.8	F2Ia	G12 N	G12/.7B	13/5	IIaOE	B	Ceph/Evans		Fine
								"				
	400/264	2-6"	6.3-7.7	F0-B1	G12 N	"	18/5	IIaOE	A	Ceph/Evans		slut
								IIIaJ-e				
	40/13		3.93	K2II	G12 N	G12/.7B	9/5	IIaOE	B	std vel		Fine
	40/9		0.04	A0V	"	"	9/5	"	A	Test kk	Cold focus set to 140R	"50?"
	40/25		0.04	A0V	"	"	"	IIaJ-e	B	"	Cold focus 140R	120
	40/27		"	"	"	"	"	IIaJ-e	B	"	normal 90 R	1150

23 Thuro - Fri

Date *Apr 27-28 cont* Ob

Observers *Rm-Tx*

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Spectr. Temp. .
Focus.....
Spectr. Temp. .

Exp. Mtr.

Sci

24

Comparison e/Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
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40/25	0.09	A02	G12N	G12/7	9/5	IIIaJe	B	Test KK	40 R Focus	✓
40/10	"	"	"	"	9/5	IIaJe	A	Test KK	40 R Focus	IIIJ?
					9	IIIaJ-E	B		Temp 46°F Set at 90 R	cent sl Blue
KK # J Put Fresh IIaO' in Vac										
IIIaJ 5 1/2 68 11 230										
IIaO 5 1/2 68 18 136										
098 5 68 19 185										

25

Fri-Sat

Date Apr. 28-29, 1978 Observers Ly-Tn.....

Emulsion Batches:

D.J.E. 01126-27048

D.O.E. 23087-28048

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
42596F	Focus Test for G12N.		in in / out out			3 30W	+16	Fe Arc None	11-11
42596	HD 47105	06 31.9	+16 29	19:54	19 59	3 32W	+16 31	Fe Arc No Filter	6-44
42597	HD 62044	07 37.0	+29 07	20:08	20 57	3 24W	+29 01	Fe Arc ND=1.1	57-20-20
✓42597T	Spot Calc for 42596, 42601, 04				15 min @	17.5 V D4 3900	15 V D4 4300	15 V D4 4810	
42598	HD 72208	08 26.5	+10 09	21:03	22:21	3 59W	+9 58	Fe Arc ND=1.1	8-88
42598T	Spot Calc for 42597-42600, 02-3, 05.				15 min @ 15V	1 V D4 3900	D3 4300	D2 4810	
42599	HD 118216	13 30.3	+37 42	22:25	22:50	0 34E	+37 22	Fe Arc ND=1.1	10-10-10
42600	HD 131511	14 48.9	+19 33	22:54	23:43	0 59E	+19 18	"	8-8-8
42601	HD 139892 (9 ² Car Per)	15 35.6	+36° 58'	23:46	00:13	1 16E	+36 46	Fe Arc No Filter	4-4.4
42602	HD 163506	17 51.4	+26 04	00:30	01:00	2 45E	+26 06	Fe Arc ND=1.1	8-8
42603	HD 157482	17 18.5	+40 04	01:02	01:52	1 19E	+40 03	Fe Arc ND=1.1	10-10
42603T	Strip Calc for 42597-42600, 02-3, 05.						90 sec		
42604	HD 175426	18 50.2	+36 51	01:55	03:24	1 19E	+37 00	Fe Arc No Filter	44
42604T	Strip Calc for 42596, 42601, 04,					3 min			
42605	HD 157482	17 18.5	+40 04	03:27	04:29	1 18W	+40 02	Fe Arc ND=1.1 Fe Arc	10-A-12

Spectr. Temp.

Focus 7.0R

Spectr. Temp.

Exp. Mtr. Sec.

400/34 1-2

400/47 1

400/100 1-2

400/55 1

400/101 3

400/220 1

400/101 3

400/100 2

400/125 3

400/100 3

7048
1048

Spectr. Temp. 55°F

Dome Temp./Hum. 52°F/50%

Transparency Conditions ... Fine ... vs/ haze

Focus 70R

Spectr. Temp. 50°F

Dome Temp./Hum. 45°F/60%

26

Comparison e/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
ARC Dne 11-11 ARC F 11-11 e ARC D-11 10-10 S/D K'D F-10 10-10 D-11 11-11					G12N	G12/17B	9	IIIaJ-e	A	Temp 5455°F set 70R		vs/red
	40/34	1-2	1.9	A0IV	"	"	9/5	IIIaJ-e	B	Asm Sp - KK		vs/str
	200/147	"	~5.4	KIII	G8	G16/-25B	9/5	IIaO-E	A	H+K Bin - Ly		fine
								IIIaJ-e			✓	
	400/100	1-2	6.5	A0p	G12N	G12/17B	13/5	IIaO-E	B	Sp Bin - Ly		fine no flux
								"			✓	
	200/55	1-3"	5.3	F2IV	G12N	G12/17B	9/5	"	A	RSCun - Ly		vs/str
	400/102	"	6.84	JKI	"	"	13/5	"	B	HEK Bin - Ly		fine
	400/220	"	4.95	B7V	"	"	13/5	IIIaJ-E	A	Sp Bin Bin - Ly		
	400/101	3"	~5.8	F2Ia	"	"	"	IIaO-E	B	Ceph - Evans		vs/str
	400/100	2-3	~6.0	df8	"	"	9/5	IIaO-E	A	H+K Bin - Ly		fine lotsa lines
								"			✓	
	800/125	3"	6.2	B3	G12N	G12/17B	13/5	IIIaJ-E	B	Sp Bin - Ly	cloud at 2:30 ~ 3h	no flux vs/str
								"				
	400/100	3-5	~6.0	df8	G12N	G12/17B	9/5	IIaO-E	A	H+K Bin - Ly	cloud	fine
						all 5' 12" 11 180						

048

47°F / 67%

Fine - sl huze

90 R

36°F

31°F / 67%

28

[illegible]

29

SUN/MON

Date

Apr 30 - May 1, 1978

Observers

Fgi-Tn / Tn...

Emulsion Batches:

IIIa-e 01126 27048
 098-02E 30097-26047
 IIa0-e 23087-29048

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
42612F	G12N Focus Test					3 ^h 30W	+16	Fe Arc none	7-38
42612	HD 47105	6 ^h 31.9	+16 29	19 55	20 02	3 42 W	+16° 36	Fe Arc none	5-5
42613	HD 107760	12 ^h 17.8	+73° 48	20 15	00 04	2 00 W	+73° 30	Fe Arc none	3-3-3
42613T	Spot Calc for 42612				15 min @	175VD9 15VD4 15VD4 3900 4300 4810			
42614	BD +36° 2344	13 ^h 06.0	+36 28.0	00 08	03 05	4 14 W	+36 10	Fe Arc none	3-4-3
42614T	Spot Calc for 42613-14				15 min @	15VD3 4810	7VD1 7VD2 Hx 5450		
42614F	Focus Test G16R					3 0 W	+20°	Fe Arc none	10-10
42615T	Spot Calc for 42615-20				15 min @	15V 3900	D3 4300	D1 4810	
42615	HD 124897 ² B00	14 11.1	19 42	03 21	03 25	3 28 W		Fe Arc none	6-6
42615A	Full Aperture		outer & inner					"	12-12
42616	² B00			03 29	03 33	3 36 W		"	6-6
42616A	Full Ap		outer & inner					"	12-12
42617	² B00			03 40	03 52	3 55 W		"	6-6
42617A	Full Ap		outer & inner						12-12
42618	² B00		Aprox times	4 01	4 9	4 12 W		Fe Arc ND140	14-14
42618A	Full AP							"	25-25

Spectr. Temp.

Focus... 110

Spectr. Temp.

Exp. Mtr. See

10-10

40/33

800/200

2

200/190

3

10-10

10-10

40/38

40/30

40/18

40/10

Spectr. Temp. $+38^{\circ}\text{F}$Dome Temp./Hum. $+34^{\circ}\text{F}/60\%$Transparency Conditions *Very Good - 5/ South horizon*
note KK, - IF this 098 batch is less sensitive,
perhaps 098's can be pushed further *30*
further *Tu*Focus *110R*.....

Spectr. Temp.

Dome Temp./Hum.

Comparison
(Filter) Exp.

Comparison (Filter) Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	inin/out/out				G12N	G12/78	9	IIIaJ old	B	set 110R Temp 38°F		ysl blue
	40/33	2"	1.9	A0IV	G12	G12/78	91.5	IIIaJ-e	A	Asm Bin/RK		visl str
3-3-3	800/200	2"	9.0	G5	G16	G16R/78	18/1.5	098-02-e	B	RSCVn/Fgr		fine
								IIIaJ-e			✓	
3-4-3	800/190	2-3'	$V=8.4$	F4	G16	G16R/78	18/1.5	098-02-e	A	RSCVn/Fgr	gusty at times / cloud at end	exp 1/2 narrow
								098-02-e			✓	
12-1	inin/out/out				G16	G16R/78	9	098-02-e	B	set 110R Temp $+32^{\circ}\text{F}$		
								IIIaJ-e			✓	
6-6	40/28				G8	G16/258	9/1.5	"	A	set 110R	thin cloud	
12-12								"	A	set 110R	no shift	
6-6	40/28							"	B	set 160R		
12-12								"	B	set 160R	no shift	
6-6	40/18							"	A	set 60R	cloud	fine
12-12								"	A	set 60R	center shift - 2.5	
14-14	40/10				G12N	G12/78		"	B	set 60R		
25-25					"	"		"	B	set 60R	center shift - 3.0	

31

Date Observers

Emulsion Batches:

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[illegible]

Spectr. Temp.

Focus

Spectr. Temp.

Exp. Mtr. Sec

1

40/10

40/10

100

1

—

10

1.1

11011

100

[illegible]

10

100

[illegible]

1

10

1

[illegible]

10

10



Spectr. Temp. Dome Temp./Hum. Transparency Conditions

Focus

Spectr. Temp. 32°F

Dome Temp./Hum. +27°F / 75%

32

Comparison /Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
412 1/10	40/10	set 160R		G12N	G12/1.78	9/1.5	D40	B		Thru much cloud		fine
25-25		set 160R			"	9	"	B		center -3.0 & Some snow it seems.		
1/14	40/10	set 110R			"	9/1.5	"	B				fine comp st wh
25-25		set 110R			"	9	D40 old	B		center shift -2.0		
412 me 1/10					"	9	"	A		set 110R Temp +32°F		blue
note For G8 Tests I'm not abs certain that Lower tilt pin was in contact with Grating												
					all	5 1/2" D19	68°F					

33 MONITOR

Emulsion Batches:

WAT-e 01126 - 05048

098-02-e 30097 - 01058

Date MAY 1/2 1978 Observers Fg-Tn/Tn

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
42621F	NG12 Focus Test							Fe Arc NONE	12-12
42621	HD 47105	6 31.9	+16° 29	19 51	19 55	3 40 W	+16 27	Fe Arc NONE	5-5-5
42621T	Spot Calc for 42621			15min @	17.5V D4 3900	15V D4 4300	15V D4 4810		
42622	HD 65626	7 ^h 54.5	+57° 33	20 04	22 06	04 26 W	+57 21	Fe Arc NONE	4-4-4
42622T	Spot Calc for 42622	31.		15min @	15V D3 4810	7V D1 H α	7V D2 5450		
42623	HD 118216	13 ^h 30.3	+37° 42	22 11	22 28	00 46 E	+37 18	Fe Arc NONE	1-4-4
42624	HD 118216	13 ^h 30.3	+37° 42	22 29	22 47	00 26 E	+37 18	Fe Arc NONE	4-4-4
42625	HD 118216	13 ^h 30.3	+37° 42	22 48	23 04	00 09 E	+37 18	Fe Arc NONE	4-4-4
42626	HD 146361	16 ^h 10.9	+34° 07	23 08	23 37	02 15 E	+33 56	Fe Arc NONE	4-4-4
42627	HD 146361	16 ^h 10.9	+34° 07	23 38	00 11	01 42 E	+33 56	Fe Arc NONE	4-4-4
42628	"	"	"	00 12	00 40	1 13 E	"	"	1-4-4
42629	HD 163930	17 53	+15 09	00 47	02 13	1 22 E	+15 12	"	3-3-3
42630	"	"	"	02 14	03 21	0 15 E	"	"	3-3-3
42631	"	"	"	03 21	04 27	0 51 W	"	"	3-3-3

Spectr. Temp.

Focus... 12.0

Spectr. Temp.

Exp. Mir. See

05048
1058

Spectr. Temp. 38°F
Focus $120R$
Spectr. Temp. 37°F

Dome Temp./Hum. $39^{\circ}\text{F}/46\%$
Dome Temp./Hum. $34^{\circ}\text{F}/4=80\%$

Transparency Conditions $\text{Cloud \& Aurora}$

Very clear till dawn 34

Comparison
Filter Exp.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
12-1				G12N	G12/7B	9	IIIaJold	B			
40/28	3"-5"	1.9	ADIV	G12N	G12/7B	9/5	IIIaJ-e	A	AmBin/KK		v sl str
							IIIaJ-e				
400/126	2-3	7.1	G0	G16	G16R/7B	13/5	098-ae	B	RSCVn/Fgi	aurora	
							"		both AXES too long		
400/129	1-2	$V=4.95$	F2IV	G16	G16R/7B	13/5	"	A	RSCVn/Fgi		
400/123	"	$V=4.95$	F2IV	G16	G16R/7B	13/5	"	B	RSCVn/Fgi		
400/121	"	$V=4.95$	F2IV	G16	G16R/7B	13/5	"	A	RSCVn/Fgi		
400/126	2-3	$V=5.76$	dF6	G16	G16R/7B	13/5	"	B	RSCVn/Fgi		
400/122		$V=5.76$	dF6	G16	G16R/7B	13/5	"	A	RSCVn/Fgi		
400/127		"	"	"	"	"	"	B	RSCVn/Fgi		
400/120	2"	$V=7.4 \text{ max}$	F4	"	"	18/5	"	A	"	Aurora Super, All over	fine
400/110	2"	"	"	"	"	"	"	B	"		
400/110	1'-2'3"	"	"	"	"	"	"	A	"		exp good guiding!
					098	5"	680				
					IIIaJ	5"	680				

35 TUES/WED

Date MAY 2/3 1973 Observers Fgi-Tn/Tn

Emulsion Batches:

Emulsion Batches:
098-02F 30097-01058
1190-e 23087-1D048

ΠαΟ-ε 23087-12048

Spectr. Temp. .7.

Focus....11.0.1

Spectr. Temp. 2.

[illegible]

01058
10048

Spectr. Temp. $+45^{\circ}\text{F}$
Focus 110R
Spectr. Temp. $+41^{\circ}\text{F}$

Dome Temp./Hum. $+42^{\circ}\text{F}/68\%$
Dome Temp./Hum. $+38^{\circ}\text{F}/70\%$

Transparency Conditions *Excellent*
getting sl hazy squsty
more Aurora by 0h
36

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
01058 10048	100/112	1"	$V=5.42$	K0	G16	G16R/.7B	13/15	098-02c	A	RSCVn/Fgi		fine
								"			✓	
01058 10048	300/220	1-2"	$V=9.0$	G5	G16	G16R/.7B	18/15	"	B	RSCVn/Fgi		fine v sl flex
01058 10048	300/220	1-2-3"	$V=8.4$	F4	G16	G16R/.7B	18/15	"	A	RSCVn/Fgi		v sl wk
01058 10048	200/60	2"	$V=4.95$	F2IV	"	"	13/15	"	B	"		Fine
01058 10048	in in / out out				"	"	13	"	B	Temp 43°F Set 110R		
								"			✓	
01058 10048	400/	3-5"	$V=6.8$ -7.7	F0 -G1	G12	G12/1.7B	18/15	II40-e	A	Ceph-Rm		sl str
								"			✓	
								"			✓	
01058 10048	200/60	2-3"	5.81	F2Ia	G12	G12/1.7B	13/15	"	B	Ceph-Fe		sl str
01058 10048	40/13	2	3.93	K2III	"	"	"	"	A	std vel		v sl str
01058 10048	in in / out out				"	"	13	II40-e	B	Temp of Set 110R		
						098	43/14	68°				
						II20	5 1/2	68°				

37

WBD / Thurs

Date MAY 3/4 1978..... Observers Fji-Ri / Rm-Ri.....

Emulsion Batches:

098-02-c 30097-02058

Juno-E 23087-01058

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
42639	BD+36° 2344	13 ^h 06.0	+36° 28.0	20 08	22 46	00 06 W	+36 07	Fe Arc NDNE	3-3-3
42639TI	spot cal for plates 42639 - 43				15 min	D3 150 4810	D1 90 Hx	D2 1 5458	
42640	HD 118216	13 ^h 30.3	+37° 42	22 49	23 05	00 00	+37 23	Fe Arc NDNE	4-4-4
42641	HD 118216	13 ^h 30.3	+37° 42	23 06	23 24	00 20 W	+37 23	Fe Arc NDNE	4-4-4
42642	HD 118216	13 ^h 30.3	+37° 42	23 25	23 41	00 36 W	+37 23	Fe Arc NDNE	4-4-4
42643	HD 146361	16 ^h 10.9	+34° 07	23 45	00 16	01 26 E	+33 59	Fe Arc NDNE	4-4-4
42644	HD 186688	19° 40.8	+29° 01	00 23	01 59	03 15 E	+29 19	Fe Arc ND L10	8-8-8
✓ 42644TI	spot cal for plates 42644 - 48			15 min	@ 15 Volts	D4 3900	D3 4300	D2 4810	
42645	HD 163506 = 8912	17 ^h 51.4	+26° 4	02 03	02 30	00 34 E	+26 07	Fe Arc ND L10	8-8-8
42646	HD 161096	17 ^h 38.5	+4° 37	02 34	02 46	00 33 E	+4° 39	Fe Arc ND L10	12-12
42647	HD 157482	17 ^h 18.5	+40° 04	02 53	03 33	00 44 W	+40 03	Fe Arc ND L10	8-8-8
42647TI	stop cal for plates 42644 - 48				90 sec				
42648	HD 147835	16 ^h 19.1	+32° 34	03 38	04 24	02 32 W	+32 39	Fe Arc ND L10	8-8-8
42648F	Focus Test G12 B						"	Fe Arc NDNE	5-5

Spectr. Temp. 2

Focus.....

Spectr. Temp.

Exp. Mtr. Sec.

220 2:

400/115

400/111

400/110

400/97

800/351

400/120

400/13

800/160 2-

400/93

in

Spectr. Temp. $+98^{\circ}\text{F}$Dome Temp./Hum. 5°C / 55%

Transparency Conditions clear & Aurora.....

Focus 100

Dome Temp./Hum. 20°C / 68%

Spectr. Temp.

38

Comparison Type/Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
e Arc 2-3- D2 5153		800 220	2-3	V= 8.4	F4	G16	G16R .7B	18/.5	098-02-e	A	RS CVn/Fgi		s/sy vs/wt
									098-02e				
		400/115		V= 4.95	F2IV	G16	G16R .7B	13/.5	098-02-e	B	RS CVn/Fgi		Fine
		400/111		V= 4.95	F2IV	G16	G16R .7B	13/.5	098-02-e	A	RS CVn/Fgi		Fine
e Arc JONE		400/110		V= 4.95	F2IV	G16	G16R .7B	13/.5	098-02-e	B	RS CVn/Fgi		Fine
e Arc JONE		400/107		V= 5.76	dF6	G16	G16R .7B	13/.5	098-02-e	A	RS CVn/Fgi		
		800/301		6.8- 7.7	F0-E	G12N	G12N .7B	13/.5	IIaOE	B	Ceph/Env		vs/sy Fine
									IIaO-E				
e Arc 2-3- D2		400/120		5.82	F2Ia	G12N	G12N .7B	13/.5	IIaOE	A	Ceph/Fe		Fine
		40/13		3.93	K2III	G12N	G12N .7B	13/.5	IIaOE	B	Std Vel	some cloud	Fine
e Arc 2-3- D2		800/160	2-3	6.22	dF8-	G12N	G12N .7B	9/.3	IIaOE	A	SB/Blu	comp	sl/wk fine
									IIaO-E				
e Arc 2-3- D2		400/93		6.18	A3V	G12N	G12N .7B	13/.5	IIaOE	B	SB/Blu		Fine s/sy
e Arc 2-3- D2		cin in/out out						13	IIaOE	A	Temp 40°F	lit 100 R	

39 9 hrs. - Fri

Date May 4-5 1978 Observers Ri

Emulsion Batches:

ITaJIE 01126-27048

Dao-E 23087-01058

Spectr. Temp.

Focus

Spectr. Temp.

[illegible]

Spectr. Temp. 440F

Dome Temp./Hum. 60C 72%

Transparency Conditions

Focus 110R

Spectr. Temp. 440F

Dome Temp./Hum.

40

Comparison pe/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
ARC D4	440	400/220	2-3	4.95	B7I	G-12	G12/7B	13/5	IIaJ-E	A	SB Bl/Ly	
10								IIaJ-E				
ARC D.1-10	7-77	800/136	6.19	A3	G-12	G-12/7B	18.5	IIaJ-E	B	Fe. B. - Bl.	clarks in sand	
A	816	400/50	5.81	F2Ia	"	"	13.5	"	A	Cpl-Fe	"	5/16K 5/1909
ARC D.1-10	10-0	temp - 440F			110R		9	IIaJ-E	B		kk	
								IIaJ-E			could you please	
								IIaJ-E			put the 110	

41 ie night of May 6-7

Date Sun May 7 1978 Observers L-R:

Emulsion Batches:

DAO-E* 23087-01058

ITAO-F 23087-05058

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. No.	Sec.
42652	HD 157482	17 18.5	+40 04	01:01	01:49	00 ^h 51 E	+40 03	Fe ARC ND=1.1	10-100	80/150	
✓42652T1	spot cal in plate 42652				15 min @ 15 Volts	D4 3900	D3 4300	D2 4810			
42652T2	strip cal in plate 42652				90 sec						
42653	HD 131511	14 48.9	+19° 33	01:53	02:58	02 ^h 47 W	+19° 20'	Fe ARC ND=1.1	8-8-	80/200	
42653T1	strip cal in plates 42653-56.				90 sec						
✓42653T2	spot cal in plates 42653-56				15 min @ 15 Volts	D4 3900	D3 4300	D2 4810			
42654	HD 172167 (Vega)	18 33.5	+38° 41	03 02	03 04	00 ^h 49 E	+38 50	Fe ARC ND=1.1	15-15	10/28	
42655	HD 175426	18 50.2	+36 51	03:08	03 34	00 36 E	+37 01	Fe ARC ND=1.1	1-5-	40/22	
42656	HD 157482	17 18.5	+40° 04	03:38	04 21	01 41 W	+40 03	"	10-10	80/151	
42656T1	focus test	2000/1.1						Fe ARC ND=1.1	5-5-		

Spectr. Temp. 45

Dome Temp./Hum. 7°C 100%

Transparency Conditions cloud moved off at 12:45

Focus 110R

Spectr. Temp.

Dome Temp./Hum. ... 50°C 95%

42

Comparison pe/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
ALL D2 4810	800/150	3-4	6.22	df8	NG12	G12/1.7B	9/3	IIaD [*] IIaD-E IIaD-E [*]	A	H+K Bin-Ly		comp s/wk Fine
ARC D1.1	800/200		6.84	dk1	NG12	G12/1.7B	13/5	IIaD-E	B	H+K Bin-Ly		vs/wk
D2 4810			5 1/2	@68°F	May 9			IIaD-E IIaD-E				
ARC D1.1	40/128		0.04	A0I	NG-12	G-12/1.7B	9/5	IIaD-E	A	Sd Vel		comp s/wk Fine
ARC D1.1	400/122		~5.2	B3	"	"	13/5	IIaD-E	B	SB-Ly		comp s/wk Fine
" D1.1	800/151		6.22	df8	"	"	9/3	IIaD-E	A	H+K Bin-Ly		"
" D1.1			temp - 45°F		110R		9	IIaD-E	B			

SUN-MON

Emulsion Batches:

IIIa-J-e... 064 - 05058 (old IIIcJ)
098-02E 30097-01058..

Spectr. Temp.

Focus

Spectr. Temp.

[illegible]

(Add'l)

Spectr. Temp. ... 55°F

Dome Temp./Hum. ... 10°C/82%

Transparency Conditions ... cirrus clouds

Focus ... 70R

Spectr. Temp. ... 50°F

Dome Temp./Hum. ... 0.7°C/100%

44

Comparison e/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Ac F20 6-0	200/16	2"-3	3.71	BLIB	G12	G12/7B	13/5	IIIaIe	A	Test		
444	200/26	"	"	"	"	"	"	"	B	"		
444	200/40	"	"	"	"	"	"	"	A	"		
444	200/60	"	"	"	"	"	"	"	B	"		
444	200/90	"	"	"	"	"	"	"	A	"		
444	200/129	"	"	"	"	"	"	"	B	"		
444	200/190	"	"	"	"	"	"	"	A	"	clouds	
4 D4 4/8/0		5 1/2	@ 68°F	May 9				IIIaI-E				
								IIIaI-E				
400/121		V=	4.95	F2II	G16	G16R/7B	13/5	09B-02-e	B	RS CVn/Fgi1		Fine
400/121		"	"	"	"	"	"	"	A	"		Fine
400/121		4 1/2 min	@ 67°F	May 11	Tn			09B-02-e				
temp	50°F			G12	G12/7B	9		IIIaI-E	B		right on	

45 wed Thurs

Date 10-11 May 1978..... Observers But-Tn.....

Emulsion Batches:

..II.O.E. 23087-04058

Spectr. Temp.

Focus

Spectr. Temp.

[illegible]

Good - sl nazy
Aurora H of 22^h
very good by 0^h 46

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		20/8	1.2	1	K	G12B	G12/7B	9/5	II-0-E	A	std vel		Fine
	9-9	400/100	2.3	6.75	A	"	"	"	"	B	A _p MR		comp sl wt Fine
			6	min	@	67°F	Mag 11 by Ta	"					
	9-9	400/90	2.4	6.79	A0	G12B	G12/7B	9/5	"	A	A _m MR		comp ps/wk Fine
	8-8	400/98	2	7.04	A1	"	"	13/5	"	B	A _m MR	REVERSED TELESCOPE SPEC. TEMP 48°F	Fine
	8-8	400/100		7.00	A	"	"	"	"	A	A _m MR	wrong?	Fine
	10-10				"	"	"	13		B		45°F set for	cont vs Blue

47

Emulsion Batches:

Date June 9-10-178 Observers KK-Tn

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
1	NE 30 Bulb	Hartman	Focus Test	(South grating covered - Comp Mode)					
2	"	"	(N covered - Stellar mode)	→ (S covered - Comp mode)					
3	α Boo			22 12	22 19			NE 30	2 min
4	NE 30 Hartman Test		(N covered - Stellar mode)	2 min		(S covered - Comp mode)		2 min	
5	"	"	(S covered - Comp Mode)	2 min		(N covered - Stellar mode)		2 min	
6	"	"	(N Covered - Stellar mode)	2 min		(S covered - Comp Mode)		3 min	
7	"	"	(S covered - Comp mode)	3 min		(N Covered - Stellar mode)			
8	α Boo			23 15	23 19			NE 30	2 min
June 10-11	NE 30 Hartman Test		(N Covered - Stellar mode)	2 min		(S covered - Comp mode)		2 min	
2	"	"	(S covered - Comp mode)	2 min		(N Covered - Stellar mode)		2 min	
3	Saturn			30 39	20 46			NE 30	2 min
4	4x5 of Slicer grating illumination on G16R grating								4 min
5	Vega using Blue Slicer			00 23	00 25			NE 30	2 min / 2 min
5T	Hartman Focus Test of BS		(S covered - Comp mode)	3 min		(N covered - Stellar mode)		1 min	
6	4x5 of slit Comp on grating								3 min

Spectr. Temp. Dome Temp./Hum. Transparency Conditions

Focus

*BS = Blue Slicer 48

Spectr. Temp. Dome Temp./Hum.

Comparison Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	(Ncover with stellar mode)				G12B	G12/1.7B	200u	112a old	A	(2 min each)	Focus 0 on mark	blank
	(2 min each)				"	"	"	"	A	2 Turns CW	Looking South	blank
30 2min		3"			"	"	"	"	A	1 Turn CCW	From Mark	
					G16R	G16/1.7B	"	098-cold	A	"	"	center red
					"	"	"	"	A	1 Turn CW	From 0 mark	center V for red
	(Found Pencil old mark)				"	"	"	"	A	2x5 Turns CCW	From original 0 mark	center Far blue
					"	"	"	"	B	1 Turn CCW	From last set	center blue
30 2min									A	Same Focus		
2min	Spec Temp +62°F				G16R	G16/1.7B	200u	098 old	A	2 Turns CW	From last set ie 1 CW From New 0 Mark	center vs blue
					"	"	"	"	B	1 Turn CW	From last	center red
30 2min					"	"	"	"	A	Same focus	∴ go 80 units CCW	
4min								103aD		Focus set to 40R		
30 2min					G16R	G16/1.7B	*B.S.	098 old	A	Focus set to 40R		comp wk
min					"	"	"	"	A	40R	center vs blue center tilted?	
3min								103aD				

49

Emulsion Batches:

Date Observers *KK / Tn*

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
7	4x5 of grating star 200 μ slit								1 ^m
8	slit tilt test 200 μ slit							Ne	1 ^m
8T	focus test							Ne	1-1 ^m
9	slit tilt test 250 μ slit							Ne	1 ^m
June 11-12									
10	α Boo with Blue cell			22 09	22 13	01 01W		e	11 min
10F	α Boo as Focus Test source			(N cover Stellar) 2 min		(S cover Comp) 1 min - 3 min			
11F	α Boo as Focus Test source			(S cover ^{Decker in} - Comp) 6 min		(N cover Stellar) 6 min			
12F	G64 Hartman Focus Test			(N cover Stellar) 2 min		(S cover ^{Decker in} Comp mode) 2 min			
13	4x5 of α Boo in grating 200 μ slit								3 ^m
14	Grating illumination, no collimator								30 ^{sec}
15	Grating illumination, slicer								3 ^m
16	Slicer after adjustment (1 turn in an East screw)								3 ^m
17	" " " but reset in place ^{01 08}					(S covered Comp) 20 min	(N cover Stellar) 5 min		

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

Sec.

graded

Focus Test

Spectr. Temp. June 11-12-73°F

Dome Temp./Hum.

Transparency Conditions 1. hazy

Focus 40R

Spectr. Temp.

Dome Temp./Hum.



50

Comparison Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1m								103aD				
1m								098	B			
1-1m								098	B		same focus	
1m								098	B			
11m	guided	2"		K	New G12B	G12/7B	250N	IIIa old	B	Focus 40R Temp 73°F	Decker indistinct	
3m				K	"	"	"	"	A	40R		
4m				K	"	"	B.S.	"	A	40R Temp 73°F		
					G43	G64/7B	B.S.	098 old		40R Temp 73°F		
3m								103aD				
30m								103aD				
3m								098 4x5				
5m								098 4x5				
15m	Focus Test using Vega			N G12B	G12/7B	B.S.	IIIa old	A	60R	Temp 72°F		

51

Tues - Wed

Date June 13-14/78... Observers In Kai? - KK...

Emulsion Batches:

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.....

.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
* 18F	Hartman Focus Test			#1 (N 5 stellar) 30sec	#2 (S 5 comp) 40sec				
19F	" "			#1 (N 5 stellar) 30sec	#2 (S 5 comp) 40sec				
42671	η Boo HD 121370	1900 13 49 55	13h 52.7 +18° 30	21 38	21 43	01 00W	+18 30	Fe Arc none	5-5
71F	Hartman Focus Test		+18° 54	#1 (N 5 stellar) 30sec	#2 (S 5 comp) 50sec			"	
42672	* p CrB	1900 15 57 13"	+33 36	22 03	22 19	0 30E	+33 21	"	5-5
* Check with Kai to see what star this is.									
* Discarded - probably did it wrong. Didn't make sense.									
Tony - Fe Arc not well centered on slit area. I wasn't sure what to adjust to improve it. - The Arcs I got were only a little weak. With present illumination and using 200μ slit, the exposure for a complete arc are: IIa O-E - approx 18 sec IIIa Jold - very approx 1 min - Fe Arc on <u>East</u> side of stellar area is weak. Check that on realignment of illumination → RA clamps unclamp electronics still bad, or worse. Difficult to unclamp clamps. -									

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr. Sec

1/1000 4"

4"

could cause

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions

*Note - Focus For 456°F
For G12B is 90R

52

[illegible]

53 Tests & adjustments 1st half

Date June 22-23/78... Observers T.M.

Emulsion Batches:

...III a.s.e. ... evacuated in N₂
... D.E. ... evacuated

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
42673	HD 186791	19 41.5	+10 22	01 36	01 44	0 15E	+10 32	None	
74				01 48	01 53				
75				01 56	02 06	0 07W			
76				02 08	02 21	0 22W			
77				02 23.5	02 30.5	0 32W			
78	HD 186688	19 40.8	+29 01	02 39	02 47	0 51W	+29 11	Fe Arc None	sec + 30
79	"	"	"	02 49	03 09	01 13W		"	60 sec
June 23-24 ↓									
80	HD 139892	15 35.6	+36 58	22 08	22 14	0 25W +		None	
81	"	"	"	22 18	22 54	01 05W cloud thickening			
81F1	Fe Arc in stellar mode - Rough focus test							Fe Arc none	40 sec
F2								"	1 min
F3								"	1 min
F4								"	1 min

Spectr. Temp. ?

Focus.....

Spectr. Temp.

Exp. Mtr. ?

40/9 2

40/21

40/21

40/23

40/23

40/23

40/50 good

Focus: good

40/20 2

41/42

Spectr. Temp.

Dome Temp./Hum. +60°F 89%

Dome Temp./Hum.

Transparency Conditions *Photometric*.....

* Correct Focus prob 70R

54

Note Exp meter at 900V For 73-78, 1000V after

Type/Filter	Exp.	Compansor	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fine			40/9	2"??	415	K3II	B Coll	G12/7B	BS	IJaJ-E	B	Focus 110R	+64°F-	
			40/21	*					"		B	100R	*more guiding attention	
			40/21				Exp meter rate very sensitive to focus - Good				B	85R		
			40/23						"		B	75R	RH drift	
			40/23						"		B	65R	+63°F	
Fine			400/-?	3"??			*Fe Arc done (wrong drum push) over stellar area		BS	IJaJ-E	B	Focus 65 R	hard to Focus maybe bad seeing	
"	60sec		400/50	good now	6-8-766	FO-GI	"	"	"	"	A	65R → +62°F	shouldn't have used a variable I know (looks faint)	wk x2 Fowl x3
				↑ Focus good			Exp meter balance checked - It's OK & stable by 02 ^h prob sooner -							
Fine			40/20	2"	495	B7V	B Coll	G12/7B	BS	IJaJ-E	A	Focus 55R	Temp +62°F	Fine
			40/42		"	"	"	"	"	IJaJ-E	B	"	" Exp meter balance unstable	slowk
Fine	40sec					"	"	"	"	IJaJ-E	A	Focus 55R	Temp +61°F worse than #4	OK straight
"	1min									IJaJ-old	A	45R	61°F much worse than #4	slowk
"	2min									IJaJ old	B	90R	61°F best maybe	
"	1min									"	A	70R	61 good	
							I think	95R For	61°F T _m				over →	

55

Date _____

.....

.....

.....

Spectr. Temp.	
Focus	
Spectr. Temp.	
Exp. Mtr.	Sec
Full, no m	
(South mns	
(South mns	
47680-52	

Transparency Conditions

Spectr. Temp.

Dome Temp./Hum.

56

Comparison Type/Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		Full, no mask				Blue Coll		BS	103aD				
		(South masked)				"		BS	"				
		(South masked)				"		RS	"				
		42680 → 426817 dev June 24 5.5 min @ 68°F										All 4x5s placed at NE corner of Target. on Gld 612 grating. Same as Test before Tonights ^{selected} adjustments	

57 Tues Wed

Date June 27-28/78 Observers TM

Emulsion Batches:

Emulsion Batches:
...D40-E...30038-15068

Spectr. Temp.

Focus.....40

Spectr. Temp.

[illegible]

15068

Spectr. Temp. $+79^{\circ}\text{F}$ Dome Temp./Hum. $+75^{\circ}\text{F}/180\%$ Transparency Conditions *Photometric*Focus *40R*Spectr. Temp. $+71^{\circ}\text{F}$ Dome Temp./Hum. $+63^{\circ}\text{F}/95\%$

Cloud by 01:30

58

Comparison
Type/Filter Exp.

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
None	none?	1.2"	3.27	G0 IV	B Coll	G12/78	BS	Li40-E	A	For Kai/Rg		Fine
none	none?	2'	6.7	G2 V	"	"	"	"	B			sl wk
none	400/106	2.3'	6.3'	0	"	"	"	"	A		<i>moving ahead</i> Exp meter balance bad	wk
none	none	2"	7.0	G4 V	"	"	"	"	B			
2 10								"				wk
very Approx	400/220	3'?	7.8	G5	B Coll	G12/78	BS	"	A	Temp. $+73^{\circ}\text{F}$	Exp meter from 23 58 400/70 90 17	wk
Too D	400/80	"	9.4	0	"	"	"	"	B		PH mount tightened before this Exp. Fld drawn	not Dev
											↓ Fld For Pallas <i>yes</i>	
											* Kt- Please do these ^{with} regular care. this is <u>real</u> observing ha ha. * More Ia 0's needed in Vac No IIIa's in Vac either, we may use some, no?	

59

Thurs - Fri

Emulsion Batches:

D40-e

Date Jun. 29-30..... Observers Tn - Bla - KK.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Se
42687	SKy			20 35	20 47	0 0	0° 0	Fe Arc none	@ end 15 sec	200/26	
42687F1	Focus Test			(Stellar - Comp)				Fe Arc none	15/15		
F2				(Comp - Stellar)				k	15/15		
X				21 02				"	12-0	Cancel	
	4x5	at Incad light dist on grating					3 min				
	Labels 15	Fe Arc exp tests					15 sec				
	" 30						30 sec				
	" 1						1 min				
	" 2						2 min				
	" 4						4 min				
F1	Hartman Focus Test				Comp - Stellar		1 min - 2 min	(1 min added to Comp)			
F2					Comp - Stellar		(2 min - 2 min)				
F3					Comp - Stellar		(2 min - 2 min)				
F4					Comp - Stellar		(2 min 2 min)				
F5					Comp - Stellar		(2 min - 2 min)				

Spectr. Temp. $+77^{\circ}\text{F}$

Dome Temp./Hum.

Transparency Conditions ...

Focus 40R

Spectr. Temp.

Dome Temp./Hum.

60

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe Ar Fe Bond 15/15	200/86			G	B coll	G12/78	BS	Ilao-e	A	Rg Classification		
Fe Ar 15/15				"	"	"	"	Ilao old	B	Set 40R Temp 77°F		Blank
" 15/15									B	60R " 77°F		"
" 12-0	Cancelled								A			"
								Ilao-E		60R Temp $+75^{\circ}\text{F}$		
								"				
								"		74°F		
								"				
								"				
								"	B	80R	Temp 73°F	
								"	B	70R	"	
								" new batch	B	60R	"	
								" "	B	50R	"	
								"	B	40R	"	

(iron added to Comp at end)

Cont

Emulsion Batches:

61

Date June 30 Observers Bln-Ty

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
T6	Rot. Screw 1 turn CCW			(may not have been seated properly)				Fe Arc None	45 ^s
T7	" " 2 turn CW							"	"
T8	" " 2 turn CCW			+ left there (i.e. 1 turn CCW from orig. pos.)				"	"
T9	Normal Rot.							"	45 ^s
T10	1 turn CCW							"	45 ^s
T11	2 turn CW			+ left there (i.e. 1 turn CW from orig. pos.)				"	45 ^s
June 30	F1 - F5 + T6 - 11	No Good - Revolver in wrong position						Scrap	
F1	Hartmann Focus Test			Comp - Stellar			2 ^m - 2 ^m		
F2	" "	"		"	"		2 ^m - 2 ^m		
F3	" "	"		"	"		2 ^m - 2 ^m		
F4	" "	"		"	"		2 ^m - 2 ^m		
F5	" "	"		"	"		2 ^m - 2 ^m		
T6	Rot. Screw 1 turn CCW							Fe Arc None	45 ^s
T7	" " 2 turn CW							"	"
T8	" " Normal							"	"
T9	" " 1 turn CCW							"	"

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr. So

Plates

Spectr. Temp. Dome Temp./Hum. Transparency Conditions

Focus

62

Spectr. Temp. Dome Temp./Hum.

Comparison pe/Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Arc	45°						G12/0.7B	BS	IIa-0	A			
"	"						"	BS	IIa-0	B			
"	"						"	BS	IIa-0	B			
"	45°						"	RS	098	A			
"	45°						"	RS	098	B			
"	45°						"	RS	098	A			
Plates and Repeat Image ^{slit} slider rotation returned to orig. position													
						B Coll.	G12/0.7B	BS	IIa-0	B	80R	T=68°F	
						"	"	"	"	"	70R	"	
						"	"	"	"	"	60R		
						"	"	"	"	"	50R		
						"	"	"	"	"	40R		
						"	"	"	"	"	60R		
						"	"	"	"	"	"		
						"	G16R 12.7B	RS	098	"	"		
						"	"	"	"	"	"		

63

- July 1

Emulsion Batches:

II-0-F

Date 30 June cont. Observers Tn

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
T10	Rot Screw 2 turns CW							Fe Arc None	45
F11	Hartman Focus Test (old Plate tilt but adj screws tightened)					Comp - Stellar			1.5 min 1.5 min
F12	" " " (R tilt bolt off 4 Flats)					Comp - Stellar			1.5 - 1.5
F13	" " " " "					Comp - Stellar			1.5 - 1.5
F14	" " (R tilt bolt off another 4 Flats)					Comp - Stellar			1.5 - 1.5
F15	" " (R tilt bolt in 6 Flats)					Comp - Stellar			2 - 1.5 min
F16	" " (R tilt bolt in 1 Flat Further)					Comp - Stellar			2 - 1.5
F17	" " " " "					Comp - Stellar			2 - 1.5
T18	Comp Spect for Slicer tilt test (Not changed)								45 sec
T19	" " " " "					1/8 CW Turn			45 sec
T20	" " " " "					1/8 CW Turn Further			45 sec

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr. Ser.

Spectr. Temp. Dome Temp./Hum.

Focus

Spectr. Temp. Dome Temp./Hum.

Transparency Conditions

Do RS exp 2min 098 G16R/ Tilts CCW 3/4 turn ✓
then CW 1/4
then CW 1/4

No 098 plates.

64

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2-A me	A5				B. Coll.	G16R/0.7B	RS	098-02	B	60R		
15-15					"	G121.7B	BS	IIaD-E	B	30R	Temp + 71°F center blue sl more extr in red	
15-15					"	"	"	"	B	"	Rcenter Red - Blue center Blue	
15-15					"	"	"	"	A	"	No shift center more blue than B ↑	
15-15 min					"	"	"	"	B	"	Temp + 71°F	
15-15					"	"	"	"	B	"	Temp + 69°F	
2-15					"	"	"	"	B	"		
15-15					"	"	"	"	B	40R	Temp + 69°F	
15-15									B	40R	Temp	
15-15									B	"		
15-15									B	"	Temp 68°F	

65

15hrs EST

Emulsion Batches:

098-02

Date July 1 / 78 Observers Tm

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
T21	Comp Spectra for Red Slicer Rot'n test			(Screw CCW 3/4 turn)				Fe Arc None	2 min
T22	"			(Screw CW 1/4 from ↑)					2 min
T23	"			(Screw CW 1/4 more)					2 min
F24	Hartman Focus Test			(Comp - Stellar)					4-3 min
T25	Stellar Spectra for RS Rot'n test			Same Rot'n as T23 but PH Mount				1/2 Flat in	2 min
T26	Stellar " "	"	"	Screw CW 1/4 From 25				Fe Arc None	2 min
F27	Hartman Focus Test			(Comp - Stellar)				"	4-3 min
T28	Comp Spectra for RS Rot'n Test			Rot'n - Same as T26					2 min
T29	"	"	"	Screw CCW 1/4 From 28				Fe Arc None	6 min
T30	Comp Spectra for RS Rot'n Test (Same Rot'n as 29 but PH Mount in vs from last set (approx 1/4 Flat))							Fe Arc None	2 min
T31	"	"	"	Screw CW 1/4 From 30				"	2 min
T32	"	"	"	Screw CW 1/4 From 31				"	2 min
F33	Hartman Focus Test			(Comp - Stellar)				"	3-3 min
F33	"	"	"	(Comp - Stellar)				"	5-4 min

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions

66

[illegible]

Date July 2 Observers Tn

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Spectr. Temp.
Focus....30
Spectr. Temp.

Exp. Mtr.	Sec.
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
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79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions

68

[illegible]

Spectr. Temp. Dome Temp./Hum.

Transparency Conditions

Focus .. From 30R $\rightarrow$ 0

Spectr. Temp. Dome Temp./Hum.

Comparison	
Type/Filter	Exp.

Fe Ar
nove 25m

' " /min

11 2/15-15

11	1.5 Hz
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60-60

20

[illegible]

71

Emulsion Batches:

Ilave 30038-07078..

Date 1978 July 9/10 Observers KK

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Sec.
T45F	focus test							arc	15-15		
42688	HD ¹⁶¹⁰⁹⁶ 161051	17 38.5	+4° 37'	22:20	22:29	0 18 E		arc	30-30	40/100	3
42689	AD 161096	"	"	22:38	23:01	0 13 W		arc	30-30	40/250	3
42690	"	"	"	23:05	23:09	0 21 W		arc	30-30	40/40	4
42691	"	"	"	23:19	23:29	0 41 W		arc	30-30	40/100	4
42691 F	focus test							arc	15-15		
	July 11										
42691 F2	focus test							Ne	30-30		
T1	full aperture							Ne	60-60		
T2	"							"	"		
	July 12/13										
T3								arc	15		
T4								"	"		
T5								"	"		
F3								"	"		

Spectr. Temp.

Focus.....

Spectr. Temp.

Spectr. Temp. 76°F Dome Temp./Hum.Focus 85RTransparency Conditions *clear w/ patches*.....Spectr. Temp. 75°F Dome Temp./Hum.

72

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
arc 15-17					B.C.	G12/.7	BS	II ₁₀₀ e	B		v sl to red but doglegged	
arc 30-30	40/100	3±	3.93	K2 III	G12 B	G12/.7	BS	II ₁₀₀ e	A	Std Vel.	β Opt.	focus appears to sl str
arc 30-30	40/250	3→4	"	"	"	"	"	"	B	"		vary along slit str
arc 30-30	40/40	4	"	"	"	"	"	"	A	"		i.e. one comparison sl/wk
arc 30-30	40/100	4	"	"	"	"	200μ	"	A	"		in focus, other out str
arc 15-15					"	"	200μ	"	B			best BS exposure ~ 40/100
Ne 30-30					B.C.	G16/.7	R.S.	098-02e	B	60° 85R	} very uneven comp basis	
Ne 60-60					"	"	"	"	A			
" "					"	"	250μ no lens	"	B		comparison v wk on one side	
					focus appears to change along slit on R.S. also							
arc 15							RS			F = 85R		
" 4							RS			50R		
" 4							RS			120R		
" 4							200μ			85R		

Date 1978 July 17/18 Observers KIK - Ri

IIIa.Jc. 31058-10078

Focus

Spectr. Temp.

[illegible]

0.18

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• • •

Comparison	
Type/Filter	Exp

Fe-Na 20

are 15-16.

74

[illegible]

75

Date 1978 July 15/18 Observers h.k. - Rr

Emulsion Batches:

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Spectr. Temp.
Focus
Spectr. Temp.

[illegible]

Spectr. Temp. 16

Dome Temp./Hum.

Transparency Conditions

Focus

Spectr. Temp.

Dome Temp./Hum.

76

[illegible]

77

Date: 21 July 1978 Observers: KK-Ri

Emulsion Batches:

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[illegible]

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions

Focus

Spectr. Temp.

Dome Temp./Hum.

78

Comparison Type/Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Ne						BC	G8/1.4	BS	II20	B			blank
Ne	5-5					"	"	"	"	"	T=76°F focus set 45R		
"	5					"	"	"	"	"	"		
Ne	60					"	"	"	"	"	set 60R		
Ne	5					"	"	"	"	"	"		
	15 min					"	"	"	"	"	"	lines good except at blue side (dup logs)	
Ne	5-5					BC	G16/.7	RS	II2F	"	T=77°F set 60R		
Ne	5					"	"	"	"	"			
Ne	15					"	"	"	"	"			
Ne	12					"	G8/1.4	BS	II20	"			
Ne	5-5					"	G16/.7	120μ	II2F	"	"	" should 38R.	

Date July 22/23 1978 Observers KK-Ei

IdJ. 31058-10078...

Focus

Spectr. Temp.

[illegible]

Spectr. Temp. ... 80° F

Dome Temp./Hum.

Transparency Conditions 1

Focus 35R

Spectr. Temp.

Dome Temp./Hum.

80

[illegible]

Date 1978 July 23/24 Observers KK-ri

Dec... 30.038 - 30.068

Spectr. Temp.

Exp. Mtr. Se

[illegible]

Spectr. Temp.

Dome Temp./Hum. 20°C / 76%

Transparency Conditions ... *Streaks*

82

[illegible]

Date July 24, 25, 78 Observers Fgi-Ri

Emulsion Batches:

098-02E 30038-21078

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Spectr. Temp. .

Focus.....

Spectr. Temp. .

Exp. Mtr. Seci

[illegible]

Spectr. Temp. ... 75°F

Dome Temp./Hum.

Transparency Conditions . clear

Focus ... 30 R

Spectr. Temp. ... 66°F

Dome Temp./Hum.

84

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe 15-A					B.C.	G16/.7	120 μ	09802-E	B			vs 1. R
Fe 55-A	40/80		3.93	K2II	B.C.	"	120 μ	"	A	Std Vel	β Oph	
Fe 53-B	800/400		V=7.6	G5	B.C.	G16/.7	120 μ	"	B	RS CVn/Fgi		
Fe 33-B	800/400		7.72	G0	B.C.	G16/.7	120 μ	"	A	RS CVn/Fgi		
Fe 33-B	40/40		4.15	K3II	B.C.	G16/.7	"	"	B	Std Vel	δ Hg1	
Fe 33-B	40/40		4.64	F7II	"	"	"	"	A	"	i Pac	
" 33-B	40/50		"	"	"	"	"	"	B	"	"	
" 33-B	40/30		"	"	"	"	"	"	A	"	"	
" 33-B			"	"	"	"	"	"	B	"	"	
" 33-B			"	"	"	"	"	"	A	"	"	
Fe 55					BC	G8/1.4	120 μ	M25	B	70° 30 R		
" "					"	"	"	"	"	"		
" "					"	"	"	"	"	"		

Date _____

Date _____

Inv. 30.038:.....

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Focus

Spectr. Temp.

Exp. Mtr.	Sec.
1	1
2	2
3	3
4	4
5	5
6	6
7	7
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10	10
11	11
12	12
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90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

40/70

40/62

Spectr. Temp. 73°.....

Dome Temp./Hum.

Transparency Conditions

Focus 70R

Spectr. Temp.

Dome Temp./Hum.

86

[illegible]

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions

scattered clouds

Focus

the clear

Spectr. Temp.

Dome Temp./Hum. 64°F 87%

88

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe 5/5					B.C.	G12/1.68	120μ	Ilav-E	B		66°F 2BR	sl blue
Fe/4 5/5					"	"	B.S.	"	B		66°F 60R	blue incl vs 6/1 red incl vs 6/1
Fe 2-22	40/100	5	4.15	A 321	B.C.	G12/1.68	120μ	Ilav-E	A		slit largest stop from 35R	
Fe/4 2-55	40/100	5	"	"	"	"	150μ	"	B		#8 BROKEN	
Fe/4 5-5-8	40/100	5					200μ	"	A		#7 "	
Fe/4 5-5-8	40/100	5					250μ		B			
Fe/4 5-55	40/80				B.C.	"	B.S.		A		from 70R	
Fe/4 5-55	40/330		6.8 766	FO G1	BC	"	B.S.		B		DAWN	exp. fine
Fe/4 5-5					BC	G12/1.68	B.S.	Ilav-E	B	60°F	70R	vs 6/1
					8" D19	66°F	.19	1.74				

89

Thurs Fri.

Emulsion Batches:

Evacuated II 90: 0985

Date Aug 3-4 1948 Observers T. - R.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
42711T3	comparison test							Fe Ne ND x 4	5 sec
42711T4	"							Fe ND x 4	15 sec
42711F1	focus test							Fe x 4	5/5
42711F2	focus test							Fe	5:5
42711T5	comparison test							Fe + ND	15 sec
42711T6	"							Fe Ne obl lens	5 sec
T7	"						+ Diffuser	Fe Ne Newlens	120
T8	"							Ne	15 sec
T9	"							Ne	3 sec
T10	"							Fe	~10 sec
F3	focus test							Fe	15-15
Aug 4									
F4	focus test							Fe	15-15
T11	comparison							Fe	15

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

Sec.

Spectr. Temp. Dome Temp./Hum. Transparency Conditions

Focus

Spectr. Temp. Dome Temp./Hum.

90

Comparison Type/Filter/Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe 1/2					B.C	G12/68	BS	IIa0-E	A		Has a left side	exp ok foam poor
Fe 1/2					B.C	"	BS	IIa0-E	B			exp good
Fe 1/2					B.C	"	BS	IIa0-E	B		69°F 73R	blue and sl. blue red end on
Fe 1/2					B.C	"	120μ	IIa0-E	B	note 120μ slit (40μ) before exp. was loose & lightened	69°F 33R	blue and v. blue red end on
Fe 1/2 + UD					B.C	"	120μ	"	A			exp sl. str foam poor v. strong
Fe 1/2					"	"	"	"	A			very uneven
Fe 1/2					"	"	"	"	B		098 on right side	sl. weak fairly even
Fe 1/2					"	G16/7	120μ	OAB-0E	A			good
Fe 1/2					B.C	"	R.S.	"	B		has 690-73R	vsl str
Fe 1/2					"	"	"	"	A			good
Fe 1/2					"	"	"	"	B			ok
Fe 1/2					R.C	G12/68	BS	IIIa0-E	B		68° 70R	(center sl red) center ok
Fe 1/2					R.C	"	"	"	"		"	(Blue Blue)

91

Emulsion Batches:

Date Aug 4-5/78 Observers TnNot E
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Spectr. Temp.

Focus.....

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Se
42711F5	PH Rot'n & Focus Tests							Fe	15-15		
F6								Fe	15-15		
F7								Fe	15-15		
F8								Fe	15-15		
F9	PH Rotated							"	"		
F10	1 Flat in of RH bolt							"	"		
F11								"	"		
Aug 6-7 F12	Focus Test							Fe/ 4xND	7-5		
42712	61 Cyg A	21 214	+38 15	00 43	01 33	01 11W	+38 39	"	5-5-5	400/317	
42713	HD 222368	23 34.8	+5 05	01 38	02 05	E	+05 32	"	5-5-5	400/60	
42713T	Spot Coll'n for	42712-17			15 min @ 15V	D4 3900	D3 4300	D2 4810			
42714	HD 222368	23 34.8	+5 05	02 16	02 38	00 17E		Fe/ 4xND	5-5-5	400/87	
42715	"	"	"	02 41	02 56	00 01W		"	5-5-5	400/52	
42715F								Fe nono	5/5		
42716	HD 222368	23 34.8	+5 05	03 04	03 23	00 28W		Fe/ 4xND	5-5-5	400/55	
42717	"	"	"	03 30	04 01	01 06 W	+5 32	"	5-10-5	400/50	

Spectr. Temp. Dome Temp./Hum.

Transparency Conditions ... *Hazy* ...

Focus

Spectr. Temp. Dome Temp./Hum.

* *KK put shim under West Axle of G12* 92

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe 1-5					R.C.	G12/68B	BS	IIIaJ-e	A	69°F set 65R	maybe fog red cont poor blue cont 5/10	
Fe 1-5					"	"	BS	"	B	"	lost in Dev	
Fe 1-5					"	"	120M	"	A	68°F set 35R	Rot'n moved 1/2 CW & clumped - blue cont 5/10	
Fe 1-5					"	"	120M	"	B	"	red cont sl red blue OK	
					"	"	"	"	A	"	cont 5/10 Blue sl more Blue in blue	
					"	"	"	"	B	"		OK
					"	"	BS	"	B	67°F set 65R	center red more red in red	
Fe/4x10 7-5	probuck				RC	G12/68B	BS	IIaJ-e	B	72.5°F Set 46R	Blank?	
" 5-5.5	400/317		6.4	K5V	"	"	"	"	A	"		
" 5-5.5	400/60		4.64	F7V	"	"	"	"	B		thin cloud	
							"	"				
Fe/4x10 5-5.5	400/87	2°?	4.64	F7V	RC	G12/68B	150M	"	A		can't see slit on TV (barely) star OK though	
" 5-5.5	400/52		"	"	"	"	120M	"	B			
Fe home 5/5					"	"	120M	"	B	Temp 70°F set 46R		
Fe/4x10 5-5.5	400/55		4.64	F7V	"	"	200M	"	A		cloud	
" 5-5.5	400/50?		"	"	"	"	250M	"	B	Fe Fired on its own on switching to Exp Meter - Poor Focus		

Date Aug 7-8 / 78 Observers Tn

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Focus.....

Spectr. Temp

[illegible]

Spectr. Temp. Dome Temp./Hum.

94

[illegible]

Date Aug 8-9 1978 Observers Tus

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[illegible]

Spectr. Temp. 74.5°F

Dome Temp./Hum.

Transparency Conditions

Focus

Spectr. Temp.

Dome Temp./Hum.

96

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe/none 15-15					RC	512/168B	120M	Indu Je	B	set 16R Temp 74°F		journal
15-15								"	B	set 3AR 74°F down in Ted's		
10-10		+60 μ						"	A	set 10R	cont red	
12-12		-47 μ						"	A	"	cont blue	
12-12		-40 μ						"	B	"	cont blue	
late 10-10		-82 μ			RC	616/68B	120M	Indu Je	A	PH felt loose in mount on unloading	in the quiet I could hear a "tap tap tap" when pulling & pushing E & W - goods tight now (new focus is both maybe) cont blue	unusually
15-15					"		"	"	B	set 10R Temp 74.5°F		re red
15-15					"		"	"	B	set -20R down 74.5°F		
15-15					"		BS	"	B	"	ok red of center blue to blue	

#1 97

Date Aug. 9-10 / 78 Observers J. n. - K. K.

Emulsion Batches:

* M. a. l. e.D. o. F. e.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.
4271715	Harlan Focus Test									
T7	Flexure test	Stellar	0 ^h , +46°	← 1 st Comp	0 ^h , -10°	double exp (clone + 1 st)	Fe	10-10	+4	
T8	" "	Comp	0 ^h , +46°	Stellar	4 ^h W, +46°		Fe Ne	4, 4	+4	
T9	" "	comp	4 ^h E, +46°	stellar	0, +46		Fe Ne	4, 4	-12	
F16	Focus Test						"	4, 4		
42718	HD 186791	19 41.5	+10 22	22:27	23:05	00 15W	710 35	Fe Ne diffuser	60-60-60	40/202
18T	Spot Calibration	D4	17.5 v.	3900	415V 4300	For 42718-19, 22				
42719	HD 186791	19 41.5	+10 22	23:10	23 36	00 47W		Fe / none	5-5-5	40/252
F17	Focus Test							"	25-25	
42720	HD 186791	19 41.5	+10 22	00 00	00 14	01 25W		Fe Ne	5-5-5 5-5-5	40/255
42721	"	"	"	00 22	00 50	02 00W		"	"	40/205
42721T	Flexure Test	[Comp -10°] [Stellar +40°]						Ne	15-15	
42722	λ And ^{HD 222107}	23 32.7	+45 55	01 27	02 37	0 04E	+46 18	Fe/ none	146-9	40/275
42723	HD 3712	00 34.8	+55 59	02 42	02 59	0 44E	+56 26	"	9-7-9	40/272
42723T	Flex Test	[Comp 0 30E] → [Stellar 04 ^h E]					"	"	12 (10-10)	
42724	HD 24760	03 51.1	+39 43	03 16	03 30	03 30 E	+39 55	"	11-10	40/150

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions clear

Focus

Spectr. Temp.

Dome Temp./Hum.

98

Comparison Type/Filter Exp.		Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
e	A-0					RC	G12/68B	BS	I _a J	B	Set -20R	Tempt +72.5°F	* red box vs/blue
		+47	+41			"	"	120μ	III J	B			
FeNe	4,4	+4			"	"	"	"	II J	B			
FeNe	4,4	-12			"	"	"	"	II J	A			
H	4,4				"	"	"	"	III J-E*	B	Set -20R	Tempt +71°F	
FeNe diffuse	60-60-5	40/202	4"	4.24	K3 II	"	"	120μ	"	A	Set +15 R	10 ³ comp on stellar deck by exposure test error	fine comp wh
									III J _e				
Fe/ none	5-5-5	40/252	"	"	"	RC	G12/68B	BS	"	B	"	" meter filling back slightly @ end	
H	5-5-5				"	"	"	"	"	B	set 15R	Tempt +69°F	center of field cent sl blue BG eng 5 mm RS used and
Fe Ne	5-5-5 5-5-	40/250	"	2.72	"	RC	G16/.78	RS	II Fe	B	Broken spec	put 5 th of Ne on stellar by eye Yellow filter in exp meter	
H	"	40/202	"	1	"	"	"	120μ	"	A	also broken		str.
Ne	15-15							"	"	B		-20 (cent blue flex in y also)	✓
Fe/ H	14-7	40/275	3"?	4.0	K0	RC	G8/-258	BS	I _a J-e	A	set 50R	Tempt +66.5°F	sl wh
H	9-7-?	40/302		3.34	K0 II	"	"	"	"	B	std Vel	65°F	sl wh
	12/10-4				"	"	"	"	II Fe	A		+1 no Flex	
H	11-10	40/150		2.6	R0 V	"	"	"	III J-E	B			sl wh

Date Aug 10 cont/78 Observers T₁

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[illegible]

Spectr. Temp. Dome Temp./Hum.

100

[illegible]

101

Tour by sho - 10 people

Date Aug 10-11/78..... Observers Ta-KK.....

Emulsion Batches:

098-02-e.....-10088

4-5 hrs Exposed

Spectr. Temp.

Focus.....

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mir.	Sec.
42725T2	Flex Test		[Comp. 0 ^h]		[Stellar 03 30W]	+19°		Fe/nope	15-15		
42726	HD 124897	14 11.1	+19 42	20 46	20 50	03 34W		Fe/nope	7-7	20/80	1
26T1	Flex test		[Comp 0 ^h + 30°]		[Stellar 04 30W]			"	16-16		
A2727	HD 124897	14 11.1	+19 42	21 46	21 53	04 37W		"	7-10	20/180	2
27F	Focus Test								15-15		
27T1	Flex Test		[Comp 0 ^h 30W]		[Stellar 04 00E]	0° 0°		"	14-14		
27T2	"		[Comp 4 ^h 0 E]		[Stellar 0 0]	0° 0°		"	14-14		
27T3	Flex Test (note tape movement)		[Comp (RC pulled down)]		[Stellar RC pulled up]	0° 0°		"	20-20	Tested at 400/242	2
42728	HD 201092	21 02.4	+38 15	00 20	00 50	0 42W		ne/nope	10-10		

4-shs 28

28

Spectr. Temp. Dome Temp./Hum.

Transparency Conditions 102

Focus

Spectr. Temp. Dome Temp./Hum.

* Shim of KK removed on last 4 1/2 hrs
removal

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1/15-1					RC	* G12/68B	BS	IIa F	A		+18 Set 25-R	Cent s/red
1/7-7	20/180	1"	1.29	KO	RC	G12/68B	BS	IIa J	B	std vel	focus poor or flexure	Fine
1/1.4					"	"	1/20u	"	A		+24 μ	cent red
1/7-1	20/180	2"	1.29	KO	RC	G12/68B	1/20u	IIa J	B	std vel	all amp line dbl. (Fe str)? ok	sl flex?
1/15-1					"	"	"	"	B	+11u Rel	89.5°F Set 25R	cent sl red
1/1.4					"	"	"	"	A		+116 μ	center extra red down with 45 Right
1/1.4					"	"	"	"	A		-13 μ	cent sl blue
1/1.4					"	"	"	"	A		-3 μ	no flex
1/10-10	400/242	2"	V=6.0	K7V	RC	G65/.5B	RS*	098-02E		std vel	(V Filter above RS)	strong

I noticed a tapping noise as I pulled RC
(down East) after pushing (up West)

103

Emulsion Batches:

File # 30038 - 10088
008-02E - 10088

Spectr. Temp.

Focus

Spectr. Temp.

[illegible]

Spectr. Temp.

Dome Temp./Hum. 170°F / 73%

Dome Temp./Hum. / 80%

Transparency Conditions . . . 51 Hg 29

* RA Drift temp repaired with
paper wedge in gear.
Exp time long because of drift 104

[illegible]

105

Date Aug 13/78 Observers T.H.

Emulsion Batches:

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Spectr. Temp.

Focus.....

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Sec
42732F3	Hartman Lucas Test							10/none	17-17		
32F4	" " "							"	17-17		
42733T1	Flex Test			0 ^h (comp 10)				"	10-334		
33T2	Flex Tests in N S Plane			(not moving but lined out stellar pole up 3-34)			43° 51'	"	10-7		
33T3	"			(Comp -10) (Stellar +4351)				"	10-10		
33T4	"			(Comp +4351) (Stellar +81 ie to pole)				"	10-10		
33T5	"			(Comp -81) - (Stellar +4351)				"	10-10		
33T6	Flex Test in EW Plane			Comp (0 ^h +43°) - (4 ^h W +25°)				"	10-10		
33T7				Comp (4 ^h W +25°) → (0 ^h +43°)				"	10-10		
33T8				Comp (0 ^h +43°) → (4 ^h E +25°)				"	10-10		
33T9				Comp (4 ^h E +25°) → (0 ^h +43°)				"	10-10		
33T10	Flex Test - Tel stationary at zenith but			(Top of Coll Rot S - Comp)				"	15-15		
				(Top of Coll Rot N - Stellar) *							
								* Coll can rotate a			

104

Emulsion Batches:

Date Aug. 14, 1981 Observers J. - K.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
42733T11	Flex Test for RC		(Comp 04 ^h E) (Stellar 0 ^h)				+4351	Fe/none	8-8
33T12	" "	"	(Comp 0 ^h) (Stellar 4 ^h W)				"	"	8-8
33T13	Flex Test For RC		(Comp 4 ^h W) (Stellar 0 ^h)				"	"	8-8
33T14	"		(Comp 0 ^h) (Stellar 4 ^h E)				"	"	8-8
33T15	"		(Comp 4 ^h E) (Stellar 0 ^h)				"	"	8-8
33T16	"		(Comp 43 ⁵¹) (Stellar -10°) @ 0 ^h					"	5-8
Later 33T17	More Flex Tests For RC		(Comp -10°) (Stellar +44°) @ 0 ^h					"	8-8
42733T18	"		(Comp 0 ^h) (Stellar 4 ^h W)				+44°	"	8-8
33T19	Flex Tests For RC		(Comp 4 ^h W) (Stellar 0 ^h)				"	"	8-8
33T20	"		(Comp 0 ^h) (Stellar 4 ^h E)				"	"	8-8
21	"		(Comp 4 ^h E) (Stellar 0 ^h)				"	"	8-8
22	"		(Comp 44°) (Stellar -10°) @ 0 ^h Hr L					"	8-8
23	"		(Comp p -10°) (Stellar +44°) @ 0 ^h Hr L					"	8-8

Spectr. Temp.

Focus

Spectr. Temp.

Spectr. Temp. 80°F Focus $-50R$

Spectr. Temp.

Dome Temp./Hum. $80^{\circ}/90\%$

Dome Temp./Hum.

Transparency Conditions $\text{hazy - cloudy} : 108$

note between exp T12 & T13 KK & Th had
removed block counterut springs, moved Optical plate
in & out while checking balance.

Companion Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1/2 8-8	40m Blue	-y	slo overlap	RC	G16/17B	120m	09802E	A			no Label	much blue Flex much -y Flex
1/2 8-6				RC	"	"	"	B			(2 photos for balance)	Black
1/2 8-1	7m Blue	-y	(gap gone)	BC	"	"	"	A				-y Flex
1/2 8-1	12m Red	-y	(gap almost gone)	"	"	"	"	B				sl red Flex -y Flex
1/2 8-1	6m blue	no y	poor focus	"	G8/1-25B	"	11-1-e	B				vs/ blue Flex
1/2 8-1	21m Red	no y	or vs/ -y	"	"	"	"	A			copy of plate plate used in the balance	some red Flex
1/2 8-1	27m Blue	-y	(gap almost gone)	"	"	"	"	A				cont sl Blue sl -y
1/2 8-1	9m Red	+y	still a gap	"	"	"	"	B			RA by hand	cent vs/ rel vs/ + y
1/2 8-1	71m blue	-y	sl overlap of comp	(RC)	"	"	"	A				cont Blue vs -y
1/2 8-1	35m Red	-y	gap gone	"	"	"	"	B			RA by motor	cont sl Red sl -y
1/2 8-1	30m Blue	-y	overlap comp	"	"	"	"	B			*Extra plate used in PH	cont sl blue anything sl -y
1/2 8-1	235 Red	+y	gap gone	"	"	"	"	A			plate used in PH	cont Ext Red R + y
1/2 8-1	178m Blue	-y	overlap comp	"	"	"	"	B			Temp 80°F	cat ext Blue sl -y

Date 17/18 Aug 1978 Observers KK-Ri

Παρε.....

Focus . . . 34

Spectr. Temp

[illegible]

Spectr. Temp.66.....

Dome Temp./Hum.

Transparency Conditions 110

Dome Temp./Hum. ... 15°C ... 100%

RC secondary remounted again

Comparison Type/Filter Exp.		Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Ar/-	100-100					RC	G12/.68	BS	Illo	B		Set ⁻¹⁰⁰ 0, Temp 69	
Fe/-	4-4					RC	"	"	"	"		Set 0	
Fe/4x	5-5	40/100		4.15	K3 II	RC	"	"	"	"	Std Vol	Reset 30R	sl/str
Fe/4x	5-5	200/250		5.17	A2n	"	"	"	"	A	Asm Spec KK		str
DZ									"				
4810									"				
Fe									"				
4x	1-5	200/300		4.64	F7 II	R.C.	G12/.68	BS	"	B	Set 2ul		str
-	5-5					"	"	BS	"	B		should be 16R X +30R Temp 66°F	good
												Done clippings w/ J	
						8" DI9	68°F		-2	42			

Date 1978 Aug 18/19 Observers AK-R

Emulsion Batches:

Illegible 30038-18089

Spectr. Temp.

Focus

Spectr. Temp.

[illegible]

Spectr. Temp. ... 73°F Dome Temp./Hum.

Transparency Conditions clouds + haze 112

Focus 20R ← out by 100 units

Spectr. Temp. ... 70°F Dome Temp./Hum.

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe - 5-5					RC	G12/.68	BS	IIao	B		should be 77B 77B	s/ steel
Fe - 5-5	10/15		1.29	K2IIIp	"	"	BS	IIao-E	A	Std Vel	23	s/ str
Fe/104 5-5	100/28	3"	6.84	dk1	"	"	"	IIao e	B	Asm Spack	clouds	wk
4 5-5	40/80		3.93	K2III	"	"	"	"	A	Std Vel		s/ str
4 5-5	100/85		5.82	F2Ia	"	"	"	"	B	Cph/Evens	compar in a few second in other parts	s/ str
5-30-30	40/252		3.8	G8II? K?	R.C.	G24/.9	P.S.	IV-NH	A	Asm Sp hke	V Filter over P.S. clouds	very strong
Fe - 5)								IIao-E	B		20R 70°F	
				IV-NH	5" D19	70°		AgNO ₃ (1:7500), H ₂ O rings, exposed wet				
				IIao e	7" D19	70°		18 152				

Date Sept. 19/20 1978 Observers Rj.

Date Sept. 19/20 1978 Observers Rj.

Emulsion Batches:

II-2F 30038-18088

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[illegible]

Spectr. Temp. ... 70°F

Dome Temp./Hum. 95%

Transparency Conditions ... clear ... 114.

Focus ... 30R

Spectr. Temp. ... 63°F

Dome Temp./Hum. ... 16°C 98%

very windy

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
- 55	40/80	5	4.15	K3III	R.C.	G12/68	B.S.	IT10-E	A	^{18.4} Std Val.		vs/str
	400/280		6.8 7.66	F0 01	R.C.	G12/68	BS	"	B	Ceph/Evans		vs/str
								IT10-E				
- 55	80/80		4.64	F7II	R.C.	G12/68	B.S.	IT10-E	A	Bip/18.1 Val		s/str
- 55	200/400	5+	6.2	K4	R.C.	G12/68	B.S.	IT10-E	B	Std Val		vs/str
- 55	40/80		3.15	K2III	R.C.	G12/68	B.S.	IT10-E	A	Bip/18.1 Std Val		str
- 55					"	"	"	"	B		should be OR	vs/str
						IT10		20 176				

115

Date 1978 Aug 20/21 Observers KK-Ri

Emulsion Batches:

Ilave 30038-18088

09802-E 30038-18088

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Spec.
42747	HD 124897	14 11.1	+19°42'	20:22	20:24	03:46W		Fe/ND4x	5-10	20/30	
42748	HD 131511	14 48.9	+19 33	20:27	22:01	04:47W	+19°17'	Fe/ND4x	5-5.5	20/30	2
42749	ADS 11632A HD 173739?	18 41.7	+59 29	22:15	00:30	03:25W	+59°38'	Ne/-	8-8	20/30	
42749T1	skipped in plates	42747-48			90 sec						
42749T2	spot and in plates	42749-			15 min	150 sec 193 4810		Ne/ND4x	5-5.5	20/30	
42750	HD 201092	21 02.4	+38°45'	00:38	00:50	"		Ne/-	8-8	20/30	
42751	HD 215182	22 38.3	+29°42'	00:59	01:14	00°10W	+30°06'	Ne/-	13-13.4	20/30	
42752	"	"	"	01:15	01:22	00°18W	"	Fe/-	3-3.3	20/30	
42752T1	focus test							Ne/-	15-15	20/30	
42753	HD 198478	20 45.5	+45°45'	01:35	01:57	02°48W	+46°01'	Ne/ND4x	8-8	20/30	
42754	HD 222368	23° 34.8	+05°05'	02:06	02:17	00°17W	+05°29'	Ne/-	8-8	20/30	
42755	HD 3212	00° 34.8	+55°59'	02:26	02:29	00°30E	+56°22'	Fe/ND4x	8-8	20/30	
42756	HD 219134	23° 08.5	+56°37'	02:36	03:02	01°29W	+57°01'	Ne/ND4x	8-8	20/30	
42757	HD 216489	22 48.1	+16°19'	03:16	03:50	02°37W	+16°45'	Ne/ND4x	8-8	20/30	
42758	HD 222107	23 32.2	+45°55'	03:55	04:03	02°06W	+46°20'	Ne/ND4x	8-8	20/30	

Spectr. Temp. 69°Dome Temp./Hum. 64 F / 77°Transparency Conditions photometric 116.Focus 30R

Spectr. Temp.

Dome Temp./Hum.

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
E/104x5-10	20/30		1.29	K2IIIp	RC	G12/.68	BS	IIa0e	A	Std Vel		str.
5-55	100/120	2"	6.84	dk1	"	"	"	"	B	Asm-Spec KK		vsl/wk
6-82	100/160		V=8.90	dm4	R.C	G43/.5	R.S.	098-02E	A	- - -	slit from dark lamp no V filter on skin containing image skin	+ fluxum vsl/wk
								IIa0e				
								098-02E			V filter on skin	
	400/123		V=6.2	dk7	RC	G43/.5	RS	098-02e	B	Std Vel	61 Cyg B	sl str
	40/150		3.8	G8II?	R.C	G24/9	RS	IIa0e	A	Asm-Spec KK	V filter on skin	
	40/50		"	"	"	"	"	"	B		should be 12R	
								IIa0e	B	Temp 630F	30R	
	100/200		4.7	B2	R.C.	G16/.7	R.S.	098-02e	A	B4 type Std. Vel.	V filter in exp. meter	fine
	40/80		4.64	F7II	"	"	"	"	B	B4 Std Vel	"	fine
	40/80		3.34	toII	"	"	"	"	A	"	"	sl str
	40/80		6.57	A3II	"	"	"	"	B	RSCV/Fgi	"	fine
	80/160		6.67	gh1	"	"	"	"	A	"	"	fine
	40/80		V=3.8	ko	"	"	"	"	B	"	"	vsl str

Spectr. Temp.

Dome Temp./Hum. . . 140° . . . 95%

Transparency Conditions 118.

[illegible]

119

Emulsion Batches:

Tl. A.C.E. 30038-20088

Date 1978 Aug 21/22 Observers Ri - KK

Spectr. Temp.

Focus... 30R

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Sec
42762	HD 161096	17 38.5	+ 4° 37'	20:22	20:28	0:29 W		Fe/ND4x	5-5-5	20/40	
42763	HD 163506	17 51.4	+ 26° 4'	20:33	20:52			Fe/ND4x	5-5-5	80/80	
42764	HD 186791	19 41.5	+ 10° 22'	20:55	21:00	1:03 E		"	5-5-5	20/40	
42765	HD 186688	19 40.8	+ 29° 01'	21:03	22:08	00° 06 W	+ 29° 13'	"	5-5-5	200/140	
42765T1	optical			15 min @ 15 Volts		D4 D3 3500 4300	D2 4810				
42766	HD 186791	19 41.5	+ 10° 22'	22:11	22:16	00° 13 W	+ 10° 35'		5-5-5	20/40	
42767	Cys X-1 HDE 226868	19 54.6	+ 34° 56'	22:27	01:31	03° 16 W	+ 35° 09'	Fe/ND4x	5-5-5	80/80	
42768	HD 212943	22 22.8	+ 04° 12'	01:35	01:46	01° 03 W	+ 04° 34'	Fe/ND4x	5-5-5	80/80	
42769	λ 1115 HD 222107	23 32.7	+ 45° 55'	01:58	02:13	00° 19 W	+ 46° 21'	Fe/ND4x	10/100	40/100	
42770	HD 222368	23 34.8	+ 05° 05'	02:17	02:39	00° 44 W	+ 05° 30'	Fe/ND4x	10/100	40/100	
42771	"	"	"	02:47	02:57	01° 01 W	"	Fe/ND4x	5-5-5	40/36	
42772	HD 217811	22 58.2	+ 43° 31'	03:04	03:41	02° 23 W	+ 43° 58'	"	5-5-5	40/80	
42773	HD 9138	01 24.9	+ 05° 38'	03:51	04:25	00° 40 W	+ 06° 02'	"	5-5-5	10/200	
42774	HD 22054	03 31.8	+ 00° 05'	04:30	04:38	01° 13 E	+ 00° 19'	"	5-5-5	80/80	
42775	HD 18884	02 57.1	+ 3° 42'	04:42	04:50	00° 28 E	+ 04° 03'	"	5-5-5	20/60	
42775F1	effusion test							Fe/—	5-5		

Spectr. Temp. 69° Dome Temp./Hum. $68^{\circ}/77\%$ Transparency Conditions *Some streaks* 120Focus $30R$ Spectr. Temp. $65^{\circ}F$ Dome Temp./Hum. $16^{\circ}C/100\%$ *some focus problems this night probably due to plates having been cut sl. long*

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5-55	20/40		3.93	K2II	RC	G12/.68	BS	IIa0e	A	Std Vel		fine
Fe/104x 5-55	80/80	1-2"	5.82	F2Ia	RC	G12/.68	BS	IIa0e	B	Cph/Fe	89 Her	vs. str focus!
5-55	20/40		4.15	K3 II	"	"	"	"	A	Std Vel		fine
" 5-55	200/140		~7	F0-G1	"	"	"	"	B	Cph/Evang	Su Cyg	exp fine focus varies
								IIa0-E				
5-55	20/40		4.15	H3II	R.C.	G12/.68	BS	"	A	Std Vel		fine
5-55	80/450		9.74	O9.7Iab	"	"	"	"	B	Sp Br./Bl	red & blue ends of spec	sl. wide
5-55	80/80		5.9	K0	"	"	"	"	A	Std Vel		
5-55	40/150		4.76	G8II	"	G8/.25	BS	"	B	H+K-ly		focus
5-55	40/150		4.64	F7 II	"	"	"	"	A	Std Vel		fine
5-55	40/32		"	"	R.C.	G12/.68	120H	"	B	"		exp. shift??
5-55	200/120	1-2	6.1	B3	"	"	"	"	A	"		ok shift??
5-55	100/200		6.2	H4	"	"	B.S.	"	B	"		fine
5-55	80/80		5.2	F9	"	"	"	"	A	"		vs. str
5-55	20/60		4.16	M2III	"	"	"	"	B	"		fine
			8 ^m 019	65°F	17 166			should be	3R	9 ^m 65°F	30R	

88
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2018

22°C. 50%

Lozy 122

OR

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Dome Temp./Hum.

[illegible]

123

Wed-Thurs

Emulsion Batches:

...D.F.

Date 23/24 Aug 78. Observers Tn.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
42780F2	Hartman Focus Test					0 ^h 0	+44°	Fe/-	23-23
80F3	"					"	"	"	23-23
80T5	Flexure Tests		[Comp @ 0 ^h] [Stellar @ 4 ^h W]				"	Fe/-	15-15
80T6	"		[Comp @ 4 ^h W] [Stellar @ 0 ^h]				"	Fe/-	15-15
80T7	"		[Comp @ 2 ^h W] [Stellar @ 2 ^h E]				"	Fe/-	15-15
80T8	"		[Comp @ 2 ^h E] [Stellar @ 4 ^h E]				"	Fe/-	15-15
80T9	"		[Comp @ 4 ^h E] [Stellar @ 0 ^h]				"	Fe	15-15
80T10			[Comp @ +44°] [Stellar @ -10°] @ 0 ^h				"	Fe/-	15-15*
80T11			[Comp @ 0 ^h] [Stellar @ 3 ^h 30E]				0° dec	Fe/-	15-15
80T12			[Comp @ 3 ^h 30E] [Stellar @ 2 ^h E]				"	Fe/-	15-10
80T13	"		[Comp @ 2 ^h E] [Stellar @ 2 ^h W]				"	"	15-15
80T14	"		[Comp @ 3 ^h 30N] [Stellar @ 0 ^h]				"	"	15-15
80F4	Hartman Focus Test						0° dec	"	25-25

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

Temp 74°F

47.5

* do p. 1

Total 30

Spectr. Temp. 74°F Dome Temp./Hum. H=85% Transparency Conditions Cloudy 124

Focus

Spectr. Temp. Dome Temp./Hum. +72°F

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10-23-23	Temp +74°F Set at <u>OR</u>				RC	G16/1.7	RS	TriFe	B	1		cent s/bk
" 23-23	+74°F Set down to 50B				"	"	"	"	B			cent blue
10-15-15	Set up to 30B				"	"	"	" - 9	B	<u>center shift</u> +4μ		no fler
10-15-15					"	"	"	" - 7	A	-8μ	slwy	cent s/bk
10-15-15					"	"	"	"	B	+2.5μ	slwy	no cent shift
10-15-15					"	"	"	"	A	+9μ	no y shift	cent Red
10-15-15					"	"	"	" - 6	A	-14μ		cent blue
10-15-15	*Some delay in 2nd Exp due to Fe Arc adj.					"	"	" + 21	B	+24μ	Ey	cent Red
10-15-15					RC	"	"	"	A	+6μ		cent s/bk
10-15-15					"	"	"	"	B	-4μ		cent s/bk
10-15-15					"	"	"	"	A	-2.5μ		cent vs
10-15-15					"	"	"	"	B	-8μ		cent
10-15-15	Set @ 30B or -30R Temp +73°F				RC	"	"	"	B	-		cent s/bk

126. Fri - Sat

Date 25-26 Aug 1978... Observers T.H.

Emulsion Batches:

O9802E 30038 - 22088
D.O-E 30038 - 22088

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
42781F1	Focus test to determine		Shift/Focus dial relation			0 ^h no drive	0°	Fe/-	25-25
42781F2	"		"	"		0 ^h "	0°	"	"
42781F3	"		"	"		0 "	0	"	"
42781	HD 161096 ^{Boph}	17 38.5	+4 37	19 59	20 08	0 24 W	+4 37	Ne/-	8-8-8
42782	"	"	"	20 11	20 24	0 41 W	"	Fe/ND4	8-8-8
42783	HD 179094	19 06.1	+52 16	20 36	21 50	0 40 W	+52 24	Ne/-	8-8-8
42783T	Spot Calc for 42781-84				15 min @	D3 15V 4810	D1 7V H+	D2 7V 5450	
42783F	Focus Test				@	0 45 W	+52 24	Fe/-	?-28
42784	HD 186791	19 41.5	+10 22	22 05	22 09	0 22 W	+10 35	Ne/-	12-12
42785	HD 215182	22 38.3	+29 42	22 42	22 54	1 48 E		Fe/ND4	12-12
42785T	15 ^s Ne comp		15 ^s Ar stellar					Ne/-	15-15-15
42786	HD 186688	19 40.8	+29 01	23 15	00 49	3 04 W	+29 14	Fe/ND4	5-5-5
42786T	Spot Calc for 42786-90				15 min @	D4 15V 3900	D3 4300	D2 4810	
42787	HD 212943	22 22.8	+04 12	00 54	01 12	0 44 W	+4 38	Fe/ND4	5-10-5
42788	"	"	"	01 24	0 53	1 24 W	"	"	5-5-5
42788F						1 25 W	"	"	25-25

Spectr. Temp. $65^{\circ}\text{F} \pm$Dome Temp./Hum. $64^{\circ}\text{F} \pm$ / 76% Transparency Conditions *half cloudy*.....

Focus

- Then all clear 126

Spectr. Temp.

Dome Temp./Hum.

Then more cloud

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe-1	Focus moved From -30R up to +50R				RC	G16/17B	RS	IIa F	B	Temp $65^{\circ}\text{F} \pm$	<i>+16m (32)</i> Backlash w/ -50R out by going down 40 units to setting	cont vs/Red
"	Focus moved From +50R $\rightarrow$ -50R							"	B	Temp $65^{\circ}\text{F} \pm$	<i>-27m (31)</i>	cent vs/ blue
"	Focus moved From -50R up to +20R							"	B	Temp $65^{\circ}\text{F} \pm$	<i>-4m (32)</i>	cent vs/ blue
Fe-1	40/80	1.2"	$V=2.77$ 3.93	K2 III				098-02E	B	Focus +20R $\downarrow$	V Filter in front of Exp meter (std vel)	Fine
Fe-1	40/80	2'	"	"				"	B	*Total arc c N	at 24 sec put on at mid Exp	Fine
Fe-1	200/400	2'	$V=5.80$	K0				"	B	RSC Un-Fgi	Some cloud Temp 66°F	Fine
Fe-1								"				
Fe-1					RC	G16/17B	RS	IIa F	B	Temp $+65^{\circ}\text{F}$	Set +20R $-3u$	cent vs/ blue
Fe-1	20/47	2"	$V=2.62$	K2 III	"	"	"	098-02E	B	std vel		s/sfr
Fe-1	40/100		$V=2.9$		"	G12/19B	RS	IV-Nh	A	Asm Spe KK	n Peg V filter in front of slicen	exp good fog horrible
					"	"	"	IV-Nh	A			
Fe-1	200/140	3'	~ 7	F0-G1	"	G12/168B	BS	IIa-e	A	Ceph -Rm	#2 Exp meter in front of some cloud	Fine
								"				
Fe-1	40/40		5.9	K0	RC	G12/168B	BS	"	B	std vel	$+63^{\circ}\text{F}$	Fine
Fe-1	40/30	3"	"	"	RC	"	120m	"	A	"	Fld Len. moved y shift	Fine
					"	"	120m	IIa O*	B	Set +20R	$+63^{\circ}\text{F}$ * Extra long plate right	on

Comparison Type/Filter Exp.		Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/44	E-10	2"	3.34	KOII	RC	662/688	120m	IIa0-e	B		std Vel	4 shift?	Fine
40/50	5-10	1-2"	"	"	"	"	BS	"	B		std Vel	* Fe Arc double	Fine Exp
* After thought that BS didn't fit well - Took some time to seat it. Still didn't feel right. Too tight.													
098s + IIaF 5min @ 67°F D19 21172													
From 42781 F1 & 42781 F2 measures, For 100 units decreasing Red center shifts 33m Blue													
∴ For center Blue increase Red by 3 units/m shift. Remember to set by decreasing Red #'s, overshoot by at least 40 units.													

Spectr. Temp. 67°F

Dome Temp./Hum. 63°F / 96%

Transparency Conditions S1 Hazy 130

Focus +20 R

Spectr. Temp. 65°F

Dome Temp./Hum. 62°F / 100%

Exp meter Balance unstable

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
8/10-9-9- 0/1-9-9- 7/10- 5-5- F-1-9-9- 9-1-9-9- 1-1-9-9-	80/150	1.2"	7.72	G0	RC	G16/7B	RS	09802E	A	RSCV _h -Fgi	V Filter before Exp Meter * Changed meter offset 400/200	wt
								"				
	80/150	2"	5.9	K0	RC	G16/7B	RS	"	B	stdvel		Fine
	(at 0 ^h HL)				"	"	"	IIaF	B	Set +20R Temp 65°F		
	All done 5 min D19 @ 68°F								Too humid - Dome drippy.			
									— Should have worked in Blue but I			
									— Know Red Focus better, having lev			
									Focus p a t e r from last night.			

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Emulsion Batches:

No. 0-e 30038-22038

Date 29/30 AUG. TUES/WED Observers But-Tr

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
42793A	Focus Tests To determine set/disp rel/ctn 100 unit					0"	+30°	Fe/-	28-28
93F2	"	"	"	"	"	0"	"	"	28-28
93F3	Regular Focus Test					0"	"	"	28-28
42793	HD 161096	17 38.5	+4 37	19 48	19 52	0 23W	—	Fe/ND4	5-55, 40/40, 1-2
42794	HD 168481	18 14.8	+15 47	20 08	22 23	02 20W	+15 54	Fe/ND4	5-5-5 200/100
42794T	Spot Calc for 42794-98			15 min @ 15V		D4 4300	D3 3900	D2 4810	note
42795	HD 190165	19 58.6	+45 11	22 30	01 56	04 09W	+45 28	Fe/ND4	5-5-5 1-88 3"
42796	HD 222368	23 34.8	+05 05	02 00	02 20	00 56W	+05 35	Fe/ND4	5-5 1-119 2"
42796F	Focus Test					"	"	Fe/-	5-5
42797F	"					"	"	Fe/-	5-5
42797	HD 222368	23 34.8	+05 05	02 29	02 54	01 30 W	"	Fe/ND4	5-5-5 100/100
42798F	Focus Test					"	"	Fe/-	5-5
42798	HD 222368	23 34.8	05 05	02 58	03 23	02 00 W	"	Fe/ND4	5-5-5 200/100

Spectr. Temp.

Focus...

Spectr. Temp.

Exp. Mtr.

Spectr. Temp. ... $+71^{\circ}\text{F}$...Dome Temp./Hum. $+65^{\circ}\text{F}/80\%$ Transparency Conditions ... *Some cloud* ... 132Focus ... *was 20R-* ...Spectr. Temp. ... 63°F ...Dome Temp./Hum. $+58^{\circ}\text{F}/99\%$ *dripping starting*

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe/-28-28					RC	G12/68B	BS	Iluc-e	B	Set +35R	<i>Temp +71°F backlash to zero well.</i>	cent vs/Red
" 28-28					"	"	"	"	B	Set -65R	$+71^{\circ}\text{F}$	cent for blue
" 28-28					"	"	"	"	B	Set -15R	$+71^{\circ}\text{F}$ should be correct posn	cent s/blue
Fe/100/5-5	40/40	1-2"	3.93	K20	RC	G12/68B	BS	Iluc-e	A	Std Vel	Verp meter Filter in	Fine
Fe/100/5-5	200/160		7.08	FO	RC	G12/68B	BS	Iluc-e	A	Ap-MR	#2 mask for Exp meter in	Fine
D2 4810	note difference in spot calk 8 mic @ 67°F D19 Aug 30 78											
Fe/45-5	00/188	3"	7.58	A2	RC	G12/68B	BS	Iluc-e	B	Am MR	Temp 68°F Focus +30R	s/wk
" 45-5	00/179	2-3	4.64	F7V	RC	"	"	"	A	Brt. Std. Vel		Fine
Fe/-5-5					"	"	"	"	B		Set +30R Temp 65°F	more blue in blue cent vs/Blue
Fe/-5-5					"	"	"	"	B		Set +60R 65°F	more Red in Red cent s/Red
Fe/45-5	00/184	2"	4.64	F7V	"	"	"	"	A	Brt Std Vel	Set +60R "	Fine
Fe/-5-5					"	"	"	"	B		Set OR 64.5°F	more blue in blue cent Blue
Fe/45-5	200/180	2"	4.64	F7V	"	"	"	"	A	Brt Std Vel	" 64°F	Root focus Fine
											42793F1 - 42793 Dev @ 68°F in D19 Tn	Temp rapidly dropping.

Date Aug 30 78 Observers Ri - Bts

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[illegible]

Spectr. Temp. Dome Temp./Hum.

[illegible]

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Emulsion Batches:

No. 30038-29088

098-02e 30038-25098

Date 1978 Aug. 30/31. V/Th Observers Blw-Tn

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Spectr. Temp.
42799 F1	Focus Test					0° 10' W	+30°	Fe/-	19-19		
42799	HD 212097	22 ^H 16 ^M .7	+27° 50'	21:52	22:07	01 56 E	+28° 15'	Fe/NDK4	9-7	20/15	
42800	HD 212097	22 ^H 16 ^M .7	+27° 50'	22:09	22:26	01 37 E	"	"	9-9	20/15	
42801	HD 212097	22 ^H 16 ^M .7	+27° 50'	22:27	22:41	01 21 E	"	"	9-9	20/16	
42802	HD 212097	22 ^H 16 ^M .7	+27° 50'	22:42	22:57	01 06 E	"	"	9-9	20/15	
42803	HD 212097	22 ^H 16.7	+27° 50'	22:58	23:11	00 51 E	"	"	9-9	20/15	
42804	HD 212097	22 ^H 16.7	+27° 50'	23:14	23:29	00 33 E	"	"	9-9	20/15	
42805	HD 210334	22 04.6	+45 15	23 53	01 12	01 22 W	+45 39	Fe/NDK4 Ne/-	9-9-9 9-9-9	200/450	3-
42805 T1	Spot Cal'n for 42799-42804			15 min	@ 15V?	D4 3900	D3 4300	D2 4810			
42805 T2	Spot Cal'n for 42805-06			15 min	@ 15V D3 4810	7V D1 H2	7V D2 5450				
42806	HD 219113	23 08.3	+02 08	01 19	04 52	03 59 W	+2 37	Fe/NDK4 Ne/-	9-9-9 9-9-9	200/297	
42806 F1	Focus Test					4 ^H W	"	Fe/-	9-9		
42806 F2	"					0 ^H -	"	"	9-9		

Spectr. Temp. 69°FDome Temp./Hum. $65^{\circ}\text{F}/95\%$Transparency Conditions $S/H=2.4 - \text{Good}$Focus $30R$Spectr. Temp. 64°Dome Temp./Hum. $60^{\circ}\text{F}/93\%$

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Comparison Type/Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
$F_c - 14.1$						R.C.	G12/68B	BS	IIIa-JE	B	T = 69°F	Focus = 30R	
$F_c - 14.1$	9-9	20/15		4.83	B8V	R.C.	G12/68B	BS	IIa-OE	A	Algo! Std.		
"	9-9	20/15	5"	4.83	B8V	R.C.	G12/68B	BS	IIa-OE	B	"		
"	9-9	20/16		4.83	B8V	R.C.	G12/68B	BS	IIa-OE	A	"		
"	9-9	20/15		4.83	B8V	R.C.	G12/68B	BS	IIa-OE	B	"		
"	9-9	20/15		4.83	B8V	R.C.	G12/68B	BS	IIa-OE	A	"		
"	9-9	20/15		4.83	B8V	R.C.	G12/68B	BS	IIa-OE	B	"		
$F_c - 14.1$	9-9	200/450	3-1"	7.30	G5	R.C.	G16/7B	RS	098-02E	B	RSCV _h -Fg1	66.5°F seeing & focus much better for 2nd half	
$F_c - 14.1$	9-9		5mm	Q	670F	D19	31 Aug 78		IIa-OE				uneven fry
$F_c - 14.1$	9-9						31 Aug 78		098-02E				
$F_c - 14.1$	9-9	200/297	2"	$V=7.3\text{max}$ 9.0	G5	R.C.	G16/7B	RS	"	A	RSCV _h -Fg1	Put 3 He exp. in stellar thick cloud deck Damin!	
$F_c - 14.1$	9-9					"	"	"	"	B	Set 430R	Temp $64^{\circ}\text{F}+$	cont. blue
"	9-9					"	"	"	"	B	"	"	cont. blue

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Emulsion Batches:

09802E 30038-31088

Date 31 AUG / 1 SEP 78 Observers Fgi-Tn-Bts

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mir.	Seeing
42806F3	focus test							Fe/-	10/10		
42806F4	focus test							Fe/-	10-10		
42806F5	focus test							Fe/-	10-10		
42806F6	Focus test					0 ^h	+30°	Fe/- Ne/-	10-10 20-20		
42807	HD 161096	17 ^h 38.5	+4° 37'	19 39	19 51	0 32 W	4° 33	Fe/NDX4 Ne/-	10-10-10 10-10-10	200/350	1.0
42808	HD 163930	17 ^h 53	+15° 08.9	20 03	22 15	2 40 W	+15 07	11	10-10-10 10-10-10	100/400	1.0
42808T	Spot Coll for	42807-15		15min	@ 15V D3 -4810	7V D1, 7V D2 Hd 1-5 5450					
42809	HD 210334	22 ^h 04.6	+45° 15'	22 33	23 23	0 ^h 22 E	+45 36	Fe/NDX4 Ne/-	10-10-10 10-10-10	200/400	1.0
42810	HD 210334	22 ^h 04.6	+45° 15'	23 24	00 10	0 ^h 24 W	+45 36	Fe/NDX4 Ne/-	10-10-10 10-10-10	200/400	1.0
42811	HD 219113	23 ^h 08.3	+02° 08'	00 23	03 06	2 17 W	+02 32	Fe/NDX4 Ne/-	10-10-10 10-10-10	200/400	1.0
42812	B020° 376 HD 13446	APPROX 1900 02 09	+29° 55'	03 18	03 58	0 03 W	+30 16	Fe/NDX4 Ne/-	10-10-10 10-10-10	200/500	2.0
42813	HD 13480A	02 06.6	+29 50	04 03	04 27	0 40 W	+30 11	Fe/NDX4 Ne/-	10-10-10 10-10-10	200/350	1.0
42814	HD 13480A	02 06.6	+29 50	04 30	04 54	1 06 W	+30 11	Fe/NDX4 Ne/-	10-10-10 10-10-10	200/320	1.0
42815	HD 12929	02 01.5	+22 59	04 57	04 59	1 16 W	+23 21	Fe/NDX4 Ne/-	10-10-10 10-10-10	20/36	1.0
42815F								Fe/- Ne/-	10 20		

Spectr. Temp.

Focus. W25.2

Spectr. Temp.

-3088

Spectr. Temp. $+67^{\circ}\text{F}$Dome Temp./Hum. $66^{\circ}\text{F}/77\%$Transparency Conditions *Excellent*.....Focus *was 20R - 28R*.....Spectr. Temp. $+62^{\circ}\text{F}$Dome Temp./Hum. $58^{\circ}\text{F}/98\%$

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Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
F ₁ - 10/10					R.C.	G16/.70	R.S.	098	B	Temp 640F	40R	ok
F ₁ - 10					RC	"	RS	098	B	"	30R	center
F ₁ - 10					RC	"	RS	098	B	"	20R	ok
F ₁ - 10					"	"	RS	098	B	Temp $+67^{\circ}\text{F}$ Set 28R		radiation
F ₁ - 10	200/350	1.2"	3.93	K2 III	R.C.	G16/.70	RS	098-02-e	A	Std Vel Star	β Oph	st comp star
F ₁ - 10	00/400		V=7.4	F4	"	"	"	"	B	RS CV _n /Fgi		comp star
					sep 1 78	5mm @ 680F	D19				Labelled 268	slut
F ₁ - 10	200/408	1.2"	V=6.9	G5	RC	G16/.70	RS	098-02-e	A	RS CV _n /Fgi	Set at 35R	slut
F ₁ - 10	200/405	"	V=6.9	G5	RC	G16/.70	RS	098-02-e	B	RS CV _n /Fgi	good Aurora	fine
F ₁ - 10	200/400	"	V=7.3	G5	RC	G16/.70	RS	098-02-e	A	RS CV _n /Fgi		slut
F ₁ - 10	200/58	2"	V=7.3 V=7.3	G5 G8	RC	G16/.70	RS	098-02-e	B	RS CV _n /Fgi	west star of close pair (wrong star)	blank
F ₁ - 10	200/355	"	V=5	G5 III	RC	G16/.70	RS	098-02-e	A	RS CV _n /Fgi		slut
F ₁ - 10	200/327	"	V=5	G5 III	RC	G16/.70	RS	098-02-e	B	RS CV _n /Fgi		fine
F ₁ - 10	20/36		3.15	K2 III	RC	G16/.70	RS	098-02-e	A	Std Vel Star		st comp star
F ₁ - 10					"	"	"	"	B		$+62^{\circ}\text{F}$	Cent vs blue

139 Fri. Sat

Date 1/2 SEPT 1978 Observers Tn-Bts

Emulsion Batches:

098-02E 30038-31088

Spectr. Temp.

Focus... *Left*

Spectr. Temp.

[illegible]

Date Sept 2-3/78 Observers Tn

098-02E 30038 - 01098

Focus 25

Spectr. Temp.

Exp. Mr. Se

20/36 1

note-Decker m

200/265

Transparency Conditions *5/ Hazy OK*.....

Focus +25R.....

Spectr. Temp. 70° F.....

Dome Temp./Hum. 66°/80%

Decker not used tonight.
All changes by hand.

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[illegible]

143 Sun - Mon

Date Sept 3-4 1928 Observers Tn

Emulsion Batches:

1100-E-30038-31088

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter Exp.	Exp. Mtr.
42823	^{32 Peg} HD 212097	22 16.7	+27 50	22 51	23 08	039 E	+28 12	Fe/MDA 9-9	20/16
42824	"	"	"	23 10	23 32	015 E		" 9-9	20/16
42825	"	"	"	23 33	23 55	008 W		" 9-9	20/16
42826	"	"	"	23 58	00 19	032 W		" 11-9	20/17
42827	"	"	"	00 22	00 44	057 W		" 9-9	20/17
42827T	Spot Col'd for 42823-36, 42.				15 min @ 15V		D4 D3 D2 3900 4300 4810		
42828	HD 222368	23 34.8	+15 05	00 48	01 03		+05 29	Fe/MDA 9-9	20/15
42829	HD 19356	03 01.7	+40 34	01 10	01 12	3 20 E	+40 51	" 9-9	20/15
42830				01 16	01 19	3 13 E		" 9-9	20/16
42831				01 21	01 23	3 09 E		" 9-9	20/15
42832				01 33	01 35	2 57 E		" 9-9	20/16
42833				01 36	01 39	2 53 E		" 9-9	20/15
42834				01 43	01 46	2 46 E		" 9-9	20/16
42835				01 47	01 50	2 42 E		" 9-9	20/18
42836				01 51	01 53	2 39 E		" 9-9	20/15

Spectr. Temp.

Focus. +35

Spectr. Temp.

31082

Spectr. Temp. 66°F Dome Temp./Hum. $64^{\circ}\text{F}/90\%$ Transparency Conditions *Clear by 2230 vs 1429*Focus $+35\text{R}$

Spectr. Temp.

Dome Temp./Hum.

144

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe/104 9-9	20/16*	bad?	4.83	B8V	RC	G12/688	BS	Ilco-c.	A	Algo/std	* Filter left in (Exp meter)	
" 9-9	20/16	4"	"	"	"	"	"	"	B	"	#2 BS mask inserted	
" 9-9	20/16		"	"	"	"	"	"	A	"		
" 11-9	20/17	3"	"	"	"	"	"	"	B	"	* Started top of 2nd scan for 2 sec	
" 9-9	20/17		"	"	"	"	"	"	A	"		FOGGET
D2 4210								"				
Fe/104 9-9	20/15	2-3"	4.68	F7V	RC	G12/688	BS	"	B	std vel	* on switch from Exp to Comp misfire Fe Hic on std/air	
" 9-9	20/15	"	2.0	B8V					A	Algo/prog		FOGGET Fine
" 9-9	20/16								B			
" 9-9	20/15								A			fine but scratched
" 9-9	20/16	1-2"							B			Fine
" 9-9	20/15								A			Pine
" 9-9	20/16								B			Fine
" 9-9	20/18								A			
" 9-9	20/15								B			

145 #2
Cont of

Date Sept 3-4 Observers Tn

Emulsion Batches:

III 05-0234058 - 31088

.....

.....

Spectr. Temp.

Focus

Spectr. Temp.

Exp. Mtr.	Sec.
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
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86	86
87	87
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89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

[illegible]

146

[illegible]

2

Spectr. Temp. .
Focus...+35.
Spectr. Temp. .

Exp. Mtr. Soci

.....

.....

Exp. Mtr. Soci

-04098

Spectr. Temp. ... 66°F

Dome Temp./Hum. 64°F / 90%

Transparency Conditions ... Fine ... Some thin cloud at end

Focus ... +35R

Spectr. Temp. ... 63°F

Dome Temp./Hum. 60°F / 93%

148

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe/100 5-5.5	100/180	1"	6.77	B9	RC	G12/.680	BS	IIaOE	A	Ap MR	* maybe some arc on stellar	arc on stellar
Fe/100 5-8.5	200/180	1.5"	6.7	A2	RC	G12/.680	BS	IIaOE	B	Ap MR		fine
SV D3 300 40											Note: 42843 labelled 44	
Fe/100 5-6.5	100/180	1.2"	7.85	A0	RC	G12/.680	BS	IIaOE	A	Am MR	42844 labelled 45	fine ex
" 8-8	10/19	1"	2.39	45 II	RC	"	"	"	B	Brt. Std.	42845 labelled 5A	fine ex
Fe/- 8-8					"	"	"	"	B	Set +35R Temp +63°F		sl. blue
					8" Dig 68°F							

149 Tues-Wed

Date Sept 5-6 / 78 Observers Bts-But-T_h

Emulsion Batches:

Παο-ε 30038-04098

[illegible]

151 Wed-Thurs

Date _____

Observers

.....

.....

.....

Spectr. Temp.
Focus
Spectr. Temp.

Exp. Mtr.	Sec.
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
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85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

Spectr. Temp. ... 76°

Dome Temp./Hum.

Transparency Conditions Lazy.....

Focus 30R

Spectr. Temp.

Dome Temp./Hum.

[illegible]

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions 154

Dome Temp./Hum.

Comparison Type/Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fc/144	5-5-8	40/80		3.34	10II	R.C.	G12/68	BS	IIA0-E	B	Sol/Vol		S/STR
Fc/144	5-10	200/137		6.6	142III	R.C.	G12/68	BS	IIA0-E	A	Waterloo ^{WVBr}	clouded in	S/wh
									IA0-E				
F/-	5-5								IIA0-E	B		blue Bka - Red OK	varies center ok
							10 ^m D19	68°F	24, 186				

155

Date *Trans. W. and Sept 12-13* Observers *B. X. R. - B. G.*

Emulsion Batches:

09E-02-03038-0109.8

I₂0 F. - 03038-04098.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.
42851	NOVA CYG 1978	¹⁹⁵⁰ 21° 40' 38"	+43° 48'	00 36	02 23	03 51 W	+43° 52'	Ne/- Fe/NO4	8 8 8 8 8 8	42/8.0 3
42851T	Spot Calibration for 42851				15 min @	15V 03 4810	7V 01 Hx	7V 02 8450		
42852	NOVA CYG 1978	21 40 38	+43 48	02 31	03 58	05 26 W	+43 54	Fe/NO4	5-5-5	200/200
42852T	Spot Calibration for 42852-53				15 min @	15V 04 3900	15V 03 4300	15V 02 4810		
42853	HO 16855	02° 37.1	+43° 07'	04 04	05 27	01 55 W	+43° 22'	Fe/NO4	5-5-5	20/150
42853F	focus test							Fe/-	5-5	
Sept 15/78 Test set										
42853F2	Focus Test					0"	0° 0	Fe/-	25-25	Temp 65
F3								"	25-25	Temp 65
F4								"	25-25	"
F5								Fe/- Ne/-	35-35 35-35	"

Spectr. Temp. 60°FDome Temp./Hum. 80%Transparency Conditions clouds on & offFocus 50RSpectr. Temp. 53°FDome Temp./Hum. 0900 90%gvel after 02:00156

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10/- 89	400/800	3-5	6.3		R.C.	G16/.7	R.S.	098-02	B	NOVA	field down	fine
50/100 89								098-02				
7402												
5450												
150 02	00/200	6"	6.3		R.C.	G12/.68	BS	II 60E	A	NOVA		fine
4810												
51/100 5-5-5	000/150	8"	6.7	A2	R.C.	G12/.68	BS	II 60-E	B			
72/- 5-1									B	Temp. 53°F	focus 50R	
											center of plate de slit rotated??	
											blue sl Blue Redust Ref	
						098 02e	5 ^m	219 68°F	.31	1.77		
						II 60	8 ^m		.19	1.75		
10/- 25-25	Temp 65°F Set* 50R				RC	G12/.68	BS	II 60-E	B	*original setting untouched from previous night	cont sl Red	35R
1 25-25	Temp 65°F Set 20R				"	"	"	"	A		broke alt dev	
25-25	"	"	"	"	"	"	"	"	B		-27u? center blue (uniform?)	
35-35	"	"	"	"	"	"	"	"	B		-12u center blue (Red sl Blue)	56R
61-35-35	"	"	"	"	"	G16/.78	RS	"	B		-14u? cent sl blue (Slit opposite?)	

Date 6/17 Sept. '78 Sat/Sun Observers Bln - Tn

Emission Dates:

098-02-E	30038-13098	18 172
1140-E	30038-100887	98
		24 186

[illegible]

158

[illegible]

159 Just use B PH until you see A & B focus tests first
 Date 22/23 Sept '78 Fri/Sat Observers Rm-Bto / KK-Dts...

Emulsion Batches:

5" 66" IIaD-E 30038-10028 18 161
 098.02e 30038-13098 30 176
 5" 66" IIIaJc.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Spectr. Temp.
42857	HD 186688 = SV Cyg	19 ^h 40.8	+29° 01.4	19 ^h 36	21 ^h 45	1 ^h 50	+29 09	Fe NDX4	5-5-5	20/40	
42857T	Spot Calibration for			42857 -	15min			15V D4 15V D3 KV D2 5700 4300 4810			
42858	Nova Cyg	21^h 40.8	43° 48'	22:31				Fe NDX4	5-	30/	
42859	Nova Cyg 78	21 40.6	+43° 48'	23:23	02:07			Ne/clear	8-8-8	300/140	
42859T	Spot Calibration for			42859 -	15min			15V D3 7V D1 7V D2 4810 Hx 5450			
42860	HD 215182	22 38.3	+29 42	02:12	02:26	3 ^h 35 ^m		Ne/clear	15-15-15	40/100	
42861	HD 3712	0 34.8	+55 59	02:37	02:42	1 54		Fe/4x	5-5-5	40/81	
42862	HD 6582	1 01.6	+54 26	02:50	03:49			Fe/4x	5-5-5	20/301	
42863	HD 47105	6 31.9	+16 27	04:09	04:21	02 ^h 24		Fe/-	5-5-5	20/120	
42864	HD 47105	"	"	04:30	04:36	02 09		Fe/-	5-5-5	20/80	
42865	Moon	5 23	+17 23	04:44	04:46	00:46E		Fe/4x	5-5-5	20/20	
42865F1	Focus Test	±0	+17					Fe/-	5-5	-7	
F2	"	"	"					"	"	-4	
F3	"	"	"					"	"	-1	
F4	"	"	"					"	"	-13	

12008 18 161
-13097 30 176

Spectr. Temp. 60°
Focus 55 R, 59 R, ...
Spectr. Temp. 52°

Dome Temp./Hum. ... $43/80$...
Dome Temp./Hum. ... $48/84$...

Transparency Conditions ... prob. photometric ...
160

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
12008 18 161	200/140	.	6.8-7.7	F0-G1	RC	G12/.68	BS	IIaOE	B	Ceph/Evano		Fine
DB 15102								IIaOE			last 4x5 plate in IIaO	
50 6612								IIaOE			box used	
12 200/160	4"	8.0	8.0	Nova	RC	G65/.5	RS	098 02e	B	Nova	Focus = 59 R	with light OK cont fine Hd v str
12 2102								098-02e				
5-55	40/106	V=2.9	G81? + P?	RC		G24/.9	RS	IV-Nh	B	Asm Sp/KK	exp. fine uneven fog	
5-55	40/81			RC		G12/.68	BS	IIaOe	B	Std Vel	s/s str fine	
5-55	20/301		5.8	G5V _P	RC	G12/.68	BS	IIaOe	B	Asm Sp/KK	Also labeled 61 J-Hint T ₉	vsl str fine
5-55	20/120		1.9	10IV	RC	G8/.25B	BS	IIIc	B	Asm Sp/KK	} poor focus	s/s str
5-55	20/80		"	"	"	"	"	"	B	"		fine
5-55	20/20	2-3"		G0V	"	"	"	IIaOe	B	Std Vel		Fine
5-55	+7			"	"	"	"	"	B	44R	blue end Red	OK
"	-4			"	"	"	"	"	A			cont sl blue
"	-1			"	"	G12/.68	"	"	B	74R	} T = 52°F F = 59 R	cont sl blue
"	-13			"	"	"	"	"	A			cont sl blue

161

Date

23/24 Sept 78

Observers

Sat/Sun

Bts / Waterloo

Emulsion Batches:

IlaDe... 30038-23098 18 175

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
42866	HD 187691	19 ^h 46.2 ^m	+10° 10'	23 ^h 18 ^m	00.02 ^m	04 ^h 06 ^m		Fe ND4	5-5-5
42867	^{Prob} HD 218918	23 ^h 06.7 ^m	+8° 11'	01 ^h 04 ^m	0.1 ^h 45 ^m	02 ^h 31 ^m	+08° 32'	Fe ND4	5-5-5
42867T	Spot Calibration fo		42866-67		15 min	15V D4 3900	15V D3 4300	15V D2 4810	
Sun Sept 24th Tu									
42867F1	Focus Test					0 ^h	+25°	Fe/-	25-25
67F2	"					"	"	Fe/-	25-25

Dome Temp +61°F also

Spectr. Temp.

Focus.....5

Spectr. Temp.

Exp. Mtr.

100/100

200/141

Temp

162

[illegible]

163

Sun/Mon

Date 24/25 Sept 78 Observers Rts-Tn-Gis

4th 680

7¼ 69°

Emulsion Batches:

098-02E 30038-24098 15 10

Пол-Е... 30038.. 23098^{18 16}

Spectr. Temp.

Focus 605

Spectr. Temp.

[illegible]

Spectr. Temp. 61°F

Dome Temp./Hum. 60°/79%

Transparency Conditions S1. Hazy. Photometric

Focus 60R

Spectr. Temp. 55°F

Dome Temp./Hum. 49°F/95%

S1 dura 14 by 2"
945 ty too 164

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3-23098	100/90	1.2"	8	Nova	RC	G65/1.5	RS	O98-02e	B	Nova.	no filter?	H2 str cont slat
71.02								098-02e				
4-23098	100/30	1.2"	8	Nova	RC	G65/1.5	RS	O98-02e	B	Nova		H2 str cont wk
7-10-55	200/125	2-3	9.74	O9.7Iab	RC	G12/1.68	BS	HaO-E	B	Sp. Birr Blr	Image sl/obstructed by vis Eyepiece Prism for 1st 2 hrs ?? maybe	v wk
5-1-02								"				
5-1-02	200/120		5.1	O95Ib	RC	G12/1.68	BS	HaO-E	B	Sp. Std.	58°F	sl/str
8-8-88	200/250	3"	6.75	A2V A4V	RC	G8/-1.25	BS	HaO-e	B	Ecl Bin - Blr		v sl str
8-8-88	20/36	2"	3.15	K2III	RC	"	"	"	B	std Vel	plate chipped	fine
8-2-88	20/33	1.2"	2.3	K5III	"	"	"	"	B	"		fine
8-2-88	Temp 55°F set 60R			"	"	"	"	"	B	" 3R		v. sl. red

165

Date 25/26 Mon/Tue Observers Bts-Tn-But

Sept '78

8^m 68.5 Emulsion Batches:

84 68.5 II a Oe... 30038-23098 24 17

4 1/2" 68.5 09802e 30038-24098 18 11

[illegible]

8-2309814
8-2409814

Spectr. Temp. 56°F

Dome Temp./Hum. $50^{\circ}\text{F}/77\%$

Transparency Conditions *Very good*.....

Focus $70\text{-R} \rightarrow 90\text{R}$

VERY GOOD, AURORA 04th 166

Spectr. Temp. 45°F

Dome Temp./Hum. $39^{\circ}\text{F}/79\%$

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
800/91	2"	8	Nova	RC	G16/17	RS	O9802e	B	Nova	Ex Meter Filt #4	Hd sl str no contin
00/274	7.04	A1	RC	G12/68	BS	IIaOe	B	Am MR	Exp meter Filt #2		fine
00/300	3" 7.50	A01	RC	G12/68	BS	IIaOe	B	Ap MR	Focus $\rightarrow 90\text{R}$ Temp $+50^{\circ}\text{F}$		vs str
00/224	7.85	A0	RC	G12/68	BS	IIaOe	B				fine
Temp $+45^{\circ}\text{F}$ Set $+90\text{R}$			RC	G12/68	BS	IIaOe	B				61.6 line

Date 28/29 Sept Thurs/Fri Observers Fji-Ri-Bts

Emulsion Batches:

fresh D-19	{	5m 68°	O.9802e	30038-24098	26 216
		8m 68°	IIa0e	30038-26098	20 176

[illegible]

Transparency Conditions 168.

Focus 66R

Spectr. Temp. ... 50°F

Dome Temp./Hum. 45°F/90%

Aura second half

[illegible]

169

Date 1978 Oct 1/2 Observers KK - Ri - Bts

Emulsion Batches:

5 ^m 12 ^o	142 J	32 192
5 ^m 68 ^o	098-02e 30038-29098	30 189

[illegible]

Spectr. Temp. 59°

Dome Temp./Hum. 56°F / 91%

Transparency Conditions .. scattered cloud ..

Focus 59 R

170

Spectr. Temp.

Dome Temp./Hum. 50°F / 90%

Comparison Type/Filter Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/180	5"	2.2	A5 III	RC	G12/.68	BS	III 25e	B	AsmSp/KK			fog high sl. str
200/133	3"	2.7	DM6	RC	G65/.5	RS	09802e	B	"	V filter	nodust	w/2 + flexure
100/		2.9	G8 II	RC	G12/.9	RS	11-11h	B	"	Clouds & dew		
							098-02e					v s/red
							59R -	56°F	B			

Date Mon/Tues Oct 2/3 '78 Observers Bts - Ri - But

Emulsion Batches:

8^m 68° ..IIaOe...30038-26098 20177
5^m ..09802e...30038-29098 ~~32192~~

Spectr. Temp.

Focus.....?

Spectr. Temp.

[illegible]

25098 2017
29098

Spectr. Temp. 57°

Dome Temp./Hum. 56°F / 86%

Transparency Conditions HAZE, THIN CLOUD

Focus 56R

172

Spectr. Temp. 50°F

Dome Temp./Hum. 46°F / 100%

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5-5	400/300	2-3"	7.04	A1	R.C.	G12/68	BS	IIaOe	B.	Am MR		v s/ str lines dbl
151 Q2 4810								IIaO-E			pl. no. written on spots	
5-5	400/300	2"	7.56	B9	R.C.	G12/68	BS	IIaO-E	B	Ap-MR		v s/ str
5-5	400/250		7.50	A0	R.C.	G12/68	BS	IIaO-E	B	Ap MR	CLOUDS	v s/ str
5-5	400/246		6.7	A2	R.C.	G12/68	BS	IIaO-E	B	Am-MR	CLOUD AGAIN	v s/ str
12-2								IIaO-E	B			blue blue red red

173

A200 C... - 1.12.13

Emulsion Batches:

Date

Oct 4/5

Observers

Hm-Th / Th-KK...

8^m 680

IIa-O-E 26096-30038

21 179

5^m 680

O9802E 29098-30038

25 175

5^m 670

IV-N 13127

Spectr. Temp.

Focus.....

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
42891A	186688	19 ^h 40.8	+29° 01	19 ^h 42	20 ^h 47	01 ^h 39W	+29 137	Fe/ND4	5-55
42891T	Spot Coll for 42891-92, 97				15 min @ 15V	D4 3900	D3 4300 D2 4810		
42892	HD 222368 = i Psc	03 ^h 34.8	+5° 05	20 ^h 54	21 ^h 04	01 ^h 58E	05° 31	Fe/ND4	5-55
42893	"	"	"	21 ^h 14	21 ^h 27	01 ^h 35E	05° 31	Fe/ND4	8-8-8
42894	HD 210334 = AR Lac	22 ^h 04.6	+45° 15	21 ^h 35	23 08	01 ^h 36W	+45 31	Fe/ND4	8-8-8
42895	HD 216159 = HR 8703	22 ^h 48.1	+16° 19	23 ^h 13	0 ^h 20	02 ^h 04W	+16° 45	Fe/ND4	8-
42895T	Spot Coll for 42893-95,				15 min @	15V D4 4810	7V D1 Hα 4550		
42895F	Focus Test						Net-28/ FeI-15/ (FeI-10sec)		
42896	HD 215182	22 38.3	+29 42	00 34	00 48	2 43W	+30 08	Ne/-	15-15-15
42896F	Focus Test					3 ^h W	"	Fe/-	15-15
42897	HD 217782	22 58.0	+42 13	01 04	01 24	2 58W	+42 40	Fe/ND4	5-55
42898				01 28		W	+	"	5
42897F1	Focus Test							Fe/-	7-7
42897F2	Focus Test							Fe/-	7-7

Exp. Mtr.

Spectr. Temp.

Spectr. Temp.

Spectr. Temp.

Spectr. Temp.

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Spectr. Temp.

Spectr. Temp.

Spectr. Temp.

Spectr. Temp. 56°F Dome Temp./Hum. $55^{\circ}\text{F}/90\%$ Transparency Conditions 51 Hazy Focus 60R

174

Spectr. Temp. 55°F Dome Temp./Hum. $50^{\circ}\text{F}/100\%$

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
21 179	200/149	1"	6.8- 77	FO GI	RC	G12/.68	BS	IIaOE	B	eph/EVANO		vsl str
25 175							"					ok
45-5	40/28	1"	4.6	FTV	RC	G12/.68	BS	IIaOE	B	sh vel		vsl str
2-8-92	40/65	1"	"	"	RC	G16/.70	RS	098E	B	"	no dust	vsl str
1-8-92	200/400	1"	7.3	G5	RC	G16/.70	RS	098E	B	RS CVn/Fgi		fine
1-8-92	200/314	1"	6.7	gK1	RC	G16/.70	RS	098E	B	RS CVn/Fgi	no dust	fine
1-8-92							"				48/10 sl. str D3 should be used	
1-8-92					RC	G16/.70	*RS	"	B	Set 60R Temp 55°F	* with V Filter no dust	
1-15-92	40/100		3.8	G811? + F?	RC	G24/.9	*RS	TV-Nh	B			vsl wk
1-15-92					RC	G12/.68	51.4 70M	IIaOE	B	Set 60R Temp 55°F	13R	sl recd
5-5-92	200/105	1"	5.2	A2	RC	G12/.68	BS	IIaOE	B			fine
5-5-92	200/				"	"	"	"	B		cloud border	
7-7-92					RC	G12/.68	BS	IIaOE	B	Set 60R Temp 55°F		vsl blue
7-7-92					"	"	"	"	A	"	"	blue

Date _____

Date _____

Doc-e 05108-30038

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[illegible]

Spectr. Temp. 43°F

Dome Temp./Hum. 41°F / 84%

Transparency Conditions scattered cloud 176

Focus 105R

43° > 10K

Spectr. Temp.

Dome Temp./Hum. 35°F / 99%

135R For 40.5 Lythick

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
101- J-2					RC	G12/.68	BS	IIa OE	B	43°F Temp Set 105R		cent Blue
101- A 5.5-5	200/130	3"	5.82 ^m	F2 Ia	RC	G12/.68	BS	IIa OE	B	Cyph/Evan		Fine
101- 5.5-5	100/182	3.5"	6.8-7.7	F0- GI	RC	G12/.68	BS	IIa OE	B	Cyph/Evan	some cloud Thick cloud @ 2055	Fine
480	I guess I used wrong Diaphragms, unless there's just " (yes ALL DS are wrong)											
101- 5.5-5					RC	G12/.68	BS	IIIa J	B	set to 130R Temp 40.5°F		or Right on
101- 5.5-5					"	"	BS	"	B	Set to 80R Temp 40.5°F		cent Blue

Date Mon-Tues Oct 9-10 Observers Tu-Kai

Emulsion Batches:
Huo-e 05108- 30038

[illegible]

Spectr. Temp.

Dome Temp./Hum. 50°F / 70%

Dome Temp./Hum. 48 / 803

Transparency Conditions . . . *Cloudy soon after opening.*

2. 90R for 49°F I think

178

Comparison Type/Filter Exp.		Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe/-	20-2					RC	G12/152B	BS	IliaJ	B	Set 105R	} but BS is loose	cent s/r.
Fe/-	20-1					"	"	BS	"	B	Set 55R		cent B
Fe/-	20-1	20/14	—			RC	G12/152B	BS	IliaJ	B	Solar	Set 90R (maybe some Fe in stellar)	Five some Fe
1	7-7	20/14				"	"	"	"	B	Program		Five
11	7-7	200/31*	1"	6.0	G2II	"	"	"	"	B	Unexposed cut short	much cloud / decided ant	s/wt? x
Oct 8-9 Oct 9-10 Pluto Dev D19 8min @ 67.5°F <u>Oct 9</u>													

179

Emulsion Batches:
8th 68°F ... H&D-e 05108 - 30038 191

Date Tues-Wed Oct 10-11/78 Observers Ty-Kai-John (now student)-

[illegible]

Spectr. Temp. 60°F

Dome Temp./Hum. 60°F/80%

Transparency Conditions Very good

Focus 50R

180

Spectr. Temp. 56°F

Dome Temp./Hum. 50°F/100%

Comparison Type Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5-5-5	20/14				RC	G12/688	BS	II-o-e	B	Solar - Ray		fine
5-5-5	200/120	<1"	6.0	G2V	"	"	"	"	B	"		focus? Fine
5-5-5	100/3	<1"	7.9	G5				"			Aborted - Wrong Star.	
5-5-5	100/240	<1"	7.9	G5	RC	G12/688	BS	"	B	"	thin cloud	Few wk Fine
5-5-5	100/250	2"	7.1	G0	"	"	"	"	B	"		Few wk vs/wk
5-5-5	100/250	1"	7.2	G2	"	"	"	"	B	"	broken 2 pcs in same slot unfortunately	Fine
5-10-5	100/130	<1"	6.4	G2	"	"	"	"	B	"	58°F	Fine
5-5-5	100/202	<1"	8.75	G3I	"	"	"	"	B	"	getting foggy * both labelled = 9 weaker one prob 42909	Few wk slwk

Spectr. Temp.

Dome Temp./Hum. 60°F / 90%

Transparency Conditions..... *Leavy cirrus*.....

182

Dome Temp./Hum.

Comparison Type/Filter Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5175-10 02 4300	10/110	4"	4.7	F2	RC	612/.688	BS	IIa-Oe	B	Solar Kouf	TE/focus problem with focus?	vs 500
5175-10 02 4300	200/24	3"	5.75	G5	RC	612/.688	"	"	B	"	clashed out - cut	sl. wk
5175-10 02 4300					"	"	BS	IIa-Oe*	B	set 50R Temp 57.5°F	sho	vs 500
5175-10 02 4300					"	"	70M	"	B	"	2R	red

Date 15/16 Oct 1978 Observers KK/Tn

MaTe.....

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[illegible]

Spectr. Temp. $+44.5 \rightarrow 45^\circ F$

Dome Temp./Hum. 74.3°F/84%

Transparency Conditions clouds.....

Focus

Spectr. Temp.

Dome Temp./Hum.

184

Comparison Type/Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Focus	Remarks	Quality
Fe/-	20-20		+45°	F	Set	+115R	RC	G12/68	BS	III-J-E	B	Tight Fit	76R	cent 5/5.1
"	"		"	"	"	"	"	"	"	"	C	Tight Fit	152R	wk stellar? cent 5/5.1
"	"		"	"	"	"	"	"	"	"	A	norm Fit	133R	cent 5/5.1
Fe/-	"				Set	85R	"	"	70μ	"	B		33R	cent 5/Red
Fe/4000	5-5				"	"	"	"	70μ	II40-E	B		ST-comp = -2μ	

Mon Tues

Observers *But-Tu-(John Reid)*

Emulsion Batches:
 $8\frac{1}{2}$ 67° Π_{20-E} 30038-10108
 $4\frac{1}{2}$ 67° Π_{2-F}

[illegible]

Transparency Conditions Excellent.....

Focus . . . 110R

Spectr. Temp. $+36.5^{\circ}\text{F}$

Dome Temp./Hum. 32°F / 80%

186

[illegible]

Tues-Wed

Date .. Oct 17-18 / 1978 ..

Observers *BUT-In. & Dominique*

Emulsion Batches:

8^m Dig 68^o

Jul-e 30038- 10108 20 181
 Jul-e* 30038 - 16108

II-0-e* 30038 - 16108

[illegible]

Transparency Conditions *Cruddy*.....

Focus . . . 110R . . .

Dome Temp./Hum. 38°F / 95%

188

Comparison Type/Filter		Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fel/HRA	8-8		40/-28	1.2"	4.15	K3II	RC	G12/68	70u	I _a O-E	B	std vel	#3 Exp motor filter posn	exp fine
Fel-	1-8			43°F set 110R		"	"	"	BS	I _a O-E	B			sl red
FEl/WDAH	8-8		40/-25	1"	"	"	"	"	BS	I _a O-E	B	std vel	#2 Exp motor posn	fine
D2 WID	6-6		400/250	<1"	6.71	B9	RC	G12/68	BS	I _a O-E	B	A _p MR	cloud half time	sl str faint?
Fel-	8-8			Temp +41°F set 110R		RC	G12/68	BS	I _a J	B		After adjustments		sl red
FEl/WDAH	4-12		100/36'	1"-2"	7.85	A0	RC	G12/68	BS	I _a O-E*	B	A _m MR cloud ↓		wk
														Call this an Exp test. Curious if this one turns out "sl wk"
RS & BS alignment tests														

4th 680 $\frac{II}{III} \frac{2F}{2J}$ 31058-17108.

189 Date Oct 19/20 1978 Observers KK - BRS

[illegible]

Spectr. Temp. 46°F

Dome Temp./Hum.

Transparency Conditions *clouds*.....

Focus **110 R**

Spectr. Temp.

Dome Temp./Hum. 44° / 98%

190

[illegible]

191

Date Oct 20/21 1978
Fri/SatObservers Ly - BTS - KK5^m D19, 67°F

Emulsion Batches:

098-02 30038-20108

17 126

098-02 30038-20108 (3^{hr} + vac)

17 150

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Sec.
42921F1	focus test							Ne/-	20-20		
42921	HD 201091	21 2.4	+38 15	19:19	19:30	00 03 W	+38 38	Fe/ND Ne/-	4-4-4 5-5-5	800	150
42922	HD 219113	23 08.3	+02 08	19:57	20:28	01 04 E	+02 32	Fe/ND Ne/-	4-4-4 5-5-4	200	110
42923	HD 219113	23 08.3	+02 08	20:34	21:02	00 31 E	+02 30	Fe/ND Ne/-	4-4-4 4-4-4	800	111
42924	HD 219113	"	"	21:07	21:42	00 10 W	"	Fe/ND Ne/-	4-4-4 5-5-5	800	114
42925	HD 219113	"	"	21 46	22:17	00 44 W	"	Fe/ND Ne/-	4-4-4 5-5-5	800	115
42926	HD 219113	"	"	22 23	23:00	01 26 W	"	Fe/ND Ne/-	4-4-4 5-5-5	800	110
42926T	calibration plate for 42921-42928			15min@		15V D3 4810	7V D1 Hx	7V D2 5450			
42927	HD 219113	23 08.3	+02 08	23:07	23:46	02 14 W	02 33	Fe/ND Ne/-	4-4-4 5-5-5	800	110
42928	HD 219113	"	"	23:51	00:36	03 04 W	"	Fe/ND Ne/-	4-4-4 9-5-5	800	115
42929	HD 219113	"	"	00:42	01:23	03 57 W	"	Fe/ND Ne/-	4-4-4 5-5-5	800	96
42929T	calibration plate for 42929-			15min@		15V D3 4810	7V D1 Hx	7V D2 5450			
42929F1	focus test							Ne/-	20-20		
42929F2	focus test							Ne/-	10-10		
42930	HD 22468	03 31.6	00 16	01:58	03:35	01 40 W	00 31	Fe/ND Ne/-	8-8-8 8-8-8	800	380

Spectr. Temp.

Focus.....130

Spectr. Temp.

Spectr. Temp. 52°FDome Temp./Hum. $50^{\circ}\text{F}/93\%$Transparency Conditions *Photometric*.....Focus 130R

Spectr. Temp.

Dome Temp./Hum.

 $A220\text{F}$ Tour - Percy.

192

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Ne/- 20-20					RC	665/.5	^{V filter} +RS	09802e	A	test	set 110R, reset 130R	
Fe/ND 4-4-4	100/50		v=5.2	K5V	"	"	"	"	"	Std Vel	61 Cgg A	fine dust
Ne/- 5-5-5	200/110	2"	9.0	G5	"	"	"	"	"	RSCM - FGE		* v slake dust
Fe/ND 4-4-4	300/111		9.0	G5	"	"	^{V filter} +RS	09802e	A	"		
Ne/- 4-4-4	100/114		"	"	"	"	"	"	C	"	forgot to put dark slide back in when removed	black
Fe/ND 4-4-4	100/115		"	"	"	"	"	"	A	"		
Ne/- 5-5-5	100/110		"	"	"	"	"	"	C	"		
Fe/ND 4-4-4	100/110		"	"	"	"	"	"	A	"		
Ne/- 5-5-5	100/115		"	"	"	"	"	"	C	"		
Fe/ND 4-4-4	100/96	2-3	"	"	"	"	"	09802e*	A	"		
Ne/- 5-5-5												
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Date _____

Observers

Ly-BTS

098.02c...30038-21008

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[illegible]

Focus

Spectr. Temp.

Exp. Mtr. Se

22-2108

Transparency Conditions . . . *photonic* . . .

Focus

Spectr. Temp. 48°F

Dome Temp./Hum. 36F/100%

194

[illegible]

195

Date Oct. 21/22 1978 Observers Ly-BTS
SAT/SUN

Emulsion Batches:

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.....

Spectr. Temp.

Focus 10

Spectr. Temp.

[illegible]

Exp. Mtr.	Se
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99	99
100	100

800/

Spectr. Temp. ... 60°F

Focus 108 R

Spectr. Temp.

Dome Temp./Hum. 45° F. / 76%

Dome Temp./Hum.

Transparency Conditions *hazy, partly cloudy*

Sat tour ~160 visitors 196
Partly cloudy

[illegible]

197

1978

Date 23/24 OCT. MON/TUE Observers FQI-BTS

Emulsion Batches:

4 1/2 68°

098-02-c. 30038 - 21108 22 182

Spectr. Temp. .

Focus 192

Spectr. Temp.

[illegible]

Transparency Conditions CLEAR

Focus 142 R

Spectr. Temp. 37°F

Dome Temp./Hum. *12°/91%*

• THIN CLOUD AFTER MIDNIGHT

198

Companson		Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe/NO 4.4-5.5	500/120	5-6"	V = 7.3	G5	RC	G65/1.5	V filter + RS	098-02-e	A		RS CVn		fine
Fe/NO 4.4-5.5	500/120		V = 7.3	G5	RC	G65/1.5	V filter + RS	098-02-e	C		RS CVn		fine
Fe/NO 4.4-5.5	500/120		V = 7.3	G5	RC	G65/1.5	V filter + RS	098-02-e	A		RS CVn	RELOADED BY MISTAKE 2ND Fe Arc EXP. ✓	
Fe/NO 4.4-5.5	500/120		V = 7.3	G5	RC	G65/1.5	V filter + RS	098-02-e	C		RS CVn		fine
Fe/NO 4.4-5.5	500/115		V = 7.3	G5	RC	G65/1.5	V filter + RS	098-02-e	A		RS CVn	thin cloud	fine arc on star
Fe/NO 4.4-5.5	500/722		V = 4.95	G5III	RC	G16/1.70	RS	098-02-e	C		RS CVn	thin cloud	
Fe/NO 4.4-5.5	500/		V = 4.95	G5III	RC	G16/1.70	RS	098-02-e	A		RS CVn	CLOUDS	
No focus plate?													
* Dust? on all RS plates													

199

1978

Date 24/25 OCT TUES/WED Observers Fgi - Bts

Emulsion Batches:

4 1/2 6815 09802e ... 30038-2310817, 183

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
42939	HD 222107	23 ^h 32.7	+45° 55'	20 ^h 36	20 ^h 48	0 ^h 53 E	+46° 19'	Fe/NO Ne/-	8-8-8 8-8-8
42940	HD 222107	23 ^h 32.7	+45° 55'	20 ^h 50	21 ^h 02	0 ^h 39 E	+46° 19'	Fe/NO Ne/-	8-8-8 8-8-8
42941	HD 3712 ^{LCAS}	00 ^h 34.8	+55° 59'	21 ^h 10	21 ^h 15	1 ^h 30 E	+56° 22.6	Fe/NO Ne/-	8-8-8 8-8-8
42942	HD 4502	00 ^h 42.0	+23° 43'	21 ^h 23	21 ^h 49	1 ^h 01 E	+24° 07'	Fe/NO Ne/-	8-8-8 8-8-8
42943	HD 4502	00 ^h 42.0	+23° 43'	21 ^h 51	22 ^h 09	0 ^h 42 E	+24° 07'	Fe/NO Ne/-	8-8-8 8-8-8
42944T	calibration plate for 42939 -				15min @	15V D3 4810	7V D1 Hx	7V D2 5450	
42944	HD 219113	23 ^h 08.3	+02° 08'	22 ^h 30	22 ^h 52	1 ^h 35 W	+02° 31.8	Fe/NO Ne/-	8-0-4 5-5-5
42945	HD 219113	23 ^h 08.8	+02° 08'	22 ^h 55 ^m	23 ^h 27	2 ^h 06 W	+02° 31.8	Fe/NO Ne/-	4-4-4 5-5-5
42946	HD 219113	23 ^h 08.8	+02° 08'	23 ^h 32	00 ^h 09	2 ^h 53 W	+2° 31.8	Fe/NO Ne/-	4-4-4 5-5-5
42947	HD 219113	23 ^h 08.8	+02° 08'	00 ^h 13	00 ^h 47	3 ^h 30 W	+2° 31.8	Fe/NO Ne/-	4-4-4 5-5-5
42948	HD 19845	3 ^h 06.4	+47° 43.7'	00 ^h 59	02 ^h 00	0 ^h 52 W	+47° 58.6	Fe/NO Ne/-	4-4-4 5-5-5
42949	HD 19845	3 ^h 06.4	+47° 43.7'	02 ^h 14	03 ^h 27	2 ^h 11 W	+47° 58.6	Fe/NO Ne/-	4-4-4 5-5-5
42950	HD 65626	7^h 54.5	157° 33'	03^h 44			157° 16.5	Fe/NO Ne/-	8-8-8 8-8-8
42949F									

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mir.

See

23-2358
17, 1.83

Spectr. Temp. 42°F
Focus 156 R
Spectr. Temp.

Dome Temp./Hum. 50°/89%
Dome Temp./Hum. 50°/97%

Transparency Conditions THIN CLOUD /
PHOTOMETRIC / CLOUD
200

Companion Type/Filter Exp.	Exp. Mir.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe/NO 8-8-8 14/- 8-8-8	40/70		V= 3.8	KO	R.C	G16/.70	RS	098-02-c	A	RS CVn		
Fe/NO 8-8-8 14/- 8-8-8	40/70		V= 3.8	KO	RC	G16/.70	RS	098-02-c	C	RS CVn		
Fe/NO 8-8-8 14/- 8-8-8	40/70		3.34	KOII	RC	G16/.70	RS	098-02-c	A	STD VBL	BROKEN 2 PIECES	
Fe/NO 8-8-8 14/- 8-8-8	100/200		V= 4.30	KO	RC	G16/.70	RS	098-02-c	C	RS CVn		
Fe/NO 8-8-8 14/- 8-8-8	100/200		V= 4.30	KO	RC	G16/.70	RS	098-02-c	A	RS CVn		
Fe/NO 8-8-8 14/- 8-8-8	300/120		V= 7.3	G5	RC	G65/.5	RS	098-02-c	C	RS CVn		vsl wh
Fe/NO 8-8-8 14/- 8-8-8	300/120		V= 7.3	G5	RC	G65/.5	RS	098-02-c	A	RS CVn		
Fe/NO 8-8-8 14/- 8-8-8	300/120		V= 7.3	G5	RC	G65/.5	RS	098-02-c	C	RS CVn		
Fe/NO 8-8-8 14/- 8-8-8	300/120		V= 7.3	G5	RC	G65/.5	RS	098-02-c	A	RS CVn		vsl wh
Fe/NO 8-8-8 14/- 8-8-8	300/120		V= 8.1	G2	RC	G65/.5	RS	098-02-c	C	RS CVn		
Fe/NO 8-8-8 14/- 8-8-8	300/100		V= 8.1	G2	RC	G65/.5	RS	098-02-c	A	RS CVn	cloud	
Fe/NO 8-8-8 14/- 8-8-8	400/		V= 6.40	G10	RC	G16/.7	RS	098-02-c	C	RS CVn	cloud/s	
											Focus should be 123R	

201

Date 25/26 Oct 1978 Observers KK/Tn

Emulsion Batches:

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[illegible]

Spectr. Temp. 52° F.....

Dome Temp./Hum. 52°F 100% ++

Transparency Conditions 202

Focus 130R

Spectr. Temp.

Dome Temp./Hum.

[illegible]

203

Date Oct 27-28, 1978 Observers Tor - Tn

Emulsion Batches:

~~Ilad.C.~~ 30038-16108 20 171
~~Ilad.C.*~~ 30038-18108 29 178
 EWE

Spectr. Temp.

Focus.....

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Sec
42950F	Focus Test							Fe/-	8-8		
42950	HD 186791	19 41.5	+10 22	18 34	18 36	00 56W		Fe/ND4	23-3	40/13	F
42951	HD 212943	22 22.8	+04 12	18 44	19 03	1 17E	+4 36	"	2-2-2	200/53	2
42951T	Spot Coln for 42950-51				15 min @	D4 15V 3900	D3 4300	D2 4810			
42951F	Focus Test							Fe/-	25-5		
42952	HD 17327	2 41.8	+64 14	22 12	22 51	1 51E	+64 25	Fe/ND4	24-2	400/72	2
42953	HD 17706	2 45.4	+64 02	22 59	00 18	0 27E	+64 15	Fe/ND4	24-2	400/73	3
✓42953T	Spot Coln for 42952-56				15 min @	D4 15V 3900	D3 4300	D2 4810			
42954	HD 17443	2 42.8	+67 25	00 22	02 15	1 33W	+67 37	Fe/ND4	24-2	400/73	2
42955	HD 17327	2 41.8	+64 14	02 24	03 00	2 19W	+64 25	Fe/ND4	24-2	400/73	2
42956	HD 35410	5 19.4	-00 59	03 10	03 23	0 07W	-1 00	Fe/ND4	2-4-2	200/50	
42957	HD 28363	4 23.3	+15 57	03 34	04 42	2 22W	+16 01	Fe/ND4	6-6-6	400/234	3
✓42957T	Spot Coln for 42957				15 min @ 15V	D4 3900	D3 4300	D2 4810			
42957F	Focus							Fe/-	16-16		

Spectr. Temp. 47°F Dome Temp./Hum. 48°F/H=80% Transparency Conditions Cloudy - Thence/
 Focus 145R 160R Later
 Spectr. Temp. Dome Temp./Hum. 40°F/H=100% 204

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10/108 201 18/108 113 Eng	10-8-8				RC	G12/168	BS	Ilad-e	A	Set 145R Temp 47°F	cent blue	vs/rel
Fe/108 3-3	40/13	1.2"	4.15	K3U	RC	G43/1.5	BS	"	A	std Vel		vs/wk
10/108 2-2	200/53	2	5.9	K0	RC	G43/1.5	BS	Ilad-e	A	std Vel	cloud	vs/wk
02 4810								"				
10/108 5-5					RC	G43/1.5	BS	"	A	Temp 48°F	Set 145R	cent blue
Fe/108 24-2	400/72	2-4"	7.8	B8	RC	G43/1.5	BS	Ilad-e	A	Su Cas Ass.	51 haze Focus 160R Temp 50°F	vs/wk
Fe/108 24-2	400/73	3"	8.9	B5II	RC	G43/1.5	BS	"	C	Su Cas Ass.		vs/wk
02 4810								"				
Fe/108 24-2	400/73	2-3"	9.0	B9	RC	G43/1.5	BS	"	A	Su Cas Ass.	broken (2 pieces)	vs/wk
Fe/108 24-2	400/73	2"	7.8	B8	RC	G43/1.5	BS	"	A	Su Cas Ass.	haze	Focus? Fine
Fe/108 24-2	200/50		5.9	K0	RC	G43/1.5	BS	"	C	Std. Vel		fine
Fe/108 6-6	400/234	3"-4"	7.1	F8	RC	G12/168	BS	Ilad-e	A	Hyad. Bin.	Set 140	Fine
								"				
Fe/108 16-16					RC	G12/168	BS	Ilad-e	A	Set 140 Temp 45°F	cent blue	

206

Comparison	
Type/Filter	Exp.

Date OCT 29/30 SUN/MON Observers But Jn

6th 6⁸⁰ ... Дел-е... 30038-29108 20 182

[illegible]

Transparency Conditions Fine

Focus 160R

Spectr. Temp. $38^{\circ}f$

Dome Temp./Hum. 28.5 / 100.3

208

Companso Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10/-	Comp. in mag. 6x4 used 110x4				RC	G12/68B	BS	ILF	A		} Both mounted Firmly	
10/-					"	"	"	"	C			
10/-	9-9	0/25	2.4	4.15	K3 II	RC	G12/.68B	BS	IIA OE	A	STD VEL	fine
10/-	6-6	00/251	2-3	7.00	A1	"	"	"	A	Am MR		Fine
10/-	420							"				
10/-	6-6	00/125		7.34	AO	"	"	"	A	Ap MR		
10/-	6-6	00/125	2	7.50	AO	"	"	"	A	Ap MR		
10/-	6-6	00/74		7.85	AO	"	"	"	A	Am MR	CLOUD	
10/-	10-10							"	A	38°F 50/160R		cent's 180R

Date Dec 30/31 1978.....

Observers

Rue - La Dominique + Jean

Emulsion Batches:

Emulsion Dates:

..	Tab-e	30038-28108	17	150
..	Tab-e ⁴	30038-29108	18	16 ⁶

[illegible]

Spectr. Temp. *47°F*Dome Temp./Hum. *45.7/88.7*Transparency Conditions *sl. hazy*Focus *160R*

210

Spectr. Temp.

Dome Temp./Hum. *196.6*

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>5-1</i>					RC	G12/68	BS	IIaF	A	<i>(piece of paper still in KK)</i>	<i>show nuff</i>	<i>emulsion bled - useless</i>
<i>1-1</i>	<i>200/127</i>	<i>2</i>	<i>5.8</i>	<i>F2IIa</i>	RC	G12/68	BS	IIa0-e	A	<i>Ceph/Evans</i>		<i>vsl str</i>
<i>1-6</i>	<i>200/127</i>	<i>1.2"</i>	<i>6.7</i>	<i>F0-G1</i>	"	"	"	"	A	"		<i>vsl str</i>
<i>1-6</i>	<i>0/253</i>	<i>3"</i>	<i>4.64</i>	<i>F7II</i>	"	"	"	"	A	<i>Std Vel</i>		<i>vsl str</i>
<i>1-3</i>	<i>5/10</i>	<i>3-5</i>	<i>4.64</i>	<i>F7II</i>	RC	G43/5	BS	IIa0-e*	A	<i>Std Vel</i>		<i>fine</i>
<i>1-3</i>	<i>300/140</i>	<i>3"</i>	<i>9.0</i>	<i>B9I</i>	"	"	"	IIa0-E*	A	<i>SUCas Assoc</i>	<i>vslow</i> <i>Thought something wrong</i> <i>but restarted after</i> <i>checking system.</i>	<i>no number on plate</i>
<i>1-2</i>	<i>200/140</i>	<i>2-4</i>	<i>9.1</i>	<i>A2</i>	"	"	"	"	A	<i>SUCas Assoc</i>		<i>vsl wk</i>
<i>1-2</i>	<i>200/140</i>	<i>2-3</i>	<i>8.8</i>	<i>B5I</i>	"	"	"	"	A	<i>SUCas Assoc</i>	<i>Reversed</i> <i>Fe Arc in stellar - too bad</i>	<i>sl. no good</i>
<i>1-2</i>	<i>200/82</i>	<i>2</i>	<i>7.77</i>	<i>B8I</i>	"	"	"	"	A	"		<i>fine</i>
											<i>end spect: temp</i> <i>47°F</i>	

211

TUES/WED

Date OCT 31 / NOV 1, 1978

Observers

Fgi - Tn

Emulsion Batches:

5^m 69°F 098-02-e... 30038-25/08

*098-02-e... 30038-31/08

Spectr. Temp. ...

Focus 1.0

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
42977F	FOCUS							Fe/-	20-20
42977	HD 219113	23 ^h 08.3	+02° 08	17 ^h 57	19:02	1 ^h 48 E	+2° 31.4	Fe/NDx4 Ne/-	4-4-4 5-4-5
42978	HD 219113	23 ^h 08.3	+02° 08	19:03	19:55	0 ^h 55 E	+2° 31.4	Fe/NDx4 Ne/-	4-4-4 5-5-5
42978T	Spot Calc for 42977-83.			15 min @	15V D3 4810	7V D1 Hx	7V D2 5450		
42979	HD 219113	23 ^h 08.3	+02° 08	19:56	20 57	0 07 W	+2° 31.4	Fe/NDx4 Ne/-	4-4-4 5-5-5
42980	HD 219113	23 ^h 08.3	+02° 08	20 59	21:55	1 ^h 05 W	+2° 30.9	"	4-4-4 5-5-5
42981	HD 219113	23 ^h 08.3	+02° 08	21:57	22:50	2 ^h 01 W	+2° 31.1	Fe/NDx4 Ne/-	4-4-4 5-5-5
42982	HD 219113	23 ^h 08.3	+02° 08	22:52	23:51	3 02 W	+2° 31.2	Fe/NDx4 Ne/-	4-4-4 5-5-5
42982T	Special Spot Calc for Rm (To test develt asymmetries)				15 min @	7V D3 5450	7V D2 5450	7V D2 5450	(*)
42983	HD 22468	3 ^h 31.6	+0° 16	00:00	01:24	0 11 W	+0° 28.4	Fe/NDx4 Ne/-	8-8-8 8-8-8
42984	HD 22468	3 ^h 31.6	+0° 16	01:26	02:30	1 17 W	+0° 28.2	Fe/NDx4 Ne/-	8-8-8 8-8-8
42984T	Spot Calc for 42984-86.				15 min @	15V D3 4810	7V D1 Hx	7V D2 5450	
42985	HD 41593	6 ^h 01	+15° 34	02:38	04:52	1 ^h 10 W	+15° 30.8	Fe/NDx4 Ne/-	8-8-8 8-8-8
42986	HD 65626	7 ^h 54.5	+57° 33	04:57	06:10	0 33 W	+57° 16	Fe/NDx4 Ne/-	8-8-8 8-8-8
42986F	Focus Test							Fe/-	16-16
				(*) There is no	4550 filter, 5450 presumably.				

Exp. Mtr. ...

Spectr. Temp. ...

Spectr. Temp. ...

Spectr. Temp. ...

Spectr. Temp. ...

Spectr. Temp. ...

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Spectr. Temp. ...

Spectr. Temp. ...

Spectr. Temp. ...

Spectr. Temp. ...

Spectr. Temp. ...

25108
31108Spectr. Temp. 51°F Dome Temp./Hum. 48°F / 70%

Transparency Conditions THIN CLOUDS

Focus 160R

212

Spectr. Temp. 42°F Dome Temp./Hum. 36°F / 96%

Aurora by 2h

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe/- 20-23					RC	G65/.5	RS	IIaF	A	SET 160R	$T=51^{\circ}\text{F}$ s/b ke	
Fe/- 4-4.5	300/134	3"	$V=7.3$	G5	RC	G65/.5	RS	098-02E	A	RS CVn	with V Filter & 2 Expos K	* v sl str comp sl str
Fe/- 4-4.5	300/121		$V=7.3$	G5	RC	G65/.5	RS	098-02-e	C	RS CVn		v sl str
Fe/- 4-4.5	800/120	3-5"	$V=7.3$	G5	RC	G65/.5	RS	098-02-e	A	RS CVn		v sl str
Fe/- 4-4.5	300/125	2-3	"	"	"	"	"	"	C	"		v sl str
Fe/- 4-4.5	800/121		$V=7.3$	G5	RC	G65/.5	RS	098-02-c	A	RS CVn		v sl str
Fe/- 4-4.5	300/121	2-3"	$V=7.3$	G5	RC	G65/.5	RS	098-02-c	C	RS CVn		
(X)	no change from last exp of 42978T							098-02-e			very clear	
Fe/- 8-8.5	100/200	2-3	$V=6.01$	G0I	RC	G16/.70	RS	098-02-e	A	RS CVn	$T=46^{\circ}\text{F}$ (SPECTROGRAPH) #4 mask	* str.
Fe/- 8-8.5	40/80	2-4	$V=6.01$	G0I	RC	G16/.70	RS	098-02-e	C	RS CVn		v sl str
							11	*				
Fe/- 8-8.5	80/160	3-1"	$V=7.23$	dKO	RC	G16/.70	RS	098-02-e	A	RS CVn		v sl str
Fe/- 8-8.5	80/165	1-2"	$V=6.40$	G0	RC	G16/.70	RS	098-02-e	C	RS CVn		exp fine focus sl poor
Fe/- 16/16					"	"	"	IIaF	A			cent sl red

Spectr. Temp. 47°F.....Dome Temp./Hum. 52°F/76%...Transparency Conditions THIN CLOUD.....Focus 150R.....

214

Spectr. Temp. 40°F.....Dome Temp./Hum. 37°F/90%...

Comparison Type/Filter Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1A-250					RC	G12/68	BS	IIaF	A			s/red
Se-100	To check for that shift noted on plate #42975				"	"	"	"	C			vs blue?
1A-250	10/25	1"	4.15	K3II	RC	G12/68	BS	IIaF	C	STD VEL	#2 Exp mask in	blue end box/focus Fine
1A-250	80/50	1-2"	7.00	A1	"	"	"	"	A	A _m MR		vs str
1A-250	100/125	"	7.58	A2	"	"	"	"	C	"	blue end out focus	Fine
1A-250								"			Some cloud	
1A-250	200/128	"	6.7	A2	RC	G12/68	BS	IIaF	A	"		
1A-250	100/250	2"	7.85	A0	"	"	"	"	C	A _m MR		
1A-250	100/205	2-5"	7.51	A1	"	"	"	"	A	A _m MR		vs str focus?

30038 17/75

Spectr. Temp. 49. °F

Dome Temp./Hum. 45°F/90%

216

[illegible]

Date Fri/Sat. 3/4 Nov '78 Observers Bl_n - Tr

8^m 6^{so} .. II.O.-e .. 30038-30108 .. 19 178

Spectr. Temp.

[illegible]

Spectr. Temp.

Dome Temp./Hum. 46° / 100% +

Transparency Conditions *Hazy-Foggy*.....

218

[illegible]

20108980

51° / 95°

429.55 / 509

135R

• • • • •

48 / 100%

220

[illegible]

221

Date Sun/Mon 5/6 Nov 78 Observers Rm - Th

Emulsion Batches:

8^m 68° Il. 0.0 30038-30108 19 182
440.0* 1.7058-04108

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43009	HD 186791	19 ^h 41.5	+10° 22	17 ^h 37	17 ^h 44	00 ^h 40 W	+10° 34.5	FE NDx4	9-9
43010	HD 163506 = 89 Her	17 ^h 51.4	+26° 4	17 ^h 49	18 21	03 08 W	+26° 03	Fe NDx4	6-6-6
43011	HD 186688 = 50 Cyg	19 40.8	+29 01	18 ^h 28	21 ^h 00	03 58 W	+29.13	"	6-6-6
43011T	Spot Cal's for 43009 - 13.				15 min @ 15V	D4 3900	D3 4300	D2 4810	
43012	HD 16893	2 ^h 37.4	+67° 23	21 ^h 13	0 ^h 07	0 ^h 05 W	+67 41	Fe NDx4	2-2-2
43013	HD 3712 = α Cas	00 ^h 34.8	+55° 59	0 ^h 12	0 ^h 15	02 ^h 18 W	+56° 23	Fe NDx4	3 -2
43013F1	Focus Test					02 ^h 28 W	+56 24	Fe/-	6-6
43013F2	"					2 50 W	+22	Fe/-	16-16
43013F3	"					"	"	Fe/-	16-16
43013F4	"					"		Fe/-	16-16
43013F5	"							Fe/-	16-16
43013F6	Full Aperture					comp - stellar		Fe/-	8-16

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

Sec

40/23 1

40/25 1

40/115 2

40/115 2

40/115 2

40/115 2

40/115 2

40/115 2

40/115 2

40/115 2

40/115 2

40/115 2

40/115 2

40/115 2

40/115 2

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40/115 2

40/115 2

40/115 2

40/115 2

40/115 2

40/115 2

40/115 2

40/115 2

Transparency Conditions . . . *sl / Hazy* 222

Type/Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
FE N.A.-9-9		40/23	1"	4.15	K3II	RC	G12/.68	B5	IlaOE	A	std vel		poor focus
Fe 4-6-66		40/25	1-2"	5.82	F2Ia	RC	"	"	IlaOE	A	Cyph/Evano		v sl sm p. focus
-	6-6-66	200/115	2"	6.8-7.7	F0-G1	"	"	"	"	A	"	broken in 2 equal pieces thin & bent at times	
R Oxy	2-2-80	800/154	1"-2"	~9.1	A2	"	G43/.5	B5	IlaOE	A	SU Cao Assoc	cloud	v sl wk p. focus
Fe MAX	3-2	40/11	2"	3.34	K0II	"	"	"	IIOE	A	std vel		exp fine comp w/ p. focus
Fe/-	6-6						"	"	IIfF	A	Temp 159°F	set 135R	
Fe/-	16-16						G12/.68	"	IIfF	A	"	"	no stellar
Fe/-	16-16						"	"	"	C	"	"	no stellar
Fe/-	16-16						"	"	"	A	"	"	no stellar
Fe/-	16-16						"	"	"	A	"	"	v sl red
Fe/-	8-16						"	"	"	C	"	"	v sl blue?
							BC left in						

Date Tues-Wed Nov 7-8 Observers But-Tn

Emulsion Batches.

..I-0-e	17058-04118	26 208
..O98-02E	30038-02118	2A 195

[illegible]

Spectr. Temp. 46°F Dome Temp./Hum. $48^{\circ}\text{F}/60\%$ Transparency Conditions *Excellent* 224Focus $145R$ Spectr. Temp. 37°F Dome Temp./Hum. $38^{\circ}\text{F}/92\%$

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10/10				BC	G12/.68	BS	IIA0	A		46° SA 145R	
20/10				BC	"	"	"	A		"	good
7680A											wk
40/23*	2"	4.15	K3II	BC	G12/.68	BS	IIA0E	A	STD VEL Temp 46°F set	145R	fine
00/110*	3-5"	7.00	A1	"	"	"	"	A	Am MR		str
00/100*	3-4"	7.50	A0	BC	G12/.68	BS	IIA0E	C	Ap MR	*Note Exp meter slide may not have been exactly in focus prior to end	sl str
80/146	"	V=6.01	GOV	RC	G16/.78	RS	09800E	A	RSC Vn-Fgi	#2 detent - hence our long exps? #4 All in for Exp meter Temp 38°F	sl str dual
80/145	"	V=6.01	GOV	RC	G16/.78	RS	098-02E	C	RSC Vn-Fgi		"
80/145	"	V=6.01	GOV	RC	G16/.78	RS	098-02E	A	RSC Vn-Fgi		
200/90	3-2"	7.26	A3	BC	G12/.68	BS	IIA0E	C	Am MR	#2 Exp meter slide	sl str red end poor focus
200/90	2"	6.61	A0	BC	G12/.68	BS	IIA0E	A	Ap MR		str
			"	"	"	"	IIAF	C	Temp 37°F		sl poor focus very blue

225

1978

Date Wed-Thurs Nov 8-9 Observers Eni-Bts

Emulsion Batches: 5th D19 098-02-c 30038-02118 22188

Spectr. Temp.

FOCUS.....

Spectr. Temp.

Exp. Mtr. 'Se

[illegible]

118 22 188

Spectr. Temp. **480F**
 Focus **145R**
 Spectr. Temp. **480F**

Dome Temp./Hum. **43°F/84%**
 Dome Temp./Hum. **43°F/89%**

Transparency Conditions **thin cloud, patchy..**
WINDY
226

Comparison
Type/Filter Exp.

Fe/- 12-12
 Fe/- 12-8
 Fe/- 12-8
 Fe/- 12-8
 Fe/- 12-8
 Fe/- 12-8
 Fe/- 12-8
 Fe/- 12-8

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		* 7.36	B3	RC	G16/1.7	RS	09802e	A			good
40/14		V= 2.62	K2III	RC	G16/1.70	RS	09802e	C	STD VEL	WRONG STAR too good? could be HD 186587?	wk
40/77		V= 2.62	K2III	RC	G16/1.70	RS	09802e	A	STD VEL		fine
200/300		7.72	50	RC	G16/1.70	RS	09802e	C	RS CVn		sl wk flow?
200/301		V= 6.0	60I	RC	G16/1.70	RS	09802e	A	RS CVn		fine
							09802e				
200/141		V= 6.0	60I	RC	G16/1.70	RS	09802e	C	RS CVn	clouds	sl wk
Fe/- 12-8				T= 480F	G16/1.70	RS	11	A		? was must change between exp's? too good to be true	good w sl blue center

227

Date Nov 9/10 Thurs/Fri Observers KK - Gu - Bts / Bln - Bts

Emulsion Batches:

5^m 67° IV-Nh 13117
8^m 68° HIE - 021-01
8^m 68° II₂₀

18 132

24 196

[illegible]

Spectr. Temp. 52°FDome Temp./Hum. $50^{\circ}\text{F}/83\%$Transparency Conditions *Cloudy / Clear / Cloud*.....Focus 130Spectr. Temp. 48°FDome Temp./Hum. $46^{\circ}\text{F}/90\%$

228

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Ne/- 24-25	40/157	?	-10	G2V	RC	G16/.2	RS	IV-Nh	A	Std Vel.	Clouds	complete sl wke
Ne/- 25-30	40/200	4"	2.9	G8II +F	RC	G16/.2	RS	IV-Nh IV-Nh	C	Asn Spex KK	Clouds/Clear	comp wke star good v wke uneven
Ne/- 30-35	40/245	4"	2.0	F8I	RC	G16/.2	RS	IV-Nh	A	Polakis	clear	IR sl wke
Ne/- 35-40	40/241	4"	2.0	F8I	RC	G16/.2	RS	IV-Nh	C	Polakis	clear	exp fine
Ne/- 40-45	40/201	4"	2.0	F8I	RC	G16/.2	RS	HIE film	A	Polakis	clear	ok exp sl str smudges
Fe/ 45-50	200/125		7.38	B30	RC	G12/.68	BS	IIa-OE	A	Sp Bin-Blu		
Fe/ 50-55	200/125		7.41	B0	RC	G12/.68	BS	IIa-Oe	C	Sp Bin-Blu	Cloud	
Fe/ 55-60	200/125	3	6.51	B30	RC	G12/.68	BS	IIa-OE	A	Sp. Bin-Blu	Some Cloud 480 F	focus? sl str v. sl. blue

Comparison Type/Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe-12-12									098-02-e	A			v sl blue
Fe-12-12		20/35	6"8"	2.39	K5 III	RC	G16/1.7	RS	098-02-e	C	Std Vel		sl str
Fe-12-12		100/200		V=5.80	GD	RC	G16/1.7	RS	098-02-e	A	RS CVn		exp fine focus or flex?
Fe-12-12									098-02-e				
Fe-12-12		100/		V=6.4	GD	RC	G16/1.7	RS	098-02-e	C	RS CVn	CLOUDS	
Fe-12-12									098-02-e	A		53°F	v sl blue

1978

7^m 67^{1/2} • Emulsion Batches:
Tab-e/17058-04/18

Date _____

Nov 15/16. Wed / Thur

Observers

Rm-Th / Bls-Ta...

[illegible]

Spectr. Temp. 38°F.....

Focus 170R

Spectr. Temp. 38°F

Dome Temp./Hum. +36°F/80%

Dome Temp./Hum. 35°F / 77%

Transparency Conditions . . . *Same Cloud*

Weak duress - low in north

232

[illegible]

233

Thurs - Fri

Date Nov. 16-17/78..... Observers .. KK-Th-Gu/.....

Emulsion Batches:

7^m 68° IIa.0-e 17058-07118
 5^m 68° IIIa.1-e 31058-45118
 5^m 68° 0.98-02e 30038-31108

Spectr. Temp.

Focus.....

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Sec.
43039F	Focus Test							Fe/-	5-5		
43039	HD 186791 α Oph	19 41.5	+10 22	17 24	17 30	01 09 W		Fe/NA	8-8	40/33	3
43040	HD 159561	17 30.3	+12 38	17 41	17 50	3 41 W	+12 34	Fe/-	5-5-5	40/80	2
43041	HD 172167 α Lyr	18 33.6	+38 41	17 55	17 58	2 46 W		Fe/-	7 1/2-7 1/2	40/80	
43042	α Lyr "	18 33.6	+38 41	18 01	18 03	2 51 W		Fe/-	5-5	40/80	
43043	HD 215182	22 38.3	+29 42	18 12	19 00			Fe/-	10-10-10	40/120	
43043T	Spot Cal'n for	43039, 43, 50.		15 min @ 15V		D4 D3 3900 4300	D2 4810				
43044	HD 215182	22 38	+29 42	19 10	19 40	00 24 W		Ne/-	30-30 -30	40/150	V
43045	α UMi A HD 8890	1 22.6	+88 46	19 46	20:05	2 55 E		Ne/-	30-30 -30	40/212	
43046	α UMi A HD 8890	1 22.6	+88 46	20 12	20 25	2 34 E		Ne/-	30-30 -30	40/200	
43046T	Spot Calibration		15 min @ 7 1/2 V			D3 D3 D3 7080 7680 8460					
43047	α UMi A	1 22.6	+88 46	20 28	20 47	2 11 E		Ne/-	30	40/259	
43048	HD 1326	0 17	+43 50	20 59	21 48	0 56 W		Fe/4e Ne/-	5-5-5 4-4-4	40/60	
43048T	Spot Cal'n for	43040-42, 49, 51, 52.		15 min @ 15V D4		15V D4 15V D4 3900 4300 4810					
43049	NGC 7662	23 21.2	+41 59	22:50	23 34	03 34 W					
43049T	Spot Cal'n for 43048			15 min @		D3 15V 4810	7V D1 Hk	7V D2	5450	400/34	

2118
45118
31108

Spectr. Temp. $+41^{\circ}\text{F}$ Dome Temp./Hum. $39^{\circ}\text{F}/80\%$ Transparency Conditions *Good*
 Focus *reset to 170R - should be same*
 Spectr. Temp. Dome Temp./Hum.

234

Companso Type/Filter Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe/- 5-5					BC	G12/68B	RS	IIIaD-e	A	Set 170R	$T=41^{\circ}\text{F}$	cent blue
Fe/40 8-8	40/23	3"			"	"	"	"	A	std vel	clear	good focus fine
Fe/- 5-5-5	40/80	2-3'	2.2	A512	"	"	"	IIIaJ-e	A	Asm Spec KK		good? fine
Fe/- 7-7	40/90		0.03	A02	"	"	"	"	C	Std		str
Fe/- 5-5	40/80		"	"	"	"	70M	"	A	Std		str
Fe/- 10-10	40/120		2.9		"	G8/0.2	70M	IIIaD-e	C	Asm Spec KK		fine
								"				
Fe/- 30-30	40/154	$V=2.7$		G8E +F7	RC	G16/.2	RS*	HIE	A	Asm Spec KK	*V Filter using #2 Exp meter	
Fe/- 30-30	40/212		2.0	F8I	"	"	"	"	A	Polaris		
Fe/- 30-30	40/206		"	"	"	"	"	"	A	-		fin
								HIE				
Fe/- 30-30	40/209		2.0	F8I	RC	G16/.2	RS	HIE	C	Polaris	Clean	fine
Fe/- 44-44	40/60		$V=8.07$	M1V	RC	G65/.5	RS	098-02e	A	Asm Spec	$+39^{\circ}\text{F}$	fine
								IIIaJ-e				
	400/34	exp meter balance?			RC	G12/.5	Beam splitter	IIIaJ-e	C	Planetary	some cloud	exp good guiding fair
								09802e				

pg #2 235

Date Nov. 16/17 Thurs. Observers Bln / Tu

10th 68^o

Emulsion Batches:

..HIE.....

.....

.....

[illegible]

Transparency Conditions 236

[illegible]

[illegible]

239

Tues - Wed

Date Nov. 21-22/78 Observers But-Th

Emulsion Batches:

Emulsion Batches:
7th 67 1/2° IlaOe... 17058-07118 23 202

Spectr. Temp.

Focus.....

Spectr. Temp.

[illegible]

Transparency Conditions *A Few clouds*.....1

Focus 190 R

Spectr. Temp. 29°F

Dome Temp./Hum. /

240

[illegible]

241

Sat-Sun

Date Nov 25-26/78 Observers ... Bln-Tn / Fgi-Tn

Emulsion Batches:

7^m 68° ... Ilao-e 17058-07118 22 21
 5^m 68° ... 098-02E 30038-31108 34 18
 ... too old?

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43058F	Focus Test					2 ^h E	+5°	Fe/-	12-12
43058	HD 222368	23 34.8	+5 05	17 21	17 39	01 59 E	+	Fe/NOx4	10-5
43059	HD 224559	23 53.7	+9 51	17 42	19 53	00 03 E	+46 19	Fe/NOx4	5-5-5
43059T	Spot Calc for 43058-60,64				15 min @ 15V	3900	4300	4810	
43059F1	Focus Test, rot _g test for 150μ slit					01 20W	+12°	Fe/-	8-8
43059F2	Focus Test					"	"	Fe/-	16-16
43059F3	" " rot _g test for 150μ slit					"	"	Fe/-	8-8
43059T1	Full Aperture Comp for 150μ slit					"	"	Fe/NOx4	15
43060	HD 34369	05 11.8	+33 39	22 35	00 10	1 ^h 06 E	+33 46	Fe/NOx4	5-5-5
43061	HD 22468	03 ^h 31.6	+0° 16	00 21	02 15	2 ^h 41 W	+0° 33	Ne/-	8-8-8
43061T	Spot Calc for 43061-64.				15 min @ 15V	4810	5450	Fe/NOx4	8-8
43062	HD 23838	3 ^h 43.1	+44° 40	02 19	03 48	4 ^h 02 W	+44° 55	Ne/-	8-8-8
43063	HD 65626	7 ^h 54.5	+57° 33	03 54	06 31	2 ^h 33 W	+57 18	Fe/NOx4	8-8-8
43064	HD 81797 (Hya)	9 ^h 22.7	-8° 14	06 37	06 42	1 ^h 11 W	-8° 35	Ne/-	12-12

Spectr. Temp. $+33^{\circ}\text{F}$Dome Temp./Hum. $72^{\circ}\text{F}/75\%$ Transparency Conditions .. *Clearing at dusk*Focus 1.80R $+15^{\circ}\text{F}/92\%$ Spectr. Temp. $+30^{\circ}\text{F}$ $+20^{\circ}\text{F}$ $+21^{\circ}\text{F}$ AT CLOSEDome Temp./Hum. $72^{\circ}\text{F}/85\%$ Good Aurora at 1^{st} EST 242

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe-12-12								IIaF	C			cent blue
Fe-10-5	40/20	$3^{\circ}5'$	4.84	F7II	BC	G12/68B	BS	IIaO-e	A	std vel		Fine
Fe-10-5	200/68	$4^{\circ}6'$	6.5	B3	BC	G12/68B	BS	IIaO-E	C	Py *	Var? from BScat Too slow - exposed too	Fine
Fe-10-5								IIaO-E			BC was removed & reinstalled	
Fe-8-8	Forgot to change	Comp lens			BC	G12/68B	BS	IIaF	C	set 200R	$+30^{\circ}\text{F}$	
Fe-16-8					"	"	BS	"	C	set 200R	broken on unloading	but gradient OK
Fe-16-8	Lens changed				"	"	150m	"	A	"		cent sl blue
Fe-16-8	Some lens				"	"	"	IIaO-e	C	"		by 3x ~ v s fr
Fe-16-8	200/83	$3^{\circ}6'$	5.82° 6.99	A _p	BC	G12/68	BS	IIaO-E	A	Sp. Bin-Bla	* Extremely bad at times Focus = 200R	gng effect Fine
Fe-16-8	80/168	$3''$	V= 6.01	GOV	RC	G16/1.7	RS	098-02-e	C	RS CVn	Focus To 215R Temp $+26^{\circ}\text{F}$	Focus blue end Fine
Fe-16-8								"				
Fe-16-8	80/161	$2-3$	V= 5.80	GO	RC	G16/1.7	RS	098-02-e	A	RSCVn		Fine
Fe-16-8	80/142	$3''$	V= 6.40	GO	RC	G16/1.7	RS	098-02-e	C	RS CVn	Dec readout failed	sl wkt. focus Fine
Fe-16-8	20/32	$2-3$	3.40	K4 III	RC	G16/1.7	RS	098-02-e	A	std vel		Fine

243 Sun/Mon

Date Nov 26/27 78

Observers *Rm-Th*

7^m 680

Doc. 17058 - 22118

Spectr. Temp.
Focus... 29.
Spectr. Temp.

Blue // // // //

Spectr. Temp.

Dome Temp./Hum.

Dome Temp./Hum.

Transparency Conditions .. very .. hazy ..
some thin cloud.

246

[illegible]

Spectr. Temp. 36°FDome Temp./Hum. 33°/84%Transparency Conditions cloudsFocus 175R

248

Spectr. Temp.

Dome Temp./Hum.

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe/- 1					BC	G12/.68	BS	III LoJ	A			
Fe/- 5					"	"	"	"	C		gap shows	
Fe/- 5					"	"	"	"	A		box eroded	
Fe/- 5					"	"	"	"	C		ellipsoid upper gap?	
					"	"	"	"	C		both comps = 2	
					"	"	"	"	A		w klower	
Fe/- 15					"	"	150M	"	C		wt comp 150	
Fe/- 15					"	"	150M	"	A		500/600	
Fe/- 15					"	"	BS	"	A		"	

249 SAT-Sun

Date 1978 Dec 9-10..... Observers Tn - PK.....

6^m 69°

Emulsion Batches:

W-J-e 31058 -07128
 D-o-e 17058 -22118

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43066T	Attempt to get HD 222368 - kept anyway for slit Rot ⁿ measurement							Fe/-	5-5
43066	HD 222368	23 34.8	+5 05	18 27	18 55	00 11 W		Fe/NOV4	5-5-5
43067	HD 219449	23 10.7	-9 38	19 02	19 32	1 13 W	-9 16	h	5-5-5
4306FT	Spot Coln for 43066-69.					15 min @ 15V		D4 D3 D2 3900 4300 4810	
43068	HD 3627	0 34.0	+30 19	19 35	19 46	0 05 W	+30 42	Fe/NOV4	5-5-5
43069	HD 6288	0 58.7	+0 50	19 50	21 50	1 44 W	+1 12	"	5-5-5

Spectr. Temp. 2400
 Focus... 240
 Spectr. Temp. 2400

Exp. Mtr. Seis

80/32 4

80/42 3

80/49 3

200/68 3

Spectr. Temp. $+29^{\circ}\text{F}$Dome Temp./Hum. $20^{\circ}\text{F}/77\%$ Transparency Conditions . *Some cloud - gusty*Focus ... *240R*Spectr. Temp. $+24.5^{\circ}\text{F}$Dome Temp./Hum. $17^{\circ}\text{F}/88\%$

250

Comparison
Type/Filter Exp

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G12/68B	120μ	II ₀ -e	A	marked with X		
80/32	4"	4.64	F7V	"	"	"	II ₀ -e	A	std vel	* sl. str comp str used only BS mask old #2	focus off
80/42	3-5'	5.3	K0 III	"	"	BS	II ₀ -e	A	waterloo Prog	"	v. sl str focus?
							II ₀ -e				
80/49	3"	4.6	K3 III	BC	G12/68B	BS	II ₀ -e	C	waterloo Prog	BS mask	fine exp
80/68	3-5"	6.4	A8 III	"	"	"	"	A	"	" cloud	sl. str

Date 1978 Dec 10/11 SUN/MON Observers Fgi-Tn

6^m 69°

Emulsion Batches:

4a0-c 17058-22118

Spectr. Temp.

Focus... 260

Spectr. Temp.

[illegible]

Spectr. Temp. $\pm 24^{\circ}\text{F}$Dome Temp./Hum. $18^{\circ}\text{F}/85\%$ Transparency Conditions $\text{Fine by } 18^{\circ}$Focus 260R

252

Spectr. Temp.

Dome Temp./Hum.

Companson Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10-15-55	400/137	3"	6.5	B3	BC	G12/68B	BS	II ₀₀ -e	A	P _y prog		s/str
10-15-55	40/13	4"	4.64	F7I	BC	G12/68B	BS	II ₀₀ -e	C	STD. VEL	Blue filter clouds	v s/str
22/18	Spec tem 34°F											
10-18-55					B.C.	G12/68150 μ		II ₀₀ -E	B		focus setting "0"	
"					"	"	"	"	"		moving in O increasing black ⁺	
"					"	"	"	"	"		moving in O increasing red ⁺	
10-18-55					BE	G12/68	150 μ	II ₀₀ -F	B		34°F 10 turns increasing red	
"					BC	"	"	"	"		" " "	
10-18-55					"	"	120 μ	"	"		33° 2 more turns inc red	Big Grad. inst

253

7:30 PM

Emulsion Batches:

Date Dec 12 / 78 Observers Tu

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43071F7	Hartman Focus Test					0 ^h		Fel- 18-18	
F8	Focus Test							Fel- 18	
F9	"	"	"					Fel- 18-18	
F10	"	"	"					Fel- 18-18	
F11	Focus Test after							Fel- 16-16	
F12	" "							Fel- 16-16	
F13	" "							Fel- 16-16	
Dec 13 / 78									
F14	Focus test							Fel- 16-16	
F15	"								
F16	"							Fel- 8-8	
T1	Comp. test							Fel- 2 60	

Spectr. Temp.
Focus 0
Spectr. Temp.

Exp. Mtr. Se

Temp changed

Temp 35°

"

Temp 37° F

Spectr. Temp. $+34^{\circ}\text{F}$

Dome Temp./Hum.

Transparency Conditions

Focus $O \rightarrow 45R$

254

Spectr. Temp.

Dome Temp./Hum.

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe/-18-18	Focus changed from 0 → +45R		*		BC	G12/68B	150μ	IIaF	B		* Taking out backlash by decreasing Red's	
Fe/-18					"	"	"	"	B		discarded	
Fe/-18-18					"	"	"	"	B			
Fe/-18-18					"	"	"	"	B			
Fe/-16-16	Temp 35°F				"	"	"	"	B		} prob unreliable Temp due to use of hot light Source	
Fe/-16-16	"				"	"	"	"	B			
Fe/-16-16	"				"	"	"	"	B			
Fe/-16-16	Temp 37°F				"	"	"	"	B			
Fe/-18-18					"	"	"	"	"		improved	
Fe/-18-18					"	"	"	IIaO	"		should be <u>117R at 37°F</u>	
Fe/-18-18					"	"	"	IIaO	"			

255

Emulsion Batches:

A^u 69°F ..098.02E...30038-07128

Date ... Dec 13 ... 1978 Observers Tn-Rm

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	So
43071T2	Spot Cal'n Uniformity test			15 min @	(7V D2 Top end) (5450 Bottom End)	(7V D2 rotated 180°) (5450 in middle)					Top on plate Top exposure
43071T3	Spot Cal'n	n	n	15 min @	(5V D2 Top End) (5450 mid)	(10V D2 Bottom) (5450 Bottom)					
43071F17	Hartman Focus Test		around	19 ^h			-	Fe/-	16-16		Temp: 37°F
43071F18	Repeat n	n						Fe/-	16-16		"
43071F19	Hartman Focus Test			0 ^h :10		Dome Temp +30°F		Fe/-	7-7		Temp: 33°F
43071F20	"	n		0:15				Fe/-	7-7		

Companson Type/Filter Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
09802E	"Top" on plate refers to orientation in unexp Box							09802E			} These plates placed in Exp Box with "Top" up. Should be developed <u>Totally</u> .	
09802E	Top exposed 1st.							09802E				
Fg-16-16	Temp +37°F set 115R				BC	G12/168B	150μ	Ila F	B		Focus changed from +60R → 115R based on	
Fg-16-16	" "		"		"	"	"	"	B		an average shift tot. 19μ of center blue on plate ± 43071 F16	122 R 136 R
								Note KK			* Emulsions of 4x5 098's facing you when label of Exp Box is facing you.	
											In just keeping track of	
Fg-7-7	Temp +33.8°F set 128R				BC	G12/168B	150μ	Ila 0-E	B		all orientations of the plate.	122R
Fg-7-7	" "		"		"	"	"	"	B			131R
											* But what does this mean? all our holders have long edge horizontal. Plates may age quite a bit before new ones can be made !!	

257 Fri-Sat
15-16

Date 15 Dec 78 Observers KK/Tnr-Tn

Emulsion Batches:

7th 69^o ID 017058 - 10128
ID 017058 - 10128

[illegible]

Spectr. Temp. $+36^{\circ}\text{F}$Dome Temp./Hum. $132^{\circ}\text{F}/82\%$Transparency Conditions $\text{Fine} - \text{sl. haze}$Focus 121R

258

Spectr. Temp.

Dome Temp./Hum. $130^{\circ}\text{F}/98\%$

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe/2	Temp 35°F			*	BC	G12	150 μ	IIaO	B	* Prob set +120R as I found it. Should be 129R		good
Fe/1									B		wrong comp lens!	
Fe/8-8	$+36^{\circ}\text{F}$	Set 121R			BC	G43/58	BS	"	B		should be 193R	
Fe/No. 4 3-4	40/10	1"	3.34	KO II	BC	G43/5	BS	IIaO-e	B	Std. Vel		rs/sr
Fe/1 2-4-2	800/131	2-3"	9.12	B9 V	BC	G43/5	BS	"	B	SU Cas. Abs.		fine
								"			exposed through back	
Fe/1 7-7	$+36^{\circ}\text{F}$	Set 121R			BC	G12/68B	BS	IIIaO-e	B		should be 111R	
Fe/No. 2-4-2	800/146	2"	8.97	A2	BC	G43/5	BS	IIaO-e	B	SU Cas Abs.		fine
Fe/No. 2-4	200/17	~2"	7.97	B8 III	BC	G43/5	BS	IIaO-e	B	SU Cas Abs	Temp $+36^{\circ}\text{F}$ stopped by pier	
Fe/No. 2-4-1	200/44	~2"	5.2	F9	BC	G43/5	BS	IIaO-e	B	Std Vel		rs/sr
Fe/No. 5-5-3	200/121	1-2"	6.77	F5	BC	G12/68B	BS	IIaO-e	B	Tnr Hyades Bin	cloud some	
Fe/1 1-1	Temp $+35^{\circ}\text{F}$	Set 121R						IIIaO-e	B		should be 136R	

#1
259 Sun/Mon

Date Dec 17/18 78

Observers Rm - Tn

2nd 6th

Emulsion Batches:

Il. 0-0 170.58-10.128 30 210

Spectr. Temp. 145
Focus 145
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter Exp.	Exp. Mtr.	See
43078	HD 186688 = SUG 19 ^h 40.8		29° 01	17 ^h 20	18 13	3 55W	+29 16	F _{NDX4} 5-10	771	2
43078T	Spot Calc for 43078-80.				15 min @ 15V	D4 3900 D3 4300	D2 4810			
43078F1	Focus Test for G12							F ₀ /- 15-15	Se-145R	
43078F2	Full Aperture Exp = Test For Stellar vs Comp shift for BS							F ₀ /- 15-15	Se-145R	
43079	HD 22484	03 31.8	+00 05	18 54	19 ^h 13	02 55E	+00° 23	F ₀ /NDX4 8-8	200/36 3-	
43080	"	03 ^h 31.8	"	19 ^h 21	19 ^h 39	02 29E	"	F ₀ NDX4 8-8	200/49 4	
43080F1	Full Aperture Test of Stellar vs Comp shift for slit							F ₀ /- 8-8	Se-145R	
43080F2	Focus Test for G12							F ₀ /- 18-18	"	
43080F3	Focus Test for G43 (mistake both exp in comp must mode)							F ₀ /- 5-5	Se-6 32	
43080F4	"							F ₀ /- 5-5		
43080F5	"							F ₀ /- 5-5		
				Dec 17	All developed in D19 @ 68°F for 9 mins					Tn

Spectr. Temp. $+32^{\circ}\text{F}$Dome Temp./Hum. $+28^{\circ}\text{F}/74.6$ Transparency Conditions *occasional cloud*.....Focus *145R*.....*snow 260*Spectr. Temp. 33°FDome Temp./Hum. $+30^{\circ}\text{F}/85.6$

Comparison Type/Filter Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe/- 5-1	300/71	2-4"	6.8- 7.7	F0- G1	BC	G12/68B	BS	IIc0E	B	Cph/Rm	<i>gusty - then cloud</i>	<i>slwk</i>
								IIc0-E				
Fe/- 5-5	Set 145R	Temp	33°F		BC	G12/68B	BS	IIaJ	B			<i>cent s/red</i>
Fe/- 5-5	Set 145R	"	"	"	"	"	BS	IIaJ	B			
Fe/- 8-9	200/56	3-4"	5.2	F9	"	"	BS	IIc0-e	B	Test of	<i>Clear throughout</i>	
Fe/- 8-9	200/49	4"	"	"	"	"	120μ	"	B	Slicer vs 120μ	<i>mainly clear some thin problems with comp cloud</i>	
Fe/- 8-9	Set 145R	Temp	33°F	"	"	"	120μ	IIaJ	B		<i>cloud</i>	
Fe/- 8-9	"	"	"	"	"	"	120μ	"	B			<i>cent vs/Red</i>
Fe/- 5-5	Set to 220R	Temp	33°F	"	"	G43/15	120μ	"	B	Call 1 to 1/2 aperture test for	<i>stellar vs comp shift</i>	
Fe/- 5-5	"	"	"	"	"	G43/15	BS	"	B			<i>center on</i>
Fe/- 5-5	"	"	"	"	"	"	120μ	"	B			<i>center on</i>
										Note - If anything, the conditions were slightly worse for Exp #4380 than for #43079. Hard to guide by TV since slits are still out of focus. Used same Exp meter BS mask for both exps		

261 Date 18 DEC '78 MON Observers Bl-Tu

Emulsion Batches:

5 ^m	180	100-1-e	31058-07128	31 27
6 1/2 ^m	680	100-1-e	17058-10128	23 212

[illegible]

Spectr. Temp. $+24.5^{\circ}\text{F}$

Dome Temp./Humt. 17/.....

Transparency Conditions *clear by 04*

262

Aurora at 0230

[illegible]

Date DEC. 18/19.. MON/TUES Observers But - Tr.....
78

6^m 68° II.0-e. 17058-18128 23 188

* 7th 66°

.....

Spectr. Temp. .
Focus.....175
Spectr. Temp.

Exp. Mtr.	See
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
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95	95
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97	97
98	98
99	99
100	100

42/95 4.

Te

40/40-5

44/60 5

400/120 2

400/107 2

40/11

Set 2

— 321

18128 23 188

... +18°F / 72°F

High Cirrus - Then Fine

175R

Temp.

$+7^{\circ}F/97^{\circ}$

Frosty

264

[illegible]

265

Date Dec 23/24 Observers MYB - BTSSat/Sun

Emulsion Batches:

Ilaoe...17058-18128

Plate No.	Object	R. A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43090F1	Focus test							Fe/-	5-5
	F2 Focus test							Fe/-	5-5
43090	51 Peg ^{HD217014} ^{BS 8729}	22 ^h 52.6	+20° 14	1744	1930	2 23 W	+20° 36	Fe/ND	5-5
43091	HD10307 BS 483	1 35.7	+42° 07	1948	2206	2 17 W	+42° 28	Fe/ND	5-5
43092	HD10307 BS 483	1 35.7	+42° 07	22 12	2300	3 11 W	+42° 28	Fe/ND	4 5
43092F1	Calibration Plate 43090 - 43092			15 min @ 151		D4 3900	D3 4300	D2 4812	
43092F1	focus test							Fe/-	5-5
2F2	focus test							Fe/-	5-5

Spectr. Temp. .

Focus....136

Spectr. Temp. .

Exp. Mu. See

50/200

82/200

133/200

Spectr. Temp. 34°F.....

Dome Temp./Hum. . 32° F. / 85%

Transparency Conditions Hazy 266

Focus . . . 130R

Spectr. Temp. ...32°F.....

Dome Temp./Hum. 29° F/90%

Clouded Owl.

[illegible]

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions... *Cloudy* 268

268

[illegible]

269

Thurs - Fri

Emulsion Batches:

Ilco - 17058 - 24128

Date DEC 28/29 Observers Tnr - Tn

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43094F1	Focus Test							Fe/-	25-25
F2	Focus Test							Fe/-	5-5
43093	HD 9138	1 24.9	+5 38	17 31	17 48	1 29 E	+5 57.9	Fe/NDX4	3-3-3
43094	HD 17706	2 45.4	+64 02	17 56	20 52	0 11 W	+64 17.1	Fe/NDX4	3-3-3
43093T	Spot Cal for 43094 - 43101			15 min @ 15V		D4 3900	D3 4300	D2 4810	
43095	HD 30869	4 46.2	+13 29	21 15	22 15	0 24 E	+13 36	Fe/NDX4	5-5-5
43096	HD 28363	4 23.3	+15 57	22 22	23 48	1 33 W	+16 05	Fe/NDX4	5-5-5
43097	HD 28226	4 22.1	+21 24	23 58	0 26	2 11 W	+21 34	Fe/NDX4	5-5-5
43098	HD 27383	4 14.2	+16 18	0 29	2 25	4 17 W	+16 28	Fe/NDX4	5-5-5
43099	HD 93244	10 40.9	+6 54	2 33	3 57	0 37 E	+6 28	Fe/NDX4	5-5-5
43100	HD 127617	14 27.3	+19 13	4 11	6 48	1 32 E	+18 51	"	5-5-5
43101	HD 124877	14 11.1	+19 42	6 52	6 52	1 10 E	+19 16	"	7-8
43101F	Focus Test							Fe/-	15/15

Spectr. Temp.

Focus

Spectr. Temp.

Exp. Mtr. So

80/20

400/52

200/62

200/61

80/25

400/25

400/99

80/60

40/12

Spectr. Temp. $+23^{\circ}\text{F}$ Dome Temp./Hum. $+16^{\circ}\text{F} / 14.638$ Transparency Conditions $\dots$ Fine $\dots$ s/haze $\dots$ H.C.Focus $\dots$

note 94 F152s 93093 developed Temp At.

Spectr. Temp. $+1.3^{\circ}\text{F}$ Dome Temp./Hum. $+5^{\circ}\text{F} / 9.070$

270

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Feb 2-2					BC	G8/-25	120m	IIa J	A		Set 140R Temp $+23^{\circ}\text{F}$	* center vs/Fur Red?
Feb 5-5					BC	G43/1.5	BS	IIa O-e	B		Set 270R Temp $+23^{\circ}\text{F}$	center vs/Red
Feb/Mar 3-3	80/20	3'	6.2	K4	BC	G43/1.5	BS	IIa O-e	B	std. Vel.		sl wk comp wkt
Feb/Mar 3-3	400/52	3"	8.89	B5 IV	BC	G43/1.5	BS	IIa O-e	B	Su Cas Ass.	* Extra 5 sec exp. arc 90° adjusted str Hyades 10 sec screw Fo Arc repaired	sl wk vs/Red Fine
Feb 5-5	200/62	1-2"	6.77	F5	BC	G12/1.68	BS	IIa O-e	B	Thr Hyades Bin.	Temp 20°F Set 210R	sl wk Fine
Feb/Mar 5-5	200/61	1-2"	7.12	F8	BC	G12/1.68	BS	IIa O-e	B	"		"
Feb/Mar 5-5	80/25	1-2"	5.99	Am	BC	G12/1.68	BS	IIa O-e	B	"		re wkt Fine
Feb/Mar 5-5	400/125	1-2"	7.44	F8 I	BC	G12/1.68	BS	IIa O-e	B	"	$+17^{\circ}\text{F}$	Fine
Feb/Mar 5-5	400/99	3-2	7.29	KO	BC	G12/1.68	BS	IIa O-e	B	Mistaken - meant to do HD 97937		sl wk
" 5-5	800/60	3-4"	8.2	Be	"	"	"	"	B	High lat. Re-Thr	$+15^{\circ}\text{F}$ Set 225R	re wkt wk
" 7-8	40/12		1.2	K20p	"	"	"	"	B	std vel		re wkt vs/wkt
Feb - 15/15					"	"	"	IIa J-e	B	Set 225R	Temp $+13^{\circ}\text{F}$	Center Red

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions . *Some cloud - gusty*

272

1 unit = 10 divisions on old wheel.
Increasing numbers moves plate away
from camera mirror

243 Thurs / Fri
Date Jan 4/5 1999

Date Jan 4/3 1979 Observers RH-12/B14-15

Emulsion Batches:

II-o-e	12/08-28/28	New 22/92
III-e	3/058-19/28	

WaJe 31058-19128

[illegible]

Spectr. Temp. $+15^{\circ}\text{F}$Dome Temp./Hum. $+10^{\circ}\text{F}/(80)\%$ Transparency Conditions *some thin cloud - OK*.....Focus ... 520... *For 6.43*.....Spectr. Temp. $+10^{\circ}\text{F}$Dome Temp./Hum. $+15^{\circ}\text{F}/85\%$ ** Note - How do New IIaOs shape up? 274*

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>28128 No 19/28</i>	800/125	3-1"	8.78	B5V	BC	G43/.5	BS	IIaOE*	B	SU Coo Pass	Focus 520 Hg Em	no Fe? fine Ex
<i>4-8</i>	80/11		5.1	B3	"	"	"	"	B	B Std. Vel.	<i>Halo's on some spots??</i>	<i>Same?</i>
<i>F/- 4.55 150 DA 480</i>	40/70	1-2	4.07	B2II	BC	G12/.68	BS	IIIa Fe	B	Sp Bin-Blk	Focus 513 Temp $+13^{\circ}\text{F}$	Fe vs/wk Fine
<i>Fe/- 5.35</i>	40/55	1-2	3.51	O95Z	BC	G12/.68	BS	"	B	Sp Bin-Blk		Fe vs/wk s/wk
<i>F/- 4.65</i>	800/240	F3-2"	7.91	dc5	BC	G12/.68	BS	IIa-OE	B	Sp Bin-Blk	Focus 514 Temp $+12^{\circ}\text{F}$	Fe s/wk s/wk
<i>x 1.5</i>	400/74	2"	7.20	<i>9.65+ A2</i>	BC	G12/.68	BS	IIa-OE	B	Sp Bin-Blk		Fine
<i>F/- 16.6</i>	400/120	2-3	6.30	A0	BC	G12/.68	BS	IIa-OE	B	Sp Bin-Blk		Fine
<i>" 7.9</i>	40/12	2	1.29	K2III	BC	G12/.68	BS	IIa-OE	B	Std. Vel.		s/wk
<i>Fe/- 2.9</i>					"	"	BS	IIa I	B	Sec 514 $+10^{\circ}\text{F}$		cont. Ex
<i>-9.9</i>					"	"	"	"	A	"		no Comp Ex
	Jan 5	IIaOs	D 19	7min	@ 68°F							
		IIaJs	s 2 O98s	5min	@ 68°F							

275 Sat-Sun

Emulsion Batches:

Ilade 12108-28128 16 2 02 11-11

Date Jan 6-7 Observers BK-Tn

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Spectr. Temp.
43110	HD 222368	23 34.8	+5 05	17 31	17 42	0 50 W		Fe/No. 6-6	400/10	51
43111	HD 3165	0 29.8	+36 17	17 50	19 17	1 29 W	36 45	" 6-6	400/150	51
43111T	Spot Calc for	43110-118			15 min @ 15V	3900	4300	4810		
43112	HD 13994	2 11.0	+57 04	19 25	20 20	0 50 W	57 26	Fe/No. 6-6	200/70	51
43113	HD 22912	3 35.7	+71 18	20 30	22 20	1 22 W	71 34	" 6-6	400/150	51
43114	HD 57044 A	7 14.5	+73 16	22 28	0 05	0 32 E	73 08	" 6-6	400/120	51
43115	HD 71152	8 10.7	+24 52	0 20	1 10	0 29 E	24 38	" 11-11	400/100	51
43116	HD 71663	8 23.5	-2 11	1 14	2 14	0 35 W	-2 24	" 11-11	200/100	51
43117	HD 101177	11 33.5	+45 40	2 26	3 54	0 56 E	+45 15	" 11-11	200/70	51
43118	HD 74874	8 41.5	+6 47	3 58	4 30	2 30 W	6 32	" 11-11	200/50	51
43118F1	Focus Test							Fe/No. 11-11	200/50	51
F2	"	"						Fe/No. 11-11	200/50	51

Spectr. Temp. $+15^{\circ}\text{F}$

Dome Temp./Hum. 41.0° F 90%

Transparency Conditions *Excellent so far*

276

[illegible]

277

Date JAN 8/9 MON - TUES 79 Observers But Th.

Emulsion Batches:

Emulsion Batches:
 57 098-02E 30038-07128 29192

[illegible]

Spectr. Temp. $+15^{\circ}\text{F}$

Dome Temp./Hum. $+16^{\circ}\text{F}/90.7$

Dome Temp./Hum.

Transparency Conditions 5/ Hqzu

278

[illegible]

Date JAN 9/10 TUES WED 79 Observers But-Tu

Emulsion Batches:
DuO-e 12108-06019 16195

Focus

Spectr. Temp.

Exp. Mtr. So

11

Dome Temp./Hum. 46°F/95%

II₁De Dev Jan B D19 7min @ 68°F R₁₅

281

166-2102

Emulsion Batches:

H002-12108-06019...

Date

Jan 10-11, 79

Wed

Tues

Observers

Rm - Bls

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43127F3	Focus Test							Fe/-	5-5
7F4	"							Fe/-	5-5
43128	HD 17706	2 ^h 45.4	+60° 02'	18:11	21:29	1 ^h 38 W	+64° 22.7	Fe NDX4	3-4-5
43127	Sport Cal'n for 43128-			15 min @ 15v	84 3900	03 4300	DZ 4810		
43129	HD 20365	3 ^h 11.5	+49° 51'	22 ^h 46	22:59	02 46W	+50° 10'	Fe NDX4	6-6
43130	HD 22484	3 ^h 31.8	+05° 05'	23 ^h 12	23:34	03 02W	+00° 22'	Fe NDX4	6-6
43131	HD 33328 = 25v	5 ^h 04.4	-8° 53'	00 ^h 05	01:09	03 04W	-8° 45'	Fe/-	5-5
43132	HD 45542 / 26v	6 ^h 23:02	+20° 17'	01:55	04:18	03 41	+20° 15'	Fe NDX4	5-5-5
43132	Spot cal for 43131			15 min @	17.5 04 3900	15 04 4300	15 04 4810		
43133	HD 79469	9 ^h 09.2	+12° 44'	04:51	05:59	03 50	+12° 27'	Fe/ND-4-5-	
43133F	-Focus							Fe/NDX4 (1-11)	

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr. See

800/65

400/16

400/8

400/21

400/20

400/185

Spectr. Temp. 14°⁵

Dome Temp./Hum.

Transparency Conditions . Clean, then dark

Focus 521

282

Spectr. Temp.

Dome Temp./Hum. -1°F!!

Comparison
Type/Filr Exp.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G43/.5	BS	IIaOe	B			cont Red
				"	"	"	"	A			central blue of lines
800/40	7.8	8.78	B5V	"	"	"	"	B	SUCos Assoc.	cloud	Comp double Fe lines wk
40/6		5.1	B3V	"	"	"	"	B	BStd Vel	NW star	Fine
40/8		5.2	F9	"	"	"	"	B	std Vel		Fine
40/21	3-4	4.07	B2V	"	G12/.68	"	IIIaJ	B		Spectrograph 10" → 514	sl/wk
400/320		4.04	B7Ve	"	"	"	IIaOe	B	Bln High Pr.	Cloud	str
400/185	2-3	3.82	B9.5V _p	"	"	"	"	B	Bln Br. Sp Bin	Cloud	
				"	"	"	"	B		+3°F	right on
				IIaOe	Dev	Jan 13	D19 7min @	68°F		Bts	
				IIIaJ	Dev	Jan 13	D19 4min @	68°F		Bts	

Date Jan. 11/12. 79. ^{Thu} ~~Fri~~ Observers Inr - Bts

not
evacuated

Emulsion Batches.
 Dia 0 12108-12019 16 191

[illegible]

Focus

Spectr. Temp

Exp. Mtr. S

5

Dome Temp./Hum.

[illegible]

285

Fri/Sat

Date Jan 12/13 Observers Bln-Bts

Emulsion Batches:

IIIa-JE* 31058-19128

IIIa-JE**31058-12019

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.
43139F	Focus							Fe/-	17-17	
43139	HD 24760	03 51.1	+39°43	17 39	17 55	-02 51E+39 54		Fe/-	6-6-6	20/31
43140	"	"	"	18 03	18 24	-02 21E		Fe/-	6-6-6	20/30
43141	"	"	"	18 30	18 48	-01 58E		Fe/-	6-6-6	20/30
43142	"	"	"	18 55	19 07	-01 38E+39 54		Fe/-	6-6-6	20/31
43143	"	"	"	19 15	19 29	-01 17E		Fe/-	6-6-6	20/30
43144	"	"	"	19 35	19 59	00 48E		Fe/-	6-6-6	20/45
43145	"	"	"	20 04	20 26	00 21E		Fe/-	6-6-6	20/45
43145	✓ spot cal for 43139-145				15 min @	17.5V D4 3900	15V D4 4300			
43146	HD 24760	"	"	20 30	21 27	00 41W		Fe/-	6-6-6	20/90

Spectr. Temp. $17^{\circ} F$

Dome Temp./Hum. 15°F / 93%

Transparency Conditions. Haze and cloud.....

286

[illegible]

2-12-019

Spectr. Temp. 25°F Dome Temp./Hum. 41.7°F Transparency Conditions *cloudy mainly*

Focus *505* Spectr. Temp. $+24^{\circ}\text{C}$ Dome Temp./Hum. *>1h clear, windy / cloudy*
288

Compensation Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe-12-12	20/36	4"	2.71	Bos V	BC	G8/1.25	120u	Maie	B	SB Tn	* clear slide gusty for Exp meter	guiding sl. motor
" 11-1	20/28	3"	"	"	"	"	BS	"	B	"	cloud & snow	dust v sl wh
Fe-11-11					"	"	"		B			ok
Fe-11-1	20/?	2"	2.71	Bos V	BC	G8/1.25	BS	Maie	B	SB Tn	thin cloud x motor failed	dust v sl wh
											comparison lines very uneven	Focus 507 P Temp 22°F
Fe-11-1					BC	G12/68	BS	IIaDe	B		20°F set 510	
Fe-11-5-5-5	not working	4"			BC	G12/68	BS	IIaDe	B	Blh Br Sp Bin.	clear	sl str
Fe-11-5-5	200/32		A2+ g65		BC	G12/68	BS	IIaDe	B	Blh High Pr.	some cloud exp meter now working	
											clouded out	
											spectrograph and 16°F	

12019 16 197

Spectr. Temp. 18°FDome Temp./Hum $16^{\circ}\text{F}/87\%$Transparency Conditions *thin cloud*.....Focus *5.11*.....

290

Spectr. Temp.

Dome Temp./Hum.

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>Fe/10-11</i>					BC	G12/68	BS	IIaDe	B			cent vial red
<i>Fe/10-5-7</i>	100/100	2	6.7	A2	BC	G12/68	BS	IIaDe	B	A _m MR	(comp str)	Fine
<i>Fe/ND4 7-7</i>	100/100	1-2	7.85	A0	BC	G12/68	BS	IIaDe	B	A _m MR		sl wk (comp too str)
<i>Fe/ND4 7-7</i>	100/94	2	7.5	B9	BC	G12/68	BS	IIaDe	B	A _p MR.		comp too str Fine
<i>Fe/10-11</i>					BC	G12/68	BS	IIaDe	B		15°F	right on
<i>Fe/- 20</i>					RC	G16/.7	RS	09802	B		$T=12^{\circ}\text{F}$ $F=516$	
						"						
						"						
						"						
<i>Fe/- 20-20</i>					RC	G16/.7	RS	09802c	B		$T=12^{\circ}\text{F}$ $F=514.0$	sl red
<i>Fe/- 10</i>					BC	G12/.68	BS	IIaDe	B			
						"						

py #1

Dec * 12108 - 12019

291

Date Jan 18/19 1979

Observers

Fj-Tn/Bl-Tg

Emulsion Batches:

Dec. 12108 - 12019 20 wt
098-02e 300.38 - 08019 21 100
Dec-e 31.058 - 12019

Spectr. Temp.
Focus... 514
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	See
43154T7	Comp test, diffuser over BS, comparison decker, no lenses in feed							FeNe/-	240		
F4	Focus test	$\tau = 0$	$\delta = 40^\circ$	15:40				Fe/-	10-10		
43155	HD 3712 (2 Cas)	00 ^h 34.8	+55° 59	17:57	18:00	00 ^h 54 W	+56° 21	Fe/NDX	6-6	40/10	
43156	HD 1976	00 ^h 18.9	+51° 28	18:05	18:41	1 ^h 51 W	+51° 50	Fe/NDX	4-4-4	200/35-4	
43157	HD 4180	00 ^h 39.1	+47° 44	18:46	18:56	1 ^h 46 W	+48° 05	Fe/NDX	4 8	80/16	
43158	HD 18537	02 ^h 53.7	+51° 57	19:03	19:20	6 ^h 06 E	+52° 11	Fe/NDX	4-4-4	80/15 3'	
43159	HD 20315	03 11.0	+43 39	19 23	19:41	6 ^h 00 E	+43 52	"	4-4-4	80/17 3'	
43159T	SPOT CALIBRATION FOR 43155-9, 62.				15 min @ 15V	D4 D3 3900 4300	D2 4810				
43160	HD 19845	3 ^h 06.4	+47° 43.7	19:54	23:16	3 ^h 31 W	+47° 57	Fe/NDX	4-4-4	80/7 35	
43160T	Spot Calib for 43160.				15 min @ 15V	D3 4810	D1 5450				
43061	HD 37468	5 ^h 33.7	-2° 39	23:20	00 06	2 04 W	-2° 40	Fe/-	5-5-5	4/45 3-6	
43061T	Spot Calib for 43061, 67.				15 min @ 15V	D4 17.5V 3900	D3 15V D2 15V 4300 4810				
43062	HD 84447	09 40.2	+24 14	00 13	00 19	01 51 W	+23 48	Fe/ND	9-9	40/12	
43063	HD 86590	09 54.6	+25 02	00 25	03:52	01 30 W	+24 35	Fe/NDX	6-6-6	800/130 3'	
43063T	Spot Calib for 43063-66.				15 min @ 15V	D4 3900	D3 D2 4300 4810				

Spectr. Temp.

Dome Temp./Hum. 49°F / 70%

Dome Temp./Hum.

Transparency Conditions CLEAR

292

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe/ - 240					BC	G12/.68	BS	IIa0e	B			Too wk
Fe/ - 10-10					"	"	"	"	"		T=12° F = 514	sl red
Fe/ - 6-6	40/10		3.34	KO II	BC	G43/.5	BS	IIa0e	B	Std Vel	Focus = 521 Temp + 11 F	fine comp str
Fe/ - 4-4	200/35	4"	5.45	BS IV	BC	G43/.5	BS	IIa0e	B	Thr/Rm		sl str comp str
Fe/ - 4-8	80/16		4.44	BS III	BC	G43/.5	BS	IIa0e	B	Thr/Rm		sl strong comp sl str
Fe/ - 4-8	80/15	3"	5.19	BS IV	BC	G43/.5	BS	IIa0e	B	Thr/Rm		✓ sl strong
Fe/ - 4-8	80/17	3"	5.41	BS V	BC	"	"	"	B	Thr/Rm		✓ sl str comp sl str
Fe/ - 4-4	80/?	3-5"	V=8.1	G2	BC	G65/.5	RS	098-02-e	B	RS c/vn/Fgi	* counter not working Focus 514 Temp + 11 F	fine comp str
Fe/ - 5-5	40/45	3-6"	3.51	09.5 I	BC	G12/.68	BS	IIIa1-e	B	Sp Bin Blw	Focus 516 T = +5° F	✓ sl str NO COMP
Fe/ - 4-4	40/12		3.76	G0 II	BC	G12/.68	BS	IIa1-e	B	Rm-prog		fine comp str
Fe/ - 4-4	200/130	3-4"	7.91	G65	BC	G12/.68	BS	IIa0e*	B	Sp Bin Blw	hazy	✓ sl wtk comp sl str
								IIa0e*		Placed next to strips in Big Box	OVER	

293

Date _____

Jan 18-19 Cart

Observers

T. 4.

.....

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[illegible]

Spectr. Temp.

Focus

Spectr. Temp. $+2.0^{\circ}\text{F}$

Dome Temp./Hum.

Temp was -5°F at 4 AMDome Temp./Hum. $-2^{\circ}\text{F}/85\%$

Transparency Conditions

11/9/29 294
 KK Note II.0.0 strips stored in
 Big Box on the right. 2 II.0.0s on left.

Comparison Type/Filter Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1-4-9	40/12	2'-4"	3.76	GOTT	BC	G12/88B	BS	II.0.0*	B	Rm-prog	$+2^{\circ}\text{F}$ in spect. focus 5/6	v sl str comp sl str
1-6-1	40/117	2'-3"	6.49	AGn	"	"	"	"	B	SB Blu	very hazy	v sl str comp str
1-7-1	40/13	3"	3.76	GOTT	"	"	"	"	B	Rm-prog	hazy	fine comp sl str
1-9-1	40/55	3"	1.3	K2m	"	"	"	II.0.0	B	std vel	in Big Box on left.	fine but high fog
1-1-6-1					BC	G12/88B	BS	II.0.0*	A	$T=+2^{\circ}\text{F}$	Focus 5/6 red end + 0.18 blue end + 0.50	red
1-1-6-1					"	"	"	"	B		"	no stellar red
on stellar					BC	G12	BS	II.0.0e	A		$T=26^{\circ}\text{F}$ Fe 508	many bands!

is the ND filter still in position 1?? on several plates comp lines ghost thru stellar

295

Date

JAN 28 21^h

Observers

Tn

Emulsion Batches:

8^m 69°

4 1/2 69°

IIaD-12108

IIaJ-C 31058

Unemulded
12019

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43167T2	Tests to check Comp "Ghosting" in stellar for					120μs/slit		Fe/-	15
T3	"							"	45
T4	"							Fe/NOA	45
T5	"							"	15
F3	Focus Test							Fe/-	5/5
F4	Focus Test After PHA adjusted & locked				Blue End > 1/2 Turn CCW Red End 1/4 Turn CCW			Fe/-	5/5
T6	Tests to check Comp Ghosting for					120μs/slit		Fe/-	15
T7	" " " " "					150μs/slit		Fe/-	15
T8	"							Fe/-	45
T9	"							Fe/NOA	45
T10	"							Fe/NOA	15
									10
									30
43167F11								Fe/-	20
F12								Fe/-	100

Jan 30/31

Tues/Wed

Bts

IIIaJ 31058-22019

Spectr. Temp.

Focus....5

Spectr. Temp.

Exp. Mtr.

Norm

3x

3x

Norm

Act of

Is this

Norm

Norm

3, Norm

3, Norm

Norm

Norm

3,

Norm

Norm

5x Norm

Unexposed
12019

Spectr. Temp. $+33^{\circ}\text{F}$

Dome Temp./Hum. $+32^{\circ}\text{F}$

Transparency Conditions 296

Focus 506.....

Spectr. Temp.

Dome Temp./Hum.

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
F/- 15	Normal/Exp				BC	G12/68	120u	IIa J-c	B	Adjusted Decker relay switch so Arc would fire with Decker in.		ghosts
	3x Normal/Exp						"	"	B			many ghosts
F/- 45	3x Normal						"	IIa O-	B			ghosts
	Normal						"	"	B		sp str?	slight ghost
F/- 515	* Act of mask switching, activates				Filter wheel		"	"	B			cart st B4e
F/- 515	Is that a bad sign?						"	"	A	Temp +33 still	cent Red blue oval needs more ECW Turn	
F/- 15	Normal						120u	IIa J-c	B	should be same as T2		Ft ghosts
F/- 15	Normal						150u	"	B			ghosts
F/- 45	3x Normal						"	"	B			many ghosts
F/- 45	3x Norm						"	IIa O	B			slight ghost
F/- 15	Norm						"	"	B		str	many Ghost
10	Norm											
30	3x											
F/- 515	norm				BC	G12/68	70u	IIa J-c	B		sp temp = 26°F focus 508	
F/- 100	5x norm				BC	G12/68	70u	IIa J-c	B			

What's with the 300u slit?

297

Wed Thurs

Date _____

Jan 31 / 11

Observers

615

Emulsion Batches:

5^m 68°

IIa5

 $4^{1/2} 12^m$

098

7^m 68

... 1150

24 197

17 192

[illegible]

Focus 570

Spectr. Temp.

Dome Temp./Hum.

Dome Temp./Hum.

Transparency Conditions ... clear > 11 PM

GOOD METEOR TRAIL

298

Some aurora in southeast

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G12/68	70 μ	IIIaJ	B		plate chipped at one end.	
normal 5X				BC	G12/68	120 μ	IIIaJ	B		20°F focus S10 (Focus not fine unless switch held manually)	
normal 5X				"	"	150 μ	"	"			
20/5	3	198	09	BC	G12/68	RS	IIaOe	B	CNO	20°F focus S10	star v. st. strong comp. weak & uneven
400/608	3	7.1	G0	BC	G16/1.7	RS	098-02	B	RSCH _h -F _g		star s. strong NO comp.
							IIaOe			CLAMP PROBLEMS	
							098e				
100/200		V ₄ 195	F2 II	BC	G16/1.7	RS	018-02	B	RSCH _h /F _g	temp 15°F focus S10	star strong NO comp! NO comp.
							098-02		Discarded		

299 Sat/Sun

Date Feb 3/24 Observers KK-BTs

Emulsion Batches:

II 0.12.108-.....

Spectr. Temp.

Focus...510

Spectr. Temp.

[illegible]

Spectr. Temp.

Dome Temp./Hum. 21°F/87%

Transparency Conditions

300

Focus 510 → 511

Spectr. Temp.

Dome Temp./Hum.

9! but was not

Com. son type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit/Filter	Emulsion	P.H.	Program	Remarks	Quality
4- 2	400/490	12"	V=30	G8II +F?	RC	G12/1.9	RS +10V"	HIE	B	Asm Sp KK	clouds	✓ sl. strong comp. fine
Fe- 20-2	500.4	+28μ			RC	G12/1.68	70μ	IIIaJe	B	T _C		red
Fe- 1-2	512.6				BC	G12/1.68	70μ	"	B	S ₊		vs bl
Fe- 20-2	510.4	+2μ			BC	G12/1.68	70μ	"	A		F=510	vs sl. red
Fe- 4-6	00/48			A0 IV	BC	G8/-25	120μ	IIa0e	B	Asm Sp 10C	T=22° Faint 511	✓ sl. str. faint 511
Fe- 1	00/				BC	"	"	IIIaJe	B			
4- 6					BC	G8/-25	150μ	IIa0e	B		after 1/2 turn out on Tangent screw ghosts on 6-8 strong lines, comp. sl. strong 12 ^s total probably enough with 4x ND	

Spectr. Temp. 17°F Focus 512 Spectr. Temp. 14°F Dome Temp./Hum. $11^{\circ}\text{F}/70\%$ Dome Temp./Hum. $8^{\circ}\text{F}/$ Transparency Conditions SOME CLOUD

302

Comparison
Type/Filter Exp.

Fe/- 20-25

Fe/- 20-25

Fe/- 8-8

Fe/- 15-8

02

00

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
505.5 ✓			+25 μ	BC	G16/7	RS	098-02-e	A	TEST	$T=17^{\circ}\text{F}$, $F=512$	sl red
505.5 ✓			+17 μ	BC	G16/7	RS	098-02-e	B	TEST	$T=17^{\circ}\text{F}$, $F=512$	sl red
100/62		V = 6.01	G0I	BC	G16/7	RS	098-02-e	B	RS CVn/Fgi	CLOUDS THIS is	wk G-8!
					0.007?		098-02-e				

303

Tues/Wed

Emulsion Batches:

8^m 66°

Jade 12.018-28019

Date

Feb 6/7

Observers

But - Bts

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43174	HD 38817	05 43.4	+43 59	20 ^h 21 ^m	21 39	+00 33W	+43° 57'	Fe/10	5-10
43174F	FOCUS TEST							Fe/-	5-5
	Feb 7/8 Wed/Thurs		Bts			09802e	30038-08019		
43174F2	focus							Fe/-	20-20
43174F3	Focus							Fe/-	30-30
43174F4	Focus							Fe/-	30-30
	Feb 8 Thurs	KK							
F5	focus							Pe/-	20-20
F6	focus							Fe/-	20-20
F7	"							"	"
F8	"							"	"
43174T	Spot test			① ② ③ all H _α 2 ^m DA 7V	② reversed				

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions Haze.....304.

[illegible]

305

Date ... Feb 8/9 Observers ... KK-Bk/Bts

Emulsion Batches:

42 W IIIa Jore 31058 - 08019 29 269
 10 W HIE Nov 17 340 20 250

IIIa Jore 31058 02029 11 199
 IIa Jore 31058 02029 11 199

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Type/Filter	Comparison Exp.
43175	HD 215182	22 ^h 38 ^m	+29° 42'	18 ^h 23 ^m	19 ^h 16 ^m		+30° 07'	Ne/-	30-31-31
43176	HD 12929	02 ^h 02 ^m	+22° 59'	19 ^h 28 ^m	19 50 ^h 7 ^m			Ne/-	30-30-30
43176T	Spot calibration			① D3 8464A 7 1/2 V 5 ^m ② D3 8464A 7 1/2 V 15 ^m ③ D3 768					
43177	HD 47105	06 ^h 31 ^m 9	+16° 29'	20 ^h 08 ^m	21:44	① 04W		Fe/-	6-6-6
43178	"	"	"	21 ^h 50 ^m	22:32	0 52 W		Fe/-	6-6-6
43179	"	"	"	22 ^h 37 ^m	23:20	1 41 W		Fe/-	6-6
43179T	spot cal	for 43177-43181			15min 15V	4300 D4	(all three 30/2)		
43180	HD 61421	07 ^h 34 ^m 0	+05° 29'	23:25	23:37			Fe/-	6-6-6
43181	HD 47105	06 ^h 31 ^m 9	+16° 29'	23:43	00:35			Fe/-	4-6-6
43182	HD 84441	09 ^h 40 ^m	+24° 14'	03:44	01:13	+00 25W	+23° 52'	Fe/NDU	6-6-6
43183	HD 89449	10 ^h 14 ^m 3	+19° 59'	01 26	03:33	+02 12W	+19° 34'	Fe/ND4	6-6-6
43183T	spot cal	for 43182-83-84			15min 15V	3900 04 03 02 4300 4810			
43184	HD 84441	09 ^h 40 ^m	+24° 14'	03 ^h 45 ^m	04 ^h 14 ^m	+03 ^h 27 ^m W	+23° 52'	Fe/ND4	6-6-6
43185	HD 139892	15 ^h 35 ^m	+36° 58'	04 ^h 35 ^m	06 39	+00 01	+36° 41'	Fe/-	6-6-6
43185T	spot cal	for 43185			15min 15V 04 15V 04 3000 4300 4810				
43185F	focus							Fe/-	6-6

Spectr. Temp.

Focus... 50

Spectr. Temp.

Exp. Mtr. Sec.

02019 29 24
20 11
02029 11 19
2519 Comparison
Type Filter Exp.

Spectr. Temp. 20°
Focus 506
Spectr. Temp. -2°F

Dome Temp./Hum. 7°F/79%
Dome Temp./Hum. -9°F/79%

Transparency Conditions Very slight haze, few scattered clouds
306

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10/50	5"		G&T + F2	RC	G12/.9	RS	HIE	B	Asm Sp KK	cylindrical lens out of adjustment	flexure or focus?
40/50		3.15	K2 III	"	"	"	"	"	Std Vel		
7 1/2 U 15"							HIE				
10/75	6"	1.9	A2 IV	BC	G8/-025	70μ	Ilade	"	Am sp KK	SPRNO 14°F 513 prior focus comp where side	
40/76	5"	"	"	"	"	"	"	"	"	11°F 514 refocused telescope!	"
40/75	4.5	"	"	"	"	"	"	"	"	10°F	"
10/70		0.6	FSD V S	BC	"	"	"	"	Std Vel	focus slowly improved	"
40/75	5-6	1.9	A2 IV	BC	G8/-025	70μ	"	"	Am sp KK		"
00/50		3.1	G0 II	BC	G12/.68	150μ	Ilade	B	Evans	6°F 516	mod. strong comp w/
00/33	6-7	5.3	B2 I	"	"	"	"	"	Std Vel (Evan)	thin cloud, windy	mod. strong comp w/!
00/50		3.1	G0 II	BC	"	"	"	"	Evans	clear haze	one corner is light, smudge mod. strong comp w/!
00/59	5-7	4.95	B2 I	"	"	"	Ilade	"	Blk High Pr.	probably some contamination due to poor seeing	NO comp.
				"	"	"	"	"		-2°F 518	no comp! discarded

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions 3 1

308

[illegible]

309

Date Feb 10/11, 1979 Observers FM - PLS

Emulsion Batches:

7th 6⁰⁰ II. Doe. 12018-09029 16206

Spectr. Temp.

Focus.....

Spectr. Temp

[illegible]

09029 16 206

Spectr. Temp. 9°F

Dome Temp./Hum. $+44^{\circ}\text{F}/79^{\circ}$

Transparency Conditions *clear*

Focus 515

310

Spectr. Temp. -40°F

Dome Temp./Hum. $-10^{\circ}\text{F}/79^{\circ}$

Comparison Type/Filter Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Feb-6	800		7.2	F57	BC	GR/.68	150μ	IIaDe	B	Waterloo		
Feb/Mar-6	800/200		5.02	B 9	BC	GR/.68	120 μ	IIaDe	B	Waterloo		sl. str.
" 6-6	800/244		6.6	F0	BC	GR/.68	120 μ	IIaDe	B	"		sl. str.
" 6-6	100/35	5"	4.0	F8	"	"	"	"	"	"	STAR exposed, in part, thru comp. docken	
" 6-6	200/60		6.6	F5	"	"	"	"	"	"		sl. str.
02 410	200/41		6.6	F7	"	"	"	"	"	"	clouded out -2 $^{\circ}\text{F}$ 518	sl. str. comp sl. str.
Feb-6					"	"	"	"	"		-4 $^{\circ}\text{F}$ 519	

Spectr. Temp. $+4^{\circ}\text{F}$ Dome Temp./Hum. $+2^{\circ}\text{F}/80\%$ Transparency Conditions *fair... got better 312*Focus *517**just before clouds rolled in
full moon.*Spectr. Temp. $+4^{\circ}\text{F}$ Dome Temp./Hum. $-2^{\circ}\text{F}/77\%$

Comparison Type/Filter Exp.	Exp. Mtr. <i>NO FILTER</i>	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>16 193</i>	<i>800/200</i>	<i>3+</i>	<i>5.5</i>	<i>B8</i>	<i>BC</i>	<i>612/1.68</i>	<i>120μ</i>	<i>IIaDE B</i>		<i>Sp. Bin-Ly</i>	<i>F517</i>	<i>fine</i>
<i>16 190</i>	<i>800/190</i>	<i>3</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>PIERCE LIMIT</i>	
<i>16 190</i>								<i>IIaD-E</i>				
<i>16 190</i>	<i>20/5</i>	<i>3</i>	<i>0.3</i>	<i>F6IV</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>Std Vel.</i>	<i>clouds.</i>	<i>sl str.</i>
<i>16 190</i>	<i>200/50</i>	<i>3</i>	<i>1.9</i>	<i>A0IV</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>Asm - KK</i>	<i>clouds.</i>	<i>1.4 vsl str</i>
<i>16 190</i>					<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>		<i>+4°F 517</i>	
<i>16 190</i>	<i>400/65</i>	<i>3</i>	<i>67</i>	<i>dG3</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>Asm Sp. KK</i>	<i>+4°F 517 haze red</i>	<i>vsl wle focus poor</i>
<i>16 190</i>	<i>100/35</i>			<i>G2V</i>						<i>Std Vel</i>	<i>2.3</i>	<i>sl strong</i>
<i>16 190</i>	<i>400/75</i>	<i>2-2½</i>	<i>7.20</i>	<i>G8IV</i>	<i>BC</i>	<i>612/1.68</i>	<i>120μ</i>	<i>IIaDE*</i>	<i>B</i>	<i>Asm Sp. KK</i>	<i>thickening haze</i>	<i>0.7 vsl strong some comp ghosts</i>
<i>16 190</i>								<i>IIaDE*</i>				
<i>16 190</i>					<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>B</i>		<i>F=517 T=35°F</i>	<i>good vsl red in red</i>
<i>16 190</i>					<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>A</i>			
								<i>Comparison sl. strong on all</i>				

313

Emulsion Batches:
 T^m 68° J^{no} E 12018-12029... 16 200

Date FEB. 12/13 MON-TUES/19 Observers ... But ... Ri

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43199	HD 38817	05 43.4	+43° 59'	21 10	00 : 23	03" 47W	+43° 57'	FE ARC NDX4	4-4-1
43199T1	spot cal for plates 43199-			15 min	@ 15 Volts	D4 D3 D2 3900 4300 4910		FE ARC NDX4	4-4-1
43200	HD 138406	15" 26.8	+62° 05'	00:36	03 11	-03 03 E	+61° 45'	FE ARC NDX4	4-4-1
43200F1	focus test							FE ARC —	66

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.
No. El. Test

40/90

40/87

Spectr. Temp. +02° F.....

Dome Temp./Hum. -3°F 80%

Transparency Conditions *clear and cold* 314

* looks like last are imposed after bumping pt. comparison still st. strong

Date FEB 13/14 TUES/WED/TH Observers But-RD

Emulsion Batches.
 Itae 12108-12029 16 202

Focus.....

Spectr. Temp.

Exp. Mtr.	Sec.
1	1
2	2
3	3
4	4
5	5
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8	8
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98	98
99	99
100	100

100/50 5-

400 00

400/52

Transparency Conditions clear 316

Focus 516

Spectr. Temp. -2°F

Dome Temp./Hum. -7°F. /

[illegible]

Date Feb. 16/17 Fri./Sat Observers Ther-Bts

Emulsion Batches:

8^m 67° Παοε. 12108 - 12029 17 208
~~Παοε. 12108 - 13029~~

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43205	F focus							Fe/-	4-4
43205	HD 14951	2 ^h 19.3 ^m	+10° 09'	18 ^h 43 ^m	20 ^h 29 ^m	+3 ^h 33 ^m	+10° 27.3'	Fe/NOx4	3-3-3
43206	HD 42560	6 ^h 06.3 ^m	+14° 14'	20 ^h 58 ^m	21 ^h 26 ^m	+10 ^h 44 ^m	+14° 09'	Fe/NOx4	3-3-3
43206	F focus							Fe/-	4-4
43206	T spot cal for 43205-43206			15 min 15V	① 3900 ⁰⁴	② 4300 ⁰³	③ 4810 ⁰²		

2029 17 208
3229

Spectr. Temp. 10°F

Dome Temp./Hum. $-2^{\circ}\text{F}/81\%$

Transparency Conditions *clear, cold, windy*
318

Focus 514

Spectr. Temp.

Dome Temp./Hum.

Comparison
Type/Filter Exp.

Fe/-44

Fe/100 3-3

Fe/100 3-3

Fe/-44

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	612/.68	120 μ	Ilade	B	514.7 517.4		
200/50	5.6	5.38	B6	"	"	"	"	"	Blk Br. Sp. Bin.	decker wrong 1/2 stellar exp. in comp.	
200/48		4.18	B3V	"	"	"	"	"	"		
				4	"	"	"	"	516.5	+4°F 516 snow blowing off dome	vs/red

2.2.29 18208
2.2.29 2127
2.2.29

Spectr. Temp. $+4^{\circ}\text{F}$

Dome Temp./Hum. $-7^{\circ}\text{F}/79\%$

Transparency Conditions *clear, cold*.....

Focus *5.16*.....

320

Spectr. Temp. -3°F

Dome Temp./Hum. $-7^{\circ}\text{F}/79\%$

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe/10-3-3	00/100	6"? 5.4	GO	BC	G-12/.68	120 μ	IIa-De	B	Idon-Type	Hoffman mask malfunctioned for focus test		sl strong
Fe/10-3-3	200/100	4"? 5.0	GO	BC	G-12/.68	120 μ	IIa-De	B	"			
Fe/10-3-3	100/200	4"? 6.2	G2	BC	G-12/.68	120 μ	IIa-De	B	"	.. @ ..	↓ STAR in comp mask	
Fe/10-3-3	40/20	4 3.27	GO	BC	G-12/.68	120 μ	IIa-DE	B	KIC *			v sl str
Fe/10-3-3	40/20+	4 1.29	Kmp	BC	G12/.68	120 μ	IIa-De	B	Std Vel	→ last 2 are Trouble w/ filter on		unseen
Fe/10-3-3	200/120	4 4.95	B7V	BC	G12/.68	120 μ	III-a-TE	B	SB-Bln/Ly			fine
Fe/10-3-3	400/100	4 6.18	A3V	BC	G12/.68	120 μ	IIa-DE	B	SB-Bln			
Fe/10-3-3	40/10	4 3.86	A1V	BC	G12/.68	120 μ	IIa-DE	B	SB-Bln			
Fe/10-3-3	40/15	4 3.93	Fop	BC	G12/.68	120 μ	IIa-DE	B	KK *			vsl str

321

Date

Feb 19/20

Observers

Myd? - Ri/Ri

7^h 69^m

Emulsion Batches:

IIA-Oe 12108-13029

IIO* uncalibrated

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43215F1	focus test							Fe A4	4-4
43216	HR 483 HD 10307	1 ^h 35.7	+42° 07'	18 35	19: 14	03 ^h 13 ^m 40 ^s	+42° 28'	Fe A4	4-4-4
43217	HD 27691	4 ^h 12.1	+14° 51'	19 29	23 07	4 ^h 26 ^m W	+14° 58'	Fe NDx4	4-3-3
432171	spot cal for plates 43216-43220				15 min @ 1526 ft	D4 D3 3900 4300	P2 4810		
43218	15 LMi HD 84737	9 42.1	+46° 29'	23 15	00:00	08 ^h W	+46° 04'	Fe NDx4	3-3-3
43219	HD 89484 = 8 Leo 1 ^h 10 ^m 5 ^s 2 ^s	10 14.5 10 14.3	+20° 21' +19° 59'	00:08	00:21	00 ^h 16 ^m E	+19° 53'	Fe NDx4	3-3-3
43220	"	"	"	00:24	00:38	00 ^h 00 ^m			3-3
43221	HD 124892	14 11.1	+19° 42'	01:06	01:14	03 ^h 19 ^m E	19° 31'	Fe NDx4	4-4-4
43222	"	"	"	01:17	01:22	03 ^h 11 ^m		"	4-4-4
43223	HD 97932	11 10 44	+13° 23'	01:34	02:20	00 ^h 45 ^m W	+12° 55'	Fe NDx4	4-4-4
432231	spot cal for plates 43221-	43221-			15 min @ 1526 ft	D4 D3 3900 4300	P2 4810		
43223F1	focus test							Fe NDx4	4-4

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr. See

Spectr. Temp. ... 18°F

Dome Temp./Hum. 15°F / 90%

Transparency Conditions ... clear then hazy

Focus ... 512

Spectr. Temp. ... 16°F

Dome Temp./Hum. 5°F / 98%

322

Companion Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
F ₁ 1-4					BC	G12/.68	120A	IIa-OE	B	514.6	T 18°F 512	sl blue
F ₄ 2-4	00/75	3"	5.6	G2	BC	G12/.68	120A	IIa-Oe	B	Solar Type		vis
F ₄ 2-4	00/225	3"	7.5	G0	BC	G12/.68	120A	IIa-Oe	B	Solar Type		perfect
P2 480								IIa-Oe				
F ₄ 2-4	00/65	3"	5.7	G1	BC	G12/.68	120A	IIa-Oe	B	Solar Type		vis ok
F ₄ 2-4	00/80		2.6V 5.3	Kott E8	BC	G12/.68	120A	IIa-Oe	B	Solar Type	wrong star	
F ₄ 2-4	00/80		"	"	"	"	"	"	A	"	wrong star	
F ₄ 2-4	40/35		1.29	A2HP	"	G12/.68	120A	IIa-Oe	A	Solar Type		sl str
F ₄ 2-4	40/35		"	"	"	"	"	"	B	"		sl str
F ₄ 2-4	800/48		6.49	A6N		G12/.68	120A	IIa-Oe	B	Solar Type		
F ₄ 2-4								IIa-Oe	"	"	1 give up its getting worse by the minute	
F ₄ 2-4							16 of	512				

323

Thurs/Wed

Emulsion Batches:

Ilac De... 12108-20029

Date

Feb 20/21

Observers

M. J. P. / B. S.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43224F	Focus							Fe/-	4-4
43224	α Tau / HD 29139	04 ^h 30.2 ^m	+16° 18'	18 ^h 25 ^m	18 ^h 31 ^m	-0 ^h 17 ^m	+16° 27'	Fe/ND4	2-2-2
43224T1	Grating illumination	Fe Ne 1200	small lens + diffuser	103aD	400 sec				
T2	Full aperture	"	"	"	"			FeNe/dif.	30-30
T3	Same + Wr 6 filter	"	"	"	"			"	"
T4	Same arc + Wr 6							Fe/ _{fx}	12-12
F2	Focus test							Fe/-	6-6
F3	focus test							"	"

Spectr. Temp. +

Focus.....

Spectr. Temp. ..

Exp. Mtr.

Transparency Conditions Partial Cloud

324

Spectr. Temp. Dome Temp./Hum.

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe/- 0-0					BC	G12/.68	120μ	IIaDe	A			good
Fe/4 22-2	10-24			KSTII	BC	G12/.68	120μ	IIaDe	A			fine
Fe/- 30-30					"	"	120μ	IIaDe	B		clouds	
" "					"	"	"	"	"			sl. wk
Fe/- 12-12					"	"	"	"	"			red fine uv sl wk
Fe/- 6-6					BC	G12/.68	120μ	IIaDe	A			
					"	"	"	"	B			vsl blue

Spectr. Temp. +34°F.....

Dome Temp./Hum. ... 33°F.....

Transparency Conditions ... clear.....

Focus 504.....

69% outside

326

Spectr. Temp. +33°F.....

Dome Temp./Hum. ... 27°F.....

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5-10 1-6-6					BC	G12/68	120 μ	IIaDe	B			sl blue
5-10 1-6-6					"	"	"	"	A			sl blue
5-10 5-5-5	40/9	2-4	4.9	B4	"	"	"	"	B	Std Vel	(30 TALL) numbered "26"	sl str.
5-10 5-5-5	400/69	2-4	7.5	B9	"	"	"	"	B	Ap MR	numbered "26 B"	fine
5-10 5-5-5	400/76	6-8 8-10	7.26	A3	"	"	"	"	B	Am MR		fine
5-10 5-5-5	100/110		7.19	A0	"	"	RS	"	B	Am MR	KK ALIGNED RED SLIC-R 01:30-02:00	ok * good alignment
5-10 5-5-5	100/120	5	7.24	A7	"	"	"	"	B	Am MR		ok *
5-10 5-5-5					"	"	"	"	B			sl blue
							* RS plates die at H & K - no UV					

Transparency Conditions *hazy*.....

Focus 502

Spectr. Temp. $\pm 40^{\circ}\text{F}$

Dome Temp./Hum. *+36°F / 98%*

clouds 328

[illegible]

329

Sun-Mon

Date Mar 45/79 Observers G. S. / T. n

Emulsion Batches:

8" 68°F II 9.0-e 12108 - 0.2208??
II 9.0-e * 12108 - 28029

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43232	HD 91316 (p Leo)	10 27.6	+9 49	19 37	20 18	3 41 E	+9 23	Fe/ND4	8-8-8
43232T1	Spot Calc for 43232				15 min @ 15V	D4 3900	D3 4300	D2 4810	
43232T2	5 trip Calc for 43232								90 sec
43233	HD 91316	10 27.6	+9 49	20 28	20 41	3 18 E	+9 23	Fe/ND4	12-12
43234	HD 91316	10 27.6	+9 49	20 45	20 51	3 08 E			8-16
43234T1	Spot Calc for 43233-34								90 sec
43234T2	Spot Calc for 43233-34				15 min @ 15V	D4 3900	D3 4300	D2 4810	

Spectr. Temp. .
Focus.....50
Spectr. Temp. .

Exp. Mtr. Scin

43/76 3"

100/19 2"

100/12 2"

Spectr. Temp. $+41^{\circ}\text{F}$

Dome Temp./Hum. 38°F / 100 + 7%

Transparency Conditions *Hazy* 330

[illegible]

331

Wed Thurs

Date MAR. 7-8/79..... Observers Bln-Tm / Rm-Tm.....

5^m 67° Emulsion Batches:8^m 68°III-J-e 31058-02029
H.O.-e 12108-28024

Spectr. Temp.

Focus..... 56

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Sec.
43234F1	Focus Tests							Fe/-	26-26		
43234F2	" "							Fe/-	26-26		
43235	HD 37468	05 33 ^m .7	-2° 39'	18 49	19 20	0 26W	-2° 39'	Fe/-	8-8-8	1/40	2
43236	HD 91316	10 27.6	+9 49	19 33	19 37	0 9 10 E	+9° 24'	Fe/ND4	8-8-8	1/10	1
43236T	Spot Calc for 43235			15 min @	14.5 D4 3900	15 V D4 4300	15 V D4 4810				
43237	HD 91316	10 27.6	+9 49	19 43	19 45	04 02E		Fe/ND4	12-12		
43238				19 53	19 57	03 50			12-12	200/10	
43239				20 03	20 10	03 37E			12-12	200/36	
43240				20 15	20 25	03 22E			8-8-8	200/36	
43241				20 28	20 42	03 05E			8-8-8	200/55	
43242				20 47	21 49	01 58E			8-8-8	200/300	
43242T1	Spot Calc for 43236-44			15 min @	15 V D4 3900	D3 4300	D2 4810				
43242T2	Strip Calc for 43236-44								90 sec		
43243	HD 91316	10 27.6	+9 49	21 53	00 04	0 16W	+9 24	Fe/ND4	8-8-8	200/10	
43244	"	"	"	00 06	00 08	0 21W	"	"	8-16	200/6	

52029
23224

Spectr. Temp. $+40^{\circ}\text{F}$

Dome Temp./Hum. $+38^{\circ}\text{F}/60\%$

Transparency Conditions $s. / \text{Hazy}$ 332

Focus 502

Spectr. Temp. $^{\circ}\text{F}$

Dome Temp./Hum. $/$

* Try e Leo long gap soon

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fo/-					BC	G8/-25	120 μ	IIa-J-e	A	After vs/ CW Turn of adj screws	$\sim .010\mu$	sl red
Fo/-					BC	"	120 μ	"	B		$\approx .001$	v sl bl.
Fo/- 2-8-8	40/40	2"	3.51	09.5V	BC	G8/-25	120 μ	IIIa-JE	B	Sp. Bin-Blu		fine
Fo/ 4-8-8	100/9	1-2	3.71	B1Ib	BC	G8/-25	120 μ	IIa-D-e	B	Cal Std		sl wh
								IIIa-Je				
Fo/ 4-8-8	100/ not working		3.71	B1Ib	BC	G8	120 μ	IIa-D-e	B	Cal Std		wh
Fo/ 2-8-8	200/10		3.71	B1Ib	BC	G8/-25	120 μ	IIa-D-e	B	Cal Std		sl wh
2-8-8	200/26	2"										fine
8-8-8	200/36	1.2"										fine
8-8-8	200/55	2"										v sl str
8-8-8	200/300	1"									T=38°F @ end	v str
								IIa-D-e				
								IIb-e				
Fo/ 8-8-8	200/600	1"	3.71	B1Ib	BC	G8/-25	120 μ	IIa-OE	B	Calib. Std	Foans = 503	burnt
1" 8-8-8	200/6	0.2"		"	"	"	"	"	B			wh

333

#2

Cont

8^m 68°

Emulsion Batches:

H90-C*12108-07039

Date

Mar 7-8

Observers

Rm-Tu

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43245	HD 84441 = ϵ Leo	9 ^h 40.2	+24 14	00 ^m 23	00 40	1 39 W		Fe/NA4 8-8-8	
43246	HD 89449	10 14.3	+19 59	00 54	02 31	2 56 W	+19 33	" 8-8-8	
43246T	Spot Cul' for 43245-46				15 min @ 15V				
43247	HD 84441	9 40.2	+24 14	02 ^m 37		W		Fe/NA4 8-8-8	
43246F	Focus							Fe/- 08-26	
discarded									

Spectr. Temp.

Focus... 50.5

Spectr. Temp.

Exp. Mtr. See

250/150

200/120

200/120

Transparency Conditions ... *cloud coming* ... 334.

Focus . . . 505

Spectr. Temp. 33.5 °F

Dome Temp./Hum. *29°/90%*

[illegible]

335 Thurs-Fri

Date Mar 8-9 179 Observers AK-Tg

Emulsion Batches:

8^m 68° Παο-ε 12108-07039
new D19 boards

new D19 bench

[illegible]

Comparison Type/Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fo 48-8?		80/55	5"	3.27	G0	PC	G8/-25	120 μ	Tab-e	B	Asm - f Kk		s/stv
D2 4810									"				
Fo 1-506		80/50	3"	1.29	K2	BC	G8/-25	120 μ	"	B	stave/	comp v k	v sl str
" 5F5		400/120	2"	6.84	dK1	BC	G12/-68B	150 μ	"	B	Asm Sp Kk	hazy - cloudy	v sl str
" 655		400/42	2."	3.8	A0IV	"	"	"	"	B	"		sl str uneven
Fo 1-505						"	"	"	Maj	B	of	- .007	sl blue
" 725						"	"	"	Maj	A	off = 15' ccw adj	+ .004	v sl red
											Note prob no diff made in Last adjustment of PHA		
											Some = 1/2 hr Kk speckle system experiment		

357 SAT-SUN

Date MAR 10-11 1979 Observers BA-TS

Emulsion Batches:

8^m 180 DuO-e 12108 - 07039

[illegible]

Spectr. Temp. ... 35°F

Dome Temp./Hum. 121°F / 82%

Transparency Conditions Hazy & windy

Focus ... 504

338

Spectr. Temp. 121°F @ 508

Dome Temp./Hum. 121°F / 90%

Comparison Type/Filter Exp.	Exp. Mir.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe 15-5	200/56	5"	3.98	F8	BC	G12/68	120u	IIuOc	B	Waterloo	cloud	Fine
02		5"	5.46	K0				"		- 11 -		
A 15-5	400/120	5"	5.86	K0	BC	G12/68	150u	"	B	Wat prog		sl str
A 15-5	400/106	5"	5.6	F8	BC	"	"	"	B	"		Fine
" 15-5	400/100	5-2"	6.00	F8	"	"	"	"	B	"	Bad start 508 set	Fine
" 15-5	400/70	3"	5.71	A5	"	"	"	"	B	"		Fine
F 15-5	7					"	"	IIuJ	B		- 11 u	cent's/Blue
15-5	Approx					"	"	"	A		- 13.5u	cent's/Blue

339 Mon - Tues

Date Mar 12/3/79 Observers But-Tn

Emulsion Batches:

Emulsion Batches.
ΠαΟ-ε. 12108.-08039

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[illegible]

Spectr. Temp. $+27^{\circ}\text{F}$ Dome Temp./Hum. $120^{\circ}\text{F}/70\%$ Transparency Conditions *Fine* - s/b hazeFocus *508*

340

Spectr. Temp. 124°F Dome Temp./Hum. $20^{\circ}\text{F}/80\%$

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5-55 1/4	—	2"	3.8	B9	BC	G12/68	120u	Dev-e	B	B std Vel	No Exp meter <i>may have been joined</i>	Fine
							"					
5-55 1/4	From 2038 100/50	1-2"	7.51	A1	BC	G12/68	120u	"	B	Am MR	No Meter <i>* comp w/k</i>	Fine
5-55 1/4	10/12	—	3.1	Gop I	"	"	"	"	A	Rm Prog	<i>* comp w/k</i>	3/5 str
5-55 1/4	100/21	2-3	679	AO	"	"	"	"	B	Am MR	<i>comp w/k</i>	w/k
5-55 1/4					"	"	"	Dev	B		<i>blue and vs Red Red and vs Blue</i>	
											<i>24°F 508</i>	
											<i>* Goppel Fe Arc comp</i>	
											<i>should be OK now</i>	

341

Date Mar 14-15 / 79 Observers Gis-Bts / Rm-Bts

II.O-e. 12108.-08039 19 202

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[illegible]

Spectr. Temp. $+34^{\circ}$ Dome Temp./Hum. $+22^{\circ}\text{F}/70\%$ Transparency Conditions . . . *intermittant cloud* . . .Focus *504*

Spectr. Temp.

Dome Temp./Hum.

342

Comparison Type/Filter Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe - 7-7					BC	G 8/025/20	ITaDe	B			$+34^{\circ}$ 504	sl red
Fe - 7-8	200/111	6-8	3.8	G 6.7	"	"	"	"	B		$+27^{\circ}$ 507	v sl str
Fe - 7-8	200/67		5.3	F 5.1	"	"	"	"	B			v sl str
Fe - 7-8	400/41		6.8-7.7	F 0-31	"	G 12/.68	150p	"	B		$+15^{\circ}$ 512 cloud	wrong * guess or tilt
Fe - 7-8											$+13^{\circ}$ 513	sl red
											again, comp str one side, wk. on other	
											* Karl can you push this as much as possible please	

343 Thurs / Fri

Date Mar 15/16.....

Observers Blm - Bts

Emulsion Batches:
IIaOe..12108-07039 (focus lens)

Plate 12108-08039

Plate 12108-08039

Spectr. Temp. .
Focus
Spectr. Temp. .

Exp. Mtr.

Soci

7039
8039

K^oF

Transparency Conditions

510

.....

Dome Temp./Hum.

344

[illegible]

345

Fri/Sat

Date

Mar 16/17

Observers

KK-Bts/Bts

Emulsion Batches:

Ila. Oe... 12108-15039 16 205

Ila. Se... 31058-08039

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43267F	focus							Fe/-	7-7
43267	HD 47105	6 31.9	+16 29	19:06	19:18	0 00		Fe/-	8-8-8
43268	"	"	"	19:21	19:39	0 21 W		Fe/-	8-8-8
43269	HD 61421	7 39.0	+ 5 29	19:43	19:47	0 31 E	+05 16	Fe/-	8-8-8
43270	"	"	"	19:49	19:52	0 26 E	11	Fe/-	8-8-8
43271	HD 47105	6 31.9	+16 29	19:59	21:04	1 45 W		Fe/-	8-8-3
43271F1	focus							Fe/-	7-7
71F2	focus							Fe/-	7-7
43272	HD 84441 E Leo	09 ^h 40.2	+24° 14'	00 ^m 31 ^s	00 ^m 47 ^s	2 22 W	+23° 51'	Fe/ND	8-8-8
43273	HD 89449 Leo	10 ^h 14.3	+19° 59'	00 55	01 48	+02 48 W	+19° 33'	Fe/ND	8-8-8
43274	HD 141513	15 44.4	-3 07	02 11	02 36	-01 58 E	-03 22	Fe/ND	8-8-8
43275	HD 84441 E Leo	09 ^h 40.2	+24° 14'	02 43	03 08	+4 43 W	+23° 52'	Fe/ND	8-8-8
43275T	spot on	for 43267-		15 min 15V	(1) 3900 04 (2) 4300 03 (3) 4810 02				
43276	HD 147835	16 ^h 19 ^m	+32° 34'	04 00	05 11	+00 09 W	+32° 22'	Fe/ND	5-5-5
43277	HD 163506	17 ^h 51.4	+26° 04'	05 22	05 57	-00 37 E	+26 02	Fe/ND	5-5-5
77F	focus							Fe/ND	20-80

Spectr. Temp. 2
Focus.....
Spectr. Temp.

Spectr. Temp.

Dome Temp./Hum.

Dome Temp./Hum.

Transparency Conditions clear

cloud

haze

cloud

346

[illegible]

Date _____

Mar 17/18 Sat/Sun

Observers

Two L.Bts.

Trade... 12108-15039 18 192
 Trade... 12108-16039

Spectr. Temp.

Focus

Spectr. Temp.

[illegible]

Spectr. Temp. Dome Temp./Hum.

348

2-55

349

Sun Mon

Date

Mar 18/19

Observers

Gis-Bts/KK-Bts

Emulsion Batches:

8^m 68° II.10e...12108-160398^m 68° II.10e...12108-16039

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43280F	Focus			18 38				Fe/-	S-S
43280	HD 91316	10 ^h 27 ^m 6	+ 9° 49'	19 00	21 48	01 ^m 15 ^s E	+ 9° 16'	Fe/ND	8-8-8
S1	Strip cal								
S2	Strip cal								
S3	Strip cal								
43280 T	Spot cal	for 43280-91		15 min 15V	① D4 3900	② D3 4300	③ D2 4810		
43281	HD 91316	10 ^h 27 ^m 6	+ 9° 49'	21 52	22 36	00 28 E	9° 21'	Fe/ND	8-8-8
43282	HD 91316	10 ^h 27 ^m 6	+ 9° 49'	22 38	23 05	00 01 W	9° 21'	Fe/ND	8-8-8
43283	HD 91316	"	"	23 06	23 24	00 20 W	"	"	"
43284	HD 91316	"	"	23 26	23 43	00 39 W	"	"	"
43285	HD 91316	"	"	23 45	23 57	00 52 W	"	"	"
43286	HD 91316	"	"	23 59	00 09	01 04 W	"	"	"
43287	HD 91316	"	"	00 11	00 17	01 12 W	"	"	"
43288	HD 103095	11 47.2	+38 26	00 29	01 29		+37 49	Fe/ND	5-5-
43289	HD 116656/7	13 ^h 19 ^m 5	+55 27	01 45	2 05	00 02 W	15457		

Spectr. Temp. 440.....

Focus 501

Spectr. Temp.

Dome Temp./Hum. 40°.....

Dome Temp./Hum.

Transparency Conditions this cloud

380

Type	Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe-55							BC	G12/68	120 μ	IlaOe	B		44° SO1 -25 μ close but Ends look fuzzy	
			100/100	3-4"	3.7I	BIZb	BC	G8/-0.25	120 μ	IlaOe	B	Cal. Std.		
			90 sec							IlaOe				
			60 sec							IlaOe				
			120 sec							IlaOe				
										IlaOe				
			100/71	3-4"	3.7I	BIZb	BC	G8/-0.25	120 μ	IlaOe	A	Cal. Std.		
			100/50	3-5	3.7I	BIZb	BC	G8/-0.25	120 μ	IlaOe	B	Cal. Std.	45° SO2	
			100/38		"	"	"	"	"	"	A	Cal. Std.		
			100/21		"	"	"	"	"	"	B	Cal. Std.	Rate meter slow?	
			60/00		"	"	"	"	"	"	A	Cal. Std.	" " "	
			100/00		"	"	"	"	"	"	B	Cal. Std.	" " "	
			100/00		"	"	"	"	"	"	A	Cal. Std.	" " "	
Fe-55			100/-				BC	G12/68	120 μ	IlaOe	B		38° SO3	sluggish sl fuzzy
			1/100				SI.			IlaD			2nd run thin cloud we cant →	

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions *Thin cloud*

Focus

Spectr. Temp. *34.0*Dome Temp./Hum. *30°/85%*

352

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	<i>1/100</i>				<i>ST</i>			<i>IIaD</i>			<i>thin cloud</i>	<i>v wk</i>
<i>Fel 45-5.5</i>	<i>100/61</i>	<i>2-3</i>	<i>6.8</i>	<i>G8V</i>	<i>BC</i>	<i>G12/68</i>	<i>120μ</i>	<i>IIaD</i>	<i>B</i>	<i>Asm Sp</i>	<i>F=504, T=36°</i> ^{<i>exp meter</i>} <i>slow</i>	<i>fine</i>
<i>" 7"</i>	<i>40/14</i>				<i>"</i>	<i>"</i>	<i>" *</i>	<i>"</i>	<i>"</i>	<i>Std Vel</i>	<i>RV = +10.4</i> ^{<i>!</i>}	<i>s/ str</i>
<i>4/100 45-5.5</i>	<i>100/120</i>	<i>2-3</i>	<i>6.5</i>	<i>d62</i>	<i>"</i>	<i>"</i>	<i>" *</i>	<i>"</i>	<i>"</i>	<i>Asm Sp</i>	<i>350</i> ^{<i>H & K emission</i>} <i>504</i>	<i>s/ str</i>
<i>" "</i>	<i>100/101</i>		<i>3.93</i>	<i>F0p</i>	<i>"</i>	<i>"</i>	<i>" *</i>	<i>"</i>	<i>"</i>	<i>Asm Sp</i>		<i>s/ str</i>
<i>" 55"</i>	<i>100/110</i>	<i>3"</i>	<i>5.81</i>	<i>F2Ia</i>	<i>"</i>	<i>"</i>	<i>" *</i>	<i>"</i>	<i>A</i>	<i>Ceph - Fc</i>		<i>s/ str</i>
<i>4/</i>									<i>A</i>			<i>s/ blue</i>

353

Mon/Tue

Emulsion Batches:

JAOE... 12108-18039 18 198

Date Mar 19/20

Observers Myd-Bts/Rm-Bts

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43295F	focus test			18 50		/		Fe/-	5-5
				1					
43296	1 Gem HD 41116	558.1	+23° 16	19 13	19 30	58w	+23 12	Fe/ND4	5-5-5
43297	μ Cnc HD 67228	08 01.9	+21 52	19 41 ²⁰ ₂₀	20 21 35	58w	+21 34	Fe/ND4	5-5-5
43298	μ Cnc HD 67228	"	"	21 36	22 35	58w	+21 34	Fe/ND4	5-5-5
43299	ϵ Leo = HD 89441	9 ^h 40.2	+29° 14	01 ^h 29	01 57	+03 45W	23° 49	Fe/ND4	5-5-5
43300	40 Leo = HD 89449	10 ^h 19.3	+19° 59	02 ^h 05	03 ^h 11	4 ^h 25W	+19° 31	Fe/ND4	5-10
43300T	spot calib.		15min 15v		3900	D3 4300			
43301	89 Her = HD 163556	17 ^h 51.4	+26° 4	03 ^h 26	04 ^h 26	01 ^h 57E	+26° 01	Fe/ND4	5-5-5
43302	HD 186688 = σ Ucy	19 ^h 40.8	+29° 1	04 38	05 52	02 19E	+29° 09	Fe/ND4	5-5-5
43302F	Focus Test							Fe/-	5-5

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

Sec

Spectr. Temp. 40° Dome Temp./Hum. 39° Transparency Conditions *thin cloud*Focus 502

Spectr. Temp.

Dome Temp./Hum. 34°

354

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5-5-59 18 95					BC	62/68	120 μ	Ilade	A		40° 502	blue
5-5-59 200/58	3.4	5.1	G5	BC	"	"	"	"	A	Solar Type		str
5-5-59 205/58		6.0	G2	"	"	"	"	"	B	"	break of 30 min for bar	vs/str
5-5-59 200/57		"	"	"	"	"	"	"	A	"	"	vs/str
5-5-59 200/56		3.8	G0pII	"	"	"	"	"	A	"	38° 503	slstr
5-5-59 200/53		5.3	F5V	"	"	"	"	"	B	"	humidity 79% Cirrus	slwk
5-5-59 400/60		5.8	F2Ta	"	"	"	130 μ	"	B	"	Ceph/Rm	slwk
5-5-59 400/22		6.8-7.6	F0-G1	"	"	"	"	"	A	"	Ceph/Rm	* vwk
5-5-59				"	"	"	"	"	A	"	38° 503	slblue
											* Korf Please push the one as much as possible	

355

Emulsion Batches:

Date Observers

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[illegible]

ph A vs B

43255 A-B = -2.5μ 43271 -9μ

357

