

Edelle setups

29 / 12 / 97

4508 Å Detur /

22 / 12 / 97

4508 Å 0600 hr

12 / 01 / 98

"

"

20 / 03 / 98

29 / 03 / 98

31 / 03 / 98

10 / 04 / 98

~~13 / 04 / 98~~

X grating 600 lines/mm 2

13

Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mtr. S

Spectr. Temp.

Dome Temp./Hum.

4.

DAVID DUNLAP OBSERVATORY
74" LOGBOOK
VOL. 89
PLATE NOS. CL 50686 - CC 1587
DEC-1997 - APRIL 1998

py #1

Tues / wed

Date ... 1997 Dec 2/3... Observers ... Lu / Jn... (Seaside mostly)

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.
CC506 ^{26/67}	Inboard / outboard							FeAr ND3	4/7
88	B/H5(4)	(after following observation)			17 23				0
89	Comp							n	4
90	HD 205730	21 32 14	H45536	17 19 14					68
91	Comp							n	4
92	comp							"	4
93	HD 44982	06 19 48	82 21 00	17 32 52					1000
94	comp							"	4
95	HD 44982	"	"	17 51 35					1200
96	comp							"	4
97	HD 44982	"	"	18 13 45					1140
98	comp							"	4
99	BIAS(4)			18 34					
700	Comp							n	4
01	GSC 5198 *	21 21 46	-03 11 58	18 47 01					720
02	comp								

Spectr. Temp.
Focus... 6...
Spectr. Temp.

Exp. Mtr. S

100V

4.8k

911 2

755

934

1247 2

Spectr. Temp. Dome Temp./Hum. $+1.0^{\circ}\text{C}$ 62.88% Transparency Conditions ... Fine 6

Focus ... 6.95

Spectr. Temp. Dome Temp./Hum. 400 0 50 1024 4 1 CCDPMT

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
47		1000V				CHSS CCD	1800ln 47.06	306u	5184A	3/4			
0										1			
4										5			2.5K
68		4.8K	1"	5.53	M5 D ₄₀					6	Just used/marginalization stop		2.8K
4										7			
4										7			
1000		911	2"	9.8	G5V					8		$\Delta \alpha 0001:53$ $\Delta \delta -0001:20$	
4										9			
1200		755	2	"	"					10			
4										11			
1140		934		"	"					12			
4										13			
										1			
4										13		$\Delta \alpha -00 00 12$ $\Delta \delta -00 01 06$	
720		1247	2"	9.7	G0					14		* Wrong Star	
										15			

7PG2

Tues/Wed

Date 1997 Dec 2/3

Observers

Lu/Tn

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.
CC50703	comp							FRAY ND 3	
04	GSC 5198	21 21 46	-03 11 58	19 08 24					900
05	"	"		19 23 57					960
06	Comp							"	4
07	BINS (4)			19 42					⊙
08	Comp							"	4
09	TT Cet	01 46 57	-09 45 06	19 53 08					900
10	Comp								4
CG 8187/90	H03765	00 35 18	+39 40 00	20 18				4x	67ms
91/92	"							2x	133ms
CC50711	comp							"	4
12	H03765	00 35 18	39 40 00	20 21 21					332
13	comp							"	4
14	comp							"	4
15	TT Cet	01 46 57	-09 45 06	20 39 40					1200
16	comp							"	4

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mr.

294

297

176

2090

288

Spectr. Temp. -100.3°C ...Dome Temp./Hum. $-1.5^{\circ}/70.7\%$

Transparency Conditions some cloudy... D,

Focus 6.95

Spectr. Temp.

Dome Temp./Hum. 2.2

400 0 50 1024 4 1 CCD FINT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 Ymm 47.06	306	5784	15			
900	294	2"	9.7	40				16		Correct star	
960	297							17		$\Delta \alpha -00.0035$ $\Delta \delta +00.0112$	
4								18		through clouds.	
0								1			
4								18			
900	170	2-3'	10.0	A				19			
4								20			
67ms		1-2" guess			Above	306 u slit			Seeing Test	Pearson Airport NNW 7 Km/hr	
137ms										(102.3 Kpas at And rising)	
4				236 dks				20		ALT 86°	
332	2090	1"-2"	7.36	dks				21			
4								22			
4								22			
1200	288	1"-2"	10.0	A				23			
4								24			

AIPG 3

Date 1997 Dec 2/3 Observers Lu/Tn

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.
cc50717	BIAS(4)			21 00					
18/24	flats							Tung ND 4	6
25	comp							FeAr ND 3	4
26	HD 44982	06 19 48	82 21 00	21 16 38					960
27	"	"	"	21 32 59					960
28	comp							"	4
29	HD 44982	"	"	21 51 29					970
30	"	"		22 07 59					960
31	comp							"	4
32	BIAS(4)			22 25					
33	comp							FeNe ND 5	4
34	Vys 410 B	02 49 10	55 02 14	22 33 42					1800
35	comp							"	4
36	Vys 410 A	"	"	23 07 11					1196
37	comp							"	4

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

S

838

830

820

847

226

462

Spectr. Temp. -100.3°C Dome Temp./Hum. $-1.8^{\circ}\text{C}/72\%$ Transparency Conditions OK D
 Focus 6.95
 Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	$1800\frac{1}{\text{mm}}$ 47.06	306μ	5184	1			
4 6								2			
3 4								24			
960	838	2"-3"	9.8	45V				25	Lee		
960	830	"	"					26			
4								27			
970	820	2"-4"	"	"				28			
960	847	"	"					29			
4								30			
								1			
5 4					$1800\frac{1}{\text{mm}}$ 47.75	306μ	5300	5			
1800	226	1"-2"	11.2	M0				6	AC+55 19225	(No ADU above sky)	
4								7			
1196	462	2"	10.5	M0				8	AC+55 19224	200 ADU ABOVE	
4								9			

11 pg#4 Tues/wed

Date 1997 Dec 2/3.... Observers [Vys]/Tn/Ly.....

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.
CC50738	B/H/S(4)	.		233947					0
39	Comp							FoVe NDS	4
40	Vys 416 B	030825	+574808	234147					1300
41	Comp							"	4
42	Vys 416 A	"	"	000526					1111
43	comp							"	4
44	Comp							"	4
45	Vys 419 C	032412	234630	003144					1840
46	comp							"	4
47	Vys 419 A	"	"	010603					96
48	Comp							"	4
49	B/H/S(4)			012336					0
50	Vys 419 B	1	"	012824					1140
51	Comp							"	4
52	Comp							"	4

Spectr. Temp
Focus....6
Spectr. Temp

Exp. Mtr.
1000V

280

285

182

255

125

Spectr. Temp. Dome Temp./Hum. -2.7°C 76.78A Transparency Conditions ... Fine 12

Focus ... 6.95

Spectr. Temp. Dome Temp./Hum. -2.7°C

Comparison Iter. Exp.	Exp. Mtr.	Seeing	P ₀ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0	1000 V				CHSS CCD	1800in 47.75	306	5300A	1			
4									9			
1300	280	1"-3"	~10	M0					10	AC+5820565	NORTH = slightly fainter	
4									11			
1111	285		~10	M0					12	AC+5820564	South one	
4									13			
4									13			
1840	182	1"-2"	11.89	M					14		through clouds.	
4									15			
94	255	3"-4"	10.38	M					16	419A	70 ADU above sky not very separate from B.	
41									17			
0									1			
1140	125	1"-3"	~11	M					18	419B	NORTH = fainter of pair	
4									19		SEPARATION FAIR	
4									19			

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Date 1997 Dec 2/3 Observers [Vys.] / T.H. / L.H.

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.
C50753	HD 36395	05 26 16	-03 41 00	01 53 40					483
54	Comp							NB5 FeNe	4.5
55	Comp							"	4
56	Vys 560	09 53 13	-03 41 18	02 07 50					873
57	Comp							"	4
58	Vys 560	"	"	02 24 14					846
59	comp							"	4
60	Vys 560	"	"	02 40 17					839
61	comp							"	4
62	BIAS(4)			02 55					0
63	comp							"	4
64	BD Tol 2447	10 23 49	01 21 36	03 00 15					921
65	comp							"	4
66	comp							"	4
67	Vys 238	06 32 57	71 59 24	03 25 09					987
68	Comp							"	4

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

Exp. Mtr.

1000V
115K

300

300

300

600

47

Spectr. Temp. $+100.3^{\circ}\text{C}$ Dome Temp./Hum. $+39^{\circ}\text{C } 81\% \text{ H}$ Transparency Conditions $\dots$ *part cloudy* $\dots$ *11*

Focus $\dots$ *6.95* $\dots$

Spectr. Temp. $\dots$ Dome Temp./Hum. $\dots$

Comparison ter. Exp.	Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
483	1000V 115K	3"-4"	7.95	M1	CAS	1800 $\frac{1}{2}$ 47.75	306 μ	5300A	20	Mary St/101		
45			7						21			
4									21			
873	300	2"-3"	10.5A	MO					22	Hu pgn		
4									23			
846	300		"	"					24			
4									25			
839	300		"	"					26			
4									27			
0									1			
4									27			
921	600	3"	9.65	M2					28	Mary St/1		
4									29			
4									29			
987	277	2"	11.0	MO					30	AC+72 3338		
4									31			

15 PG 6

Tues / wed

Date 1997 Dec 23

Observers [Vys]/Lu/Tn

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.
CC50769	comp							FeNe ND5	4
70	BD+33 2071 B	10 58 11	33 25 38	03 52 36					2243
71	Comp							"	4
72	BIAS(4)			04 32					0
73	BD+33 2071 C	"	"	04 33 27					2100
74	Comp	- Header sug(B) elit: it on 12/97 Tn						"	4
75	BD+33 2071 A	"	"	05 10 38					1273
76	comp							"	4.5
77	Comp							"	4
78	HD 95735	10 57 54	36 38 00	05 37 58				"	288
79	Comp							"	4
80	BIAS(4)			05 44					0
81	comp							"	4
82	BD+16 2222	11 04 29	16 05 39	05 47 45					1452
83	Comp								
84/94	flat3 x 11							" Tung ND 4	5
95	BIAS(4)			06 18					0

Spectr. Temp

Focus

Spectr. Temp

Exp. Mtr.

1000 V

220

61

245

2000

200

Spectr. Temp. -100.3°C Dome Temp./Hum. $-3.8^{\circ}\text{C}/82\%$ Transparency Conditions $\dots$ partly cloudy $\dots$ 16.
 Focus 6.95
 Spectr. Temp. $\dots$ Dome Temp./Hum. $-40^{\circ}\text{C}/83\%$ 400 0 50 1024 4 / ECDMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4	1000V			CASS CCD	1800/mm 47.75	306 μ	5300	5		SBIG used OK,	
2293	220	1"-2"	11.8	K8				6	Vys 597B	middle positions BA144 box	
4								7		of Diagonal 3	
0								1		Some cloud	
2100	61	~14	K like					8	Vys 597C	SBIG used Faintest, most NW of 3	
4								9		Too Faint Really to normally do	
1273	295	1"-2" ~	11.2	M like				10	Vys 597A		
45								11			
4								11			
282	2000	1"-2'	7.48	M2				12	M2 mag shd vel		
4								13			
0								1			
4								13			
1452	200	1"-2"	11.5	M0				14	Vys 599		
5								15			
0								2		FLATS 12.3K	
0								1			

17 Pg#1 Fri / Sat

Date 1997 Dec 5/6... Observers ..mn../..L4/Tn.....

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.
cc507 ⁹⁶	Inboard / Outboard HARTMANN							FeAr ND 4	4/6
98	Comp							"	4
99	HD 217675	22 57 19	+11 47 19	18 34 13					50
cc50800	comp							"	4
01	BIAS(4)			18 40					
02	Comp							"	4
03	VES 735	2000 02 20 07	61 07 03	18 45 00					1800
04	Comp							"	4
05	VES 735	"	"	19 17 07					1800
06	comp							"	4
07	BIAS(4)			19 48					0
08	VES 735	"	"	19 51 17					1800
09	comp							"	4
10	VES 735	"	"	20 23 30					1855
11	comp							"	4
12	BIAS(4)			20 56					0

CCD
Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

CCD V

HV=1320

1760

1850

1755

1760

CCD Spectr. Temp. - 99.5°C Dome Temp./Hum. +0.9°C 58.5%
 Focus 6.88 Transparency Conditions Partial clearing 18
 Spectr. Temp. Dome Temp./Hum. Both CCD Dewar and secondary mirror reinstalled Today.
 Dewar Pumped down.
 CD 395 0 50 1024 4 1 CCD FM

Comparison er Exp.	Exp. Mtr.	Seeing	Mag. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4/6	1000V				CASS CCD Tgrating →	1800 l/mm 56.35	306μ	6600A	3/4	focus test		
4									5			
60	8K		3.62	B6 III per A2p					6	normalization star too	Stronger line saturated to bring others up	
4									7			
									1			
4									8			
1800	HV=1320 1760	2"-3"	12	0					9	Mn program	(Hx double Em ~ 20nm above continuum)	
4									10			
1800	1850		"	"					11			
4									12			
0									1			
1800	1755	1-3"	"	"					13			
4									14			
1855	1760	2"-4"	"	"					15			
4									16			
0									1			

1. pg 2

Fri / Sat

Emulsion Batches:

Date 1997 Dec 5/6..... Observers SmJ/Lu/Tu.....

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[illegible]

V\

SAT/SUN

Emulsion Batches:

Date 1997 Dec 13/14. Observers Rm / Lu / 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.
CC508 ²⁴ / ₂₅	Inboard / OUTBOARD HURTMAH							Red ND4	4/6
26	BIAS(4)			23 05					
27	Comp							"	4
28	HD 30282	4 41 06	+36 32 00	23 15 18					576
29	Comp							"	4
30	Comp							"	4
31	HD 22484	3 31 46	00 05 04	23 30 49					300
32	Comp							"	4
33	Comp							"	4
34	HD 44990	06 19 49	07 08 25	23 40 32					475
35	Comp							"	4
36	BIAS(4)			00 02					0
37	Comp							"	4
38	HD 62509	07 39 12	+28 16 04	00 05 42					36
39	Comp								
40	flat 3x7							Fluor ND 5	4 6
41	BIAS(4)			00 12					0

 CCD
Spectr. Temp.
Focus.....6
Spectr. Temp.

 Exp. Mtr. Se
200V

2040

3780

3650

MK

CCD Spectr. Temp. -100.4°C ...

Dome Temp./Hum. -00.1 778H

Transparency Conditions ... Partial clearing 22

Focus 6:88

Spectr. Temp.

Dome Temp./Hum. -00.5 81.58H
CCD

CCDFINT
395 050 10741

MAX ADY

Exp. Mtr.	Seeing	P. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000V				CASCCD	1800/n 54.93	306	6400	3/4	focus test		
								1			
								5			
2040	4"	8	F-G					6	Rm program	High priority Then cloudy	
								7			
								8			
3780	4"	4.28	F9 IV-V					8	std vel	very cloudy	
								9			
								9			
3650	4"	7	F-G					10			25K
								11	Rm pgm	through clouds.	
								1			
								11			
11K								12	std vel		11K
								13			
								2			11K
								1			

Np951

Sun / Mon

Date 1947 Dec 14/15 Observers Krn / Tn

Emulsion Batches:

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.
CC508 ⁸⁴⁶	In board / out Board		Hartmann					FeAr ND4	4/6
1197	HD 218 525	23 03 35.2	+44 01 14					4x 2x	67ms 133ms
CC50850	BIAS(4)			18 15 38					0
51	Comp	Telescope position							4
52	SKY	01 17 23	+61 02 30	18 18 47					600
53	Comp							"	4s
54	Comp							"	4s
55	HD 20 3064	21 14 43	+43 31 30	18 46 56					192
56	Comp								
CG81157/63	FLATS x 7							TUNG ND5	4s
64	BIAS(4)			18 55					
CC50865/66	Inb / out Board		Hartmann					FeAr ND4	4/6
67	Comp							"	4
68	HD 20 3 64	21 14 43	+43 31 30	19 10 18					372
69	" Comp	"	"						550
70	Comp							"	4

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

Exp. Mtr.

1320V

724

40K

-519

8K4

59K

5K

CCD
Spectr. Temp. -100.6 °C

Dome Temp./Hum. -4.6 °C 62%

Transparency Conditions increasing cloud 24

Focus 7.08

90 c gain

Spectr. Temp.

Dome Temp./Hum.

420 0 50 1024 4 1 CCD UNIT

Comparison / Filter Exp.	Exp. Mtr.	Seeing	Mag. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4/6	1320V					0600C 2704	306u	5140A	3/4			
6/6		POOR	634	AD		Above 306u	Slit			Seeing test	52 - 000025 158 00 00 00	
0									1			
4/6	774								6	SKY	Tel East Side	
4/3									8	SKY	cloudy	
4/3									8			
1/2	40K		4.99	08					9	SKY	08 V e?	5.8K
									10			
4/3									2			
						1800lu 5635		6600A	+		395 0 50 1024 41	CCD UNIT
4/6	-5.7 °C		6.95	set		↓		6600A	3/4	focus	N ↓ ↓	
4									11			
3/2	8K +4		4.99	08					12			4K
5/0	5.4 K								13			
4	5.4 K								14			

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Emulsion Batches:

Date 1947 Dec 14/15 Observers Krrn / 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.
CC50871	HD 20364	21 14 43	+43 31 30	19 41 46	ed + ✓				237
72	Comp							FeAr ND4	4
73	BIAS (4)								4
74	Comp								4
75	HD 199 579	20 53 03	+44 32 24	19 57 26					967
76	Comp								4
77	HD 199 579	"	"	20 16 16					1282
78	Comp								4
79	Comp								4
80	HD 217675	22 57 19	+41 47 19	20 45 17					122
81	Comp								4
82/88	FLATS x 7							TUNG ND5	6s
89	Comp							FeAr ND4	4s
90	HD 39640	BIAS (4)		02 01					0

Spectr. Temp
Focus....6
CCO
Spectr. Temp

Exp. Mtr. S

1000
865

62k

3.4k

13k

395 0 50 1024 41 CCDFMT

Cover / Filter	Exp.	Exp. Mtr.	Seeing	P.M. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
77L		1000V 8.6K		499	08	CASS CCD	1800 In 58.35	306 _w	6600A	12	By accident Readout in 12 ed tel though		
4										16			
4										17			
4		6.2K	4"	5.96	06	Pe				18		cloudy	
4										19			
120		3.4K	5"							20			
4										21			
4										22			
122		13K		3.62	B6III	pe + A2p				23			0.3K
4										24			
6										2			
4										26			
0										27			
										1	(tel still Reversed.)		
											Ad +00 00 11		
											LS +00 01 06		

VX 99#1

Mon / Tues

Emulsion Batches:

Date 1997 Dec 15/16.... Observers Mn / 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.
CC 50891	Comp							FEAR ND 4	4
92	140217675	22 5719	41 4719	17 2911					78
93	comp							"	4
CC 50894	BIAS (4)			17 34					0
95	Comp							"	4
96	VES 735	02 2007	+610703	17 4810					1535
97	Comp							"	4
98/902	FLATS x 5							TUNG ND 5	6s
903	BIAS (4)			18 24					0
CC 50904/05	Inb / out							FEAR ND 4	4/6
06	Comp							"	4s
07	VES 735	02 2007	+610703	18 4157					2407
08	Comp							"	4s
09	VES 735	"	"	19 2607					983
10	Comp			19 4253					2308
11	Comp								

CED
Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mtr.

100V

12K

130V

175J

+2.9°C

21K

12K

28K

CCD - 100.3 °C Spectr. Temp. Dome Temp./Hum. +3.6 °C 56624 Transparency Conditions FINE 28

Focus 6.95 7.03 for 600C grating 90 gain

Spectr. Temp. Dome Temp./Hum. C2 395 0 50 1024 41 CCD FWHM

Comparison Filter	Exp.	Exp. Mtr.	Seeing	P.V. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4		1000V				CHSS CCD	1800 in 5635	3064	6600A	5			5
78		12K		362	B61Dpe + A2p					6		normalization STAR Also done last night.	5.7k
4										7			
0										1			
4		1320V								8			
B35		1752	4.8	128	09					9		SKY still bright a bit @ 3 hrs E	27 26
4										10			
6										2			
0										1			
4	4/6	+2.9 °C		7.03	set		0600C 27.04	306	5140A	3/4	focus	445 0 50 1024 41	
4										11			
247		2.6K	4.8	128	09					12			
4										13			
933		1.2K								14		Auto guider used, but it guided off in RA too much.	
2368		2.8K								15			
										16			

NR942 Mon/Tues

Emulsion Batches:

Date ...1997..Dec 15/16.. Observers ...Mr./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.
CC50912	BIAS(4)			20 22					0
13/18	FLATS x 6							TUNG ND 5	4
19	Comp							Febr KDA	4
20	VES 735	02 20 07	+61 07 03	20 32 46					2231
21	Comp							"	4s
22	VES 735	"	"	21 12 33					
23	Comp							"	4s
24	BIAS(4)			21 51 55					0
25	VES 735	"	"	21 53 17					2213
26	Comp							"	4s
27	VES 735	"	"	22 32 16					2229
28	Comp							"	4s
29	BIAS(4)			23 11					0
30	VES 735	"	"	23 12 24					22
31	Comp								4s

CO
Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mr.

1320

2.8

18

2.8K

2.8

2.7

CCD Spectr. Temp. -100.2°C Dome Temp./Hum. $+2.2^{\circ}\text{C}$ 64-48// Transparency Conditions FIR 30

Focus $7.0.3$

Spectr. Temp. Dome Temp./Hum. $445\ 0\ 50\ 1024\ 4\ 1\ \text{CCDFMT}$

Exp.	Exp. Mtr.	Seeing	Plg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0	1320V				CAS CCD	0600C	306u	5140A	1			
6					grating	27.04			2			12K
4						*27.03			17		* Grating angle change	
23	2.8		12.8	09					18		To get sky line	
6									19		at red edge out	
28									20			
6									21			
0									1			
213	2.8K								22			
4									23			
229	2.8		3.5						24			
4									25			
0									1			
2	2.7								26			
4									27			

My #3

Mon/Tues

Emulsion Batches:

Date 1997 Dec 15/16. Observers Mn/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.
CC50932	VES735	02-2007	+61 07 03	235145					220
33	Comp							FeAr ND4	4s
34	VES735	"	"	003021					220
35	Comp							"	4
36	BiHS(4)			0116					0
37/42	FLAHSx6							JUNG ND5	4
43/44	Comp	two written off this FRAME						FeAr ND4	4s
45	45 VES735	02 2007	+61 07 03	012820					2225
46	46 Comp							FeAr ND4	4
47	47 VES735 ✓	02 ^h 2007	+61 07 03	02 ^h 1116					2447
48	48 Comp ✓							"	4
49	49 BiHS(4)			0254					0
50	50 VES735	"	"	0255					2200
51	51 Comp							"	4
52	52 VES735			033404					1804
53	53 Comp								

Spectr. Tem

Focus....

Spectr. Tem

Exp. Mtr.

1320V

2.6

275K

Now Tel

3.9K

3.4K

3.2K

2.9K

Spectr. Temp. Dome Temp./Hum. $+16^{\circ}\text{C}$ 6768H Transparency Conditions *Fine - some cloud* ³²
 Focus *7.03*
 Spectr. Temp. Dome Temp./Hum. $+11.0^{\circ}\text{C}$ 7156H

Commission Filter Exp.	Exp. Mtr.	Secing	Pt. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
220	1320V				CASS	0600C		5140A	28			
4	2.6	46	12.8	08	cen	27.03	306		29			
220	2.75K								5			
4									7			
0									1			
4									2		Topup Done	
4	(Now Telescope East Side)					600C					8ci w det	
4						27.015	changed again				of 27.015	
225	2.9 k								9ci		test on west side	
4									10ci		~60ADU ABOVE sky	
4									11ci			
0	3.4 k								12ci			
220									13			
4									1			
0	3.2K								14		airmass 1.75, poorer seeing	
4									15			
4	2.9 4-7								18		airmass 1.90	
									19			

47 p44 Mon/Tues

Date 1997 Dec 15/16... Observers mn./tn.....

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.
CC50954	BIAS(4)			04 05					0
55	Comp							Felt IND4	4
56	HD53975	07 01 57	-12 14 24	04 17 41					534
57	HD53975	"	"	04 26 55					576
58	Comp							"	4
59	Comp							"	4
60	HD 54662	07 04 36	-10 11 11	04 40 46					845
61	Comp							"	4
62	Comp							"	4
63	HD 48279	06 37 30	+01 49 00	05 00 38					244
64	Comp							"	4
65	HD 48279	"	"	05 13 15					2035
66	Comp							"	4
67	Comp							"	4
68	HD 48099	06 36 37	+6 26 25	05 51 50					1111
69	Comp								

Spectr. Tem

Focus.....

Spectr. Tem

Exp. Mtr.

1320V

25K

25K

50K

23K

27K

50K

Spectr. Temp. Dome Temp./Hum. $+1.2^{\circ}\text{C}$ 7078H Transparency Conditions ... thin cloud 34

Focus 7.03

Spectr. Temp. Dome Temp./Hum. $+1.0^{\circ}\text{C}$ 6912H

445 0 50 102441 CCD FWT

Comparison Filter Exp.	Exp. Mtr.	Seeing	Pg Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0	1320V				CAISS CCD	0600C 27.015	1	5740A	1			
4									19		Tel still East Side	
534	25A	V poor 7" 156.47		07.5	V				20	0* std	156-00 0017 2.6 min 158-00 0115	36K
516	25K								21			
4									22			
4									23			
845	50K	8" 6.21		06.5	V				24	0* std	Airmass 2.6	8K
2									25			
4									26			
244	23K	6" 7.86		08	V				26			
4									27			
2035	27K	8" 7.86		08	V				28		156-00 0021 158-00 0115	
4									29			
4									5		Close to Full	
111	50K	15" 6.36		07	V				6		noon	
									7			

mpg#5 P9#5 Mon/Tues

Emulsion Batches:

Date 1997 Dec 15/16 Observers M.A./T.J.

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	Ex
cc50970	B/H5(4)			061212					0
71	Comp							Edm ND4	4
72	HD46202	06 2654	+50300	061722					368
73	HD46202	"	"	062435					
74	Comp							"	45
75	Comp							"	45
76	HD87901	10 0303	+122722	064058					1
77	"	"	"	064232					185
78	Comp								4
79/84	FLATS X6							Twire ND5	45
85	B/H5(4)			0647					
11	Comp								

Spectr. Temp. ...
7.0.2
Spectr. Temp. ...

Mr. Seen

320V

3.3K

100V

8K

10K

Transparency Conditions *OK* *30*

Spectr. Temp.

Dome Temp./Hum. 20.3

Comparison pe/Filter	Exp. Mtr.	Seeing	Hg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0	1320V					0600C 27-015	306u	5140A	1			
4									8			
3/8	3.3K	B-15	8.19	09V					9		The SE of PAIR	
									10		↗ 1' separation	
4									11			
4	1000V								11			
1	8K	1.35							12	Telluric Std		
8	10K								13			
4									14			
5/16									2			

1991 Tues / wed

Date ... 1997 Dec 16 / 17 ... Observers . K. n. / T. n.

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.
CC509 ⁸⁶	Inboard / Out Board							FeAr ND4	4/6
88	BITS (4)			17 14					0
89	Comp							FeAr ND4	4
90	HD 27675	22 57 19	+41 17 19	17 21 06					30
91	Comp							"	4
92	Comp							"	4
93	HD 8965	01 23 18	+59 44 00	17 29 57					44K
94	Comp							"	4
95	Comp							"	4
96	VES 735	02 20 07 ²⁰⁰⁰	+61 07 03	17 45 39					2200
97	Comp							"	4
98	BITS (4)			18 23					0
99	VES 735	"	"	18 24 56					2200
51 000	Comp								4.
01	VES 735	"	"	19 04 08					220
02	COMP								

CCD
Spectr. Temp.
Focus
Spectr. Temp.

Exp. Mtr. Se

1060V

5K

44K

1320V

26K

2370

9530

CCD Spectr. Temp. -100.2°C Dome Temp./Hum. $+5.0^{\circ}\text{C}$ 59924 Transparency Conditions . mostly clear . 30

Focus 7.03

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1060V				C455000	600/n 27.015	30u	5190A	3/4			
0								1			
4								5			
5K		3.2	B6	Upe + A2p				6			12K
								7			
								7			
44K	3"	7.28	B0.5	V				8			10K
								9			10K
1320V								9			
2.6K	2-3'	12.8	09					10		180A04 max above sky	
								11			
								1			
2370	2"							12			
								13			
9530	1.3							14		thin cloud	
								15			

2nd pg #2 Tues / wed

Date 1997 Feb 16 / 17 Observers K.S.N. / T.M.

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.
cc51003	VES 735	2000 02 20 07	+61 07 03	19 44 02					2274
04	Comp							FeAr NDA	4
05	BINS (4)			20 25					0
06	VES 735	"	"	20 26 04					2200
07	Comp							"	4
08	Comp							"	4
09	HD 24760	03 51 08	+39 43 16	21 10 55					32
10	HD 24760B	"	"	21 12 35					208
11	Comp							"	4
12	Comp							"	4
13	HD 28446	04 24 06	+53 41 37	21 33 10					276
14	Comp								4
15	BINS (4)			21 39 19					0
16	Comp							"	4
17	HD 46202	06 28 54	+05 03 00	21 45 23					1153
18	Comp							"	4

Spectr. Temp
Focus... 7.
Spectr. Temp

Exp. Mtr.

31K

35K

59K
1000V

860

37K

34K

Spectr. Temp. Dome Temp./Hum. $+3.2^{\circ}\text{C}$ 6448H Transparency Conditions Hazy - ⁴⁰thinly cloudy
 Focus ... 7.03 ...
 Spectr. Temp. Dome Temp./Hum. $+2.8^{\circ}\text{C}$ 668A
 45 0 50 1024 4 1 CCD/FWT

Comparison Filter Exp.	Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
27	3.1K	1-3"	128	09	CASS CD	0600C 27015	306u	5140A	16		some cloud	
4									17			
0									1			
2200	3.5K								16			
4									18			
4	5.9K								18			
32	5.9K				B65 III				19			
24	6.80								20		fainter companion to MORTN	
4									21			
4									21			
27	3.9K	1.2"	5.78	B0 III					22		SE one	OK
4									23			
0									1			
4									23			
15	3.4K								24			
4									25			

W/p #3

Date 1947 Dec 16/17 Observers K.R.H. / T.H.

Emulsion Batches:

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.
CC 51019	HD 46202	06 26 ⁵⁴	+05 03 00	22 12 46					1872
20	Comp							Feb NDA	4s
21	Comp							"	"
22	HD 4743	06 18 18	-17 54 22	22 50 52					33
23	Comp							"	4
24/30	FLAT 7							FLAT NDS	5
31	B/H 5 (4)			22 57					0
32	Comp							(	4
33	HD 39680 The SW one			23 04 51					124
34	Comp							"	4
CC 51035	HD 39680	05 49 00	+13 49 00	23 28 20					33
36	Comp							"	4
CG 81 202/6	HD 40722	5 55 40	+43 22 39					" 4 x	62
07/08	"							" 2 x	133
CC 51037	B/H 5 (4)			00 12					0

Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mtr.

1000V

26K

5.9K

2.4K

3.3K

Transparency Conditions Pass (100%) 42

Reason Bar Pressure Rising. L

1222 W SW 11 Kms/hr.

Comparison Filter Exp.	Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1872	1000V 2.6K	2.7"	8.2	O9	CASS CED	0660C 27-015	306	5140A	26		The Right one used	
24	45								27			
7	"								27			
33	5.9K		1.9	B1 II ₊					28			14K
2	4								29			
16	45								2			12K
5	5								1			
0									5			
4									6			
120	2.4K								7			
4									8			
	3.3K	3"	.	O?e					9		✓ The NW one of Pair Oe star from IAK Symp 20 P139 list - cf VES 235	
4												
4												
67					Above	306u slit				Seeing		
133												
0									1			

43 p4#4

Tues/Wed

Date 1947 Dec 16/17 Observers [Vys.] / m.m. / T.G.

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.
CC510 ³⁸ / ₃₉	Inboard/out Board							Fel6 ND5	1/3
40	Comp							"	4
41	HD 36395	052618	-034100	015626					581
42	Comp							"	4
43	BIAS(4)			0207					0
44	Comp							"	4s
45	BD-02 3000*	2000 045313	034118	022025					1038
46	Comp							"	4s
47	Comp VES735 2000			023915				Fel6 ND4	4s
48	BD-02 3000	022007	+610703	032546					1831
49	Comp							"	4s
50	VES735	"	"	035731					
51	Comp							"	4
52	BIAS(4)			0418					0
53/59	FLATIS X 7							Fel6 ND5	6s

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

Exp. Mtr.

1020V

575

435

1320V

447

33K

1427

Spectr. Temp. Dome Temp./Hum. $+2.0^{\circ}\text{C}$ 75-78% Transparency Conditions Part cloudy 44.

Focus 6.88

Spectr. Temp. Dome Temp./Hum. $+19^{\circ}\text{C}$ 73-88%
 395 0 50 1024 4 1 CCD FWT

Comparison Filter Exp.	Exp. Mtr.	Seeing	Plg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1/3	1000V				grating	1800ln 47.75	306u	5300A	3/4	Focus test		
4									5			
58/	575	3"	795	m1					6	mag. sd cel		
4									7			
8									1			
45									8			
103	435	2 3/4"	1054	m2	Looks like K-type Note, Re wrong star. TO SW of BD-023000				9	Hlw pgm	About 30° from main, incloud B2 -00 00 01 155 -00 03, 45	
45									10	Too	cloudy now	
44	1320V					1800ln 5635	306	6600A	1/5		clear in NW	
188/	447 203K	3"	12.8	09 140					126	Kys 560	B2 +00 00 02 155 -00 00 27	
4									7			
	1427								8			
4									9			
0									1			
65									2			12K

US 1945

Date 1997 Dec 16/17 Observers [Hlw] / Krm / Tm.....

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.
CC51060	Comp							Febr ND4	45
61	HD 87901	10 03 03	+12 27 22	04 27 56					20
62	Comp							"	45
63	Comp							Febr ND5	4
64	BD-02 3000	09 53 13	-03 41 10	04 36 24					900
* 65	Comp							"	4
66	BD-02 3000	"	"	04 57 39					900
* 67	Comp	(error)	Blank					"	4
68	BD-02 3000	"	"	05 10 17					905
69	Comp							"	4
70	BIAS (4)			05 27					0
71	Comp							"	4
72	BD+01 2447	10 23 49	+01 21 36	05 30 51					867
73	Comp							"	4
74	Comp							"	4

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

1000

HK

11K

370

340

372

520

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions *Fine* 4.6

Focus 6.88

Spectr. Temp.

Dome Temp./Hum.

395 0 50 1074 41 CCD FAT

Comparison
Exp.

Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
45 1000V HA				CASS	1800in 56.35	306u	6600A	10			
20 11K								11	Telluric Std.		5K
45								12			
4					1800in 47.75	306u	5300A	5		OK	5.7K
90 370	4"	10.54	MO					6	Vys 580	Δ2 00 00 04 Δ8 00 00 45	
4								7		<u>Blank</u>	
90 340								8	"		
4				Did Felt with mirror for FeNe				9		<u>Nothing there.</u>	
90 372								10			
4								11	✓	OK	
0								1			
4								12			
88 820		9.65	m2					12	marcy std kel		
4								13			
9								14			

W Pgt 6

Date 1947 Dec 16/17 Observers [Vyc]/Tr./Ken

Emulsion Batches:

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[illegible]

Spectr. Temp

Focus

CD
Spectr. Temp

Exp. Mtr. 9

Transparency Conditions . . . *Free* *48*

Focus 6-88

Spectr. Temp. ... -100.3°C ...

Dome Temp./Hum. 0°C 80% A

[illegible]

U_g #1

Sun/Mon

Date ... 1997 Dec 21/22 Observers Hix/T.H./M.K.L.....

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.
CEISO 81/82	Inboard/out Board							ThAr	1/4
83	Comp								4
84	HD 219586	23 11 46	+70 234	18 5502					999
85	Comp								4
86	B/AS(4)			19 16					0
87	HD 219586			19 1928					1825
88	Comp							ThAr	4
89	HD 219586			19 5245					1813
90	Comp							"	4
91	B/AS(4)			20 25					0
92	HD 219586			20: 29:26					1200-
93	Comp							"	4
94	HD 219586			20 5154					1800
95	Comp							"	4
96	HD 219586			21:24:47					1909

CCD

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

CCD Spectr. Temp. -100.2°C Dome Temp./Hum. $+1^{\circ}\text{C}$ 61% H Transparency Conditions Fine 50

Focus $\dots 220$

90C gain

Spectr. Temp. $\dots$

Dome Temp./Hum. $\dots$

CA

0 0 256 1024 4 1 CCDFMT

Comparison Iter. Exp.	Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1/4					600 l/mm Edel	W H	100u 400u	4508A	3/4	focus test	100u W = .261 400u H = .225	
4	1320V				18.00	600 l/mm			5	Tel focus @ 2314		13K
999	1320V					04585			6			
4									7			
0									1			
182	0								7			
4									3			
183	— 23'								2			
4									3			
0									1			
1200	0								4			
4									4		edit	
1500	0								5		Bah! edit ✓	
4									3			
1909	0								6			

9/ Pg#2

Sun/Mon

Emulsion Batches:

Date 1997 Dec 21/22 Observers Hix/Tn1 (m Ki... helping)

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
ce15097	Comp							Th4r	4s
98	HD 219586	23 11 46	+70 20 34	21:59:50					1840
99	Comp							n	4
ce15100	BIAS(4)			22 33					0
101	HD 219586	"	"	22 34 54				.	1802
102	Comp							n	4
103	HD 219586	"	"	23 08 29					1808
104	Comp							n	4
105	HD 219586	"	"	23 42 00					0
106	Comp							n	4
107	BIAS(4)			00 16					0
108	HD 219586	"	"	00 19 54					1908
109	Comp							n	4
110	HD 219586	"	"	00 56 22					1762
111	Comp								4
112	BIAS(4)			01 27					0

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

Exp. Mtr. See

Spectr. Temp. Dome Temp./Hum. -5.3°C 6608H Transparency Conditions *Fine... slight haze...* 52

Focus *220*

Spectr. Temp. Dome Temp./Hum. *C.2*

Comparison pe/Filter Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. <i>Echelle</i>	Grating/ Tilt <i>X</i>	Slit	Emulsion	P.H.	Program	Remarks	Quality
4r	1320V				1800	0600 4585	100W 400H	4508A	3			
1845	—	4"	57	FO					2			
4									3		middle bright line max 8r3K	
0									1			
184	0								2			
4									3			
184	0								4			
4									3			
	0								5		some cloud	
4									3			
0									1			
1968	0								2			
↑									3			
1762	①								4		200ADU MAX are Background cloud at end	
4									3			
0									1			

53

R4#3 SUN/MON

Emulsion Batches:

Date 1997 Dec 21/22... Observers H.j.x./Tn./mki.....

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
ce15113	HD219586	23 11 46	+70 20 34	01 31 17					1800
14	Comp							THA	4
15	HD219586			02 04 25					1769
16	Comp							"	4
17	BIAS (4)			02 36					B
18	HD219586			02 44 18					1829
19	Comp							"	4
20	Comp							"	4
21	HD34029	05 09 18	+45 53 47	03 30 33					094
22	Comp							"	4
23	BIAS (4)			03 40					0
24/36	FLHTS x 13			(Fetexgo still East Side)	8 hrs W	+70°	TUNG		25
	Dec 22/23	Echelle THA stability test using NMIST. BAT 50						Just above platform	THA
ce15138	→ 189 on	Batch at 0 hr L = Platform						THA	23

Spectr. Temp.

Transparency Conditions. *Part Cloudy*.....54

Focus ... 1220

Spectr. Temp.

[illegible]

Ag 11

SAT/Sun

Emulsion Batches:

Date .. 1997 Dec 27/28.. Observers .. H.j.x. / T.m.....

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.
ce 151 ³⁷ / ₃₈	Inboard / outboard							ThAr	2/2
39	BIAS(4)								0
40	Comp							ThAr	4
41	HD 219 586	23 11 46 ¹⁹⁰⁰	+70 20 34	18 31 26					1724
42	Comp							ThAr	4
43	BIAS(4)			19 04					0
44	BIAS(4)			21 32					0
45	Comp							"	4
46	HD 219 586	"	"	22 32 38					1802
47	Comp							"	4
48	HD 219 586	"	"	23 07 30					1802
49	Comp							"	4
50	BIAS(4)			23 39					0
51	HD 219 586			23 41 15					2025
52	Comp								9
53	HD 219 586			00 16 05					1829

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

Exp. Mtr.

1320V

0

0

0

Spectr. Temp. ^{CCD} -101.3°C

Dome Temp./Hum. -0.6°C 62%RH

Transparency Conditions Fine - Part. Cloudy

Focus 224

90C gain

Spectr. Temp.

Dome Temp./Hum.

100u slit width set -> .262
400u slit height " -> .225

Comparison
Filter Exp.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ X Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
1320V				Echelle 1800	0600h/mic .4585	100u 400u	4508A	11/2	focus test	0 0 128 1024 8 / CCD FWHM	
								1		0 0 256 1024 4 / CCD FWHM	
								3		@ 01 26 W ELIOTER ERRORS -00 14	
								4.		TEL East side @ 01 00	
								3		some cloud at end	
								1			
								1			
								3			
								2.		@ 05 28 West Ad -00 01 27	
								3		55 -00 02 27	
								5		max ~130 ADU Above Background.	
								3			
								1		@ 06 44 W	
								2.		52 -00 01 18	
								3		55 -00 02 30	
								6			

4"

57p902 SAT/Sum

Date ..1997. Dec 27/28.. Observers ..Hjx./Tn.....

Emulsion Batches:

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[illegible]

Spectr. Temp

Focus . . . 2

Spectr. Temp

Exp. Mtr.

1326V

Transparency Conditions *Slightly hazy*..... 30

Dome Temp./Hum. ... -48°C ... 71.7% RH

Comp. Filter	Exposure	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	4	1320V				Echelle	18.00	0600H/100uW	100uW	4508A	3		
	0						14585	100uH		1			
	184	0	3-4"	5.7	F0					2	N Radial pulsation program		
	4									3			
	184	0								7		cloud at end of exposure	
	4									3			
	0	0								5/1		Too cloudy	
	1635							100u 600u = .205		2			13K

5a p4#1

Sun / Mon

Date ... 1997 Dec 28/29 Observers ... H.j.x. / T.a.

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.
81-82	In board / out board							ThAr	2 1/2
CE15183	BIAS (4)			17 36					0
84	Comp			17 36				"	4
85	HD 219586	23 11 46	70° 20' 34"	17 39 18					840
86	Comp							"	4
87	HD 219586	"	"	18 03 04					1201
88	HD 219586	"	"	18 23 36					1215
89	Comp							"	4
90	BIAS (4)			18 45					0
91	HD 219586			18 47 27					1203
92	HD 219586			19 08 26					1200
93	Comp							"	4
94	HD 219586			19 29 57					1491
95	Comp								4
96	BIAS (4)			19 59					0

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

1320

0

0

0

0

0

0

Spectr. Temp. Dome Temp./Hum. -2.5°C 64.8H Transparency Conditions ... Hazy - part cloudy (6)

Focus 224 undraged

Spectr. Temp. Dome Temp./Hum. -3.0°C 66.19H

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ x Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
2/2	1320				Echelle							
0					1800	0600h .4585	100u W 400u H	4508A	1/2	focus test	CCD FMT 0 0 128 1024 8 1	
4									1		0 0 256 1024 4 1	
4									3		Telescope East Side @ 00 38 u	
4	0	1-2'	5.7	F0					2		13x -00 01 02 155 -00 00 45	
1201	0	1-2'							3	5th From Top	(60k 108-122 range)	
1215	0								4	410ADU MAX/ Above Background	4496 $\rightarrow$ 4525 Å	
4									5		Next Red center of at 4544 Å	
0									3		center 4578 next Red center	
23	0								1			
120	0	1-2'							2			
4									6		~ 200 ADU MAX above Background	
121	0	1"							3			
4									2		thick cloud	
0									3			
									1		9.6k for strong central comp line	

6) pg#2 Sun/Mon

Sun / mon

Date 1997 Dec 28/29... Observers Hix/Tn.....

Emulsion Batches:

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[illegible]

52

-2.4°C 71% H

Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5	25					Eclerle 18.00	0600 .4585	400H *		2		slit H not changed for these fluts	
								500H = .205		3			
1657	0							"		2		very cloudy	
4								"		3			
0								"		1			
25								700H = .195 set		7		Telescope was side	

63 pg #1

SUN/MON

Date 1998 JAN. 11/12... Observers Hix/Tn.....

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.
ce152 ^{2 1/2}	In b / OUTBOARD							THA	2 1/2
23	BIAS(4)								0
24	Comp							"	4s
25	HD 219586	23 11 46	17 02 34	18 23 10					1804
26	Comp							"	4
27	HD 219586	"	"	18 54 38					1800
28	Comp							"	4
29	BIAS(4)			19 25 57					0
30	HD 219586	"	"	19 29 13					1800
31	Comp							"	4
32	HD 219586	"	"	20 01 14					1800
33	Comp							"	4s
34	HD 219586	"	"	20 34 28					1800
35	Comp							"	4s
36	BIAS(4)			21 05 33					0

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

Exp. Mtr.

CCD
 Spectr. Temp. -100.5°C Dome Temp./Hum. ... -66°C 5368H Transparency Conditions ... Clearing by sundowner ...

Focus ... 224

Spectr. Temp. Dome Temp./Hum. ... -7.7°C 5898H ...
 CJ

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Mag. Mag.	Sp.	Inst. Echelle	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	2 1/2					18100	0600 14585	100uW 700uW	4508A	1/2		0 0 128 1024 8 1	
	0							100uW = .261 400uW = .225		1		0 0 256 1024 4 1	
	4									3			
	180	n/A	3"	5.7	FO					4		MAX 2220 AD4 150.00 Background	
	4									3			
	180	n								5			
	4									3			
	0									1			
	180	2n								2		~150 MAX AD4	
	4									3		above background.	
	180	n								6			
	4									3		Strong control line MAX 8.75 K 1404	
	180	n								4		~150 AD4 MAX above background.	
	4									3			
	0									1			

5p42 sun / moon

Date ... 1998 JAN 11 / 12 ... Observers Hix / Tz

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.
CE15237	HD219586	23 11 46	+70 20 34	21 08 06					1797
38	Comp							ThAr	4
39	HD219586	"	"	21 10 34					1803
40	Comp							"	4
41	HD219586	"	"	22 13 16					1800
42	Comp							"	4
43	BIAS(4)			22 46					0
44	HD219586	"	"	22 47 20					1809
45	Comp							"	4
46	HD219586			23:11:46					2040
47	Comp								4
48	HD219586			23:36:34					1803
49	Comp								4
50	BIAS(4)			00 40					0
51/70	FLHTSX 20					8 28W	+70°		255

Spectr. Tem

Focus

Spectr. Tem

Exp. Mtr.

N/A

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions ... *some cloud* ... CCFocus *224*

Spectr. Temp.

Dome Temp./Hum.

Comparison filter	Exp.	Exp. Mtr.	Seeing	P ₀ Mag.	Sp.	Inst. <i>Echelle</i>	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1797		<i>N/A</i>		<i>5.7</i>	<i>F0</i>	<i>18.00</i>	<i>0600 H/mm</i> <i>14585</i>	<i>708 x V</i> <i>400 x H</i>	<i>4508A</i>	<i>2</i>		<i>~ 145 MDU MAX</i> <i>Above Background</i>	
4										<i>3</i>			
1803										<i>4</i>			
4										<i>3</i>			
1800										<i>5</i>			
4										<i>3</i>			
0										<i>1</i>		<i>>> sp 18/ASA 184T</i>	
1801										<i>2</i>			
4										<i>3</i>			
2000										<i>4</i>		<i>~ 120 MDU MAX Above Background</i>	
4										<i>3</i>			
1803			<i>3.5</i>							<i>6</i>		<i>Part cloudy</i> (<i>~ 60 MDU MAX Above</i>)	
4										<i>3</i>			
0										<i>1</i>		<i>After complete Reboot</i>	
255							<i>100 uW</i> <i>500 uH = .215</i>			<i>2</i>		<i>(CC032 Head Hung up) MAX 12 K</i>	

67 p4#3 Sun/moon

Emulsion Batches:

Date 1998 JAN 11/12 Observers Hix/T4

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.
CE152 7/12	Inboard Lou Board								1/1
73	Comp								1s
74	HD109387	122913	+70 2022	02 22 02					617
75	Comp								1s
76	HD109387			02 52 30					687
77	B1145(4)			03 01 16					0
78	HD109387	"	"	03 08 05					601
79	"			03 18 36					600
80	Comp								1s
81	HD109387			03:31:24					650
82	"			03:43:20					599
83	Comp								1s
84	HD109387			03:56:33					600
85	B1145(4)			04 07					0
86	HD109387			04:11:00					601
87	Comp								1

Spectr. Temp. Dome Temp./Hum. -8.7°C 65.5% H Transparency Conditions: Part Cloudy 8

Focus 224

Spectr. Temp. Dome Temp./Hum. -8.7°C 66.7% H

Companso e/Filtet Exp.	Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst. E-Lette	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1/1					19.50	0600 h/m. 2860	1000 500	W H 6570	1/2		Focus test Right in focus	
1/s									3		Rebooted Again & Restored.	9K
617		4"	383	B7					4.		DL 100 0040 US 5-00 0003	24K
1/s									3		(4th hand) (From Blue end)	
687									4.			
0									1			
601									2			
600									5			
1/s									3			
650									6			
577									4			
1/s									3			
600									5			
0									1			
60		2" 3'							2			
1									5			

684#4 S44/mon

Emulsion Batches:

Date 1998 JAN 11/12.... Observers HJA / T₁.....

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.
ce15288	HD109387	122913	+702022	042403					907
89	HD109387			04:39:38					602
90	"			045008					601
91	Comp							ThAr	5
92	HD109387			050223					612
93	"			051344					600
94	"			052416					600
95	Comp							ThAr	5
96	BIAS(4)			0535					0
97	HD109387			053650					604
98	"			05:47:22					622
99	"			05:58:15					600
300	Comp.								15
01	HD109387			06:09:25					615
02	"			6:20:09					600

CCO
Spectr. Temp.
Focus...?
Spectr. Temp.

Exp. Mtr. S

CCO
Spectr. Temp. -100.2°C

Dome Temp./Hum.

Transparency Conditions *mos. fly. clear* *70*Focus 22.4 Spectr. Temp. -100.0°C Dome Temp./Hum. *C2*

Companion Filter	Exp.	Exp. Mtr.	Seeing	P _h Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>87</i>				<i>383</i>	<i>B7</i>	<i>19.50</i>	<i>0600h</i> <i>2360</i>		<i>6570A</i>	<i>4</i>		<i>max ~ 7.5K of H₂</i> <i>emission</i>	
<i>602</i>										<i>5</i>			
<i>601</i>										<i>6</i>			
<i>Ar 5</i>										<i>3</i>			
<i>612</i>										<i>2</i>			
<i>600</i>										<i>4</i>			
<i>600</i>										<i>5</i>			
<i>Ar 5</i>										<i>3</i>			
<i>0</i>										<i>1</i>			
<i>64</i>										<i>2</i>			
<i>622</i>										<i>6</i>			
<i>600</i>										<i>4</i>			
<i>5</i>										<i>3</i>			
<i>15</i>										<i>5</i>			
<i>10</i>										<i>6</i>			

1 Pg#5 Sun/Mon

Date .. 1998 JAN 11/12 .. Observers H.j.v. / T.s.

Emulsion Batches:

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[illegible]

Dome Temp./Hum. -9.5°C 71.7%RH

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
600		10pe	3"	3.83	B7	Echelle 19.50	0600	100uW 500uH	6570A	4			
1										3			
0										1			
102										2			
15										3			
6										3			
132										4	Telluric STD	~ 6K max	
181										4			
18										3			
0										1			
153								100uW 700uH $\lambda = 195$		2		~ 10K	

707
9441 Tues/Wed

Emulsion Batches:

Date 1998 Jun 13/14..... Observers H.J. & J.T.

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.
CE 153 ²³ / ₂₄	In							ThAr	3/2
25	BIAS(4)			18 15					
26	Comp							"	4s
27	HD 6860	01 0408	+35 0526	18 1802					82
28	Comp							"	4s
29	Comp							"	4s
30	HD 219586	23 11 46	+70 2034	18 2632					1802
31	Comp							"	4s
32	HD 219586 BIAS(4)			19 0806					0
33/42	FLATS x10			22 17		4 25E	75°	TUNG	25
43/44	Inb (one BOARD)							ThAr	2/2
45	BIAS(4)			00 24					0
46	Comp							ThAr	k
47	HD 109 387	12 2913	+70 2022	00 3346					603
48	"			00 4419					606

CCD Spectr. Temp. -101.2°C ... Dome Temp./Hum. -6.5°C 54% H Transparency Conditions mostly clear... 74...

Focus... 224 still OK...

Spectr. Temp. Dome Temp./Hum. -7.7°C 58% H

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3/2		no print				Eckel/P 15-00	060014/m .4585	100uW 400-H	4509A	1/2		0 0 128 1024 81	
												0 0 256 1024 41	
4s						203 MOTT				3		strong middle line max 8K	
82						203 MOTT				4		100400 Hare background	
4s										5		Tel west side Zenith	
4s										6		Tel East side	
182		24" 5.7 FO								2		Bd 00 01 17 220404	
4s										3		AS 00 01 51 MAX blue	
0										1			
6 75								500uH	4509A	2			12K
2/2		T = -6.7°C F = .219				0600 .2860	100u 500u	6570A	1/2		Focus test		
0							500u	H = .215		1			
4 k										3			11K
63		4" 3.83 BF								2			
606										4			

X₂ #2 T4051wed

Date .1998.JAN.13/14. Observers H.j.x./T.n.....

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.
ce15 349	HD109387	12 29 13	+70 20 22	00:55:19					604
50	comp							THA	15
51	HD109387			01 06 42					632
52	"			01 17 55					642
53	"			01 29 54					600
54	comp								15
55	BIAS (4)								0
56	HD109387			01:43:21					600
57	"			01:53:51					607
58	"			02 04 24					643
59	comp								1
60	HD109387	"	"	02 16 30					600
61	"			02:26:57					609
62	"			02:37:40					604
63	comp								3
64	BIAS (4)			02 48					0

Spectr. Temp. Dome Temp./Hum. -79°C 59% H Transparency Conditions ... Part Clear ... 76

Focus ... 219

Spectr. Temp. Dome Temp./Hum.

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
604				3.83		19.50	0600/1 2860	100uW 500uH	6570A	5			
4	15									3		MAX	85K
632										6			
692										4			
600										5			
15										3			
0										1			
600										2			
607										6			
643										4			
1										3			
600										5			
609										2			
604										7			
3										3			
0										1			

77

Pg 3 Tues/Wed

Date 1998 JAN 13/14... Observers HJx/Ta.....

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.
ce15365	HD109387	12 2913	+702022	025110					6155
66	"			03:01:54					600
67	"			03:12:28					600
68	comp.								15
69	HD109387	"	"	032350					619
70	"			03:34:38					600
71	"			03:45:09					600
72	comp								15
73	Bias (4)			0356					0
74	HD109387			03:57:57					621
75	"			04:08:48					644
76	"			041958					606
77	Comp								15
78	HD109387			043115					879
79	"			04:46:22					602

Spectr. Temp. Dome Temp./Hum. -8.3°C 59.3% *TH* Transparency Conditions *Fine* *TH*

Focus ... *219*

Spectr. Temp. Dome Temp./Hum. -8.7°C 63.7% *TH*

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>6155</i>				<i>19.50</i>	<i>0600_{1/2}</i> <i>2860</i>	<i>100_{1/2}</i> <i>500_{1/2}</i>	<i>6570A</i>	<i>2ci</i>			
<i>600</i>								<i>6</i>			
<i>600</i>	<i>3-4"</i>							<i>4</i>			
<i>15</i>								<i>3</i>			
<i>619</i>								<i>5</i>			
<i>600</i>								<i>2</i>			
<i>600</i>								<i>7</i>			
<i>15</i>								<i>3</i>			
<i>0</i>								<i>1</i>			
<i>621</i>								<i>6</i>			
<i>644</i>								<i>4</i>			
<i>600</i>								<i>5</i>			
<i>15</i>								<i>3</i>			
<i>879</i>								<i>7</i>			
<i>602</i>								<i>4</i>			

Pyd4 T48/wed

Date 1998 JAN 13/14..... Observers Hj + TG.....

Emulsion Batches:

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[illegible]

Spectr. Temp. Dome Temp./Hum. Transparency Conditions ... *clouds snow* ...

Focus 219
Spectr. Temp. ^{exp} -101.3°C Dome Temp./Hum. -8.5°C 65.8H

[illegible]

6pg

Tues/wed

Emulsion Batches:

Date ..1998 JAN. 20/21.. Observers ..Lu./..Tn... "Service" ..

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.
cc 510 ^{88/89}	Inboard/outboard		Hartmann					FeAr ND3	
90	BIAS(4)			20 31					
91	comp							"	4
92	HD 44982	06 19 48	82 21 00	20 42 01				"	1200
93	comp							"	4
94	HD 44982	"	"	21 04 43					745
95	comp							"	4
96	BIAS(4)			21 18					
97	Comp							"	4
98	HD 44982	"	"	22 14 14					1200
99	HD 44982	"	"	22 35 22				"	1200
cc 51100	comp							"	4
01	HD 44982	"	"	22 57 10					1200
02	comp							"	4
03	BIAS(4)			23 18					
04	Comp							"	4
05	HD 62509	07 39 12	+28 16 04	23 24 21					27

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

Exp. Mtr.
1200
660

660

360

585

660

24

24k

CCD Spectr. Temp. - 10.4 °C Dome Temp./Hum. - 30°C 80% Transparency Conditions PART Cloudy 82

Focus 6.95

Spectr. Temp. Dome Temp./Hum. 400 0 50 1024 4 1 CCD FMT

Comparison Iter. Exp.	Exp. Mir.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	1000V no filter				CHSS CCD	1800/4m 4706	306u	5/84	3/4			
4 1200	630	5"	9.8	45V					1 5 6			
4 745	360	"	"	"					7 8		through clouds	
4									9 1 9			
4 1200	585	6"	"	"					10		Δα +00 00 57 B 5 -00 01 27 @0015E	
4 1200	660								11			
4 1200	724	"	"	"					12 13			
4 22	92K		1.14 1.015	KOUB					14 1 15 18		std vel	14K

161 p92

"Service"

Emulsion Batches:

Date 1998 Jan 20/21 Observers [Vys]/T.A./L.Y.....

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.
CC510 ⁰⁶	HD 62509	7 39 12	+28 16 04	23 26 07					32
07	Comp							FeAr	4s
08/14	flats x 7							ND3 Tung No 4	6
15	BIAS(4)			23 33					0
16/17	Inboard / Out Board							FeAr ND5	4/2
18	Comp							FeAr ND5	4
19	HD 36395	05 26 18	-03 41 00	23 48 49					490
20	Comp							"	4s
21	Comp							"	4s
22	BD-02 3000	09 53 13	-03 41 18	00 12 31					688
23	Comp							"	4s
24	BIAS(4)			00 30					0
25/31	FLATS x 7							TUNG ND4	5s
32	BIAS(4)			01 24					0
33	Comp							FeAr ND5	269
34	BD+01 2447	10 23 49	+01 21 36	01 47 39					150

Spectr. Temp. Dome Temp./Hum. -5.1°C : $80\% \text{H}$ Transparency Conditions *part cloudy* 14 .

Focus 6.95

Spectr. Temp. Dome Temp./Hum.

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	32	24K		1.14	KO III 6		1800 l/m	306u	5184A	17	std vel		12.8
	4									18			
	3									2			12K
	0									1			
	4/2					T grading $\rightarrow$	1800 l/m	306a	5300A	3/4	Focus test		
	4						4775			5			
	48	920	5"	7.95	M1					6	Marcy std.	$\Delta 2.00 00 02$ $02W$ $\Delta 5.00 05 54$	
	45									7			
	43									8			6K
	68	310	4.7"	10.54	M0					9	Hlw pyn	$\Delta 2.00 00 01$ <i>mostly cloudy</i> $\Delta 5.00 01 09$ <i>work</i> Definitely not the brighter star to SW $6.4K$	
	10									10			
	0									1			
	53									2			12K
	0									1			
	20	150				(CC 51135)			CC 51136	14			
	5					Then Comp E			BIHS (4)	15	marcy std vel		

6944 Wed / Thurs

Date JAN. 21/22. 1998 Observers [R.M.] / L.Y. / T.L.

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.
CCS1137/38	comp Inboard / out Board							FeAR ND4	4/6
39	Comp BIAS(4)			1813 6016					0
40	Comp							FeAR ND4	4
41	HD 12533	01 57 45	41 51 00	18 18 21					126
42	Comp							"	4
43	Comp							"	"
44	H 17 203156	21 15 23	+37 18 55	18 28 48					1000
45	Comp								
46/48	HD 30282	4 41 06	+36 32 00	18 55 09	Comp, star, Comp,		Bias		1500
49	Bias(4)			19 21					0
50/52	HD 22484	3 31 46	00 05 04	19 25 54	comp, star, comp				300
53/55	HD 44990	6 19 49	07 08 25	19 34 50	comp, star, comp				1577
56/58	HD 25361	3 56 42	+58 23 00	20 08 22	Comp, star, comp				1582
59/61	HD 62509	7 39 12	+28 16 04	20 41 25	Comp star, comp				293
62/68	flats							Tung ND5	7
69	Bias(4)			20 51					0

cd
Spectr. Temp.
Focus.....6
Spectr. Temp.

Exp. Mir. Se

10K 4

9100 4

2050

2780 4

3024 3

1K

3500

^{CCD}
 Spectr. Temp. -100.4°C Dome Temp./Hum. $-3.4^{\circ}\text{C} 66\% \text{H}$ Transparency Conditions *cloudy* 85.

Focus 6.95

Spectr. Temp. Dome Temp./Hum. $-53^{\circ}\text{C} 70\% \text{H}$ 400 0 50 1029 4 1 CCD FMT

Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	Ch.	Program	Remarks	Quality
4/6				CASSIOPEIA	1800/14	30u	GP00P	16 3/4	focus	Remainder ~	MAX ADU
0				Tygrating	54.93			16 1			
4								5			
10K	4"	2.26	K3-IVb					6	NORMALIZATION STAR	for inter comparison too	
4								7			
1000		5.8 -5.9	F2					8			
2100	4"	↓	↓					9	Rm cepheid	high priority	
								10			
1500								11/12	Rm cepheid	high priority	2K
0								1			
2780	4"	4.28	F9 IV					13/14	Vel std	PRAT cloudy	
3.2K	3"	7	F-G					14/15/16	Rm High Priority	" "	2.6K
1K		7.30 8.07	F6 Ib-G2 Ib					16/17/18	Rm cepheid	low priority	
3500		1.14	K0 IIIb					18/19/20	std Vel		3.6K
3								21			13.2K
0								1			

02pg#2

wed / Thurs

Date 1998... JAN 21/22.

Observers [Vys.] for H/w / Tn / Lu

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[illegible]

Spectr. Temp

Focus.....6

Spectr. Temp

Exp. Mtr.	S
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
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
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

100V

1.6 分/株

900 3

--	--

7

370 3.

59

10

1

1

17/

70

600 3

1

Spectr. Temp. Dome Temp./Hum. -4.2°C 70.78 H Transparency Conditions . Part Cloudy..... 86

Focus 6.95

Spectr. Temp. Dome Temp./Hum. -5.9°C 72.38 H

400 0 50 1024 4 1 CCDFMT

Comparison Filter Exp.	Exp. Mtr.	Seeing	Mag. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4/2	1000 V no filter				CASSED	1806 In 47.75	306 μ	5300A		Focus test		
625	900	3"	7.97	M1					5/6/7	marcy std vel	velio +8.52	8.52
1200	723	4'	10.54	M0					8/9/10	vels 560	Too cloudy. at first	
900	540	3-4"	"	"					11/12	"	n 20 AMP above sky	
789	550		"	"					11/12	"	Too cloudy tend	
0									1			
55									2			125K
766	536	2-3"	9.65	M2					13/14/15	marcy std vel	velio +8.36	
939	600	"	"	"					16/17		ind. cloud work	
0									1		52 00 00 of 55 40 00 of	

pg 189

Date 1998, Jan 30/31

Observers MK₂+/Lu

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.
CC51196/97	Inboard/Outboard							FEAR ND 1	4/6
98	BIAS								
99	comp	1997.5						"	4
CC51200	NGC 2903	09 32 02	21 30 36	05 53 43					603
01	comp							"	4
02	NGC 2903			06 09 40					700
03	comp							"	4
04	BIAS(4)			8 32					
05/13	flats							Tung ND 4	5
14	comp	1997.5						FEAR ND 1	4
15	NGC 4736	12 50 46	41 08 06	01 47 41					600
16	"	"	"	01 59 15					600
17	comp			02 22				"	4
18	BIAS(4)			02 11					
19/28	flats							Tung ND #4	4

Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mtr.

1320

660

750

1500

1480

Spectr. Temp. $-100.$ Dome Temp./Hum. $-3.0/76.2\%$ Transparency Conditions $clear$ 90

Focus 6.90

Spectr. Temp. Dome Temp./Hum. $350 \ 150 \ 1024 \ 2 \ 1 \ CCD-FMT$

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
HV 1320				CASS CLO	1800 56,10	34 μ	6563	3/4			
								1		fixed time offset 1 day 7h18m29s	
								5			
650	5"							6			
								7			
750								8			
								9			
								1			
								2			15.3K
								10			
1500								11			
1486								12			
								13			
								1			
								2			12.6K

PG 201

Date 1998 Jan 30/31 Observers M Ko + / Lu

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.
CC51229	comp		1997.5					F&A ND1	4
30	NGC 4736	12 50 46	41 08 06	02 29 06					600
30 31	"	"	"	02 40 27					600
32	"	"	"	02 51 06					600
33	comp							"	4
34	comp							"	4
35	HD 90861	10 24 18	29 05 00	03 22 11					300
36	"	"	"	03 29 24					600
37	comp							"	4
38	BIAS(4)			03 41					0
39	comp							"	4
40	HD 132737	14 55 36	27 33 00	03 48 11					600
41	comp							"	4
42	BIAS(4)			04 00					0
43	comp							"	4
44	NGC 4736	12 50 46	41 08 06	04 21 27					600

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

1500

?

?

14K

32K

6K

5K

Spectr. Temp. -100.2 Dome Temp./Hum. $-4.0/78.6\%$ Transparency Conditions part clear 92Focus 6.96

Spectr. Temp.

Dome Temp./Hum.

350 0 150 1024 2 1 CCOFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4				CASS CCD	1800l/mm 56,10	306	65B3	5			
600	1500							6			
600	?							7			
600	?							8			
4								8			
4								9			
300	14K	5"	7.20	K2III				10			
600	32K							11			
4								12			
0								1			
4								5			
60	16K		8.02	K0III				6			
4								7			
0								1			
4								7			
60	1560	5"						8			

PG 393

Date 1998 Jan. 30/31

Observers MK+ / Lu

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.
CC51245	NGC 4736	12 50 46	41 08 06	04 32 20					600
46	"	"	"	04 43 00					600
47	comp							FeAr ND1	4
48	NGC 4736	"	"	04 55 42					600
49	"	"	"	05 06 21					600
50	"	"	"	05 17 24					600
51	comp							"	4
52	BIAS(4)			05 29					0
53	comp							FeAr No1	4
54	NGC 4736	"	"	05 34 53					600
55	"	"	"	05 45 27					600
56	"	"	"	05 56 04					600
57	comp							"	4
58	NGC 4736	"	"	06 08 26					600
59	"	"	"	06 18 59					630
60	comp							"	4

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

1560

1560

HV=1320V

1530

1530

1530

1505

1515

1530

1490

1570

Spectr. Temp. -100.2°C Dome Temp./Hum. $-4.82/86.2\%$ Transparency Conditions *clear* 14.Focus 6.90

Spectr. Temp.

Dome Temp./Hum.

350 0 150 1024 2 1 CCDFMT

Comparison Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
600	1560	5"			CASS CCD	1800 $\frac{1}{\text{mm}}$ 56.10	306 μ	6563	9			
600	1536								10			
4	HV=1320V								11			3 K.
600	1530								12			
600	1530								6			
600	1570								7			
4									8			
0									1			
4					CASS CCD	1800 $\frac{1}{\text{mm}}$ 47.06	306	5184	5			
600	1505								6			
600	1515								7			
600	1530								8			
4									9			
600	1490								10			
630	1570								11			
4									12			

95PG 4

Date 1998 Jan 30/31

Observers MKit/Lu

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.
CCS1261	BIAS(4)								0
62	comp							FeAr ND1	4
63	H0132737	14 55 26	27 33 00	06 38 06					480
64	comp							"	4
65/74	flats							Tung ND 2	4
75	BIAS(4)			06 56					0
76	comp							FeAr ND1	4
77	SKY			06 01 04					51
78	comp SKY			06 03 16				"	70
79	comp							"	4

You mean 7 EST, ? T_n

Yes, handovers are OK Feb 3/198 noted.

Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mtr. S

HV=1320

18.8K

30.K

50K?

Spectr. Temp. Dome Temp./Hum. 350 0 150 1024 2 1 00PNT

Comparison Iter.	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	0					CASS CCD	1800/mn 47.06	306 _u	5184	1			
	4	HV=1320								5			
	480	18.8K			8.02	KO III				6			
	4									7			
	2	4								2			11.1K
	0									1			
	1	4								5			
	51	30.K								6			
	70	50K?								7			
	4									8			

ATPG¹

Date 1998 Jan 31 / Feb

Observers Mri + / Lu

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.
CC51280	BIAS(4)			20 01					0
81/ 82	Inboard/outboard							FeAr ND1	4/6
CC51283	comp							"	4
84	HD29139	04 30 11	16 18 30	20 14 54					24
85	comp							"	4
86	comp							"	4
87	NGC1068	02 42 37	-00 01 24	20 28 16					1201
88	comp							"	4
89	NGC1068	"	"	20 51 35					1200
90	comp							"	4
91	BIAS(4)			21 14					0
92/ 98	flat3							Tung ND4	4
99	comp	→ junk, wrong							600
CC51300	NGC2903	09 32 02	21 30 36	21 59 11					600
< 01	"	"	"	22 11 31					600
02	comp	→ for 300 and 301 → 304						FeAr ND1	4

Spectr. Tem

Focus.....

Spectr. Tem

Exp. Mr.

HV=40

11 K:

HV=1320

3230

3215

800

824

Spectr. Temp. $\sim 100, 3^{\circ}\text{C}$ Dome Temp./Hum. $-1.0/74^{\circ}$ Transparency Conditions fair 98

Focus 6.9°

Spectr. Temp. Dome Temp./Hum. 350 0 150 1024 2 1 CCOFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0				CASS CCD	1800/mm 56.10	306 μ	6563	1			
4/6								3/4			
4								5			
24	HV=1000 11 K:	2"	0.85	K5+III				6			
4								7			
4								7			
120	HV=1320 3230							8			
4								9			
120	3215							10			
4								11			
0								1			
4								2			
4								5			
600	800 800							6			
600	824							7			
4								8			

ARG #2

Date 1998 Jan 31 / Feb 1

Observers MK+ / Lu

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.
CC51303	BIAS(4)			22 24					
04	NGC 2903	09 32 02	21 30 36	22 35 46					606
05	comp							F2AR ND 1	4
06/12	flats							Tung ND 4	4
13	BIAS(4)			22 55					
14	comp							F2AR ND 1	4
15	H077327	08 56 48	47 33 08	23 01 46					19
16	"	"	"	23 04 02					51
17	comp							"	4
18	NGC comp							"	4
19	NGC 4736	12 50 46	41 08 06	23 15 58					1240
20	"	"	"	23 37 44					1200
21	comp							"	4
22	BIAS(4)			00 00					0
23	NGC 4736	"	"	00 02 51					1200
24	"	"	"	00 23 23					1200

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mir.

Se

700

33K

100K

3400

3300

3210

3260

Spectr. Temp. $\sim 109.3^{\circ}\text{C}$ Dome Temp./Hum. $-1.8/74.9\%$ Transparency Conditions clear 100

Focus 6.90

Spectr. Temp. Dome Temp./Hum.

Comparison
Filter Exp.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCO	1800/mm 56.10	306 _m	6563	1			
66 700								9		South off center	
4								10			
4								2			
								1			
4								10			
19 33K		3.6	AV _n					11			
51 100K								11			
4								12			
4								5			
1240 3400.								6		1320 with Exp. Mtr.	
1200 3300								7		Very clear.	
4								8			
0								1			
1200 3210								9			
1200 3260								10			

161 PG 3

Date 1998 Jan 31 / Feb 1

Observers MK+ / Lu

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.
cc51325	comp							FeAr ND 1	4
26/32	flats							Tung ND 4	4
33	BIAS(4)			0049					0
34	comp							FeAr ND 1	4
35	NGC 4736	12 50 46	41 08 06	00 57 03					1200
36	"	"	"	01 19 20					1200
37	comp.							"	4
38	NGC 4736	"	"	01:43:09					1200
39	"	"	"	02:05:55					1200
40	comp.							"	4
41	bias(4)			02 29					0
42	NGC 4736	"	"	02:31:46					1200
43	"	"	"	02:53:05					1200
44	comp							"	4
45/54	flats							Tung ND 4	4

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

Se

3200

3000

2300

2700

2900

Spectr. Temp. -100.2°C Dome Temp./Hum. $-2.4^{\circ}\text{C}/78.1\%$ Transparency Conditions *clear* *102*
 Focus *6.9*
 Spectr. Temp. Dome Temp./Hum.

Comparison
Filter Exp.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4				CASS CCD	1800/mm 56.10	306 μ	6563	11			
4								2			
0								1			
4				CASS CCD	1800/mm 47.03	356 μ	5184	5			
240	3220							6			
1200								7			
4								8			
1200	3000							9			
1700	2300							10 x 9		cloud? Some cloud.	
4								11			
0								1			
1200	2700							3		Very haze	
1200	2900							4			
4								5			
4								2			

fixed

10764
Date 1998 Jan 31 / Feb 1

Observers

MK5+ / Lu

Emulsion Batches:

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[illegible]

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.	S
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
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
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37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
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67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
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 . . . *hazy* *104*

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
						CASS CCO	1800 γ mm 47.06	306 μ	5184	1			
rr	4									5			
1	300	33K 2-3"				7.2 K3 III				6			
	4									7			
	4									8			
	600	23.2K				8.02 K0 III				8			
	4									9			
	4									9			
	1200	~3000								10			
	1200	~2900								11		through clouds occasionally	
	4									12			
	0									1			

Op 9#1

Sun/Mon

Date 1998 Feb 1/ Feb 2... Observers [G.L.]/T.M. 1.m.t.c.....

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.
CC5137/68	Inboard / outboard							FeAr ND 3	4/5
69	Comp			18 42 27 19 03 25 ✓ 18 03				FeAr ND 4	4
70	HD 19356	03 01 40	1900 +40 34 14	18 45 17 ✓	SAYS 1405 54				19
71	Comp			edit 18 46 09 ✓ 14 06 47				"	4
72	BIAS(4)			on 18 SAYS 14 14 14	✓				0
73	Comp			18 53 36 ✓ SAYS 14 16 36	Astro clock			"	4
74	HD 222994	23 40 36	1900 +24 55 00	18 55 58	18 55 58				11/73
75	Comp			19 16 58 14 37 36	edit times			"	4
76	HD 222994	"	"	19 19 58	19 19 58				870
77	Comp							"	4
78	Comp							"	4
79	RXSD 0101.4115	2000 01 01 25	+11 50 3	19 40 28					1819
80	Comp							"	4
81	BIAS(A)			20 14					0
82	Comp							"	4
83	Hip 17878	2000 03 49 28	+12 54 44	20 20 52				1800	975

(9)
Spectr. Temp
Focus... 7.4
Spectr. Temp

Exp. Mtr. S

1000V

21500

807 4

550

975

CCD Spectr. Temp. -100.4°C ... Dome Temp./Hum. 0.5°C 80% H Transparency Conditions Part Cloudy 105

Focus ... 7.07

Spectr. Temp. Dome Temp./Hum. 446 0 50 1024 4 1 CCD Fmt m4x ^{40x}

Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4/5 1000V					600C 1/1mm	470u	4100	1/2	focus test		
4				Tygrating →	25.20			3		Had to Reset Cepheus	
19		212	B8 V	(Just the normalization star)				4		(The new PC) clock	
4								5		mk. of Lij did same previous	
0								1		Two nights.	
4								6			
11/3 21500 24'	9.06							7			1.2K
4								8		clock of New Cepheus set	
80 807 4.5								9		For Exp #451376	700
4								10			
4								11			
18/4 550 3'	11.0	?						12		some cloud ABOVE sky	
4								13		Field checks out nicely	
0								1			
4								14			
985 (2-3*)	9.64							15		clocks out.	
									noted	Faint companion to south	

Copy #2

Sun/Mon

Emulsion Batches:

Date 1998 Feb 1/2 Observers [Gld]/Tn/mki

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.
CC51384	Comp							FeAr ND4	4s
85	HIP17878	034928	²⁰⁰⁰ +125444	205236					1895
86	Comp							"	4s
87	BIAS(4)			2127					0
88/93	FLATS x 6							FeAr ND3	6s
CC51394	BIAS(4)			2155					0
95/96	Inb/out Board							FeAr ND1	4/6
97	Comp							FeAr ND1	4
98	FF HD62509	¹⁹⁰⁰ 073912	+281604	224613					6.7
99	Comp							"	4
CC51400	HD62509	"	"	225013					6.1
01	Comp								4
02	BIAS(4)			225756					0
03/08	FLATS x 6							JUNK ND3	4s
09	Comp							FeAr ND1	4s

CCD
Spec. Temp.
Focus.....
Spec. Temp.

Exp. Nr. Se

1000V

1690 3

105K 2

105K

CCD Spectr. Temp. -100.3°C ... Dome Temp./Hum. ... -100.3°C 84.3% H Transparency Conditions ... P.O.A.T. Cloudy ... 1006

Focus 7.07 6.90 for 1800ln grating

Spectr. Temp. Dome Temp./Hum. 440 050 1024 4 1 CCD FMT

Exp. Mtr.	Seeing	Pr Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000V				CHSSCCD	0600 25.20	470u	4100A	16			10K
1690	3"	9.64						17	AST 325pgm		
								18			
								1			
								2			14K
					1800ln 47.06	306u	5184A	1		440 050 1024 4 1 CCD FMT	
								3/4	focus		
								5			10K
605K	2"	10.44	KO II					8	std vel	cloudy Bet Gem	4K
								10			
10.5K								11	"		7K
								12			
								1			
								2			11K
								5			9K

Spectr. Temp. Dome Temp./Hum.

[illegible]

Wpg #1

Tues/Wed

Date ... 1998 Feb 3/4 ... Observers M.Ki./Tn... + [Vys]. too

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.
C 51417	BIAS (4)			18 13					0
18/19	Inboard/OUTBOARD Hartmann							FeAr ND1	4/6
20	Comp							"	4
21	HD 19356	030140	+403414	18 16 31					55
22	Comp							"	4
23	Comp							FeNe ND5	4s
24	Vys 396 A? → 2 3052	106 24 57	18 37 26						174
25	Comp							"	4
26	Vys 396 B	02 30 52	+06 24 57	18 43 43					1692
27	Comp							"	4
28/32	FLATS x 4 Plats	02 30 52 (BIAS (4))		19 14				TUNG ND3	4s
33	Comp							FeNe ND5	4s
34	Vys 406	02 46 32	+26 33 59	19 27 11					1600
35	Comp							"	4s
36	BIAS (4)			19 55					0

CCD

Spectr. Temp.

Focus... 6"

Spectr. Temp.

Exp. Mtr.

1000V

No f. ltr

15

13K

1700

256 4

335 4

CCD Spectr. Temp. - 100.3 °C Dome Temp./Hum. - 35°C 66% H Transparency Conditions Fine 112

Focus 6.90

Spectr. Temp. Dome Temp./Hum. 400 0 50 1024 4 1 CCD FWHM

Exp. Mtr.	Seeing	Plg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0	1000V no filter			CASS CCD	1800/n 47.06	306 μ	5184A	1			
4/6								3/4	focus test		3.5K
4	13							5			6.5K
55	13K	2.12	B8V					6	normalization star		6.5K
4								7			
4							5184A 5300A	8		*seems grating tilt didn't change?	
174	1700	5"	59	KO			5.300A intended	10		Vys 39614, Two Brightest of Pair	
4							but 5184A actual	11		*	
1692	256	4"-6"	11.66	M				12	*wavy	Half moon a bit closer & bright	
4								13	*		
4							5184A	14		(AN edited now)	
4					1800/n 47.74		5300A	15			
100	236	4"	10.8	MO				16	Vys pgrm	50nm above SKg AC+26 7021	OK
4								17			
0								1			

131 pg #2 Tues / wed

Date 1998 Feb 3/4... Observers [Vys]/mxi/Ty.....

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.
CC51437	Comp							FeNe ND5	4s
38	Vys 99	03 0248	+45 2119	20 0023					1577
39	Comp							"	4s
40	Comp							"	4s
41	Vys 430	03 4247	+02 2910	20 3445					1800
42	Comp							"	4s
43	Comp							"	4
44	HD 36395	05 2618	-03 41 00	21 1028					929
45	Comp							"	4
46	BIAS (4)			21 27					0
47	Comp/BD-02 3000/comp 3000							4s FeNe ND5	4s
48	BD-02 3000	09 5313	-03 41 18	21 3713					996
49	Comp							"	4s
50	BD -02 3000	"	"	21 5531					968
51	Comp							"	4s

Spectr. Tem.
Focus...
Spectr. Tem.

Exp. Mr.

1000 V

410

355

1650

900

332

Spectr. Temp. Dome Temp./Hum. -5.5°C 68.3% H Transparency Conditions ... Fine - increasing ¹⁰⁰ cloud.

Focus 6.70

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000 V				CASCO Tgrating	18001 47.74	306	5300A	18			54K
490	3"-6"	10.2	M0					19	AC+45 130-216		
								20			
								20			
355	3"-4"	11.2	M0					21	AC+2 2282-51		
								22			6K
								23			57K
1650	3"-5"	7.97	M1					24	MARCY std.	V helio +8.52	
								25			
								1		Definitely not the bright star to SW ~3"	
								26		12:00 00 12	
400	4"-6"	10.54	M0					27	Vys 560	12:00 00 24 Some cloud at start	
								28			
332								29		540ADU above sky	
								30			

11⁵ pg #3 Tues/Wed

Date 1998 Feb 3/4 Observers [Vys]/Tn/mki.....

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.
CC51452	BD-02 3000	09 53 13	-03 11 18	22 14 17					1079
53	Comp							FeNe NO5	
54	BIAS(4)			22 34					0
55	Comp							"	4s
56	BD+01 2447	10 23 49	+01 21 36	22 39 14					1039
57	Comp							"	4s
58	Comp							"	4s
59	Vys 573	10 11 52	-11 27 17	23 04 25					2000
60	Comp.							"	4
61	BIAS(4)			23 43 26					0
62	BIAS(4) Comp							"	4
63	Vys 579	10 20 15	-09 43 25	23 52 29					1350
64	Comp							"	4
65	Comp							"	4
66	HP 95735	10 57 54	+36 38 00	00 24 05					593 4
67	Comp							"	4

Spectr. Temp.

Focus.....6

COO
Spectr. Temp.

Exp. Mtr.

1000V

344

4

600

5

505

4

466

4

1100

5

Spectr. Temp. Dome Temp./Hum. -5.8°C $65.9\% \text{H}$ Transparency Conditions . *Mostly clear* 116!

Focus 6.90

^{CCP}
Spectr. Temp. $-$ $^{\circ}\text{C}$ Dome Temp./Hum. -6.2°C $65.5\% \text{H}$
 $^{\circ}\text{C}$

Com Filter	Exp.	Exp. Mtr.	Seeing	Pgr Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		1000 ✓ 344	4.5"	10.54	M0	CASS CCD	1800 λ 47.74	306 μ	5300A	6c:	Vys 560		
										7			
										1			
										8			
		600	5"	9.65	M2					9	marcy std vel	helio +8.36	
										10			
										11			
		565		11.0	M0					12		LS 200 00 07 LS -00 00 54	
										13			
										1		Done turned	
										14			
		466	4.6"	10.2	M0	<u>note</u> CC 51468 BIAS(4) CC 51469/CC 51475 FLATS at encl Tun 6 @ 6.5 ND3				15	BD-09 3070		
										16			
										20			
		1100	5"	7.48	M2					21	marcy std vel	helio -84.70	
										22			

Page 1

Plates / FRI

Date . 1998 Feb 5/6 ... Observers ... Lu / Tn

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.
CC51A ⁷⁶ / ₇₇	Inboard / Out Board							RED ND1	4/6
78	B1A5C4)								0
79	Comp							"	4
80	HD 19356	030140	+40 3414	18 15 32					25
81	Comp							"	4
82	Comp							"	4
83	AO Cam	²⁰⁰⁰ 042813	+53 0242	18 24 14					1060
84	"	"	"	18 42 54					1080
85	comp							"	4
86	AO Cam	"	"	19 03 46					1080
87	"	"	"	19 22 22					1150
88	comp							"	4
89	AO Cam	"	"	19 43 33					1080
90	comp							"	4
91	B1A5C4)			20 07					0
92	Comp							"	4

CO
Spectr. Temp.
Focus 6
Spectr. Temp.

Exp. Nr. Se

1000

JAK 3

360 3

351

341

331

394

CCD Spectr. Temp. ... -100.7 Dome Temp./Hum. ... -2.0°C 48.3% H Transparency Conditions ... Fine 115

Focus ... 6.97

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ins. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000V				CASS CCD	1800/n 47.06	300u	5184A	3/4	Focus test		
								1			
								5			
74K	3"	2.12	B8V					6	NORMALIZATION STU.		
								7			
								8			74K
360	3"	9.5						9	W UMa		
351								10			
								11			
341								12			
335								13			
								14			
294								15			
								16			
								1			
								16			

119892

Thurs / Fri

Emulsion Batches: —

Date 1998 Feb 05/06

Observers

Lu / Tn

duplicate of CC51492 actually

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.
CC51493	RXSS J01.4115	01 01 25	41 15 03	20 07 34					2190
94	Comp							RA ND1	45
95	RXSS J01.4115	01 01 25	41 15 03	20 52 48	Time shift OK after 20 knot				1805
96	Comp							7	45
97	BIH5 (4)			21 24					
98	Comp							4	45
99	HD22484	3 31 46	+00 05 04	21 29 02					111
CC51500	Comp							4	45
01	comp							"	4
02	HD 44982	06 19 48	82 21 00	21 37 21					1000
03	"	"	"	21 54 28					1100
04	comp							"	4
05	comp							17	4
06	AO Cam	04 28 13	53 02 42	22 21 00					1250
07	"	"	"	22 42 22					1080
08	comp							2	4

Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mtr.

1020 V

336

264

49k

7.1

820

348

7.1

Spectr. Temp. -100.7 Dome Temp./Hum. $-3.7^{\circ}C/54.3\%$ Transparency Conditions $\dots\dots$ fine $\dots\dots$ (20) ..

Focus $\dots\dots$ 6.97

Spectr. Temp. Dome Temp./Hum.

400 0 50 1024 4 1 CCD FMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000 V 336	3"-4"	11.0	?	CASS CCD	1800 Y/mm 47.06	5184	5184A	17	Gld program	XGP/B error But it wrote ok?	
								17		After re boot	
264	5"	11						2			
								3			43K
								1			
								4			
49K	5"	4.28	F9 II-V					5	std vel		2K
								6			
								6			
709	4"	9.8	G5V					7			
820								8			
								9			
								9			
368		9.5	?					10			
327	3"							11			
								12			

1219 3

THURS / FRI

Emulsion Batches:

Date 1998 Feb 05/06

Observers Lu / 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.
CC51509	BIAS(4)			23 01					0
10	AO Cam	04 28 13	53 02 42	23 03 20					1000
11	"	"	"	23 26 25					1012
12	comp							F2Ar ND 1	4
13	AO Cam	"	"	23 40 29					1040
14	"	"	"	23 58 21					1100
15	comp							"	4
16	BIAS(4)			00 18					0
17	AO Cam	"	"	00 19 19					1101
18	comp							"	4
19	comp							"	4
20	HD 65583	7 54 18	+29 31 00	00 45 50					527
21	comp							"	4
22	BIAS(4)			01 06					0
23/29	FLATS x 7							TUNG ND3	55
30/31	In 13 / 04T			FOR next setup					

Spectr. Temp

Focus

Spectr. Temp

Exp. Mtr.

Spectr. Temp. -100.7 Dome Temp./Hum. $-4.1/55.9$ Transparency Conditions fine 1.2.2.Focus 6.97

Spectr. Temp.

Dome Temp./Hum.

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	0					CASS CCD	1800/mm 47.06	306 μ	5184	1			
	1000	333	2"-3"	9.5	?					13			
	1012	330	"	"						13	— time corrected.		
	4									14			
	1040	301	2"-3"	9.5	?					15			
	1100	300	"	"						16			
	4									17			
	0									1			
	1101	300	2"-3"	9.5	?					18			
	4									19			
	4									19		colt ccofmi $\uparrow$	7.7K
	57	5.6 K	2.3"	7.0	dg7					20	stable		3K
	4									21			
	0									1		Time still OK on Cepheus	
	55									22		Another Cepheus	
							2500	5844	3/4	focus		Failure.	

123 19#4

Date 1998 Feb 5/6 Observers [Gld]/L.A./T.L...

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.
CC51537	Comp 1900							FeAr ND3	4 ₅
33	HD 65583	7 5418	+29 3100	01 22 24					320
34	Comp							"	4
35	Comp							"	4c
36	BD+64 1134	16 27 57	+63 57 41	01 39 42					1801
37	comp							"	4
38	BD+64 1134	"	"	02 12 05					1800
39	comp							"	4
40	BIAS(4)			02 43					0
41	BD+64 1134	"	"	02 44 49					1800
42	comp							"	4
43	BD+64 1134	"	"	03 17 02					1800
44	Comp							"	4
45	BD+64 1134	"	"	03 49 56					1805
46	Comp							"	4
47	BIAS(4)			04 22					0

Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mtr.

S

01

2

321

2

321

2

317

1

310

1

Spectr. Temp. Dome Temp./Hum. -1.7°C 5928/4 Transparency Conditions Fine 124..

Focus 6.97

Spectr. Temp. Dome Temp./Hum. C0 400 0 50 1024 41 (CDFET)

Comparison Filter Exp.	Exp. Mtr.	Seeing	Mag. ✓	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4 3					CASS Tyrer	1800/1 5858	204	5854A	23			
320 4	2.7K	2"	7.00	dG7					24	Stive/		2K
4 4									25			
1800 4	301	2.3"	11.36						25			5.5K
1800 4									26	Gld pym [HI]	Field drawn in old Field Book.	5.5K
1800 4									27		It checks out with OSS too.	
1800 4	321	2"-3"	"						28			
1800 4									29			
1800 4									1			
1800 4	321	2"	"						30			
1800 4									31			
1800 4	317	1.2"							6			
1800 4									7			
1800 4	319	1.2"							8			
1800 4									9			
1800 4									1			

125PG5

Date 1998 Feb 5/6

Observers

Lu/Tn

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.
CC515 48	BD+64 1134	16 27 57	63 57 41	04 26 35					1800
49	comp							FAV ND 3	4
50	BD+64 1134	"	"	04 59 25					1800
51	comp							"	45
52	BIAS(4)			05 34					0
53	BD+64 1134	"	"	05 35 59					1886
54	comp							"	4
55	BD+64 1134	"	"	06 09 27					1706
56	comp							"	4
57	comp							"	4
58	HD 177724	19 00 49	13 42 53	06 ^{44 04} 46 06					43
59	Comp							1	4
60	BIAS(4)			06 46					
61/62	flat							Ting ND 4	3

Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mtr.

Spectr. Temp. -100.7 Dome Temp./Hum. $-5.5/56.9$ Transparency Conditions $fine$ 126...
 Focus 6.97
 Spectr. Temp. Dome Temp./Hum. $-5.8^{\circ}C$ 56.8% H

Comparison Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1800	230				CASS CCD	1800/mm 51.58	306 μ	5894A	1		Had to Reboot all again,	
4									2			
1800	284	2"-3"	11.36	?					3			
45									4			
0									1			
1886	383	2"	11.36						5			
48									6			
1306	422	2"							7			
4									8			
4									8			
43	10.5K		2.99	AOV _n					9	Telluric Std.		
14									10			
									1			
3									2			11.5K

177

1978 Feb 06/07

Gld/Lu

Date Observers

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.
CC 51568/69	In-board/out-board							F2/Pr ND 1	4 1/2
70	BIAS(4)			21 49					
71	comp	(2000)						"	4
72	FF Cnc	08 29 40	17 17 02	21 52 06					1803
73	comp							"	4
74	FF Cnc	"	"	22 24 17					1800
75	comp							"	4
76	BIAS(4)			22 55					0
77	FF Cnc	"	"	22 57 38					1804
78	comp							"	4
79	FF Cnc	"	"	23 30 52					1800
80	comp							"	4
81	BIAS(4)			00 02					0
82	FF Cnc	"	"	00 04 13					1800
83	comp							"	4

Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mtr.

395

371

380

412

444

Spectr. Temp. -100.2°C Dome Temp./Hum. $-7.5/63.1$ Transparency Conditions *fine* 12.8..

Focus 6.93

Spectr. Temp. Dome Temp./Hum. 400 0 50 1024 4 1 CCD FMT

Comparison Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4/4					CASS CCD	1800/mm 47.06	306 μ	5184	3/4			
									1			
4									5			
1800	395	3"	10.5	K1+K4					6		GL Program	
4									96			
1800	371		"	"					7			
4									8			
0									1			
1800	380	2"-3"	"	"					9			
4									10			
1800	412	2"	"	"					11			
4									12			
0									11			
1800	444	2"	"	"					13			
4									14			

Spectr. Temp. -100.2 Dome Temp./Hum. -35/64.7 Transparency Conditions excellent. (130)

Focus 6.93

Spectr. Temp. Dome Temp./Hum.

Comparison ter. Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1530	494		10.5	K1+KX	CASS CCD	1800 λ/mm 47.06	306 μ	S184	15			
4									16			
1500	475								1			
1800	475								17			
4									18			
1600	466	2"							19			
4									20			
0									1			
1800	458								21			
4									22			
1600	418								23			
4									24			
0									1			
4									24			
25	10.5K								25	Vel. Std	star $\uparrow$ across slit during exp	
27	10.5K								26		star below slit	

PG 3 131

Date 1948... Feb. 06/07 Observers G. L. / L. M.

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.
551600 ccs1600	β Gem	07 39 12	28 16 04						15s
01	comp							FeAr ND1	4s
02	comp							"	"
03	HD 86801	09 55 48	29 02 00	03 36 13					35s
04	comp							"	4
ccs1605	comp							"	4
06	HD 90861	10 24 18	29 05 00	03 46 51					300
07	HD 90861	"	"	03 52 10					300
08	comp							"	4
09	comp	11 49 40						"	4
10	c26-06	11 49 40	55 03 55	04 03 51					1400
11	comp							"	4
12	BIAS(4)			04 36					0
13	comp							"	4
14	c15-04	11 53 59	55 14 35	04 40 57					1800
15	comp							"	4

Spectr. Temp.

Focus

Spectr. Temp.

Exp. Mtr.

Se

(0.5)

3060

3018

40

24

Spectr. Temp. 100.74 Dome Temp./Hum. $-4.8/62.4$ Transparency Conditions $excellent$ 132
 Focus 6.93
 Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
CO. Sh.		1.14	K111					27		Star above slit.	
								28			
								28			
1003		8.88	G0V					29		Vel. Std.	
								30			
								5			
3060		7.2	K211					6		Vel. Std.	
3018		"	"					7			
								8			
								9			
40		13.11	B-V 0.79					10		Carlberg Pagn testz	
								11			
								1			
								12			
29		13.67	B-V -0.04					13			
								14			

Date 1998 Feb 06/07

Observers

Gld / Lu

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.
CC 51616/22	flats							Tung ND 3	5
CC 51623	comp	16 50 24	27 25 19	10 31 10				EAR ND 4	4
24	tyc 3882548	16 50 24	57 25 19	05 31 10					1800
25	comp							+1	4
26	tyc 3882548	"	"	06 02 55					1715
27	comp							"	4
28	BIAS (4)			06 33					0
29	BIAS (4)			06 34					0
30/36	flats							Tung ND 3	5

Spectr. Temp. 7001

Dome Temp./Hum. 53/67.1%

Transparency Conditions fine 12

Focus

Spectr. Temp.

Dome Temp./Hum.

400 0 50 1024 4 1 CCD FMT

[illegible]

PG 1 125

Date 1998 Feb 07/08

Observers MK/Lu

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.
CC 51637	HD 20162	03 09 17	44 58 33	18 17 16					68
CC 51638	comp.							FAr ND1	4
39	Bras (4)								
40/41	Inboard/outboard							"	4/7
42	comp.							"	4
43	CN And	00 20 30	40 13 36	18:25:49					900
44	"	"	"	18 41 38					900
45	comp							"	4
46	BIAS (4)								0
47	CN And	"	"	19 00 05					900
48	comp							"	4
49	comp							"	4
50	AO Cam	04 28 13	53 02 42	19 20 57					720
51	"	"	"	19 33 18					720
52	comp							"	4
53	BIAS (4)			19 46					0

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

1000 m/s

868

694

71

125

102

Spectr. Temp. -100.7 Dome Temp./Hum. $-100/58.0$ Transparency Conditions $fine$ 136

Focus 6.93

Spectr. Temp. Dome Temp./Hum.

400 0 50 1024 41

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	68	1000 volts	2"	6.16	M20	CASS CCD	1800 λ mm 47.06	306 μ	5184	5		Normalization star.	
	4									5			
	4									3/4			
	4									6			
900		868	2"	10.0	FS					7		sky still bright at beginning.	
900		694		"	"					8			
4										9			
0										1			
900		671								10			
4										11			
4										11			
720		325	1"-2"	9.5?	?					12			
720		302								13			
4										14			
0										1			

PG 2 137

Date 1998 Feb 07/08

Observers MKi/Lu

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.
CC51654	AO Cam	04 28 13	53 02 42	19 47 48					720
55	comp							FeAr ND 3	4
56	comp.							"	4
57	EQ Tau	03 48 13	22 18 49	20 08 05					900
58	"	"	"	20 24 24					900
59	comp							"	4
60	BIAS(4)			20 41 15					
61	EQ Tau (SWE)	"	"	20 44 01					720
62	comp			21 08 06					4
63	comp			21 08 06					4
64	HD 79886		09 11 36	77 39 00					600
65	comp.							"	4
66	comp.								4
67	HD 62509		07 39 12	21 34 12 28 16 04					20
68	comp.							"	4
69	comp.							"	4

Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mtr.

S

269

205

143

351

1540

2000

Spectr. Temp. -100.3°C Dome Temp./Hum. $-2.4/63.6$ Transparency Conditions *Fine* 130Focus 6.93

Spectr. Temp.

Dome Temp./Hum.

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Mag. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
720	4	269				CASS CCD	1800 μmm 47.06	306 μ	5184	15			
3	4									16			
7	4									17			
900	4	205		11.9	G1					18			
900	4	193								19			
	4									20			
										1			
720	4	350		10?	?					21		"Companion" to Ed Tac.	
600	4	1540		8.6	F2					22		0.055	
	4									23		-0.13	
	4									24			
20	4	20,440.		1.14	KOIII _b					25		↗ 66en. RV Std.	
	4									25		↙ Trarled. V. bright.	
	4									26			
	4									27			

793

Date 1998 Feb 07/08

Observers MKC/Lu

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.
U 51670	EQ Tau.	03 48 13	22 18 49	21 58 51					1000
71	"	"	"	22 16 23					1000
72	comp							FeAr ND1	4
73	BIAS(4)			22 34					0
74	EQ Tau	"	"	22 35 52					1000
75	"	"	"	22 52 53					900
76	comp							"	4
77	EQ Tau (SE)	"	"	23 10 17					630
78	comp							"	4
79	BIAS(4)			23 21					0
80	comp							"	4
81	HDS 4975	07 05 54	-03 43 00	23 31 11					620
82	comp							"	4
83	comp							"	4
84	HD 66141	07 57 04	02 36 34	23 46 30					60
85	comp							"	4

Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mtr.

184

198

200

208

265

2360

6500

Spectr. Temp. -100.3°C Dome Temp./Hum. $3.5/66.0$ Transparency Conditions *fine* 140Focus 6.93

Spectr. Temp.

Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000	184	2'-3"	11.9?	GL	CASS CCD	1800/mm 47.06	306 μ	5184	28		
1000	198	"	"	"				29			
1	4							30			
0								1			
1000	200	2"	"	"				6			
900	208							7			
1	4							8			
630	265		10.?	K?				9		"Companion" to EQ Tau.	
4								10			
0								1			
4								11			
620	360		8.3	FS				12			
4								13			
4								13			
60	6500		4.39	K2 III ₆				14			
0	4							15			

PE 4 141

Date 1998 Feb 07/08

Observers MK: / Lu

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.
cc5168b	comp							FEAR ND 3	4
87	HD 54975	07 05 54	-03 43 00	23 52 00					640
88	comp							"	4
89	comp							"	4
90	HD 79886	09 11 36	77 39 00	00 10 39					602
91	comp							"	4
92	BIAS(4)			00 22					0
93	comp							"	4
94	HD 54975	07 05 54	-03 43 00	00 34 32					720
95	"	"	"	00 47 06					720
96	comp							"	4
97	HD 54975	"	"	01 01 04					720
98	"	"	"	01 13 37					720
99	comp.							"	4
cc51700	BIAS (4)			01 27					0
				01 27					

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

Exp. Mtr.

1530

1250

1400

1300

1200

240

Spectr. Temp. -100.3°

Dome Temp./Hum. -3.9/65.2

Transparency Conditions Fine 142

Focus 6.93

Spectr. Temp.

Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
								15			
1530		8.3	FS					16			
		"	"					17			
								17			
1250		8.6	FZ					18			
								19			
								1			
								20			
1400		8.3	FS					21			
1300		"	"					22			
								23			
1220		"	"					24			
124		"	"					25			
								26			
								1			

PG 5 143

Date 1998 Feb 07/08

Observers

Mki/Lu

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.
cc51701	comp							FeAr No 1	4
702	HD 65583	075418	29 31 00	01 37 42				24	218 1800
703	comp							"	4
04	comp							"	4
05	HD 95660	10 57 24	30 58 00	01 46 25					600
06	"	"	"	01 56 50					600
07	comp							"	4
08	comp							"	4
09	OU Ser	15 22 44	16 15 41	02 19 36					420
10	"	"	"	02 26 58					420
11	"	"	"	02 34 20					420
12	comp							"	4
13	BIAS(4)			02 43					420
14	OU Ser	"	"	02 43 53					420
15	"	"	"	02 51 16					420
16	"	"	"	02 58 41					420

Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mtr.

Spectr. Temp. -100.3°C
6,93Dome Temp./Hum. $-4.8/62.1$

Transparency Conditions Fine 144

Focus

Spectr. Temp.

Dome Temp./Hum.

Comparison Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4 1 218					CSS CCD	1800 μm 47.06	306 μ	5184	26		(Moon very close)	
4 218	1800		7.0	G7					27		R U Std. (Mercury) Bright Sky	
4									28			
4			8						28			
600	1870		8.0	F2					29	* Triple system!		
600	1633		+	"					30			
4									31			
4									5			
420	920		8.2	G5					6			
420	960								7			
420	930								8			
4									9			
420	920								10			
420	972								10			
420	1055								11			
420	1040								12			

p46145

Date 1998 Feb 07/08

Observers MKi/Lu

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.
CCS1717	comp							F2Ar ND1	4
18	OU Ser	15 22 44	16 15 41	03 07 26					464
19	"	"	"	03 15 37					442
20	"	"	"	03 23 24					420
21	comp							"	4
22	OU Ser	"	"	03 32 06					420
23	"	"	"	03 39 37					420
24	"	"	"	03 47 05					420
25	comp							"	4
26	BIAS(4)			03 55					0
27	OU Ser	"	"	03 56 41					426
28	"	"	"	04 04 12					420
29	"	"	"	04 11 38					420
30	comp							"	4
31	OU Ser	"	"	04 21 08					420
32	"	"	"	04 28 32					420

Spectr. Tem.

Focus.....

Spectr. Tem.

Exp. Mir.

1047

890

781

781

957

1060

1063

1100

1116

1200

1185

108

Spectr. Temp. -100.3 Dome Temp./Hum. $-52/60.0\%$ Transparency Conditions ... *fine* ... 146.

Focus

some thin clouds.

Spectr. Temp.

Dome Temp./Hum.

Comparison Ref. Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4					CASS CCD	1800/mm 47.06	366 μ	5184	13			
424	1047		8,2	45					14			
42	830								15			
420	781								16		Some clouds.	
4	781								17			
420	957								18			
420	1060								19			
42	1063								20			
4									21			
0									1			
420	1100								22			
42	1116								23			
42	1200								24			
4									25			
42	1185								26			
42	1108								27			

PG 7147

Date 1998 Feb 07/08

Observers

MKi/Lu

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.
ec51733	OU Ser	15 22 44	16 15 41	04 36 03					420
34	comp							Fe Ar ND	4
35	OU Ser	"	"	04 44 39					420
36	"	"	"	04 52 18					420
37	"	"	"	04 59 58					420
38	comp							"	4
39	BIAS(4)			05 08					5
40	OU Ser	"	"	05 11 01					420
41	"	"	"	05 18 28					420
42	"	"	"	05 25 49					420
43	comp							"	4
44	OU Ser	"	"	05 34 30					420
45	"	"	"	05 41 47					420
46	"	"	"	05 49 08					420
47	comp							"	4
48	OU Ser	"	"	05 57 47					420

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

Se

1045

984

2000

998

2

1010

1160

1160

4

1200

1288

1233

38

Spectr. Temp. -109.3° Dome Temp./Hum. $-56/59.8$

Transparency Conditions fine 1.48

Focus 6.93

Spectr. Temp. Dome Temp./Hum.

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
420	1045		8.2	G5	CASS LCD	1800/mm 47.06	306 μ m	5184	28			
4									29			
420	984								6		Some clouds.	
420	1000								7			
420	998								8			
4									9			
6		2"							1			
420	1010								10			
420	1160								11		S/N ~ 80	
420	1160								12			
4	12								13			
420	1200								14			
420	1288								15			
420	1233								16			
4									17			
420	1378								18			

PG 8 149
Date 1998 Feb 07/08

1998 Feb 07/08

Observers MK: / Lu

MK_i / Lu

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Spectr. Temp
Focus
Spectr. Temp

Spectr. Temp.

Dome Temp./Hum. / 62.

Transparency Conditions . . . fine 150

Focus

Spectr. Temp. Dome Temp./Hum.

400 2 50 1024 4 /

[illegible]

pg#1 151 Sun/Mon

Emulsion Batches:

Date 1998 Feb 8/9... Observers MKi/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.
CC 51766	Comp							Redr ND2	4
67	HD 19356	03 01 40	+40 39 14	18 45 50					24
68	Comp							"	4
69	BIAS (4)			18 49					0
70	Comp							"	4
71	RXSS J0101.4115	01 01 25 ²⁰⁰⁰	+41 15 03	19 00 39					1547
72	Comp							"	4
73	RXSS J0101.4115	"	"	19 28 04					1282
74	Comp							"	4
75	RXSS J0101.4115	"	"	19 51 07					1397
76	Comp							"	4
77	BIAS (4)			20 16					0
78	RXSS J0101.4115	"	"	20 17 00					1293
79	Comp							"	4
80	RXSS J0101.4115	"	"	20 40 09					1196
81	Comp							"	4

Spectr. Temp. $\rightarrow 1001.9^{\circ}$

Dome Temp./Hum. 27

Transparency Conditions ... *Fine* 152

400 0 50 1024 4 1 CCOFINT

Com Tilt	son Exp.	Exp. Mtr.	Seeing	Pt Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4		1000V				CASS CCD	1500/1	306	518/18	5			
2			1.2	212	B8V					6			
4										7			
0										1			
4										8			
1542		324	1"	11						9	Gld pgn	1542Vubae Sky	
4										10			
1742		320								11			
4										12			
1347		380	1"							13			
4										14			
0										1			
1293		400								15			
4										16			
1196		400								17			
4										18			

pg#2 \53

Sun/Mon

Date 1998 Feb 8/9 Observers M.K./T.M.

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.
CC51782	RXSO101.4115	01 01 25	+41 15 03	21 01 51					1032
83	Comp							Felt NO2	75
84	BIAS(4)								0
85	Comp							"	4
86	HD 22484	03 31 46	+00 05 04	21 24 55					71
87	Comp							"	4
88	Comp							"	4
89	EQ Tau	02 48 13	+22 18 49	21 32 32					904
90	"			21 48 32					900
91	Comp.			22 06				"	4
92	ER Tau.	"	"	22 06 25					918
93	"			22 22 32					909
94	Comp							"	45
95	EQ Tau	"	"	22 39 49					1033
96	"			22 57 34					905
97	Comp							"	4

Spectr. Temp

Focus... 6.9...

Spectr. Temp

Exp. Mtr.

140V

322

84k

340

215

190

178

9210

Spectr. Temp. Dome Temp./Hum. -1.5°C 61.38H Transparency Conditions Fine 1.54.

Focus ... 6.93.

Spectr. Temp. Dome Temp./Hum. -2.4°C 64.48H
C2

Exp.	Exp. Mtr.	Seeing	Pl ₀ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
102	1000 V 322	1-2"	11		CASS	1800 L 47.06	306	5184A	19			
95									20			
0									1			
4									21			
71	5.4K		428	F9 IV-V					22	std vel		3-5K
4												
4												
904	240	1"	12	G1					25		Superb Seeing.	
900	215								26		Bright sky (moon)	
4									27			
98	190	1"							28			
909	178	1"							29			
43									30			
1033	2210	1-2"							6			
905		"							7			
4									8			

Pg#3 154

Sun / Mon

Emulsion Batches:

Date 1998 Feb 8/9 Observers MKi/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.
CC51798	BIAS(4)			23 12					0
99	Comp							FEAR NO 2	45
CC51800	HD 79886	09 11 36	+77 39 00	23 19 43					600
01	Comp							"	4
02	Comp								
03	HD 95660	10 57 24	+30 58 00	23 37 40					420
04	"			23 46 07					420
05	"			23 53 52					420
06	Comp							"	4
07	HD 95660	"	"	00 02 29					498
08	"			00 11 11					420
09	"			00 18 32					422
10	Comp								4
11	BIAS(4)			00 26					0
12	Comp								4

Spectr. Temp

Focus 6

Spectr. Temp

Exp. Mtr.

1000V

1385

1410

1860

1850

212K

188K

Spectr. Temp. Dome Temp./Hum. ... -2.5°C 64.5% H Transparency Conditions ... F14R 156

Focus 6.93

Spectr. Temp. Dome Temp./Hum. Ca

Exp. Mtr.	Seeing	P.W. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000V				CASSCO	1800 l/mm 47.06	306	5184R	1			
								9			
1385	1.2"	8.6	F2					10			
								11			
								11			
1910.	1"	8.0	F3					12		← for longer. Triple?	
1860								13			
1850								14			
								15			
2.2K	1"							16			
1.8K								17			
								18			
								19			
								1			
								20			
								20			

157 P9#4

Sun/mon

Emulsion Batches:

Date ... 1998 Feb 8/9 Observers ... MKi / Ty

Plate No.	Object	R.A. 1900-2000	Declination 1900-	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC51813	F4 Dra	15 3446	+62 16 44	00 32 57					869
14	"			00 48 06					807
15	Comp							Fea ND2	4s
16	F4 Dra	"	"	01 03 25					807
17	"			01 17 16					801
18	Comp								
19	F4 Dra			01 33 37					800
20	"			01 47 32					800
21	Comp								4
22	F4 Dra			02 03 48					801
23	Comp								4
24	B7115(4)			02 19					0
25	Comp								4
26	HD 103095	11 47 13	+38 26 18	02 26 05					1555
27	Comp								4

must edit name and
RA & Dec only

Spectr. Temp

Focus

Spectr. Temp

Exp. Mtr.

1800V

328

321

350

375

344

405

400

3500

Spectr. Temp. Dome Temp./Hum. $-2.7^{\circ}C$ 66.38% Transparency Conditions SL: 7114.4424 150

Focus 6.93

Spectr. Temp. Dome Temp./Hum.

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Mag. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
869		1000V 328	1"	10.5	F0	CASS	1800L 47.06	306	57848	21		7150 ADU in low sky	
807		321								22			
2	4									22			
807		350	<1"							24			
801		375								25			
										25			
800		394								26			
800		405								27			
4										27			
801		400								28			
4										29			
0										1			
4										5			
155		3500	<1"	6.45	G8Vp					6	std vel		
4										7			

154 p#5

Sun/Mon

Emulsion Batches:

Date 1998 Feb 8/9..... Observers mk: /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.
CG 812 ⁰⁹ /14	HD 103095	11 47 13	+38 26 18					4x 67ms 2x 132ms	1000V
CC 51828	Comp							FeAr ND2	45
29	HD 109247	12 28 12	+55 21 00	02 50 16				600	600 2870
30	"			03 01 08					637 2420
CC 51831	"			03 12 50					520 2200
32	Comp.								4
33	bias(4)			03 27					
34	HD 109247			03 28 28					600 2470
35	"			03 49 38					600 2200
36	"			03 49 38					644 2670
37	Comp.							"	4
38	Comp							"	4
39	FU Dra	15 34 45	+62 16 44	04 08 37					800 374
40	"			04 22 37					1013 155
41	Comp							"	4
42	bias(4)			4 41					0

Spectr. Temp.

Dome Temp./Hum.

-23°C 66.8% H

Transparency Conditions

slight Haze 160

Focus 6.93

Spectr. Temp.

Dome Temp./Hum.

-3.6°C 70% H

Exp. Mtr.	Seeing	Pv. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000V		6.45			1800	Above 306u slit				Seeing Test. Done SW no wind (1st After Reboot of Heuricon & Cepheus) trailed.	
2870	1"	8.2	F2			306u 5/84A		3			
2920								4			
2200								5			
								6		Started in code 6. Read out in (code 5) (Fix) - ne- got caches, wd font.	
								1			
								1			
								2			
								3			
								4			
								5			
								6			
324	1"	10.5	F0					7		24° ADU above Sky	
955	41"							8			
								9			
								1			

161 p9#6

31

Date 1998 Feb 8/9 Observers M.K. / T.

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.
CC51843	FU Dra	15 3445	+62 16 44	04 42 16					836
44	"			04 56 36					833
45	Comp							red ND2	45
46	FU Dra			05 12 17					800
47	"			05 26 25					802
48	Comp							"	45
49	FU Dra			05 42 39					800
50	Comp								45
51	Comp								45
52	HD 79866	09 11 36	+77 39 00	06 07 18					602
53	"	"	"	06 18 06					600
54	"	"	"	06 28 26					612
55	Comp							"	4
56/63	FLATS x 8							JUNG ND3	45
64	BIAS(4)			06 44					0

Spectr. Tem

Focus.....

Spectr. Tem

Exp. Mtr.

1200

378

408

394

360

355

130

128

1400

Spectr. Temp. Dome Temp./Hum. Transparency Conditions *Fine* 1.52...

Focus 6.93

Spectr. Temp. Dome Temp./Hum. -40°C 67.8%
CD

Comparison Filter Exp.	Exp. Mtr.	Seeing	Plat. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
838	1000V 378	<1"	10.5	F0	C455 CCD	1860	306	5184A	10			
833	408								11			
4									12			
800	394								13			
802	360								14			
4									15			
800	355	1"							16			
4									17			
4									18			
602	1320	1-2"	8.6	F2					19			
600	1286	1-2"							20			
612	1400	2"							21			
4									22			
4									23			
0									1			

@ 548W
 5L-000200
 5F-000318
 Telescop E₄₅ + S₁₀

12AK

163 P9#1 Mon/Tues

Date 1998 Feb 9/10..... Observers Lu/Tn.....

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.
CC518 ⁶⁵ / ₆₆	✓ Inboard / OUTBOARD							FEAR ND2	4/6
67	✓ Comp							"	4
68	✓ HD 20162	3 09 17	44 58 33	18 18 06					159
69	✓ Comp							"	4
70	✓ BIHS(A)			18 22					0
71	comp							"	4
72	HD 44982	6 19 48	18 22 100	18 28 20					900
73	"			18 43 47					1090
74	comp							"	4
75	Comp							"	4
76	EQ Tau	03 48 13	22 18 49	19 09 26					1200
77	Comp							"	4
78	BIHS(A)			19 32					0
79	Comp							"	4
80	UX Eric	03 09 52	-06 53 24	19 38 48					1080
81	"	"	"	19 57 29					1080

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mir. Se

730 150

740

145

293

310

Spectr. Temp. Dome Temp./Hum. $+0.9^{\circ}\text{C} \dots 73.2^{\circ}\text{H}$ Transparency Conditions *Thin cloud* 1.64

Focus 6.93

Spectr. Temp. Dome Temp./Hum. *CA* 400 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Ph. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2 4/6				CASS CCD	1800h 4706	306	518A				
4								5			
159	2350	6.16	M2 III					6	NormalizatiON		
4								7			
0								1			
4								8			
700	730	1.2	9.8	G5				9			
1000	740							10			
4								11			
4								12			
1200	145	11.9	G1					13			
4								14			
0								1			
4								13			
1000	293	10.6	F8					14			
1000	310							15			

16942

Mon/Tues

Emulsion Batches:

Date 1998 Feb 09/10

Observers

Lu/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.
cc51882	comp							FEAR ND 2	
83	UX Eri	²⁰⁰⁰ 03 09 52	-06 53 24	20 17 15					957
84	Comp							"	4
85	BIAS(4)			20 35					
86	Comp							"	4
87	HD 54975 ^{Actually HD 54990}	7 05 54	-03 43 00	20 39 15					500
88	comp							"	4
89	comp							"	4
90	HD 54975	07 05 54	-03 43 00	20 54 47					800
91	"	"	"	21 08 45					800
92	comp							"	4
93	HD Comp							"	4
94	HD 22484	3 31 46	+00 05 04	21 28 49					300
95	Comp							"	4
96/03	FLATS X 8							TUNG ND 3	4
904	BIAS(4)			21 39					5

Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mir.

1000V

304

3050

905

837

484

2

Spectr. Temp. Dome Temp./Hum. $-1.1^{\circ}/77.3\%$ Transparency Conditions *part clear* 165

Focus 6.93

Spectr. Temp. Dome Temp./Hum. $-1.5^{\circ} 78.8\%$
C2

Filter	Exp	Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		1000V				CASS CCD	1800/mm 47.06	306 μ	5184A	16			
957		304	2"	10.6	F8					17		through clouds	
4										18			
4										1			
500		3050								19			
4										20		[wrong] $\rightarrow$ The brighter companion in the field	24K
4										21			
800		905		8.3	F5					21			
800		837								22		through clouds	
4										23			
4										24			
308		4.8K	2"	4.28	F9 <u>IR-V</u>					25			
4										26	std vel		3.1K
4										27			
4										28			11.3K
23										1			

16 Xpg#3

Mon/Tues

Emulsion Batches:

Date 1998 Feb 9/10..... Observers [Rm]/Lg./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.
CC51905/6	InB/OUTBOARD							RAT ND 4	4/6
907	Comp							RAT ND 4	4s
08	HD22484	3 3146	+000504	214359					321
09	Comp							"	4s
10	Comp							"	4s
11	HD44990	6 2820	+70825	215348					1200
12	Comp							"	4s
13	Comp							"	4s
14	HD 30282	4 4106	+363200	222437					1270
15	Comp							"	4s
16	B/15 (A)			2247					0
17	Comp							"	4s
18	HD25361	3 5642	+582300	225205					1065
19	Comp							"	4
20	comp							"	4
21	HD 84441	09 4011	24 1405	231647					218

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions ... *increasing cloud* ...Focus *609.3*

Spectr. Temp.

Dome Temp./Hum. *-1.2°C 78.9%RH**400 0 50 1024 4 1 CCD (FAT)*

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>1000V</i>				<i>CASS CCD</i>	<i>54.93</i>	<i>306</i>	<i>6400A</i>	<i>3/4</i>			
								<i>5</i>			
<i>1690</i>		<i>4.28</i>	<i>F9 IV-V</i>					<i>6</i>	<i>std vel</i>	<i>cloud + tend</i>	<i>2K</i>
								<i>7</i>			
								<i>8</i>			
<i>2015</i>	<i>2"</i>	<i>7</i>	<i>F/G</i>					<i>9</i>	<i>Rm cepheid</i>		
								<i>10</i>			
								<i>11</i>			<i>7.7K</i>
<i>2.2K</i>	<i>1.2"</i>	<i>8</i>	<i>F-G</i>					<i>12</i>	<i>Rm Cepheid</i>	<i>medium cloud</i>	
								<i>13</i>			
								<i>1</i>			
								<i>13</i>			
<i>1050</i>	<i>1."</i>	<i>7.30 8.07</i>	<i>F6 Ib-G2 Ib</i>					<i>14</i>	<i>Rm cepheid</i>	<i>cloudy too</i> <i>(Lower priority acc)</i>	
								<i>15</i>			
								<i>16</i>			
<i>5.9K</i>		<i>2.98</i>	<i>G1 II</i>					<i>17</i>			

PG 4 169
Date 1998 Feb 09/10

Observers

$$[Rin]/Liu/T_n$$

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Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mtr.	S
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
26	26
27	27
28	28
29	29
30	30
31	31
32	32
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34	34
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36	36
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45	45
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54	54
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78	78
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. -1.3 / 78.9

Transparency Conditions mostly cloudy / 70

Dome Temp./Hum.

HDU MAX

[illegible]

P41 / 71

Tues/wed

Emulsion Batches:

Date 1998 Feb 10/11..... Observers [Vys] / T. / L.

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.
CC519 31/32	Inb / OUTBOARD							12 No ND5	4/2
33	Comp							12 No ND5	4s
34	HD 20162	3 0917	+44 5633	18 24 22					239
35	Comp							"	4s
36	B145(4)			18 30					0
37	Comp							"	4s
38	Vys 395	02 3014	+74 707	18 34 32					1330
39	Comp							"	4s
40	Comp							"	4s
41	Vys 430	03 4247	+02 2910	19 00 43					776
42	Comp							"	4s
43	Comp							"	4s
44	HD 36395	5 2618	-03 4100	19 17 33					1470
45	Comp							"	4s
46	B145(4)			19 43					0

Spectr. Temp. -100.4 Dome Temp./Hum. $+2.3^{\circ}\text{C}$ 738A Transparency Conditions *PART CLOUDY* 172

Focus 6.87

Spectr. Temp.

Dome Temp./Hum. 2.2

Approaching FULL MOON
400 0 50 1024 41 CCDFMT

Exp. Mtr.	Seeing	Pr. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000V				CHSS CCD	1800/n 47.74	306	530A	3/4	focus test		
								5			
34K		6.16	M2II					6	Normalizati ⁿ start		
								7			
								1			
								8			
908	1.2"	10.7	M2					9	AC+20 821-180	90AD4 ABOVE SKY	
								10			
								10			
270	1.2"	11.2	m0					11	AC+02 2282-51	50AD4 above sky cloud at end	
								11			
								12			
1580	1.2"	7.97	m1					13	MARCY STD +8.52		
								14			
								1			

PG 2 173 Tues/Wed

Date 1998 Feb 10/11

Observers [Vys] Lu/Tu

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.
CC51947	Comp							FeNe ND 5	4
48	Vys 410 B	02 49 12	55 02 32	19 49 48					1648
49	Comp							"	4
50	Vys 410 A	02 49 10	55 02 14	20 19 23					1175
51	Comp							"	4
52	Comp							"	4
53	Vys 416 A	03 08 25	+57 48 08	20 47 07					1200
54	Comp							"	4
55	Vys 416 B	"	"	21 08 56					1258
56	Comp							"	4
57	BIAS (4)			21 31					0
58	Comp							"	4
59	Vys 424	03 33 54	+54 53 31	21 34 37					1367
60	Comp							"	4
61	Comp							"	4
62	Vys 226	03 49 06	53 16 23	22 02 10					1430

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

1000

330

500

360

333

344

36

Spectr. Temp. -100.4°C Dome Temp./Hum. $1.4/74.9$ Transparency Conditions *frilly, cloudy* 1.74.
clearing by 21 ESTFocus 6.87

Spectr. Temp.

Dome Temp./Hum. $+0.2^{\circ}\text{C}$ 85%lt
 0.7

Exp. Mtr.	Seeing	Plat. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000				CASS CCD	1800h 47.74	306	5300A	14		AC+55 19225	
470	4.12	11.2	MO					15		Funke one to NE OK cloudy 50ADU HRP SKY	
500	1.2"	10.5	MO					16			
								17		AC+55 19224	
								18			
								18			
360	1.2"	10.0	MO					19		south one AC+58 20564	
								20	(well separated)	Both A & B look to be equal brightness	
333	1.3"	10.0	MO					21		AC+58 20565	
								22		Ad -00 0020 Ad -00 0051	
								1			
								23			
344	2	11.0	MO					24		AC+54 2311-89	
								25			
								26			
380		10.5	MO					27		AC+53 2250-45	

P43 175
Date 1998 Feb 10/11

Observers

[Vys]/Lu/Tn

Emulsion Batches:

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.....

[illegible]

Spectr. Temp. -100.4°C Dome Temp./Hum. $-0.1/85.4$ Transparency Conditions fairly clear 17KFocus 6.83

Spectr. Temp.

Dome Temp./Hum. -0.9 93.58H

Then Foggy

Exp. Mtr.	Seeing	Plg Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000V				CASS CCD	1800/mm 47.74	306	5300	28			
								28			
121	2-3"	11.0	MD					29	AC+72-3338	cloudy foggy	
								30			
								1			
								5			
840	2-3"	7.48	M2					6	Marney std vel		
								7			
								2			13K
								1			

pg#1 17th Fri / SAT

Date 1998 Feb 13/14 Observers MK: / TS

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.
cc5198 ¹ /82	Inboard / out Board							star ND2	4/6
83	BIN 5(1)			18 20					0
84	Comp								4
85	HD 23300	3 3859	+45 2205	18 2326					109
86	Comp								4
87	Comp								4
88	HD 22484	3 3146	00 0504	18 3248					286
89	Comp								4
90	Comp								4
91	EQ Tau	2000 03 4813	22 1849	18 4438					175
92	Comp								4
93	EQ Tau	"	"	19 1619					149
94	Comp								4
95	Comp								4
96	HD 54975	1900 7 0554	-03 4300	19 4810					800
97	"			20 0155					800

CCP
Spectr. Temp
Focus... 6
Spectr. Temp

Exp. Mtr.

1600 V

12K

6.6K

205

130

700

900

CCD Spectr. Temp. -100.1°C Dome Temp./Hum. -4.0°C 55.4% H Transparency Conditions ... mostly clear $\rightarrow$ cloudy ... 175

Focus ... 6.99

Spectr. Temp. ... Dome Temp./Hum. -5.7°C 60.5% H

400 0 50 1024 + 1 CCD FWH

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4/6		1000 V						300.	5184A	3/4	focus test		
0										1			
4										5			7K
109		1.2K		5.66	B6V					6	17.5am		
4										7			
4										7			
286		6.6K	4"	4.28	F9 IV-V					8	stalled		35K
4										9			
4										9			
175		205	2.4"	11.9	G1					10		~ 20 ADU above sky	
4										11		very cloudy by end	
149		130								12			
4										13			
1										13			
800		700	3.4"	8.3	F5					14			
800		800								15		STARTED using ATI window	

17909#2 Fri/SAT

Emulsion Batches:

Date 1998 Feb 13/14... Observers Mki / Th

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.
CC51998	Comp							FeAr 11/12	4s
999	BIAS(4)			2016					0
52000	HD 54975	7 0554	-03 4300	20 1816					800
01	"			20 3154					600
02	Comp							"	4
03	Comp							"	4
04	EQ Tau	3 4813	122 1849	20 4750					1200
05	" " edit			21 0827					1200
06	Comp.			21 3104				"	4s
07	EQ Tau edit	"	"	21 3104	edit E.S.T.				
08	Comp							"	4s
09	EQ Tau	3 4813	122 1849	21 4553					1200
10	"	"	"	22 0619					1218
11	Comp							"	4
12	BIAS(4)			2228					0

Spectr. Temp.
Focus... 6"
Spectr. Temp.

Exp. Mtr. Se

1000V

880

205

203

92

120

Spectr. Temp. Dome Temp./Hum. Transparency Conditions ... *part clear now* 180

Focus *6.94*

Spectr. Temp. Dome Temp./Hum. *-7.2°C 61.3%RH*

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4	45	1000V				CASSCO	1800in 47.06	306u		15			
2	0									1			
800		880	2.4"	8.3	F5					16			
600										17			
4										18			
4										18			
1200		205		14.9	G1					19			
1200	45	203								20.		} Brighter Star ~2' TO SE OF EQ TA4	
										21			
										(22) 22 Readout in 20			
4	45									23			
1200		92	3"	11.9	G1					24		20.404 above sky	
1258		120								25			
4										26			
0										1			

18/pg#3 FAI/SAT

Emulsion Batches:

Date ... 1998 Feb 13/14. Observers m.ki./Tg.....

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
CC52013	Comp							red ND2	4s
14	HP 79886	9 11 36	+77 34 00	22 51 59					946
15	"			23 08 20					900
16	Comp							"	4s
17	HP 79886	"	"	23 29 11					1007
18	Comp							"	4
19	B115 (4)			23 48					0
20	Comp								
21	HD 95660	10 57 24	+30 58 00	23 57 48					600
22	"			00:08 29					604
23	Comp								4
24	HD 95660			00:21:55					600
25	"			00:32:39					600
26	Comp.							"	4
27	Comp							"	4

Spectr. Temp

Focus ... 6

Spectr. Temp

Exp. Mtr.

1000V

80

1020

1070

1005

1140

1155

1155

124

120

182

Dome Temp./Hum. -8.7°C 62.35%

Companson Filter Exp.	Exp. Mtr.	Seeing	Pg Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4s	1006V				CASS CCD	1800h 47.06	306	5784A	5		FeH source still on	
4s	980	4"	8.6	F2					6		Δ 200 0017 Δ S-00 0057	
4s	1020								7			
4s									8			
4s	1070		8.6	F2					8		SOURCE OFF NOW After Reboot of Cephens	700
4s									9			6.3K
0									1			
									10			
600	1005								11			
600	1140								12		Lamp stays on.	
4	1155								13			
600	1155								14			
600	1121								11			
4	1130								15			
4									16			

183 pg# 4 Fri/SAT

Emulsion Batches:

Date 1998 Feb 13/14..... Observers M.Ki./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.
CC52028	HD109247	12 2812	+552100	00 49 45					605
29	"			01 00 12					603
30	"			01 10 36					614
31	Comp							Red V02	4s
32	BIAS(4)			01 24					0
33	HD109247	"	"	01 24 11					600
34	"	"	"	01 34 35					600
35	"	"	"	01 44 56					648
36	Comp							"	4s
37	HD109247	"	"	01 57 54					616
38	"	"	"	02 08 39					605
39	"	"	"	02 19 14					600
40	Comp							"	4s
41	Comp							"	4s
42	Fu Dra	1534 56	62 16 44	02 36 43					900

1998/25

Spectr. Temp.

Focus.....6

Spectr. Temp.

Exp. Mtr.

1000

1124

1147

1187

1100

1160

1290

1092

1108

1097

158

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions *Fine* 184

Focus 6.94

Spectr. Temp.

Dome Temp./Hum.

Exp.	Exp. Mtr.	Seeing	Ph. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
605	1000 V 1124	4"	8.3	F2	C4SS CCD	1800 In 47.06	306	518A	17			
603	1147								18			
604	1187								19			
602									20			
601									1			
608	1100								21			
600	1160								22			
609	1290								23			
604									24			
606	1092								25			
605	1108								26			
600	1097								27			
604									28			
603									28			
600	158								29		Weak.	

185 p945

Emulsion Batches:

Date 1978 Feb 13/14..... Observers ..m.k./J.L.....

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.
CC 52043	FU Dra	15 34 56	1991.25 16216 44	02:52:32	← fix				925
44	Comp			03:12:03				FeAr ND2	4
45	FU Dra			03:12:03					900
46	"								970
47	Comp								4
48	bras(4)			03 46					0
49	Comp								4
50	HD136924	15 18 12	1900 16 37 00	03 55 44					480
51	"			04 04 14					480
52	"			04 12 57					480
53	Comp								4
54	HD136924			04 22 38					480
55	"			04 31 06					602
56	"			04 41 39					480
57	Comp								4
58	HD136924			04 51 49					537

Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mtr.

165

154

~300

726

687

674

580

620

626

Spectr. Temp. Dome Temp./Hum. Transparency Conditions *OK* 186

Focus *6.79*

Spectr. Temp. Dome Temp./Hum. *-10.9°C 66%RH*

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
926		165	~4"			CASS CCD	1800h 47.06	306u	5184A	30	(wrote in 29)		
900		154								30			
970		~300								5		re-foussed.	
4										6			
0										7			
4										1			
480		726	4"	8.25	G5					9			
480		687								10		OU Ser	
480		—								11			
4										12			
480		674								13			
680		880								14			
480		620								15			
4										16			
537		636								17			
										18			

187P9#6

Emulsion Batches:

Date 1998 Feb. 13/4..... Observers M.K. / T.G.....

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.
CC52059	H0136924	15 18 12	+16 37 00	05 01 08					548
60	"	"	"	05 10 43					480
61	Comp							RA ND2	45
62	BIAS(4)			05 20					0
63	Comp							"	45
64	HT Vir	²⁰⁰⁰ 13 46 07	+5 06 57	05 24 08					600
65	Comp							"	45
66	Comp							"	45
67	F0 Vir	²⁰⁰⁰ 13 29 47	+01 05 46	05 39 47					328
68	"	"	"	05 45 38					340
69	"	"	"	05 51 57					352
70	Comp							"	4
71	Comp							"	4
72	H0144579	¹⁹⁰⁰ 16 01 30	+39 24 00	06 03 41					370
73	Comp								

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

675

578

1585

1920

1930

1940

2165

4

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions ..OK.;.....

188

Focus 6.94

Spectr. Temp. Dome Temp./Hum. $\pm 11.8^{\circ}\text{C}$ 66.88H
C2

Exp. Mtr.	Seeing	Pte Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
598 675				CAS	1800 4706	306a	5184A	19			
480 578	3.4"							20			
4r								21			
0								1			
4s								21			
600 1585		7.2	GO					22			900
4s								23			
4s								23			
328 1920								24			
340 1970								25			
352 1940								26			
4								27			
4								27			
370 216K	4"	6.66	G8V					28	stave		
								29			

190

Dome Temp./Hum.

[illegible]

19 pg #1

SHT/SHN

Emulsion Batches:

Date 1998 Feb 14/15... Observers Gld/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.
CC520 ⁸⁴	Inboard / out Board							FEA ND2	4/7
86	Comp							"	4
87	HD 23300 ✓	3 38 59	+45 22 05	18 16 27					35
88	Comp							"	4
89	B/A/S(4)			18 21					8
90	Comp							"	4
91	HD 4388 ✓	00 40 6	+30 25 00	18 26 09					509
92	Comp							"	4
93	HD 4372 edit ✓	00 41 00	+30 24 00	18 37 12					394
94	Comp							"	4
95	Comp							"	4
96	RXSG 01014115 2000	01 01 25	+41 15 03	18 50 12					1800
97	comp							"	4
98	RXSG 01014115	"	"	19 22 27					1810
99	comp							"	
100	RXSG 0101 - "	"	"	19 54 26					1801

Spectr. Temp. Dome Temp./Hum. - 7.0°C + 28H Transparency Conditions *Fine* 192

Focus 7.00

Spectr. Temp. Dome Temp./Hum. C2 400 0 50 1024 4 1 CCD FWT

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	4/7	1000V				7800Tn CASS CCD	1800 Lm 47.06	306u	5184A	3/4			
	5									5			
	55	2K								6		$\Delta\alpha = -19^s$ $\Delta\delta = -1'18''$ no stars α 21.0 δ 1.0 γ 1.0	
	4									7			
	8									1			
	4									8			
	509	3K	3"	761	B5					9	stave1	NE one ✓	15K
	4									10			
	394	25K		736	G5					11		SW one of pair.	
	4									12			
	4									13			
	1800	296								14			
	4									15			
	1510	296								16			
										17			
	1501	210								18			

1931942

Sat/Sun

Emulsion Batches:

Date 1998 Feb 14/15 Observers Gld/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.
cc 52101	comp							FeAr ND2	4
02	RXST001+4115	01 01 25	+41 15 03	20 26 26					1800
03	comp							"	4
04	BIAS (4)			20 58					0
05	comp							"	4
06	FF Cnc	08 29 10	+17 17 02	21 04 26					1800
07	comp							"	4
08	FF Cnc	"	"	21 36 35	expt.				1875
09	comp							"	4
10	FF Cnc	"	"	22 09 42					1800
11	comp							"	4
12	BIAS (4)			22 41					0
13	FF Cnc	"	"	22 42 41					1805
14	comp							"	4
15	FF Cnc	"	"	23 19 00					1800
16	comp							"	4

Spectr. Temp. Dome Temp./Hum. $-8.9^{\circ}, 45.3H$ Transparency Conditions $good$ 194

Focus 7.00

Spectr. Temp. Dome Temp./Hum. $-10.5^{\circ}, 52.18H$
C2

Exp. Mtr.	Seeing	P.P. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000				CASSCO	1800/n 47.06	306u	5184A	19			
161	3.4"	11						20			
								21			
								1			
								22			
265	2.4"							23		> 100 ADU above sky	
								24			4.3K
241								25	WRITEN in wrong col (23cc)		
								24			
252								26			
								27			
								1			
281	2.3"							28			
								25			
328	2"							6			
								7			4.3K

195 pg # 3

SAT/Sun

Emulsion Batches:

Date 1998 Feb 14/15 Observers Gld/Tn

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[illegible]

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions *Fine - increasing cloud.* ¹⁰⁶Focus *7.00*

Spectr. Temp.

Dome Temp./Hum. *-10.6°C 53.6% H*Comparison
Filter Exp.

Exp. Mtr.	Seeing	Ex. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>1000V</i> ~ 420	<i>1.2"</i>	<i>11</i>		<i>CASS CCD</i>	<i>1800 l/m</i> <i>47.06</i>	<i>306μ</i>	<i>5184A</i>	<i>8</i>			
								<i>9</i>			
								<i>1</i>			
<i>~ 420</i> 313								<i>10</i>			
								<i>11</i>			
<i>368</i>	<i>1"</i>							<i>12</i>			
								<i>13</i>			
<i>313</i>								<i>14</i>		<i>Cloudy in ...</i>	
								<i>15</i>			
								<i>1</i>			
<i>310</i>								<i>16</i>			
								<i>17</i>			
<i>1688</i>	<i>2"</i>	<i>7.2</i>	<i>K2 III</i>					<i>19</i>	<i>std vel</i>		
								<i>20</i>			
										<i>Seeing test.</i>	
										<i>Forgot to change Exp Header.</i>	

19719#4

SAT/Sun

Emulsion Batches:

Date ...1998 Feb 14/15.. Observers Gld.../T... ..

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.
CC52132	Comp							FeAr ND2	4
33	HD103095	11 4713	+38 2610	02 5057					47s
34	Comp								
35/40	FLATS x 6							TUNG ND3 FeAr for stellar ND5	4s
Red Filter FOR Comparison Using OG 560 ORDER separation									
41	comp							"	4s
42	HD121409								66s
43	comp							"	4s
44	" comp pgndcloud-1"							"	4s
45	pgndcloud-1	14 4401	+48 4052	03 5028					360s
46	"			03 57	only approximate,				840s
47	comp							"	4s
48	comp								4s
49	pgndcloud-2	14 41 50	+48 54 47	04 19 09					1200s
50	comp							"	4s

Spectr. Temp. Dome Temp./Hum.

Transparency Conditions

Part Cloudy

198

Focus 7.00 7.20 for 150ln gratings

Spectr. Temp.

Dome Temp./Hum.

-10.5°C 49.5%RH

400 0 50 1024 4 1 CCD FMT

ompanion
Filter Exp

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000V				CASS CCD	1800ln 47.06	306u	518AA	21			
2650	1.2"	6.45	G8Ip					22	std vel		2k max
								23			
								2			
2nd order				CASS CCD	150ln/mm 23.29	306u	~6008A	5		425 0 50 1024 4 1 CCD FMT	
200								5			
~500								6		28.7k max	
								7			
								8			
20V	1"-2"	~12.6	B-R 0d					9			
516								9		200 ADU above sky	
								10			
								11			
615								12			
								13			

1990905

SAT/5461

Emulsion Batches:

Date 1998 Feb 14/15..... Observers Gld. / 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.
cc 52151	BIAS(4)			4 40					8
52	Comp	2000					RG 60 Filter →	FeAr NDS	4
53	pgmcloud-4	14 39 20	+49 00 33	04 50 26					600s
54	comp							"	4s
55	comp							"	4s
56	pgmcloud-5	14 38 34	+48 47 27	05 04 51					600s
57	comp							"	4s
58	comp							"	4s
59	Tyc 4113-691	16 42 31	+64 21 37	05 19 43					605
60	Comp							"	4s
61	BIAS(4)			05 31					0
62	comp							"	4s
63	Tyc 4113-1263	16 32 00	61 57 11						600s
64	comp							"	4s
65	comp							"	4s
66	Tyc 4113-12188	16 49 45	+64 07 17						900s

Spectr. Temp

Focus... 7.2

Spectr. Temp

Exp. Mtr.

1320 10/15

826

615

616

598

530

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions *OK again* *200*Focus ... *7.20*

Spectr. Temp.

Dome Temp./Hum.

425 0 50 1024 41 CCOFUT

Expansion Filter	Exp.	Exp. Mtr.	Seeing	Mag. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>8</i>		<i>1320 volts</i>					<i>150 m 2329</i>	<i>306</i>	<i>6000A</i>	<i>1</i>		<i>OG 560 Filter for stellar beam</i>	
<i>4</i>										<i>14</i>			
<i>600</i>		<i>826</i>		<i>11.5</i>	<i>B-R 0.6</i>					<i>15</i>			
<i>4</i>										<i>16</i>			
<i>4</i>										<i>17</i>			
<i>600</i>		<i>615</i>	<i>1"</i>							<i>18</i>			
<i>4</i>										<i>19</i>			
<i>4</i>										<i>20</i>			
<i>605</i>		<i>616</i>	<i>1-2"</i>							<i>21</i>		<i>Δx+00 0014 ΔS-00 0015</i>	
<i>4</i>										<i>22</i>			
<i>0</i>										<i>1</i>			
<i>4</i>										<i>23</i>			
<i>600</i>		<i>598</i>								<i>24</i>		<i>clouding in.</i>	
<i>4</i>										<i>25</i>			
<i>4</i>										<i>26</i>			
<i>900</i>		<i>2680</i>								<i>27</i>		<i>all</i>	

Pg #6
201

Sat/Sun

Date 1998 Feb. 14/15... Observers Gd/Jh

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.
α 52167	comp						R660 Filter	TeAr NDS	4 _s
68	comp.							"	4 _s
69	HD 126660			06 24 36					21
70	HD 123299	14 01 41	+64 51 14	06 27 39					23
71	HD 120315			06 31 15					18
72	HD 116842	13 21 13	+55 30 32	06 33 23					85
73	HD 113139	12 56 26	+58 54 19	06 40 44					99
74	HD 103287	11 48 34	+54 15 03	06 44 37					32
75	HD 115604	13 13 04	+41 05 57	06 48 17					78
76	109358			06 51 14					52
77	Comp							TeAr NDS	4 _s
78/83	FLATS x 6						OG560 Filter in	TeAr NDS	15
84	BIAS(4)								0.
	FLATS x								

Spectr. Temp.

Dome Temp./Hum.

-10.3° + 52.1 H

Transparency Conditions ...

p. cloudy

202

Focus 7.20

Spectr. Temp.

Dome Temp./Hum.

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
46	1000V					1401n 23.29	506m	6000A	28			
45									5		one comp per star ↓	
21									6.		Rack problem	
23	520								7			7K
18									8			7.5K
85	525								9		cloud	
99									10			5K
32	600								11			
78									12		lots of solar	
52									13			
43									14			
15									15	2ci		14K
8									1			

pg#1
203

SUN/MON

Emulsion Batches:

Date ... 1998 Feb 15/16 Observers [Vys]/mki./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.
cc521 ^{85/86}	Inboard / on, BOARD							FeNe ND5	4/2
cc521 87	Comp							"	4
88	Vys 396 A? Bright	02 30 52	+06 24 57	18 40 10					120
89	"			18 43 06					339
90	Comp							"	4
91	B/A5(4)			18 51 12					0
92	Vys 396B	02 30 52	+06 24 57	18 52 38					1935
93	Comp							"	4
94	Comp							"	4
95	Vys 401A	02 38 56	+10 32 07	19 31 28					1638
96	Comp							"	4
97	Comp							"	4
98	Vys 419C	03 18 20	+23 25 09	20 05 05					1870
99	Comp							"	4
cc52200	Vys 419A *	"	"	20 39 25					1302
01	Comp							"	4

CCD
Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

1000

B&K

B&K

247

245

158

245

CCD -100.5°C
Spectr. Temp.

Dome Temp./Hum. ... -4.7°C 73.8/H

Transparency Conditions ... Fine but East wind 204

Focus 6.98

Spectr. Temp.

Dome Temp./Hum. ... -5.7°C 77.0/H

400 0 50 1024 4 1 CCD FMT
Pressure 103.12 kPa
MAX ADU

Exp. Mtr.	Seeing	Ph. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000V				C455 CCD	47.74	306u	5300A	3/4	Focus		
								8			
RAK	1"	5.9	KO					9			2K
B3K	"	"	"					10			5.2K
								11			5.7K
								1			
247	1.3"	11.66	M					12		Δα -00 00 05 Δδ +00 00 45 ? odd	70 ADU ABOVE SKY
								13			
								14			
245	2"	10.98	MO					15	AC+11 20-183	Δα -00 00 11 Δδ -00 00 54	90 ADU ABOVE SKY
								16			
								17			
158	1.2"	11.89						18	Faint SE companion		60 ADU ABOVE SKY
								19			
265	2"	10.38	MOV					20	* mainly the South, brighter one of close pair		
								21		vys 419A/B	

Pg#2
205

Sun/Mon

Date 1998 Feb 5/16.... Observers [Vys]/Tn/Mkr.....

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.
CC52202	Vys 419B	031820	+23 25 09	21 03 30					1399
03	Comp							ReNo ND5	4s
04	BIAS(4)			21 30					0
05	Comp							"	4s
06	HD 36395	052618	-03 41 00	21 50 09					458
07	Comp							"	4s
08	Comp							"	4s
09	* BD-02 3000	09 53 13	-03 41 18	22 06 39					967
10	Comp							"	4s
11	Comp							"	4s
12	BD-02 3000	09 53 13	-03 41 18	22 35 29					900
13	Comp							"	4s
14	BD-02 3000	"	"	22 53 23					900
15	Comp							"	4s
16	BD-02 3000	"	"	23 10 18					889
17	Comp							"	4

w/ Roney. STAR @ 1900 epoch, not 2000 ✓

* Probably BD -03 2823

1900 ✓

2000

CD
Spectr. Temp
Focus.....6
Spectr. Temp

Exp. Mtr.

1399
140

1360

303

355

276

360

CCD
 Spectr. Temp. 100.5°C Dome Temp./Hum. -5.7°C 778H Transparency Conditions ... Fine ... slightly hazy ... 206

Focus 6.98

Spectr. Temp. Dome Temp./Hum. -5.7°C 798H
 CD

400 0 50 1024 41 CCD FWHM

Exp. Mtr.	Seeing	Plt Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000V 140	1.3"	105	M0V	CAS CCD	1800ln 47.74	306	5300H	22	750ADU HBR SKY	Sometimes A & B not well separated.	
								23			
								1			
								24			
1360	2"	797	M1					25	Murcy SK/vel	<u>V + 8.52</u>	
								26			
								27			
303	2"	9.6 10.54	M0					28	not it Vys 560	Looks red like.	
								29			
								29			
255	2"	10.54	M0					30	Vys 560	As 00 00 03 SS 00 00 27 780ADU above SKY	
								31			
276								11			
								12			
260								13			
								14			

p9 #3
207

sun / mon

Date 1998 Feb 15/16... Observers [Vys.] / M.K. / T.M.

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.
CC52218	B145(C4)			23 26					0
19	Comp							Fake ND5	4s
20	BD +01 2447	10 23 49	+01 21 36	23 30 43					982
21	Comp							k	4s
22/28	FLATS x 7							JUNG ND 3	4s
CC52229	Comp							FEAR ND2	4s
30	HD 79886	9 11 36	+77 39 00	23 58 45					901
31	Comp.								4
32	Comp.								
33	HD 104247	12 28 12	+55 21 00	00:32:24					600
34	Comp								4
35	HD 169247	n	n	00 48 54					600
36	Comp.								4
37	Comp.								
38	HD 79886	9 11 36	+77 39 00	01 09 04					900

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

Exp. Mir.
1000V

710

1590

4450

1600

445

Transparency Conditions... *slightly hazy* ... 208

Spectr. Temp.

Dome Temp./Hum.

On	Exp.	Exp. Mtr.	Seeing	P. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0		1000V				CHSSCD	1800h 47.74	306u	5300A	1			
4										14			
982		760	3"	9.65	m2					15	Murphy Std	+8.36 v helio	
45										16			
3										2			13.5K
4							1800h 47.06	306u	5784A	8		-5 -40 effects	
101		1590								9			
4										10		Fe ar.	
600		4450								11		+18 +6	
4										12			
4										13			
4		1600	1"							14			
4										15			
4										15			
4		1445								16	seeing variable	Done partially obscuring first minute.	

pg#1
209

Sun/Mon

Date 1998 Feb 15/16.... Observers mki./Tn.....

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.
52239	Comp.							FEAr ND2	4
40	Comp.								4
41	HD 109247	12 2812	+552100	012439					600
42	Comp							"	4
43	Comp							"	4
44	X FU Dra	15 3446	+621644	014809					900
45	Comp							"	4
46	B/AS(4)			2205					6
47	FU Dra	15 3446	+621644	020741					901
48	Comp							"	4
49	Comp							"	4
50	HD 109247	12 2812	+552100	022910					631
51	Comp							"	4s
52	Comp							"	4s
53	FU Dra	15 3446	+621644	024737					800
54	Comp							"	4s
55	B/AS(4)			3 04					0

STAR To 55W of FU Dra
1991.25

Note identified as GSC 4181-1726
c 50000

15 3438 +621350
Tn Feb 17

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

Exp. Mtr.

1000

1635

207

185

1600

185

Spectr. Temp. Dome Temp./Hum. -5.6°C 80% H Transparency Conditions ... *Fine* 210

Focus 6.98

Spectr. Temp. Dome Temp./Hum. -6.2°C 84% H

Exp.	Exp. Mtr.	Seeing	Pl ⁺ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4	1000				CASS CCD	1800 L 47.06	306 μ	5184A	17			
4									17			
600	1635	1.2"							18			
4									19			
4									19			
900	207	1.2" NO							20		Star ? STAR SSW. FFUDRA ~ 2-3' distant	
4									21			
6									1			
901	185	1.2" 11							22		$\Delta \alpha^{\circ} 00 00 20$ $\Delta \delta^{\circ} 00 01 54$	
4									23 23			
63	1600								24		$\Delta \alpha^{\circ} 00 00 04$ $\Delta \delta^{\circ} 00 00 18'$	1K
4									25			
45									25			
10	185	2" 10.5 GO							26		$\Delta \alpha^{\circ} 00 00 18$ $\Delta \delta^{\circ} 00 01 36$	
4									27			
0									1			

Pg#5

Sun/Mon

211

Date 1998 Feb 15/16 Observers Mike/T.H.

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.
CC52256	Comp							FeAr ND2	4s
57 HD 109247				031013					600
58	Comp							"	4s
59	Comp					✓		"	4
60	FU Dra	199125 153446	+621644	032609		✓			925
61	Comp					✓		"	4
62	Comp					✓		"	4
63	HD 109247	122812	+552100	034635		✓			
64	Comp								4
65	BIAS(4)			0403		✓			0
66	Comp	199125							4
67	FU Dra	153446	+621644	040938					900
68	Comp.							"	4
69	Comp.							"	4
70	HD 109247	122812	+552100	043453					611
71	"	"	"	044553					

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions *increasing... cloud 22*Focus *6.98*

Spectr. Temp.

Dome Temp./Hum. *+5.9°C 85% H*Comparison
Filter Exp.

Exp. Mtr.	Seeing	Filter Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CHSS CCD	18001- 47.06	306u	5784A	28			
1100	1.2'							29		⁰ -27	
								30			
								4			
141	1.2'							5		cloud	
								6			
								6			
	2							7			
								8			
								1			
								9			
131								10			
								11			
								11			
1020								12			
920								13			

pg#6
213

Sun/Mon

Emulsion Batches:

Date 1998 Feb 15/16. Observers MKi./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.
CC 52272	HD 109247	12 2812	+552100	045600					607
73	Comp							Fe4 NO2	4s
74	Comp							"	4s
75	HD 103095	11 4713	+382610	051059					606s
76	Comp							"	4s
77	Comp							"	4s
78	HD 109247	12 2812	+552100	052607					607
79	Comp			053640					600
80	"			054712					600
81	Comp								4s
82	HD 109247			055909					600.
83	"			06 10 27					600.
84	"			06: 21:32					600
85	Comp							"	4s
86/91	FLATS x 6							TUNG ND 3	4s
92	B/HIS(4)								0

CCD
Spectr. Temp.
Focus.....6
Spectr. Temp.

Exp. Mtr. Se

100V
875

4K 2

1550

1880

1885

090

086

CCD Spectr. Temp. -100.5°C Dome Temp./Hum. -5.9°C 85.1% Transparency Conditions increasing cloud 214

Focus 6.98 Spectr. Temp. Dome Temp./Hum. -5.9°C 85.3%
CD

Filter	Exp.	Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
87		1000V 875	1.2"			CASS CCD	1800 1/4 47.06	3064	5784A	14			
2	4									15			3.4K
4										5			
60		4K	2"	6.45	G8Ip					16	st/vel		2K
4										17			
4										17			
60		1050								18			
60		1080								19			
40		1085								20			
40										21			
100		1090								22			
100		1086								23			
60										24		Brought Down Sky	
4										25			
03	4									2			11K
										1			

py#1 Sun/Mon
215 1998 Feb 22/23
Date

Hjx/Tn
~~Sta~~/Ta

Observers

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.
CE52293/94	Inboard/outboard							FEAR ND3	4/7
95	BIAS(4)			2245					0
96	Comp		1900						
97	HD 76943	8 5409	+42 10 44	22 41 48					59
98	Comp								
99	Comp							FEAR ND4	4
CE52300	FK Com	13 30 47	+24 13 59	22 58 30					1200
01	Comp							"	4
02	VFK Com1	"	"	23 23 45					1289
03	"	"	"	23 46 37					1215
04	Comp							"	4
05	BIAS(4)			00 08					0
06	FK Com			00 10 32					1271
7	Comp							"	4
8	Comp							"	4
9	HD 113226	12 57 12	+11 29 46	00 41 11					376

Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mtr.

1900V

17K

170

282

316

371

67K

Spectr. Temp. -100.8°C Dome Temp./Hum. $0.0^{\circ}\text{C}/78\%$ Transparency Conditions *cloudy partly* 216Focus *6.85*

Spectr. Temp.

Dome Temp./Hum. *C2*

400 0 50 1024 4 1 CCD FMT

Exp. Mtr.	Seeing	✓ P.V. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000V				CASS CCD	1800/mm <i>56.35</i>	306μ	STF 66008	3/4	Focus test		
				TGRWing	56.35			1			
								5			
1.7K								6		Normalize star	
								7			
								7		West and slightly south of close 1" pair	
170	3.8"	8	G5 II					8		slightly fainter too.	
								9		AIR MASS 1.9	
282								10		strongest FeAr line	
										saturated slightly	
316								11			
								12			
								1			
371	4.5"							13			
								15		is weak one	
								15			
6.7K	5"	2.83	G8 III					16		sp Type standard	

Py#2
217

Sun/moon

Date 1998 Feb 22/23. Observers Hix, L.T.

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.
C52310	Comp							FeAr ND 4	4s
11	Comp							"	4s
12	HD 103095	11 4713	+382610	00 5307					735
13	Comp							"	4s
14	Comp							"	4s
15	HR 5191	13 4733	+491849	01 1410					77
16	"			01 1633					68
17	Comp							"	4
18	B/H5(4)			01 20					0
19	Comp								4
20	HD 87901	10 0303	+122722	01 2946					106
21	Comp								4s
22/30	FLATS x 9							TUNG ND5	7s
31	Comp B/H5(4)			03 02					0
	Fl Comp	13 3047	+241359						

Spectr. Temp
Focus... 6"
exp.
Spectr. Temp

Exp. Mtr.

1/25

1.4K

8.6K

13K

1.5K

Spectr. Temp. Dome Temp./Hum. -0.6°C 74.7% Transparency Conditions ... *Cloudy* 218

Focus ... 6.85

^{CCD}
Spectr. Temp. ... -101.7°C

Dome Temp./Hum. ... -0.9°C 77.8%

400 0 50 1024 91 CCD FWT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000V				CASS CCD	1800 In 56.35	300	6600A	17			
								18			400 MAX
1.4K	4.5	6.45	G8Vp					19	std vel		12K
								20			
								21			
8.6K		1.86	B3V					22	Telluric Std	LOW AIR MASS	3K
13K								22			
								23			
								1			
								23			
11.5K								24	Telluric Std.	1.23 AIR MASS	6.5K
								25			
								2			12K
								1			

219
pg 1

Mon/Tues

Date . 1958 . Feb. 23/24 . . . Observers . H. J. x. / T. v.

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.
CC523 ^{32/} 33	Inbound 164T BOARD							FeAr ND4	4/6
34	Comp							"	4
35	HD 30138	4 3950	+400751	18 4523					174
36	Comp							"	4
37	BIAS(4)			18 52					0
38	Comp							"	4
39	HD 245770	5 3242	+261600	18 5733					601
40	"	"	"	19 0758					659
41	Comp								4
42	Comp								4
43	HD 22484	3 3146	+000504	19 2446					369
44	Comp								4
45	BIAS(4)			19 34					0
46/50	FLATS x 5							FeAr ND5	7
51	Comp							FeAr ND4	8
52	HD 245770	5 3242	+261600	19 5403					640

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

Exp. Mtr.

1000 V

2.5K

406

3K

357

CCD Spectr. Temp. -100.3 °C Dome Temp./Hum. +7.7°C 64.2% Transparency Conditions ... Part Clear 220

Focus 6.85

Spectr. Temp. Dome Temp./Hum. +11.4°C 65.2% H

400 0 50 1024 4 1 CCD FWH

Expansion filter Exp.	Exp. Mtr.	Seeing	PA Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4/6	1000 V				CAS CCD	1800 L 56-35	306	6600A	3/4			
4									5			14K
174	2.5K		5.97	68M					6	NORMALIZATION		3K
4									7			
0									1			
4									7			
601	406	2-3'	8-9	B0					8		Hx em MAX FOCAL	
659									9		cloudy	
4									10			
4									10			
3/9	3K		4.28	F9 IE-V					11	std vel	cloudy	
4									12			
0									1			
116									2			13K
15									13			
44									14			
640	257		8-9	B0								

221
pg#2

mo., Tues

Date 1998 Feb 23/24 Observers Hjx/Ts

Emulsion Batches:

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.....

[illegible]

Spectr. Temp
Focus 6
Spectr. Temp

Exp. Mur.

1000

209

25

117

225

217

✓

101

Spectr. Temp.

Transparency Conditions .. *Part Cloudy* *222*

~~Wind. NW 24 knots V 235T~~

Dome Temp./Hum. c2

400 0 50 1024 4 1 CCDFMT

[illegible]

223
p9#1

Tues / Wed

Date 1998 Feb 24/25 Observers Hix / JG

Emulsion Batches:

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.
CC523 ⁶³ / ₆₄	Inbarun / out Baran							FeAr ND4	4/6
65	BIHS(4)			22 17					0
66	Comp							"	4s
67	HD 71148	8 20 38	+45 59 25	22 24 56					540
68	Comp							"	4
69	Comp							"	4
70	BD +33 1646B	8 02 34	+33 06 25	22 36 10					14/8
71	Comp							"	4
72	BD +33 1646A	"	"	23 01 56					1184
73	Comp							"	4
74	BIAS(4)			23 23					0
75	Comp							ND4	4
76	HD 95735	10 57 54	+36 38 00	23 29 18				FeAr	872
77	Comp							ND5	42s
78	Comp							11	4

CCD
Spectr. Term

Focus.....

Spectr. Te

Exp. Mtr.

1000

2.9K

90

157

16K

CCD Spectr. Temp. -100.9°C Dome Temp./Hum. 0°C 75% H

Transparency Conditions Part Clear 224

Focus 6.85

Wind 22 kts/hr @ 23 EST NNW
PRESS 101.10 kpasals A

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000V				CASS CCD	1800 l/m 56.35	306 μ	6600A	3/4			
								1			
								5			125K
2.9K	3.4"	6.32	G5V					6			2.5K
								7			
								7			
90	3.8"	12	M0					8	Vys250B	Fainter B component to SW	
								9	comparison	strong line slightly saturated	
157		10	M					10	Vys250A	very cloudy	
								11			
								1			
								12			15K
1.6K	5"	7.48	M2					13	Marcy Std vel		
								14			20K
								15			

225
Pg 42

Date 1998 Feb 24/25 Observers Hie / TL

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.
CC52379	HP120 315	13 43 36	+49 48 45	23 55 55					192
80	Comp							FeAr ND5	45
81	Comp							"	4
82	FK Com	13:30:46.89	24:13:58.9	00 17 54					901
83	"	"	"	00 35 18					837
84	"	"	"	00 50 27					600
85	Comp							"	45
86	B/115(4)			01 02					0
87	FK Com	"	"	01 04 04					615
88	"			01 14 38					600
89	"			01 24 59					668
90	"			01:36:44					606
91	Comp							"	4
92	FK Com			01:48:31					600
93	"			01:59:13					931

Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mtr.

1000

1016K

33

33

600

690

800

788

312

101

251

Spectr. Temp. Dome Temp./Hum. 0°C 75% H Transparency Conditions ... Half ... cloudy ... 226

Focus 6.85 E getting v windy

Spectr. Temp. Dome Temp./Hum. C 400 0 50 1024 4 1 CCOFMT

Comparison Filter Exp.	Exp. Mtr.	Seeing	Proj. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
172	1000V 10.6K	6"	1.86	B3V	CAISS CCD	1800ln 56.35	306	6600A	16	Telluric Std	Bd +06 0021 1500 09	7.3K
45									17		0 3 34 East A2 62, A1 54	
4									17			
90	433		8.2	GS11					18			
89	708		"	"					19			
600	600		"	"					20			
8									21			
0									21			
65	690	5"							22		(900004 max at Hα em)	
600	800								23			
668	788		"	"					24			
606	512								25			
4									26			
600	409								27			
93	251								27		(cloudy again)	

273

Emulsion Batches:

Date 1998 Feb 24/25... Observers HJx.../T... ..

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.
CC52394	FK Com	13:30:46.89	24:13:58.9	02:15:45					900
95	Comp							Red NDS	45
96	FK Com	"	"	02:37:54					10/2
97	"	"	"	02:55:09					921
98 ✓	"	"	"	03:10:53					900
99 ✓	Comp.								4
400	FK Com			03:30:30					600
401	"			03:41:00					784
402	"			03:54:26					600
403	"			04:05:21					490
404	Comp							"	4
405	B/H S(A)			0414					0
6	Comp								4
7	HD 113226	13 0211	210 5732	04 1914					39
8	Comp								4
9	Comp								4

Spectr. Temp. Dome Temp./Hum. 0°C 77% ⁵⁴ Transparency Conditions *medium cloud* 28
 Focus 6.85
 Spectr. Temp. Dome Temp./Hum.
& gusty NNW and.

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Mag. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
900		257		8-9	G5II	Cass CCD	1800/n 66.35		6600A	28			
4										29			
100		370				"	"			6			
92		350	3-4"			"	"			7			
900		468								8			
4										9			
100		374								9			
70		438								10			
100		670								11			
40		120								12			
4										13			
0										14			
4										15			
39		9.4K		2.83	G8III					15	sp std		10K
4										16			
4										18			

229 pg #4

Emulsion Batches:

Date 1998 Feb. 24/25 Observers Hix, T.G.

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
CC32410	FK Com	13:30:46.89	24:13:58.9	04:25:26					3/0
411	"			04:31:18					306
412	"			04:37:01					287
413	"			04:42:29					317
414	"			04:48:33					296
415	"			04:54:18					292
416	"			04:59:51					317
417	"			05:05:57					346
418	"			05:15:32					358
419	Comp								45
420	FK Com			05:25:14					325
421	"			05:31:32					346
422	"			05:37:59					340
423	"			05:44:11					442
424	"			05:52:20					410
425	comp								45

CCD
Spectr. Temp. -100.2°C

Dome Temp./Hum. 0°C ... 80%

Transparency Conditions ... Clearing 230

Focus 6.85

Spectr. Temp.

Dome Temp./Hum.

Comparison File	Exp.	Exp. Mtr.	Seeing	✓ Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30	600			8-9	G5LL	Cass CCD	1800/n 56.35	306u	6600A	17			
30	600									18			
287	610									19			
317	601									20			
246	600									21			
242	600									22			
317	600		4"							23			
346	600									24			
351	602									25			
45										26			
35	600									6			
346	600									7			
341	600									8			
40	600									9			
40	600									10			
45										11			

231 pg 5

Date 1998 Feb. 24/25 Observers Hjx./Tn.....

Emulsion Batches:

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[illegible]

Transparency Conditions .. *Fine* 432

Spectr. Temp.

Dome Temp./Hum. 0°C 81.1% HTransparency Conditions .. *Fine* 432[illegible]

2385#1

Wed/Thurs

#1 FIRST

Emulsion Batches:

Date 1998 Feb 25/26 Observers H.J.x./Ta... [Vys.pym.]

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.
CC 529 46/41	Inbound 1047							FeNe ND5	4/2
42	Comp							"	4s
43	HD 301 38	4 3950	+40 0751	18 4542					96
44	Comp							"	4s
45	Comp							"	4s
46	HD 36 395	5 2618	+03 4100	18 5525					357
47	Comp							"	4s
48	B/H5(4)								0
49	Comp							"	4
50	Vys 413	03 0234	-04 2113	19 0848					1135
51	Comp							"	4
52	Comp							"	4
53	Vys 430	03 4247	+2 2910	19 3412					1148
54	Comp							"	4
55	Comp							"	4
56	Vys 428 B	03 3812	+6 2130	20 0304					1265
57	Comp							"	4

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

Exp. Mtr.

1000

1000

213

192

262

CCD
 Spectr. Temp. Dome Temp./Hum. $+33^{\circ}\text{C}$ 68624 Transparency Conditions Fine but gusty 234
 Focus 6.89 NORTH wind
 Spectr. Temp. Dome Temp./Hum. CD $\sim 104 \text{ MAX}$

Exp.	Exp. Mtr.	Seeing	Plg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
9/2	1000V				CASS	1800 In	306	5300A	3/4			
4					CCD	47.7A			5			
9/6	—		5.97	G 8 III					6	NORMALIZATION		JK
4									7			SAT
4									8			
35/	1000		7.97	M 1					9	MURCY ST.		670
4									10			
0									1			
4									10			
1135	213	2 ^u 3"	10.5	MO					11	AC-04	240-76	good one
4									12			
4									13			
1148	192	2 ^u 3"	11.2	MO					14	AC+2 2282-51		
4									15			
1745	262	2 ^u 4"	11.1	MO					16		AC+17 449-111	
4									17			

235 #2

Wed / Thurs

Date 1998 Feb 25/26... Observers H.J. x / T.N. [V.S. 50/11.]

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.
cc524 58	Vys 428A	03 3812	+16 21 30	20 26 23					943
59	Comp							FeNe ND5	45
60	BIAS(4)			20 43					0
61	Comp							"	4
62	HD 95735	10 57 54	+36 38 00	20 51 16					564
63	Comp							"	4
64/69	FLATS x 6							TUNG ND4	5
cc52470	Comp							FeAr ND5	45
71	HD 120315	13 43 36	+49 48 55	21 13 42					40
72	Comp							"	45
73	Comp							"	45
cc52474	FK Com	13 30 47	124 13 59	21 24 36,	21:40:23	21:56:16	22:11:44	exp time → 900, 90 exp filter → 830, 830	600, 730
78	Comp							"	4
79	BIAS(4)			22 24	#81	#82			0
80/83	FK Com	"	"	22 29 18	22 35 02	22 45 28	22 56 04	exp time → 600, exp filter → 736,	604, 930
84	Comp							"	4

Spectr. Temp. Dome Temp./Hum. $+2.5^{\circ}\text{C}$ 72% Transparency Conditions ... Fine 236

Focus 6.89

Spectr. Temp. Dome Temp./Hum. 400 0 50 1024 4 1

Exp.	Exp. Mtr.	Seeing	Ph. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
943	1000V 354	2" 5"	10.3	MO	CAS5 Targeting	1800 lines 47.74°	306"	5300A	18	BD+16 502	Vys Program	
1									19			
0									1			
4									19			
584	2K	4" 6"	7.48	M2					20	Murcy Std 4e/	-84.70 V helio	1K
4									21			
5									2			145K
45					Targeting	1800 lines 56.35°	306	6600A	22			
40	12.5K	5"	1.86	B3V					23	Telluric Std	Big Air mass	
1									24			
2									24			
700, 600									8c1			
790, 730				8-9	G5II				9			
4									1			
0									10, 11, 12, 13			
600	604								14			
840	930										> 12K photons	
											After Background	

237
1443

Wed / Thurs

16 Date 1998 Feb 25/26 Observers Hix / Tn

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.
CC524 ⁸⁵ 89	FK Com	13 30 47	+24 13 59	23 05 59	23:14:33	23:10, 23:31:46	23:40:13	exp 1m 480, 480 exp 1m 866, 866	45
90	Comp							FEAR ND5	45
91	BIAS(4)			23 50					0
CC524 ⁹² 96	FK Com	"	"	23:50:16	23 58 45	00 07 07	00 14 40	exp 1m 440, 440 exp 1m 820, 910	45
97	Comp								45
98 502	FK Com	"	"	00:32:27	00:42:24, 00:47:46	00:55:19	01 03:21	exp 1m 420, 420 exp 1m 800, 842	45
CC52503	Comp							FEAR ND5	45
04	BIAS(4)			01 13					0
CC525 ⁰⁹ 08	FK Com	"	"	01 14 04	01 21 51	01:30:53	01 38 33	Exp T COUNTS	435, 880,
09	Comp			START of	Batch of 5	420 OBS		"	45
10/14	FK Com	"	"	01 50 34					420
CC525 ¹⁵ 16	Comp & BIAS(4)			02 29				FEAR ND5	45
17/11	FK Com	13 30 47	+24 13 59	02 34 44					440
18/21	m			02 43 27					420
22	Comp							"	45

Spectr. Temp. Dome Temp./Hum. $+1.8^{\circ}\text{C}$ 73/80 Transparency Conditions *Mostly clear* 238

Focus 6.89

Spectr. Temp. Dome Temp./Hum. $C\lambda$ 400 0 50 1024 4 1 CCOFMT

Exp. Mtr.	Seeing	Pl [✓] Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000 ✓ 480, 480 388 382, 926 760	4"	8-9	G5II	CASS CCD	18001n 56.35	306u	6600A	15c,	16, 17, 18, 19	Repeat x 5	
								20			
								1			
420, 426, 483 360, 934, 788								21,	22, 23, 24, 25	Repeat x 5	
								26			
20, 459, 423 590, 909, 880	2"							27,	28, 6, 7c, 8c;	Repeat x 5	
								9c;			
								1			
509, 429, 420 1000, 910, 830								10c,	11, 12, 13	Repeat x 4	
counts								14			
880, 915, 950	2"							15		Repeat 4200AS 5x	
								16/	1		
1050								17/	1	Had to Re boot, T.O. error	
	1.2"							2		Repeat 4200AS x 4	
								3			

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p44

Wed/Thurs

Emulsion Batches:

45

Date 1998 Feb 25/26 Observers HJX/TG

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.
CC525 ²⁷ 27	FK Com	13 30 47	24 13 59	03 16 12				5x	420s
28	Comp							12x ND5	4s
29	BIAS(A)			03 54					0
30 ²⁷ 234	FK Com	"	"	03 56 04				5x	420s
35	Comp							"	4s
36	FK Com	"	"	04 37 34				4x	422s
37	"	"	"	04 45 35					440
38/40	"	"	"	04 53 26				3x	420
41/42	Comp & BIAS(A)			05 17					4s
43	FK Com			05 19 32					1000
44	"			05 36 49					1014
45	Comp							12x ND5	4
46	"							"	4
47	HD 113226	12 57 12	11 29 48	05 58 13					188
48	Comp								4
49	Comp								4
50	HD 205435	21 30 13	14 5 08 59	06 08 58					305
51	Comp								75
52/61	FLATS X10							ND5	75

CCD
Spectr. Temp
Focus.....
Spectr. TempExp. Mtr.
ND5

790

750

75, 630, 520

777

731

8K

45K (3-4)

CCO
 Spectr. Temp. ... -100.5°C ... Dome Temp./Hum. +00.2°C 77.0% H Transparency Conditions ... Mostly clear ... 2100
 Focus ... 6.89 ... increasing cloud by 5km
 Spectr. Temp. ... Dome Temp./Hum. -00.7°C 81.1% H

Comp. Filter	Exp.	Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	420	750	1.2"	8-9	G5II	C455	1800lm 56.350	306u	6600P	4c1		Repeat 420 OBS. BAT 5	
	45									5			
	0									1			
	420									6		Repeat 420 x 5	
	45									5			
	420									6		Mark OK	
	40	750								7			
	420	75, 630, 530	1.2"							8		Repeat x 3	
	45									9			
	1000	777								10			
	104	751								11			
	15									12			
	4									12			
	185	8K	2.83		G8III					13	sp std		
	4									14			
	305	45K (3-4")	3.99		G8III					15			
	75									16	std vel		
										16	Turn	CC52562 BIAS(4)	
										17			
										18			

24494#1

Thurs / Fri

Emulsion Batches:

Date 1998 Feb 26/27.... Observers H.J.X. / J.N.....

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.
CC 525 ⁶³ / ₆₄	Inboard/out-board							REAR ND5	4/6
⁶⁵ / ₆₆	B/H/S (4)								0
⁶⁶ / ₆₇	Comp							"	4
⁶⁷ / ₆₈	HD 30138	4 39 50	+40 07 51	18 43 56					183
⁶⁸ / ₆₉	Comp							"	4
⁶⁹ / ₇₀	Comp							"	4
⁷⁰ / ₇₁	HD 5394	x 3		18 59 54					173/14
⁷¹ / ₇₂	Comp							"	4
⁷² / ₇₃	Comp							"	4
⁷³ / ₇₄	HD 23630 (V Cas)			19 10					230/22
⁷⁴ / ₇₅	Comp							"	4
⁷⁵ / ₇₆	Comp							"	4
⁷⁶ / ₇₇	HD 23862 (28 Tau)	3 43 14	+23 49 52	19 21 22					260/5
⁷⁷ / ₇₈	Comp							"	4
⁷⁸ / ₇₉	B/H/S (4)			19					0

Spectr. Temp. Dome Temp./Hum. ± 5.0 64.32/4 Transparency Conditions ... Hazy 242

Focus 6.89

Spectr. Temp. Dome Temp./Hum. 400 0 50 1024 41 CCD F4T

Exp.	Exp. Mtr.	Seeing	Hg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4/6	1000V				CASSCO	1800/n 56.35°	306u	6600P	3/4	focus		
0									1			
4									5			
183	3K	1.2"	5	G8					8	120amplization		4K
4									7			
4									7			
As	3K	1"	2.7V	B0Ile					8		3x	8K
4									9			
4									9			
302	~7K	1"	2.9V	B7IIIe					10		3x	~ 8K
4									11			
4									12			
605	3K	1"	5.1	B8c					12		3x	9K
4									13			
0									1			

243192

Emulsion Batches:

Date 1995 Feb 26/27 Observers H.J. / T.H.

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
CC52585	Comp							Red NDS	4
86/88	HD 37202	5 3140	+21 0454						230s
89	Comp							"	4
90	Comp							"	4
91/92	HD 33328	5 0422	-08 5256	19 4057					
92	"			19 4305					284
93	"			19 5041					171
94	"			19 5520					133
95	Comp							"	4
96	HD 33328			20 0443					
97	"			20 1142					307
98	Comp							"	4
99	Comp							"	4
600	HD 245770	5 3242	+26 1600	20 7734					1330
601	"	"	"	20 5059					1
602	Comp								

Spectr. Temp. Dome Temp./Hum. $+4.3^{\circ}\text{C}$ 64.8 H Transparency Conditions ... Part Cloudy 244
 Focus 6.89
 Spectr. Temp. -100.5°C Dome Temp./Hum. $+3.3^{\circ}\text{C}$ 64.9 H

Comparison
Filter Exp.

Exp. Mtr.	Seeing	Fig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4				CLASS CCD	1800h	30h	6600A	14			
133	~7K							15			~7K
4								16			
4								16			
4K			B2Ve	4.3V				17		no	
284	10K							18		Yes The Funny COSMIC RAY?	
171	8.8K							19		guided $\leftrightarrow$	
133	5.9K							20	one	E $\rightarrow$ W TRAIL	
4								21			
								22			
307								23			
4								24			
4								24			
1330	720	1"	8-9	B0				25		* Rusty Cosmic RAY in each H&E profile	
1	755	<1"						26			
								27			

245. p9³

THURSDAY / FRI

Date 1998 Feb 26/27 Observers Hjx./Tn

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.
CC52603	BIAS(4)			21 20					
04	Comp							Fe4 ND5	45
05	BD433 1646B	08 02 34	+33 06 25	21 24 09					1363
06	Comp							"	45
07	BD433 1646H	"	"	21 49 16					883
08	Comp							"	4
09	Comp							"	4
10	HD915735	10 57 54	+36 38 00	22 13 40					456
11	Comp							"	4
12	BIAS(4)			22 22 50					0
13	Comp							"	4
14	HD120315	13 43 36	+49 48 45	22 27 43					43
15	Comp							"	4
16	Comp								
17/20	Fk Com	13 30 47	24 13 59	22 35 22	22:56:24	23:16:57	23 37 36		1220
21	Comp							900	1200 1200 1200

Focus 689

Dome Temp./Hum.

Transparency Conditions *Thin cloud* *246*

Spectr. Temp.

Dome Temp./Hum. $+3.1^{\circ}\text{C}$ 55.2% RH

Companion Filter	Exp.	Exp. Mtr.	Seeing	Filt. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
						C455 CCD	1800 l/n/mm 56.350	306	6600A	1			
	4									28			
	3/4	94	1"	12	M0					29	Vys 250B	Fainter S Wore single HX em this time	
	4									30			
	8/8	270	1"	10.5	M	looks K like				6	Vys 250A		
	4									7			
	4									7			
	4/8	1450	1"	7.48	M2					8	marcy std vel	-89.70 V ₀	
	4									9			
	0									1			
	4									10			
	4/3	9K								11	Telluric Std	<u>Air mass 2</u>	
	4									12			
	4/4	480								12			
	4/4	480	475	2"	8-9	G5 II				13, 14, 15, 16			
	4/4	604								21			

247944

THURS / FRI

Emulsion Batches:

Date ... 1998 Feb 26/27 Observers ... H.J.X. / T.N.
27

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.
CC52622	BIAS(4)			23 54				* CC 52626 = Comp	0
23/27	FK Com	13 3047	+24 1359	23 5539	00 0946	00 25 46	00:41:35	958 825	913 800
28/28	Comp							540	4
29/28	FK Com	"	"	00:55:48	01:05:21, 01:14:06, 01:21:30			420	480
33	Comp								4
34/38	FK Com	"	"	01 3307	01 4202	(01:51:07	START of Repeat x 3		420
39/40	Comp & BIAS(4)			START of Repeat x 5					45
41/45	FK Com	"	"	02 16 02					420
46	Comp.								4
47/51	FK Com	"	"	02 56 12					420s
52/53	Comp & BIAS(4)			03 34					45
54/58	FK Com	"	"	03 35 56					420s
59	Comp								4
60/64	FK Com	"	"	04 15 29					420
65	Comp								4
66	BIAS(4)			4 53					0

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions *PART. Cloudy* 248.

Focus 6-89

Spectr. Temp.

Dome Temp./Hum. : 0° 57.8A

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	0	1000 ✓				CASS	1800ln 56.35°	306u	6600A	1			
8	913	600 533	1.5"	8-9	G5IT					22, 23, 23		4x	
5	600	772 788											
4	400	800 746								6, 7, 8, 9		4x	
2	400	736 760								10			
4	400		1.5"							11, 12		5x	
4	400	860								13			
4	400	840, 834								14			
4	400	815, 724,								15			
4	400	740, 780, 857 2"								16		Repat 5x	
4	400	[TOTAL of 5]								17/1			
4	400	3900 2-4"								18		Repat 5x	
4	400									19			
4	400	4000								20		Repat 5x	
4	400									21			
0	0									1			

25049#5

Thurs / Fri

Emulsion Batches:

Date 1998 Feb 26/27. Observers H.J.X. / T.G.
55

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.
CC526 ⁶⁷ /71	FK Com	13 30 47	+24 13 59	04 55 25					420
72	Comp							red NO5	45
73	Comp							"	45
74	HD 113226	12 57 12	+11 29 48	05 36 12					82
75	Comp								4
76	Comp								↑
77/78	FK Com	13 30 47	+24 13 59	05 42 08	05 49 31				120 124
79	Comp								4
80	Comp								4
81	HD 205435	21 30 13	+25 08 59	06 04 15					122
82	Comp								4
83/92	FLATS x 10							TMG NO5	75
693	BIAS (4)			06					0

CCD
Spectr. Temp
Focus.....
Spectr. TempExp. Mtr.
1000 V
-TOTAL

75K

8.6
770

8.8K

CCD Spectr. Temp. -101.3°C

Dome Temp./Hum.

Transparency Conditions . increasing cloud again. ²⁵⁰

Focus 6.89

Spectr. Temp.

Dome Temp./Hum. ... 0° 58% H
C2

Exp.	Exp. Mtr.	Seeing	Pg/ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
420	TOTAL	2.3"	8-9	G5II		1800/56.35	306u	6600A	22		Repeat x 5	
5									23			
4									23			
82	7.5K								24			Fisk
4									25			
4									26			
806									26, 27			
770	3"	8-9	G5II						28			
4									29			
4									5	std vel		
4	8.8K								6			
4									2			13K
4									1			

25 p 61

1998 Feb 27/28

Mk. / Lu

Date 11/1/74 Observers MM / LG

Emulsion Batches:

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[illegible]

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions clearing 252

[illegible]

253
pg#1

SAT/SUN

Date 1998 MAR 7/8... Observers [Vys] / mki / Tn...

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.
CC52710/11	In b/out BOARD Huatman							FEAR NDS	4/2
12	Comp							"	4
13	HD 70272	8 15 59	A3 30 32	21 46 09					61
14	Comp							"	4
15	Comp							"	4
16	HD 36395	5 26 18	-03 41 00	21 52 16					704
17	Comp							"	4
18	BIHS (4)			22 05					0
19	Comp							"	4
20	BD-02 3000	9 53 13	²⁰⁰⁰ -03 41 18	22 09 22					968
21	Comp							"	4
22	BD-02 3000	"	"	22 27 27					1056
23	Comp							"	4
24	BD-02 3000	"	"	22 47 39					1090
25	Comp							"	4
26	BIAS (4)			23 08					0

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

Exp. Mtr.

1000V

3K

1000

245

360

248

Spectr. Temp. ^{CCD} - °C Dome Temp./Hum. +2.5°C 75% Transparency Conditions Hazy 254

Focus 6.89

Spectr. Temp. Dome Temp./Hum.

400 0 50 1024 4 1 CCD FWH

Comparison Filter Exp.	Exp. Mtr.	Seeing	Pg Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4/2	1000V				CASS CCD	1800/n 47.74	306n	8300R	3/4			
A									5			
61	3K								6		Just while normalizing encoders	
4									7			
4									8			
704	1000	5"	7.97	M1					9		Rsun sol corr -26.87 Marcy Steve/RV0 +8.52	
4									10			
0									1			
4									11			
968	245	3.6"	10.54	M0					12		Rsun -6.84 Vys 560 FOR H/w gone	
4									13			
1076	260								14	"		
4									15			
1090	248	3.7"							16	"		
4									17			
0									1			

Spectr. Temp. Dome Temp./Hum. $+0.5^{\circ}\text{C}$ 80% H Transparency Conditions ... Hazy 256

Focus 6.89

Spectr. Temp. Dome Temp./Hum. 400 0 50 1024 4 1 CCD FMT

Exp. Mtr.	Seeing	Pg Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1005U				CASS CCD	1800L 47.740	306u	5300A	18		(RSUN = -4.29 Km)	
2460	3.4"	9.65	M2					19	MARCY STARD	RV8 = +8.36	
								20			
								21			
154	2.3"	11.7	MO					22	HC+19	OK, RSUN + 2.65 Km/sec 1971-31 15-00003 15-00002 UVSI Blue at BD1012447	
								23			
								24			
120	2"	11.96	MO					25		yes	
								26			
								1			
								27			
2.4K 1.2"		6.45	G8Vp					28	std vel	IAU - 99.1 km/sec	
								29			
		u	u		ABOVE 306u	51if			Seeing Test		
								2			13K

257 pg 3 SAT/SUN

Date 1998 MAR 7/8 Observers M.Ki./Tn

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.
CC52748	Comp							FeAr ND2	4
49	HD103045	11 4713	+382610	01 11 31	(*) From now on to the				392
50	Comp				end of night, the central			"	f
51	Comp				wavelength is still 5300Å.			"	4
52	HD 79886	9 11 36	773900	01 30 15	Thus the centlam & grating				600
53	"			01 41 10	setting in the header all				600
54	"			01 51 46	wrong. The observers				600-
55	Comp				did not change grating tilt.			"	4
56	B/AS(A)			02 02	I fixed the database, but				0
57	Comp				it is too later to change			"	4
58/62	HD 95660	10 5724	30 5800	02 0834	→ headers of files on tape				420s
63	Comp				& cdrom!				4
64/68	HD 95660	"	"	02 4831	— Lu, 1999/01/18				420
69	Comp								4
70	B/AS(A)			0327					0

Spectr. Temp. Dome Temp./Hum. -0.3°C 80% H Transparency Conditions ... O.K. $\rightarrow$ Hazy ... 258.
 Focus 6.89
 Spectr. Temp. Dome Temp./Hum.

Exp.	Exp. Mtr.	Seeing	Hg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4	1000V				CASS CCD	1800h 4706	306	5184A	5			
3/2	2.6K	3.4"	6+5	68					6	std vel		
4									7			
600	490		86	F2					8			
600	525								9			
600	520								10			
4									11			
0									1			
4									11			
428	625, 670 600, 630, 700	3.4"	8.0	F3					12, 13	for 4 x 420 OBS. B/FT		
4									14			
420	700	3.6"							15			
4									16			
0									1			

259. P944 SAT/SCN

Emulsion Batches:

Date 1998 Mar 7/8 Observers M.K. / Tn

23

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.
CC52771	Comp							Red ND2	4s
72	HD 114726	13 07 18	+03 13 00	03 31 57					966
73	"	"	"	03 48 31					906
74	Comp								4
75	Comp								4
76	HD 95660	10 57 24	+30 58 00	04 08 15					600
77	"			04 18 37					401
78	"			04 26 08					608
79	Comp								4
80	HD 85660	"	"	04 38 57					674
81	"	"	"	04 50 43					600
82	"	"	"	05 01 04					601
83	Comp, + CC52784	13 15 54		05 12					4
85	Comp								4
86	FU Dra	15 34 46	+62 16 44	05 19 01					699
87	Comp								4

Spectr. Temp

Focus... 6:

Spectr. Temp

Exp. Mtr.

1000/

S

970

3

910

4

680

470

570

775

760

528

4

4

4

4

4

4

4

4

4

4

4

4

4

4

4

4

4

4

Spectr. Temp. Dome Temp./Hum. -0.8°C 83.8% Transparency Conditions ... Hazy 260

Focus 6.89

Spectr. Temp. Dome Temp./Hum. -0.8°C 84.6%
CD

Comparison Filter	Exp.	Exp. Mtr. 1000V	Seeing	Mag. ✓	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2	4		.			CASS CCD	1800/n 17.06	306u	518A	16			
96		970	3.7	8.4	F2					17			
906		910								18			
4										19			
4										19			
600		C80	4.8	80	F3					20			
401		470								21			
608		570								22			
4										23			
674		775								24			
600		760								25			
601		528								26			
4										27			
4										28			
899		111		10.5	F0					29			
4										30			

261 p4#5 SAT/Sun

Date .. 1998 MAR 7/8 Observers .. mk. / Tn

Emulsion Batches:

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[illegible]

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions ... *Partly Cloudy* ... *762*Focus ... *6.89* ...

Spectr. Temp.

Dome Temp./Hum. *CA*Companso
Filter Exp

Exp.	Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>4</i>	<i>1000 V</i>		<i>✓</i>		<i>CASS</i>	<i>1800/12</i>	<i>300_n</i>	<i>5184A</i>	<i>5</i>			
<i>5</i>					<i>CD</i>	<i>77.06</i>						
<i>4</i>	<i>5.6K</i>	<i>4"</i>	<i>6.7</i>	<i>A7V</i>					<i>6</i>			
<i>4</i>									<i>7</i>			
<i>4</i>									<i>7</i>			
<i>1/2</i>	<i>2K</i>	<i>5"</i>	<i>5.11</i>	<i>F8V</i>					<i>8</i>	<i>std/ve/</i>		
<i>4</i>									<i>9</i>			
<i>4</i>									<i>2</i>			<i>136K</i>
<i>0</i>									<i>1</i>			

2631
PG1

1998 Mar 10/11 Tues/Wed

Date Observers Gld/Lu

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.
CC52805/06	In/out board							FeAr ND1	4/7
07	BIAS(4)			19 02					
08	comp							"	4
09	HD 45466	06 22 35	46 44 57	19 26 19					145
10	comp							"	4
11	comp		20 00					"	4
12	FF Cnc	08 29 40	17 17 02	19 48 47					1020
13	comp							"	4
14	BIAS(4)			20 07					0
15/16 In/out board									
15/16	In/out board							FeAr ND3	4/6
17	BIAS(4)								0
18	comp							"	4
19	TYC4156-810	11 33 05	13 53 46	20 42 36					200
20	comp							"	4

Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mtr.

1500

186

555

Spectr. Temp. -100.3 Dome Temp./Hum. $-5.1/51.0\%$ Transparency Conditions $clearing$ 264

Focus 6.97

Spectr. Temp. Dome Temp./Hum. $400\ 0\ 50\ 1024\ 4\ 1\ CCD\ FMT$

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	$4/7$					CASS CCD	$1800/mm$ 47.56	306	5184	$3/4$			
										1			
	4									5			
	145	1500	$5''$	5.9	gKy					6			
	4									7			
	4									7			
	1020	186	$5''$	10.5	$K1+K4$					8			
	4									9			
	0									1			
										2			
							$1800/mm$ 51.58	250	5894				
	$4/16$									$3/4$			
	0									1			
	4					B-V				5			
	200	555	$4''$	9.29	0.267					6			
	4									7			

PG 2
265 1998 Mar 10/11

Date Observers Gd+ / Lu

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.
CC52821	TYC4156-810	11 33 05	63 53 46	21 05 07					1800
22	comp							FeAr ND3	4
23	BIAS(4)			21 37					0
24	TYC 4156-810	"	"	21 37 52					1800
25	comp							"	4
26	BIAS(4)			23 43					0
27	comp							"	4
28	TYC3031-1020	13 22 45	44 42 54	23 45 54					900
29	"	"	"	00 01 16					930
30	comp							"	4
31	TYC3031-1020	"	"	00 20 45					900
32	"	"	"	00 36 06					1800
33	comp							"	4
34	BIAS(4)			01 07					0
35	comp							"	4
36	TYC3460-2395	13 23 23	46 14 60	01 16 10					1200

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

Exp. Mtr. S

767

820

1060

1080

1053

2090

440

Spectr. Temp. -100.3

Dome Temp./Hum. -8.9/55.1

Transparency Conditions clear some clouds

Focus 6.27

Spectr. Temp.

Dome Temp./Hum.

266

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1800	767	3"-4"	9.29	13-V 2.267	CASS CCD	1800/mm 51.58	250	5894	8	[HI]		
4									9			
0									1			
1800	820								10		light snowing.	
4									11		stop	
0									1			
4									11			
900	1060	4"-6"	8.35	AD					12			
930	1080								13			
4									14			
900	1053								15			
1800	2090								16			
4									17			
0									1			
4									17			
1200	440	4"-6"	9.5	8.2					18			

2673

Date 1998 Mar 10/11

Observers

Gld/Lu Bur/Ber.

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.
CC52837	TYC3460-2395	13 23 23	46 14 60	01:38:00					1200
38	comp							FeAr ND3	4
39	TYC 3460-2395	"	"	02 04 00					1500
40	comp							"	4
41	BIAS(4)			02 31					0
42	comp							"	4
43	HD136849	15 17 48	33 17 30	02 36 43					300
44	"			02 43 06					300
45	comp							"	4
46	comp							"	4
47	TYC3460-1801	13 17 41	45 53 07	02 59 32					599
48	"	"	"	03 09 58					605
49	"	"	"	03 20 34					600
50	comp							"	4
51	BIAS(4)			03 32					0

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

437

555

5400

5200

590

580

551

Spectr. Temp. -100.3° Dome Temp./Hum. $-11.2/55.9$ Transparency Conditions *clear* 258

Focus

Spectr. Temp.

Dome Temp./Hum.

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
000	437		9.5	B-V 0.2		51.58			19			
4									20			
1500	555		"	"					21			
4									22			
0									1			
4									22			
300	5400	4"	5.37	B9V _n					23			
300	5200								24			
4									25			
4									25			
591	590	3"-5"	8.53	0.391					26			
65	580								27			
600	551								28			
4									29			
0									1			

Spectr. Temp. -100.3°C Dome Temp./Hum. $-11.9^{\circ}\text{C}/56.6$ Transparency Conditions *clear* 270Focus 6.97

Spectr. Temp.

Dome Temp./Hum.

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4							250	5894	5			
1800	132	3-5"	11.	BV 0.45					6			
4									7			
1800	110								8			
4									9			
0									1			
1800	114								10			
									11			
1800	124								12			
									13			
0									14			
3									2			

271
p4

Date 1998 Mar 11/12

Observers MKot/Lu

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.
cc52870/71	In/out Board							F2AR ND 1	1/2
72	BIAS(4)			19 04					0
73	comp							"	4
74	HD 41636	06 01 19	41 04 08	19 08 21					240
75	comp							"	4
76	comp							"	4
77	HD 32963	05 01 48	26 12 00	19 18 36					360
78	comp							"	4
79	comp							"	4
80	RXST J00144115	01 01 25	41 15 03	19 35 43					1200
81	comp							"	4
82	BIAS(4)			20 04					0
83	Comp							"	4
84	HD 54975	07 05 54	-03 43 00	20 15 56					930
85	"	"	"	20 32 25					900
86	comp							"	4

Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mtr.

Spectr. Temp. 100.4°C

Dome Temp./Hum. 8.2/47.5

Transparency Conditions fine 272

Focus 7.00

Spectr. Temp.

Dome Temp./Hum.

400 0 50 1024 4 1 CCDTMT

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1	4					CASS CCD	1800 1/4"	306	5184	3/4			
	0									1			
	4									5			
240	4	3250	2-3"	6.36	G9II					6			
	4									7			
	4									7			
360	4	1110		7.72	G2V					8			
	4									9			
	4									9			
1200	4	207	2"	11.						10		Some clouds.	
	4									11			
	0									1			
	4									11			
930	4	1090		8.3	F5					12			
900	4	938								13			
	4									14			

Spectr. Temp

Spectr. Temp. -100.4°C Dome Temp./Hum. $-9.1/55.1$ Transparency Conditions *fairly cloudy* 274Focus 7.00

Spectr. Temp.

Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1178	1120	2'-3"	8.3	FS	CASS CCD	1800 $1/2$ mm 47.06	306	5184	15		
1070								16			
								17			
								1			
								17			
790		8.6	F3					18		Near to full moon.	
900								14			
555								20		Thick, Bright Cloud.	
								21			
								1			
								2			12K

2751

Date 1998 Mar 12/13 Observers MKr/Lu

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.
CC52904/05	In/out board							FzAr ND1	1/2
06	BIAS(4)			18 51					0
07	BIAS(4)			22 54					0
08	comp			2				"	4
09	HD95660	10 57 24	30 58 00	22 56 35					530
10	"	"	"	23 06 39					600
11	"	"	"	23 17 03					600
12	comp							"	4
13	HD95660	"	"	23 28 54					600
14	"	"	"	23 39 16					618
15	"	"	"	23 49 58					600
16	comp							"	4
17	BIAS(4)			00 02					0
18	comp							"	4
19	HD84441	09 40 11	24 14 05	00 31 33					60
20	comp							"	4

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

Se

2000

1700

2400

2380

2600

2350

8800

Spectr. Temp. -100.4 Dome Temp./Hum. $-57^{\circ}/55^{\circ}$ Transparency Conditions *cloudy* 276Focus 6.98

Spectr. Temp.

Dome Temp./Hum.

400 0 50 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4				CASS	1800 l/mm	306	5184	3/4			
0				CCD	47.06			1			
0								1			
4								5			
530	2000	2"-3"	8.0	F3				6		clearing	
600	1700							7		Full Moon, Bright sky	
600	2400	1-2						8			
4	2							9			
600	2380							10			
618	2600							11			
600	2300							12			
4								13			
6								1			
4								13			
60	8806							14			
4								15			

2.98 91II

2772

Date

1998 Mar 12/13

Observers

MKo/Lu

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.
CL 52921	H084441	09 40 11	24 14 05	00 15 14					78
22	comp							FeAr NB 1	4
23	comp		(2000)					"	4
24	HT Vir	13 46 07	05 06 57	00 26 10					600
25	"			00 36 58					600
26	"			00 47 28					600
27	comp							"	4
28	BIAS(4)			00 59					0
29	comp							"	4
30	SX Cru	12 40 15	-18 48 00	01 07 36					420
31	"	"	"	01 17 48					600
32	comp							"	4
33/39	flat 3							Tung NB 3	4
40	comp							FeAr NB 1	4
41	SX Cru	"	"	01 39 28					642

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

Se

(1 K)

4 K

3076

601

601

470

636

636

70

Spectr. Temp. -100.4° Dome Temp./Hum. $-62^{\circ}/74.1$ Transparency Conditions *clear* 28
 Focus 6.78
 Spectr. Temp. Dome Temp./Hum.

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
78		1 K	1"	2.98	G1 II					16			
4										17			
4										17			
600		4 K	1"	7.16	G0					18			
600		3076								19			
600		1601								20		through some clouds	
4										21			
0										21			
4										21			
4		470	2"	9.5	F7V					22		through clouds	
600		636								23			
4										24			
4										24			
4										24			
670										25			

279
PG 3

Date 1998 Mar. 12/13

Observers MKC/Lu

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.
42	SX Crv	12 40 15	-18 48 00	01:51:04					599
43	"	"	"	02 02 41					600
44	comp.							FeAr ND 7	4
45	SX Crv	"	"	02 15 21					600
46	"	"	"	02 25 47					600
47	"	"	"	02 36 09					600
48	comp							"	4
49	SX Crv	"	"	02 47 38					600
50	comp							"	4
51	SX Crv	"	"	03 00 57					480
52	comp							"	4
53	BIAS (4)			03 19					0
54	comp							"	4
55	H&R 202	15 14 12	02 08 37						180
56	comp							"	4

Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mtr.

625

600

631

626

626

35

460

3K

Spectr. Temp. -100.4 Dome Temp./Hum. $-6.0/78.6$ Transparency Conditions $\dots$ fairly clear 280 Focus 6.98

Spectr. Temp.

Dome Temp./Hum.

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
625	2"	9.5	F7V					26		Cloud at end.	
~600		"	"					27			
								28			
631		"	"					29			
626		"	"					30			
626		"	"					31			
								5			
635								6			
		2	2					7			
460		"	"					8			
								9			
								1			
								9			
8K ~1"-2"		5.06	F8IV-V					10			
								16			

281
Pg 4

Date

1998 Mar 12/13

Observers

MKi / Lu

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.
CC5957	comp							FeAr ND1	4
CC52958	HD 95660	10 57 24	30 58 00	03 34 48					600
59	"	"	"	03 45 15					600
60	comp							"	4
61	BIAS(4)			03 57					0
CL52962/63	Inboard/outboard							FeAr ND3	4
64	comp							"	4
65	HD 145122	16 04 16	17 28 16	04 09 04					608
66	"			04 19 38					945
67	comp							"	4
68	BIAS(4)			04 37					0
69	comp							"	4
70	HD 177724	19 00 49	17 42 53	04 41 52					167
71	"	"	"	04 45 08					172
72	"	"	"	04 48 37					211

Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mtr.

S

1440

10K

101K

10K

205K

245K

Spectr. Temp. 100.4Dome Temp./Hum. -6.7°C/73.8Transparency Conditions mostly clear 82Focus 6.98

Spectr. Temp.

Dome Temp./Hum.

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	4					CASS CCD	1800/nm 47.06	306	5184	11			
600		1440	1-2"	8.0	F3					12			
600										13			
4										14			
0										1			
4													
3	4						1800/nm 51.58	250	5894	3/4	[HI]		
4										5			
608		10 K		6.14	AOV					6	Telluric	std.	
945		10.1 K								7	"	some clouds	
4										8			
0										1			
4										8			
162		21 K	1-2"	2.99	AOV					9	Telluric	std	
192		20.5 K								10			
211		20.5 K								11			

283
PAS

Date

1998 Mar 12/13

Observers

MKi/Lu

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.
CL52973	comp							PRAY NO 3	4
74	BIAS(4)			04 53					0
75	comp							"	4
76	HD196504	20 32 49	26 06 50	04 57 53					1006
77	comp							"	4
78	BIAS(4)			05 16					0
79	comp							"	4
80	TYC 3031-1020	13 22 45	44 42 54	05 23 05					900
81	"	"	"	05 38 23					900
82	comp							"	4
83	BIAS(4)			5 54					0
84	comp							"	4
85	HD130169	14 41 12	02 18 51	06 02 19					194
86	"			06 05 57					200
87	comp							"	4
88/9X	flats							Tung NO 4	4

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

0.3K2

2080

2080

20K

20K

Spectr. Temp. -100.4° Dome Temp./Hum. $-6.8/73.0$ Transparency Conditions slightly hazy 284
 Focus
 Spectr. Temp. Dome Temp./Hum.

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3	4					CASS CCD	1800 $\text{\AA}/\text{mm}$ 51.58	250 μ	5894	12			
	0									1			
	4									12			
1006		10.3K 2"-3"	5.59		B9V					13	Telluric	Std	
4										14			
0										1			
4										14			
900		2080 1"-2"	8.35							15	[HI]		
900		2086								16		Bright dawn sky.	
4										17			
0										1			
4										5			
194		20K		3.7	A0V					6	Telluric	Std	
200		21K								7			
4										8			
4										2			
											(14K)	Very bright sky and observe more?	

288

pyl

Sun/Mon

Date ... 1998 MAR 15/16. Observers ... Gld./Tn.....

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.
CC529 ⁹⁸ /99	Inb / Out BOARD HURTMAN							FeAr ND4	4/6
53000	BIDS (4)								
01	BIAS (4)								
02	Comp							FeAr ND4	4s
03	HD95660	10 5724	130 5800	192042					609
04	"	"	"	193205					600.
05	Comp							"	4s
06	Comp ✓							"	4s
07	FF Enc	082940	1171702	194900					1800
08	Comp							"	4s
CC53009	FF Enc Comp	"	"	202055				FeAr ND4	4s
10	FF Enc	"	"	202945					1800
11	Comp								4s
12	Comp								4s
13	FF Enc	"	"	22 2549					1800
14	Comp								4s
15	FF Enc			22 58 05					1800

CCP
Spectr. Temp.
Focus 6
Spectr. Temp.

Exp. Mtr. Se

1000 V

12K 3

1136

250 4s

188

279 3

279

CCD Spectr. Temp. -100.4°C. Dome Temp./Hum. -5.5°C 60% H Transparency Conditions Fine 286

Focus 6.98

Spectr. Temp. Dome Temp./Hum. 400 0 50 1024 4 1 CCD FMT

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000 V				CHSS CCD	1800ln 47.06	306u	5894A	3/4			
					57.58 ? still	By mistake		1			
								1		Then Reboot again	
1.2K	5"	8.0	FS					1c		after Reboot	
113L								1c			
								2			
								3			
250	4'6" 11							4		Wrong Setup!	
								5			
				Tyrating	1800ln 47.06	306u	5184	8			
188		11						8		1/3 blocked by dome error in filter?	
								9		Focus Problems	
								10		22hr delay	
279	3"							11			
274								12			

28 Ag #2

Sun/Mon

Emulsion Batches:

Date 1998.. MAR 15/16 Observers .. Gld./Tr. & some mti

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.
cc530 16	Comp							Feltr ND4	ts
17	FF Cnc	2000 082940	+171702	232956					184
18	BIAS(4)			000041					0
19	Comp							"	4
20	FF Cnc	"	"	00 0408					1802
21	Comp							"	4
22	FF Cnc	"	"	003559					1808
23	Comp								4
24	BIAS(4)			01 07					0
25	Comp							"	ts
26-28	HD 95660	1900 105724	+305800	011232, 012305, 013324					600s
29	Comp								4s
30	Comp								4s
31	HD 84441	1900 0940.11	241905	01 4733					103s
32	Comp							"	4
33	BIAS(4)			01 51					0

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

1000

247

270

240

2400

2500

Spectr. Temp. Dome Temp./Hum. -7.6°C 5168H Transparency Conditions ... Fine ... 288

Focus ... 6.78

Spectr. Temp. -100.1°C Dome Temp./Hum. -8.8°C 5088H

27

400 0 50 1024 4 1 CCDFMT

Exp.	Exp. Mtr.	Seeing	Plg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
184	1000 V				CHSS CCD	1800/n 47.06	306 μ	5184A	13			
0	247	4.6"	11						14			
4									1			
1802									15			
45	270	3.5"							16		Bud cosmic rays near center	
1802									17			
45	240								18			
0									19			
45									1			
1802									19			
45	2400		8.0	F3					20-22			
0									23			
45									24			
1802	10500								25		6k max.	
45									26			
0									1			

289 pg. #3 sun/moon

Date 1998 MAR 15/16... Observers Gld/Tk.....

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.
CC53034	Comp							Fed ND9	7s
35	HD90861	10 24 18	+29 05 00	02 01 59				"	313s
36	Comp							"	4s
37-42	flats							Tring ND3	
43/44	In b/out							FEAR ND5	4/6
45	Comp							OG 560 ORDER sep FOR stellar R60 Filter FOR comparison	4
46	HD95660	10 57 24	30 58 00	02 31 33					400
47	Comp							"	4s
48	Comp.							"	4s
49	SN1998S	11 46 06	+47 28 56	02 53 00					603
50	Comp for next object. B/HIS(4)				03 18				8
51	Comp for #52							"	4s
52	USNO 5510418	11 43 05	64 08 00	03 22 11					632
54	Comp For CC53054							"	4s
53	USNO 05513768	11 44 46	64 11 43	03 34 47					600
55	comp For CL53056								4s

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions ... mostly clear 290

Focus 6.98

7.13 for 150 μ grating

Spectr. Temp.

Dome Temp./Hum.

Comparison
filter Exp.

Exp. Mtr.	Seeing	Plg Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1088U				CHSS CCD	1800 μ 47.06	306 μ		27			
1490	5"							28	std vel	poss. confusion in nearby star (this is brighter of 2)	
								29			
								2			
					150 μ 23.29	306 μ	6000A	1/2		Note Format 425 025 1024 8 1	
								3			12K
1000V6/15								4			6K
330	5"							5			
1320V								6			
288	3"							7			
								8			
								9			
400	3"							10			
								11			
310										$\Delta\alpha = -0^m 57^s$ $\Delta\delta = -2^h 54'$ Ranged!	
										$\Delta\alpha = -0^m 57^s$ $\Delta\delta = -3^h 03'$	

2 pages #4

Date 1998 Mar 15/16 Observers Gld/Tn

Emulsion Batches:

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.
CL53056	usno 05514988	11 45 22	63 40 43	03 50 46					900
57	usno 05516444	11 46 02	+63 42 28	04 07 30					900
58	Comp for CL53057								4s
59	B/H S(4)			04 24				FeAr NDS	0s
60	comp for CL53061								4s
61	usno 05515138	11 45 26	63 37 21	04 12 33					632
62	usno 05514988	11 45 22	63 40 43	04 40 56					910
63	Comp for CL53062							"	4s
64	comp for CL53065							"	4s
65	usno 084391274	13 24 04	45 05 13	05 02 04					607
66	usno 08426851	13 19 49	45 27 14	05 14 02					729
67	Comp for CL53066							"	4s
68	B/H S(4)			05 28					0.
69	Comp								
70	HD131156	14 46 46	+19 30 57	05 35 58					22s

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr. S

360

430

437

313

360

347

22s

Spectr. Temp. Dome Temp./Hum. $-10.3/52.1\%$ Transparency Conditions Clean 292

Focus 2.13

Spectr. Temp. Dome Temp./Hum. -11.2°C 53.824

425 0 25 1024 8 (CCDFMT)

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
360								12		$\Delta\alpha = -0^{\text{m}}57^{\text{s}}$ $\Delta\delta = -3'6''$	
430								13		$\Delta\alpha = -0^{\text{m}}56^{\text{s}}$ $\Delta\delta = -3'9''$	
								14			
								1			
								15			
437								16			
363								17		$\Delta\alpha = -55^{\text{s}}$ $\Delta\delta = -3'9''$	
								18			
								19			
360	4"							20		$\Delta\alpha = -0^{\text{m}}34^{\text{s}}$ $\Delta\delta = -2'21''$	
347								21			
								22			
								1			
								23			
~Sk								24		10 V max.	

293

#5

Emulsion Batches:

Date 1998 MAR 15/16 Observers Gld / Jg

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.
71	Comp								
CC53071	HD 134083	15 0255	+25 1531	05 4136					38s
73	Comp for #74								4
74	HD 140159	15 3706	+19 5932	05 4531					40
75	Comp for 76								4
76	HD 141004			05 4912					28
77	Comp for 78								4
78	HD 170073			05 5628					51s
79	Comp for 80								4s
80	HD 198183			06 0156					34s
81	BIAS (4)								0
82/88	FLATS	X7		(+ ND 1.2 A/80	(06 5602 Beam ^{are} Flat)			TUNG ND5	25s

Spectr. Temp. Dome Temp./Hum. $-11.2^{\circ}/53.9H$ Transparency Conditions *Fine* 294

Focus

Spectr. Temp. Dome Temp./Hum. $-11.0^{\circ} 54.38$

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
38	1320V						25		25		11k max.	
4	4935						26	5000A	26			
40									27			
4	7K								28		13.5k max	
21									29			
4	6.7K								30		11.5k max.	
31									31			
4	6.5K								32		13k max	
34									33			
16	6.5K								34		11k max sky bright	
15	6 secs								1			
									35			13K

295
Pg #1

Mon/Tues

Emulsion Batches:

Date 1998 MAR 16/17....

Observers

[Vys]/Th... Then H.I. group. Mike Casey & Chris Burns.

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.
CC530 ^{89/90}	Inb / Out BOARD							FeNe ND5	4 1/2
91	Comp							"	4
92	✓ HD 47914	1900 6 3548	1900 +44 3714	190706					58
93	Comp							"	4
94	Comp							"	4
95	HD 36395	1900 5 2618	1900 +03 4100	191339					268
96	Comp							"	4
97	Comp							"	4
98	Vys 406	1900 02 4632	1900 +26 3359	192332					1133
99	Comp							"	4
100/103	FLAT/S x 4							Turk ND3	4s
104	BIHS(4)								⊙
105	Comp							FeAr ND4	4s
106	FF CnC	2000 08 2940	2000 171702	195646					1800
107	Comp							"	4s
108	BIHS(4)								0

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

Exp. Mtr.

1000 V

12k

240

330V

5.6k

CCD Spectr. Temp. -100.3°C Dome Temp./Hum. -25°C 43.8H Transparency Conditions Fine 296

Focus 5.97

Spectr. Temp. Dome Temp./Hum. -35°C 41.6%

400 0 50 1024 4 1 CCD FMT

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000 V				Tyrating	1800 μm 47.74 *	306 μ	5300H	1/2			
					47.73 *			3		* grating angle slightly changed.	9K
		502	K5 III					4	Polarization stage		
								5			
								6			
1.2K	1"	7.97	m1					7	std murecy		780
1.2K								8			
								9			
270	1"	10.8	m0					10			
								11			
								12			14K
					4706	306 μ	5181A	1			
1320V								13			
5.6K	1.2"							14			
								15			
								1			

297
p9#2

Mon/Tues

Emulsion Batches:

Date 1998 MAR 16/17... Observers HI group/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.
CC53109	FF Cnc	08 2940	+17 17 02	20 30 57					1975
10	Comp							FeAr ND4	4
11	FF Cnc			21 05 46					1847
12	Comp							"	4
13	BIAS(4)			21 38					0
14	FF Cnc			21 39 13					1800
15	Comp							"	4s
16	FF Cnc			22 11 43					1800
17	Comp							"	4s
18	FF Cnc	edit		22 44 43					1765
19/20	Comp & BIAS(4)			23 16				"	4s
21	Comp							"	4
22	HDS441	9 40 11	+24 14 05	23 28 12					76
23	Comp							"	4
24	Comp								4

Spectr. Temp

Focus....6

Spectr. Temp

Exp. Nr.
320V

67K

54K

49K

48K

5K

320V

17K

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions .

Part. Cloudy

298

Focus *6.97*

Spectr. Temp.

Dome Temp./Hum. *ed*

Comparison Filtered Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1975	1320V											
4	6.7K		11		CAISS CCD	1800h 4706	306h	5184A	16			
1847									17			
4	5.4K	23"							18			
0									19			
1880	4.9K	2"							1			
45									20			
1800									21			
45	4.8K								22			
1765	5K	24"							23			
45									24			
4	1000V								25			
46	17K		2.98	GI II					26			
4									27	std vel		
4									28			
4									28			

200p9#3

Emulsion Batches:

Date 1998 MAR 16/17 Observers .. HI group / Jn

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.
CC53125	HP90861	10 24 18	29 05 00	23 28 12					78
26	Comp							Red ND4	4s
27/33	FLATS x 7							Twing ND3	4s
3A	BIAS(4)			23 57					0
CC53135/36	Tab/out Board			06560 filter for Stellar					4/6
37	Comp			R60 for comparison beam				Red ND5	4s
38	USNO 05513821	11 44 47	64 13 54	00 33 25					900
39	Comp							"	4s
40	USNO 05513315	11 44 32	64 19 22	00 57 13					718
41	USNO 05510115	11 41 20	64 15 38	01 13 31					818
42	Comp							"	4s
43	BIAS(4)			01 28					0
44	Comp							"	4s
45	USNO 05506794	11 41 07	64 32 06	01 34 53					671
—	USNO 05503795	11 39 29	64 30 54	T00	FAINT	probably			
46	Comp							"	4s

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions ...

Focus 6.97

7.20 for 150/n grating

Spectr. Temp.

Dome Temp./Hum.

300

Comparison Filter Exp.	Exp. Mtr.	Seeing	Mag. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
78	5.7K	2-3"	7.20	K2 III	CASSCO	1800 l/n 47.06	306u	5184A	29	silver		35K
45									30			
45									2			12K
0									1			
7/6	2nd ORDER of Grating					150/n 23.29	306u	6000A	1/2	Focus	390 0 25 1024 8 1 CCDFMT	
5									3		-00 00 34 for bright -00 01 06 STAR	
900	360		12.5						4		For more cal: bright	
45									5			
7/3	332	2"	12.1						6		Ad -00 00 44 Ad -00 01 21	
8/5	330								7		Ad -00 00 44 Ad -00 01 27	
45									8			
0									1			
45									9			
67/1	325	12"							10			
45									11			

301 pg#4

Date 1998 MAR 16/17.. Observers H.J. group.. JH.....

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.
CC53147	Comp							REAR ND5	4s
148	USNO Φ 843736	13 23 24	+45 00 10	02 03 05					727
149	USNO 08430503	13 21 04	+45 13 10	02 19 46					900
150	1 Comp.							"	4s
151	Comp							"	4s
152	USNO 08426928	13 19 51	+45 13 35	02 42 34					1119
153	Comp							"	4s
154	BIHS (4)			0303					C
155/161	FLATS x 7							ND 1.2 + OG 560	6s
162	BIHS (4)								0
CC53163/64	Inb / out BOARD							REAR ND3	4/6
65	Comp							"	4s
66	USNO Φ 5514988	11 45 22	+63 40 43	03 44 56					
67	Comp								4s
68	BIHS (4)								0

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

320V

320

308

in 1

in 1

136

4s

C

6s

0

1320V

4s

1410

3

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions ...

Thin cloud

302

Focus 7.20

7.00 for 1800ln grating

Spectr. Temp.

Dome Temp./Hum.

Comparison Filter Exp.	Exp. Mtr.	Seeing	Plg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	1320V											
4s					CAS	150ln	306u	6000A	11			
7.7	320	1"	R mag 12.5		23.29°	Incl ORDER			12		$\Delta\alpha = -00^{\circ} 00' 29''$ $\Delta\delta = -00^{\circ} 00' 53''$	
900	308		R mag 12.9						13		$\Delta\alpha = -00^{\circ} 00' 30''$ $\Delta\delta = -00^{\circ} 01' 09''$	
4s	fn ↑								14			
4s	fn ↓								14			
1119	456		R mag 12.4						15		$\Delta\alpha = -00^{\circ} 00' 34''$ $\Delta\delta = -00^{\circ} 01' 09''$	
4s									16			
C									1		>> Bias 4.64	
4s									17			
0	1320V		V						1			
4s					1800ln	51.58	250	306u	11/2	focus	306u slit for Test,	
4s							250u	5894	3			
	1410	3"	12.7	B-V?					4			
									5			
									1			

1945
303

Date ... 1998 MAR. 16/17. Observers H.J. Ryan / T.S. ... Burnse Casey

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.
CC53169	Comp							45	45
70	TYC 156357	11 3836	+64 15 37	04 29 30				1800	1800
71	Comp							45	45
72	TYC 156357	"	"	05 02 11				1800	1800
73	Comp							45	45
74	Comp							45	45
75	HD 120315	13 4836	+49 48 45	05 42 30		ND 1.2 in Stellar Beam		307	307
76	Comp							45	45
77	Comp							45	45
78	HD 177724	19 00 49	+13 42 53	05 56 43		ND 1.2 in Stellar Beam		378	378
79	Comp							45	45
80	BIAS(4)							0	0
81/87	FLATS x 7							45	45

Spectr. Temp

Focus

Spectr. Temp

Exp. Mtr.

1320

933

2110

594

234

Transparency Conditions Some cloud..... SDC

Dome Temp./Hum. ~~72.0~~ 71.1° 71.5% H

Dome Temp./Hum. ~~98/98~~.....

Comparison Plate	Exp.	Exp. Mtr.	Seeing	P.G. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	43	1320V				CASS	18004 51.58°	250	589A	6		Noise at Readout noted	
	10	1933	1.2	11.5						7		02 00 01 00 35 00 02 00	
	8									8			
	180	2110	2"							7			
	8									8			
	"									9			
	307	5.9K	3"	1.9						10	Telluric Std		4.3K
	43									11			
	4									12			
	324	2.3K								13	Telluric Std		
	43									14			
	0									1			
	4									15			1.3K

pg 11
305

Mon 17/05

Date 1998 MAR 23/24 Observers [Vys]/Tr/Ly.....

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.
cc531 ^{86/44}	Imp low Board							FeNe 1105	4/2
90	Comp							FeNe 1105	4
91	HD 60437	7 2916	+46 403	19 3344					196
92	Comp							"	4
93	Comp							"	4
94	Vys 430	03 4247	+02 2910	19 4230					838
95	Comp ✓							"	4
96	BIAS(4)			19 58					0
97	Comp							"	4
98	HD 36395	5 2618	+03 4100	20 0228					940
99	Comp							"	4
cc53200	Comp							"	4
01	Vys 645	12 14 55	+53 30 04	20 2611					1500
02	Comp							"	4
03	BIAS(4)			20 52					0

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

Exp. Mtr.

000V

3K

164

1104

212

Spectr. Temp. ^{CCD} -100.4 °C Dome Temp./Hum. 0.0 °C 62% H Transparency Conditions Clearing by sundown 36

Focus 6.95

But thickening again

Spectr. Temp. Dome Temp./Hum. C

400 0 50 1024 4 1 CCD FMT

Comparison Filter Exp.	Exp. Mtr.	Seeing	Mag. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4/2	1000V						38a	5300A	1/2			
4									3			
1/8	3K	3"	5.65	M0.1					4	NORMALIZATION - STD		
4									5			
4									6			
8/8	164	3"	11.2	M0					7	HC+2	2282-51 some cloud	
4									8			
0									1		X 138.19 ± 4.162	
4									9			
9/40	1104	3"	7.97	M1					10	Marsy std vel		
4									11		(South East of pair) ↓	
4									11		164	
1503	212	2"	11.2	M0					12	Vys pgn	152 +00 00 24 15 00 00 48	
4									13			
0									1			

py#2
307

Mon / Tues

Date 1998 MAR 23/24... Observers ... [Vys] / Tn / Lu

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.
c cc 53204	Vys 677A	12 45 50	+46 54 39	21 02 33					1424
05	Comp							FeA ND5	4s
06	Comp							"	4s
07	BD+01 2447	10 23 49	+01 21 36	21 34 29					1290
08	Comp							"	4s
09	Comp							"	4s
10	HD 123782	14 04 33	+49 55 50	22 03 04					327
11	Comp							"	4s
12/18	FLATS x7							TUNG ND3	4s
19	BIAS (4)								0
cc 53209/21	Inb / OUTBOARD							FeA ND1	4/6
22	Comp							"	4s
23	HD 95660	10 57 24	+30 58 00	22 25 53					720
24	"	"	"	22 38 15					600
25	"	"	"	22 48 36					600
26	comp							"	4s

Spectr. Temp.
Focus.....6
Spectr. Temp.

Exp. Mtr. Sec

1000V

260 2

677. 2

344 2

1235 3

1205

1070

Spectr. Temp. Dome Temp./Hum. -2.1°C 62.3% Transparency Conditions ... PART cloudy 38

Focus 6.95

Spectr. Temp. Dome Temp./Hum. C 400 050 1024 41 CCD FMT

Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000V 260	2"	11.5	m0	CHSS CCD	1800h 47.73	306u	5300A	14	AC+41	537-54 cloudy	
								15			
								15			
677.	2.3"	9.65	m2					16	MA Ray std vel	10.8.36	
								17			
								17			
304K	2.3"	5.25	m2	LT6				18	Regular	std vel	
								19			
								3			14K
								1			
				CHSS CCD	47.06	306u	5184A	1/2			
								20			63K
1235	3"	8.0	F3					21			
1205								22			
1070								22			
								23			

PG 3. Mon/Tues
 309 Date 1998 Mar 23/24 Observers Lu/Tn

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.
cc53227	BIAS(4)	2000		22 59					0
28	comp							FeAr ND 1	4
29	HT Vir	13 46 07	05 06 07	23 06 02					660
30	"	"	"	23 17 26					727
31	"	"	"	23 30 05					660
32	comp							"	4
33	HT Vir	"	"	23 44 39					660
34	"	"	"	23 56 01					660
35	"	"	"	00 07 24					660
36	comp							"	4
37	BIAS(4)			00 19					0
38	HT Vir	"	"	00 20 48					600
39	"	"	"	00 31 16					600
40	"	"	"	00 41 45					600
41	comp							"	4s
42	HT Vir	"	"	00 54 22					637

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

See

1840 3"

1630

2050

1560

1840

2000 3"

2150

2380

2420 3"

500

Spectr. Temp. -100.4°C Dome Temp./Hum. $-3.4/62.0$ Transparency Conditions $\text{OK} - \text{fairly cloudy}$ ³¹⁰

Focus

Spectr. Temp. Dome Temp./Hum. 400 0 50 1024 4 1

Companso Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	0	1000				CASS CCD	1800 ln/mm 47.06	306	5184	1			
	4									23			
660		1840	3"	7.16	G0					24			
727		1630								25			
660		2050								26			
4										27			
660		1560								28		through clouds.	
660		1840								29			
660		2000	3"-4"							30			
4										31			
0										1			
600		2150								6			
600		2380								7			
600		2420	3"							8			
4										9			
632		2580								10			

pg#4
 311 Date 1998 MAR 23/24 Observers Lu/Ts
 20

Mon / Tues

Emulsion Batches:

.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Times E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr. focal /	See
CC53243/44	HT VIR	13 46 07	10 50 57	01 05 35	01 16 14				628 600	2.2K	4
45/46	Comp	BIAS(4)		01 29				FeA ND1	4	2.5K	4
47/49	HT VIR	"	"	01 30 45	01 41 08	01 51 56			600, 600, 600	2.5K 2.4K 2.45K	
50	comp							"	4		
51/52	HT VIR	"	"	02 03 52	02 14 14				600 600	2.8K 2.34K	
53/54	comp	BIAS(4)		02 25				"	4		
55/61	flats							Tung ND3	5		
62/63	comp	BIAS(4)		02 45				FeA ND1	4.0		
64	HD 136202	15 14 12	02 08 37	02 46 25					280	7.8K 3"	
65	comp							"	4		
66	comp							"	4		
67/68	HD 109247	12 28 12	55 21 00	02 59 31	03 11 59				720 X2 720 4	1303 2.5K 2.3"	
69/70	Comp, comp	1991.25						"	900		
71/72	FU Dra	15 34 46	62 16 44	03 35 34	03 51 00						
73	Comp							"	4		
74	BIAS(4)			04 13					0		

CCD
Spectr. Temp. ... -100.3°C

Dome Temp./Hum. ... -4.7°C 65.9%RH

Transparency Conditions ... mostly clear

312

Focus ... 6.95

Spectr. Temp.

Dome Temp./Hum.

400 0 50 1024 41 CCD FMT

Expan- sion Alter Exp.	Exp. Mtr. 1000 V	Seeing	Fig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
280	2.2K 2.5K	4"	7.16	GO	CHSS CCD	1800/n 4706	30μ	5184A	11/12			
4									13			
600, 600, 600	2.5K 2.45K 2.45K								14/16			
4									17			
600 600	2.3K 2.34K								18/19			
4, 0									20, 1			
5									3			14.5K
4, 0									5, 1			
280	7.8K	3"	5.06	F8TV-D					6			
4									7			
4									7			
720 X2 720 X2 4	1303 1250 2.3"		8.2	F2					8/9			
900	168		10.5	GO					10			
									11/12			
4									1			
0									1			

It's strange. actually get a comp image
at Hx region. all the keywords
in header are OK.

triple system.
GP1B ERROR BEFORE
upon doing Readout
on CCS3272. However it wrote OK
RESET All BEFORE and comp.

313 p445

Date 1998 MAR 23/24 Observers Lu/Tn

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.
CG81233/36	HD144579	E CG81237/38						4x 20	67ms 133ms
CC5275	Comp	1400						RED ND15	45
76	HD144579	16 0130	+392400	042425					300
77	Comp							RED ND1	45
78	Comp							"	"
79	OU Ser	15 2244	+161541	043740					600
80	"	"	"	044804					600
81	"	"	"	045826					655
82/83	Comp E BIAS(4)			0510				"	45
84	OU Ser	"	"	051145					600
85	"	"	"	052208					600
86	Comp							"	4
87	BIAS(4)			0533					0

Spectr. Temp

Focus....6'

Spectr. Temp

Exp. Mtr.

S

3

2250

1100

2

1080

1092

940

1100

Spectr. Temp.

Dome Temp./Hum.

76.5°C 6838H

Transparency Conditions ...

OK

314

Focus ... 6.95

Spectr. Temp.

Dome Temp./Hum.

-6.1°C 62.88H

400 0 50 1024 4 1 CCD FMT

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	3.5"				14.00 306u	5184	306u	306u	See my Test		
				CASS CCD	1800 47.06	306u	5184A	3			
2250	6.66	2.68						4	Std bel		
								5			
100	2.5"	8.2	45					6			
1080								7			
1092								8			
								9			
940								10			
1100								11			
								12			
								1			

315 P441 Tues / wed

Date 1998 MAR 24/25 Observers Hix / Tu

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.
ce154 ^a /62	In b / OUT BOARD							ThAr	2/2
03	BIAS(4)			19 ³³ 41					0
04	Comp								2
05	HD 62509	7 39 12	+28 16 09	1943 58					115
06	Comp								2
07	Comp								2
08	HD 84999	9 43 53	59 30 33	20 05 17					360
09	✓ (comp) HD 84999	"	"	20 11 59					431
10	out date " "	"	"	20 19 57					360
11	out " "	"	"	20 26 42					405
12/13	Comp & BIAS(4)							ThAr	2s
14	HD 84999	"	"	20 46 34					368
15/17	"	"	"	20 54 07, 21 01 18, 21 07:57					360
18	Comp								2s
19/24	HD 84999	"	"	21:17:10					360s
25	COMP							"	2s

CC2 Spect. Temp

Focus.....

Spect. Temp

Exp. Mtr. 13211

34K

200V

1.1K

1.2K

1.1K

1.2K

1.1K

1.1K

CCD Spectr. Temp. -100.2°C Dome Temp./Hum. $+2.5^{\circ}\text{C}$ 548H Transparency Conditions *Finer* 316
 Focus $\cdot 2225$, But unchanged from previous setting
 Spectr. Temp. Dome Temp./Hum. $\cdot 2$

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		1320V				Echelle 18.00	0608 1.4585	100uW 100uH	4508A	1/2	100uW=.26P 400u=.225	00 128 1024 8 8	MAX
	0									1		00 256 1024 4 1	
	2									3			7K
	115	24K		1114	K0 III 6					2	std vel		7.7K
	2									3			6K
	2	1000V	1.2	4	FO					3			
	30	1.1K	1.2	4	FO					4			
	43	1.2K								5			1.5K
	30	1.1K								6			
	45	1.2K								6			
	2									3			
	368	1.1K	1.2							1	Had to Reboot ML due to typo		
	360	1.1K	2							2	using 360 OBS. BAT. 3		
	25									3			
	360									4		360 OBS. BAT 6	
	25									3			

pg#2 Tues/Wed
317

Date 1998 MAR 24/25... Observers H.j.x./T.n.....

Emulsion Batches:

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.
CE154 ^{26/30}	HD 84999	9 43 53	+59 30 33	21 59 11	22 05 51	22 12 30			360s
32/33	B/HS(4) & Comp			22 19 09	22 25 49	22 32 28		ThA	0, 2
34/39	HD 84999	"	"	22 42 59	22 49 39	- - - - -			360s
40	Comp							n	2s
41/46	HD 84994	"	"	23:43:14	- - - - -	- - - - -			360
47/48	Comp & B/HS(4)							"	2s
49/54	HD 84994	"	"	00 28 25					360s
55	Comp							n	2s
56/61	HD 84999	"	"	01 23 27					360s
62/63	Comp & B/HS(4)			01 53					2s
64/69	HD 84999	"	"	01 54 36					360s
70	Comp & B/HS(4)			02					2s
71	Comp								2s
72	HD 84999	"	"	02 42 06					360
73	"	"	"	02 49 01					"
74	"	"	"	02 55 37					"

CCD
Spectr. Temp. -101.4°C

Dome Temp./Hum. 100.5°C 59.28H

Transparency Conditions . Fine - slightly hazy 38

Focus 2225

Spectr. Temp.

Dome Temp./Hum.

CD

Comparison Filter	Exp.	Exp. Mtr. 1000 ✓	Seeing	Mag. ✓	Sp.	Inst.	Grating/ X Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
30s		1.3K, 1.2K, 1.1K 1.3K, 1.2K, 1.1K	1.2"	4	FO	Echelle 18.00	0600H 14585	100uW 100uH	4508A	4		Repeat 3600BS BAT 6	
0,2										13			
30s										5		Repeat 3600BS BAT 6	
2s										3			
360		1K,	2"							4		Repeat 3600BS BAT 6	
2s										3			
30s										6		Repeat of 6	
2s										3			
360		2900	1.3"							5		Repeat of 6	
2s		600,								3			
360		~770	2.3"							2		Repeat of 6	
2s										3			
2s										3		now Tel East Side	
360		900								4			
"		840								4			
"		830								4			

319

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[illegible]

Telexono East Side

Comparison Filter	Exp.	Exp. Mir.	Seeing	Pla. Mag.	Sp.	Inst.	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
360	2	1000V	23'	4	FO	18.00	06001- 1.4585	100u 400u H	4508A	Ec:		Repeat x 3	
25										3			
360	2	1000V								2		Repeat x 6	
25										3			
360	2	~540	3"							4		Repeat x 6 <u>1.9 AIR MASS</u>	
25										3			
360	2									2		Repeat x 6	
25										3			
25								100u = .262		1			11.5K
0								600u = .205		1			

pg 1
321

wed / Thurs

Date . 1998 MAR 25/26 Observers . Hix / Tn

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.
Ce15513	Comp							ThAr	4s
14	HD62509	73912	+281604	19 3200					438
15	Comp								4c
16	BIAS (A)								0
1998 MAR 28/29 Hix / Tn SAT / SUN									
* Note, that after Refocus of Edelle, that some of next Blue order is showing. * In IRHF watch the aperture									
Ce15517	Comp							ThAr	4
18	HD84999	9 4353	+593035	21 3429					605
19/21	"	"	"	21 4808	start of 3				600
22/23	Comp & BIAS (A)			22 21					7s
24/26	HD84999	"	"	22 2457					600
27	Comp								
28	HD84999	"	"	22 5949					600
29	"			23 1049					600
30	"			23 2152					

Spectr. Temp. Dome Temp./Hum. $+2.6^{\circ}\text{C}$ 6368H Transparency Conditions *Some cloudy* 37

Focus *2225 (unchanged)*

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1 CCDF-MAX

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000V				Echelle 18.00	06001a 14585	100u = .262 400u = .225		3			12K
2.7K	2"	1/4	60116					4	Starvel and nonnormalization star		6K
								3			
								1			
				Echelle 18.00	06001a 14585						
				$+13.3^{\circ}\text{C}$	50.68H	100u .262 400u .225			Gradual/ Clearing after storm		
Focus changed to 2200 .235				Echelle 18.00				1			
460	4"	4	FO					2		non normalized/exposed 10-00 0037 15-00 0606	10K
460 each 3"								2		600 OBS. BHT x 3	
								3			11K
~520	3-5"	4	FO					2		600 OBS. BHT x 3	
								3			
~540								2			
~430								4			
								4			

323^{pg 2} SAT/SUN

Date 1998 MAR 28/29 Observers Hix/Tn

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.
ce1553	Comp / BIAS(4)							ThAr	4s
32	H1084999	9:43:53	59:30:35	23:39:15					600s
33	"	"	"	234529					601.
34	"	"	"	235644					486
35/36	Comp & BIAS(4)			00 08				ThAr	4s
37	BIAS(4)			01 37					0
38	Comp								4s
39	H1084999	9 4353	+593035	020143					607
40	"	"	"	02:14:08					439
* 50	Comp	* written	after Flats	02 39					4s
* 41/49	FLATS x 9							ThAr	25s
51	BIAS(4)			02 58					0

Spectr. Temp.

Dome Temp./Hum.

→ completely so.

Comparison	
Filter	Exp.

PG 1
325

Mon / Tues

Emulsion Batches:

Date 1998 MAR 30/31... Observers H.j.x. / TM / Lu.....

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
CE1555/53	Tnb / OUTBOARD	Overwrite 52553						THAr	4/3
54	Comp								3
55	HD84441	09 40 11	124 14 05	22 44 53					4/8
56/57	Comp & BIAS(4)								3
58	Comp								3
59/62	HD84999	9 43 53	+59 30 33	[23 14 29]	[23 25 09]	[23 35 42]	[23 46 44]		600
63	Comp								627
64	HD84999	"	"	23 58 31					602
65	"	"	"	00 09 10					600
66	"	"	"	00 20 40					360
67	"	"	"	00 27 49					600
68/69	Comp & BIAS(4)			00 39					3
70	HD84999	"	"	00 40 56					605
71	"	"	"	00 51 49					600
72				01 02 46					600
73	comp								4

Spectr. Temp. -09.9-7°C

Dome Temp./Hum. +17.5°C 70-80%^HTransparency Conditions Hazy to part cloudy
326

Focus 235

Spectr. Temp.

Dome Temp./Hum. C2

0 0 256 1024 4 1 CCD FMT

Comparison
Filter Exp.

Exp. Mtr.	Seeing	Plg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4/3	1000V			Echelle	06006 .4580	100u 400u	=.262 =.225	1/2	Focus	Full format	
3							4508A	3			
4/3	435	5"	2.98	G1 II				4	std bel		
3								3			
3								3			
600	140/34	3-4"	4	F0				2	5, 6, 6	4 ~ 10 min observations	
624	38/42							3		some cloud	
602	56							5			
600	140	2"	4	F0				5			
360	210							5			
600	160	2-3"						5			
3								3/1			
605	87							2			
600	33							3			
600	98							4			
4								3			

$$H_3X/Lu/Tu$$

Emulsion Batches:

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[illegible]

Spectr. Temp.

Dome Temp./Hum. 15.9°C / 76.4%RH

Transparency Conditions..... Hazy - Cloudy 308

[illegible]

PG1
329 1998 Apr 04/05

Date

Observers

H3X/Lu

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.
CE15586/87	Inboard/outboard							ThAr	4/4
88	BIAS(4)			19 50					
89	comp							"	4
90	HD 62509	07 39 12	28 16 04	19 58 07					110
91	comp							"	4
92	comp							"	4
93	HD 84999	09 43 53	59 30 33	20 21 42					600
94	"			20 32 25					600
95	"			20 43 10					600
96	comp							"	4
97	HD 84999			20 57 11					600
98	"			21 07 52					600
99	"			21 18 32					600
CE15600	comp							ThAr	4
601	BIAS(4)			21:30:00					0

Spectr. Temp. -100.3°C Dome Temp./Hum. $5.1/57.5$

Focus *good at 0.225 surprise?*

Transparency Conditions *clear* **330**

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	4/4					Echelle 18.00	0.262 0.225	2/3	4508				
								1					
	4							4					13K
	110		2"-3"	1.14	KO III			5					
	4							4					
	4							3					
	600			4	FO			4				good	
	600							5				clouds	
	600							6					
	4							7					
	600	500						4					
	600	450						5					
	600	368						6					
	4							7					
	0							1					

PG2

331

Date

1998 April 04/05

Observers

H/x/Lu

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.
CE15602	HD 84999			21:32:20					604
603	"			21:43:09					360
604	"			21:49:55					360
605	"			21:56:36					360
606	Comp								4
607/611	HD 84999		22:05:25	22:12:04	22 18. ?	22:25:23	22 32 02		520
612	Comp								4
613	BIAS (4)			22:40:00					0
614/618	HD 84999		22:42:17	22:48:56	22:55:36	23:01:15	23:08:54		
619	Comp								4
620/624	HD 84999		23:17:15	23:23:54	23:30:33	23:37:22	23:43:32		
625	Comp								4
626/630	HD 84999		23:50:39	23:57:18	00:03:57	00:10:36	00:18:37		
631	Comp								4
632	BIAS (4)			23:41:35					0

Spectr. Temp. -100.3 Dome Temp./Hum. $28/62.0$ Transparency Conditions $\text{clear w/some clouds}$ Focus 0.225

Spectr. Temp.

Dome Temp./Hum.

332

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
604		480						4	4508				
360		430						5					
360		420						6					
360		455						7					
4								3					
		520						4				5x	
4								3					
0								1				5x	
								5				5x	
4								3					
								6				5x	
4								3					
								4				5x	
4								3					
0								1					

Date _____

Observers

H₂X / Lu

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[illegible]

Spectr. Temp. -100.32Dome Temp./Hum. 1.5/65.2%Transparency Conditions clearFocus 0.255

Spectr. Temp.

Dome Temp./Hum.

334

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	360					18.00	600 4580	0.262 0.225	4508			5x	
	4							3					
	360							6				5x	
	4							3-				*Not save on time.	
	360							5				Saved it later. 5x be careful for reduction.	
	4							2		3			
	0							4		1			
	600									6		1x 600bps. bot doesn't work?	
	4									1			
	600	490								2/4		3x	
	4							3					
	600	456						5/7				3x	
	4							3					
	0							1				3x	
	601	450						4/6					
	25						500/4	0.215					

335
pg#1

Sun / mon

Emulsion Batches:

Date 1998 Apr. 5/6 Observers H. J. x. I. T. n

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.
CE156 ⁷⁸ 87	FLATS x10							TUNG	25
88	BIAS (4)			19 29					0
89	Comp							ThAn	45
90	HD62509	7 39 12	+28 16 04	19 36 03					205
91	Comp							"	45
92	Comp							"	45
93	HD84999	9 43 53	+59 30 33	19					360
94/99	"	"	"	19 59 21					360
700	Comp							"	45
701/06	HD84999	"	"	20 40 53					360
07	Comp							"	45
08	BIAS (4)			21 21 17					0
09/14	HD84999	"	"	21 23 35					360
15	Comp							"	45
76/21	HD84999								360
22	Comp								45

Spectr. Temp

Focus.....?

Spectr. Temp

Exp. Mtr.
1000V

S

3.5K

350

Spectr. Temp. -101.5°C Dome Temp./Hum. $+4.0^{\circ}\text{C}$ 5676H Transparency Conditions Clear (spotless)
 Focus $\dots 235 \dots$ still good enough. Set for sl cooler than now. $\text{Focus test done, but lost.}$ 336

Spectr. Temp. $\dots$ Dome Temp./Hum. $\dots$ 00 256 1024 4 1 CCD FMT

Comparison Filter Exp.	Exp. Mtr. 1000V	Seeing	Plg. Mag.	Sp.	Inst. Eckelle CCD	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
25					18.00	0600 in 14580	100u W 500u F. 215 H	4508A	2			
0									1			
45							100u W. 262 400u H. 225		3			13A
205	3.5K		1/4	K0III b					2	std lev		7K
45									3			
45									3			
360	550	12"							4		just one exp.	
360		2"							4		using LL 6x6 min. Bet	
45									5	important	LL 6x6 min. but	
360									5	large	" "	
45									3			
0									1			
360									6		LL 6x6 min. Bet	
45									3			
360											LL 6x6 min. but	
45												

*not 50s in noted later.
 note (360 OBS, actually 360s + 19secs)
 (36 secs between starts of 360obs exps)
 * [OK. Rardart Turkey 19secs; wife takes Barso]
 + Prison stel in Obs' command.

337pg#2

Sun/Mon

26

Date 1998 Apr 5/6..... Observers Hix/Tn.....

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.
CE15723/28	HD84999	09 43 53	+59 30 33	22:52:06 (second)					360
29	Comp							ThAr	4s
30	BIA5(4)			2326					0
31/36	HD84999	"	"	23 28 25					360
37	Comp							ThAr	4
38/43	HD84999	"	"	00:09:07					360
44	Comp							ThAr	4
45/50	HD84999	"	"	00:50:14					360
51	Comp							ThAr	4s
52	BIA5(4)			01 31					0
53/58	HD84999	"	"	01 33 03					360
59	Comp							ThAr	4
60/65	HD84999	"	"	02:13:36					360
66	Comp							"	4
67/72	HD84999	"	"	02 54 09					360
73	Comp							"	4

Spectr. Temp

Focus.....2

Spectr. Temp

Exp. Mtr.

350

350

350

350

350

350

350

350

350

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350

350

Spectr. Temp. Dome Temp./Hum. $+1.6^{\circ}\text{C}$ 62.3% H Transparency Conditions Fine 338

Focus 235

Spectr. Temp. Dome Temp./Hum. 22°C

Comparison Filter Exp.	Exp. Mtr. 1000V	Seeing	Pl. Mag.	Sp.	Inst. Echelle CCD	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
360	~350	2.4	4	FO	18.00	0600h 4580	1000V 4000H	4508A	2		<< 6x6 min. bat	
43									3		(includes 4 comp)	
0									1			
360									2		<< 6x6 min. Bat	
4									2			
360									4		<< 6x6 min. Bat	
4									3			
360	~500	2.4							5		<< 6x6 min. Bat	
43									3			
0									1			
360									2		<< 6x6 min. Bat	
4									3			
360	~340								6		<< 6x6 min. Bat	
4									3			
360									4		<< 6x6 min. bat	
4									3			

Focus 1235

Spectr. Temp. 100.3°C

Dome Temp./Hum. $+0.3^{\circ}\text{C}$ 6528/1 Tra

Dome Temp./Hum. -00.1°C 078H

Transparency Conditions... *slightly hazy* *310*

[illegible]

341 pg#1

Mon / Tues

✓ Tracy Clarke

Emulsion Batches:

Date 1998 Apr 6/7 Observers Gld./Tec./Fn.....

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
CC 532 ^{88/} 89	In board / Out Board							FeAr ND1	4/7
90	B/H S(4)								0
91	Comp							FeAr ND2	4s
92	USNO 05514988	11 43 23	16 34 40	20 10 43					180
93	"	"	"	20 41 01					1800
94	Comp							"	4s
95	USNO 05514988	"	"	21 12 55					1801
96	"	"	"	21 43 19					1800
97	Comp							"	4s
98	B/H S(4)			22 14					0
9a	USNO 05514988	"	"	22 16 54					1800
300	COMP							"	4s
301/10	FLATS x10							"	4s
11	Comp								
12	HD 120315							1.2ND in stellar beam	283
13	Comp								4s

cup

retr. Temp.

ocus....64

spectr. Temp

up. Mir.

320V

201

174

72

CCD Spectr. Temp. : -100.4°C

Dome Temp./Hum. +5.5°C 42% H

Transparency Conditions ... Fine ... 312

Focus ... 6.85

000, RA. of (3 sec) bright ~~red~~ many ~~red~~ stellar like

Spectr. Temp.

Dome Temp./Hum.

in RA 16 30 + 28° @ 21 50 EST

400 0 50 1024 41 CCD FMT

Comparison
Filter Exp.

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1320V				CHSS CCD	1800 l/mm 51.58	250u	5894 Å ± 1 Å Raw 512	3/4			
0								1			
4s								6			13K
1180	2-3"	12.5?	A3?					7			
1215								8		@ 02 16 E, 04 00 23 15 00 00 39	
4s								9			
1201	1-2"							10			
174	1"-2"							11			
4s								12			
0								1			
1172								13			
4s								14			
4s								15			
10K								16			
4s								17			
								18			

Shared RA
glow bolt. Temp
fix.

* Telluric. 6km

3L3pg#2 Mon/Tues

Date 1998 Apr 6/7..... Observers Gld/Tec/Tu.....

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.
CC5334	Comp	pgm = Petros	MAA in cloud			ND in stellar Beam Removed of course.	FeAr ND2	4s	
15	USNO pgm-46	14 41 02	+18 40 50	23 52 41				1800s	
16	"	"	"	0 23 08				38E	
17	Comp						"	4s	
18	BIAS (4)			01 28				0	
19	USNO pgm-46	"	"	01 30 29				1400s	
20	Comp						"	4s	
21	Comp						"	4s	
22	tyc 41942188	16 49 45	+64 07 15	02 07 23				1600s	
23	Comp							4s	
24	tyc 41942188			02 39 21				1807	
25	"			03 10 02				1800s	
26	Comp						"	4s	
27	tyc 41942188	"	"	03 41 46				1800	
28	"	"	"	04 12 22				2060	
29	Comp						"	4s	

Spectr. Temp. Dome Temp./Hum. $+2.9^{\circ}\text{C}$... $52\% \text{H}$ Transparency Conditions *Fine* 344

Focus 6.85

Spectr. Temp. Dome Temp./Hum. 400 0 50 1024 41 *CCDFAT*

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2	4s	1320V				CH55 CCD	1800 $\text{\AA}/\text{mm}$ 51.58	250 μ	589A	19			
	40s	1347								20			
	38s	2850	1-2"							21			
	4s									22			
	0									1			
	40s	3050	1"							23			
	4s									24			
	4s									25			
	40s	3050	2"							26			
	4s									27			
	180s	3K								28			
	180s	3480								29			
	4s									30			
	180s	3100	1-3"							31			
	20s	3175								32			
	4s									33			

Dome Temp./Hum. +20°C 58% H

[illegible]

347
p4#1

Tues / wed

Date .. 1998 Apr. 7/8... Observers .. Gld. / Tn.....

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.
CC533 ³⁵ / ₃₆	Inboard / out							FEAr ND 1	4/6
37	Comp							FEAr ND?	4
38	HD 70272	8 15 59	+330 32	19 20 11				.	52
39	Comp								4
40	BIAS(A)								0
41	Comp								4s
42	HD 62509	7 39 12	+28 16 04	19 30 37				* ND 12 in stell/air	255
43	Comp							"	4s
44	Comp							"	4s
45	FF Cnc	08 29 40	17 17 02	19 41 31				ND removed	1400
46	comp.							"	4s
47	FF Cnc	"	"	20 13 02					1813
48	Comp							"	4s
49	FF Cnc			20 44 51					1400
50	Comp							"	4s
51	BIAS(A)								0

CCP
Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

1000 V

13K

1320V

5.9K

6.1K

6.0K

CCD Spectr. Temp. -100.2° Dome Temp./Hum. 8.8° ~~38.4~~ Transparency Conditions increasing cloud ~~318~~

Focus $6.8.5$

Spectr. Temp. Dome Temp./Hum. CJ 400 0 50 1024 4 1 CCD FMT $\sim$ MAY

Exp. Mtr.	Seeing	Pr. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000 V				CASS	1800/n	306u	5184R	3/4			
				TyRATING	47.06°			5			
4K		4.25	14.5	III-IIIb				6			
	1"							7			
								1			
								8			8K
13K	1"	1.1K	KO/IB					9	std vel	* moved about slit	
								10		Randomly too.	
1320V								10			
5.9K	1"	11	KO/K4					11		thin cloud	300
								12		<u>170 ABOVE</u>	BIAS
6.1K	<1"							13		thicker cloud	
								14			
6.0K								15			
								16			
								1			

369
p902 Tens/Wed

Date 1998 Apr 7/8 Observers GL/Tn

Emulsion Batches:

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[illegible]

Dome Temp./Hum. 5.5°C 43/84

[illegible]

351
Pg #1

Thurs / Fri

Date 1998 Apr 9/10... Observers Mix / TB.....

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.
ce15793/4	Inboard/outboard							ThAr	4/3
95	Comp							ThAr	3s
96	HD 62509	7 3912	+281604	21 1627					600s
97	Comp							"	3s
98	BIAS (4)			21 30					0
99	Comp							"	3s
800	HD 84999	9 4353	+593033	[21 1059]	[21 5156]	[22:02:37]			600
03	Comp								3s
04	HD 84999			[22:15:08]					600s
05/07	"			22 27 51	22 36 31	22 45 12			480s
08/09	Comp & BIAS (4)			22 55				ThAr	3s
10/14	HD 84999			[22:57:19]	[23:05:59]	[23:14:39]	[23:23:19]	[23:31:59]	
ce15820	Comp								3s
15/19	HD 84999			[23:41:55]	[23:50:35]	[23:59:15]	[00:07:05]	[00:16:35]	480s
ce15821	Comp								3s

written Letter ac ce15820

Spectr. Temp. Dome Temp./Hum. .. 7.5°C 48/4 Transparency Conditions .. Hazy to part. cloudy 352
 Focus 231
 Spectr. Temp. Dome Temp./Hum. X grating adjusted Today. 1% different table
 EX grating settings

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	FOR SUMMER Remarks Coverage	Quality
9/3 3s	1000V			Eckelle 17.70	06001m #620	100u W 400u H	* 4509	3/4	focus test		
60s 3s	830	3	1/4	KOIII 6				5			
0 3s								6	std vel		1.8K
								5			9AK
								1			
3s	1320V							3		Telescope East side of the	
60s	3400	4	FO					4, 5, 6		(max ~ 900)	
3s	"							3			
60s	3.8K							2,			
480s	2.7K	3"						4		480000. BAT x 3	
3s								3			
31:59	2.8K							5			
3s								3			
35	2K	2"-4"						6		17 ed. 5.1	
3s								1			

Spectr. Temp. Dome Temp./Hum. 44.6°C $40.9\% \text{H}$ Transparency Conditions ... *Part Cloudy / Hazy* ~~38~~

Focus *2.31*

~~Specr.~~ ^{CCD} Temp. -101.5°C ... Dome Temp./Hum. $+1.5^{\circ}\text{C}$ $42.4\% \text{H}$

Exp. Mtr.	Seeing	Pig Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>1320V</i>											
<i>200K</i>	<i>3-4"</i>	<i>4</i>	<i>FO</i>	<i>Eckelle</i> <i>17.70</i>	<i>0600W</i> <i>4620</i>	<i>100u</i> <i>400u</i>	<i>4509A</i>	<i>4.5</i>		<i>* This Exp 504secs</i>	
<i>This Comp is CE15838 written Late</i>								<i>3 & 1</i>			
								<i>2</i>			
								<i>7</i>			
								<i>6</i>			
								<i>7</i>			
								<i>1</i>			
<i>11000 1000V</i>								<i>3</i>			
<i>700</i>			<i>ATL</i>					<i>2</i>		<i>Repeat 3600BS, BAT 6</i>	
								<i>3</i>			
<i>750</i>								<i>2</i>		<i>Repeat 3600BS, BAT 6</i>	
								<i>3</i>			
	<i>3-5"</i>							<i>4</i>		<i>Repeat 3600BS, BAT 8</i>	
								<i>3</i>			
						<i>400u W</i> <i>500u H=1215</i>		<i>3</i>			
								<i>1</i>		<i>MAX 12.5K</i>	

Emulsion Batches:

Date Observers

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[illegible]

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Comparison
Filter Exp

HD 120315 good Gld Telluric

