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3

Spectr. Temp. Dome Temp./Hum.

Transparency Conditions

Focus

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
DAVID DUNLAP OBSERVATORY											
74" LOGBOOK											
VOL: 76											
Plate Nos CC. 20409 - 27813 (FCG 40026 - 40031)											
Mar. 13, 1994 - June 1, 1994											

Spectr. Temp. -100.0°C Dome Temp./Hum. $-2.2^{\circ}\text{C}/79.5\%$ Transparency Conditions \dots hazy \dots to clouds \dots

Focus \dots 6.90 \dots

Spectr. Temp. \dots

Dome Temp./Hum. $-2.2^{\circ}\text{C}/81.1\%$

Fans OFF
480⁵⁰ 1024 41 ced fnt

(6)

Exp. Mtr.	Seeing	Pr. Mag.	Sp.	Inst.	Grating/Tilt	Slit	λ Emission	SI	Program	Remarks	Quality	
	$\sim 3^{\prime\prime}$	7.5	M2II	Cass CCD	1800 μ /mm G=5115	500 μ 10-g	5303 \AA		Seeing Test	Dome WSW, light NW wind		
		7.5	M2III						Seeing Test	92% Humidity on catwalk @ 2150		
								1				
								17				
120		9.6	M2					18	Vys Pgm			
								19				
								20				
~ 50		10.9	M0					21	Vys Pgm	-Through some clouds mostly at END of exposure (perhaps account for this in wavelength calibration). <u>Totally cloudy now</u>		
								22				
				1.5 hour break for clouds.					1			
123		7.48	M2						Vys Std	-Through <u>thick</u> clouds (but what the heck! I need this observation...)		

All to W.O.R.M.
'60 Perseus.

Spectr. Temp. -100.0°C Dome Temp./Hum. $-6.3/66.0\%$ Transparency Conditions *cloudy, snowy*.....

Focus *6.92*.....

Spectr. Temp. Dome Temp./Hum.

(8)

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emission <i>wavelength</i>	P.H. <i>si</i>	Program	Remarks	Quality
				Cass CCD	1800 l/mm G=6065	300 μ	6604 \AA	1			
60					1800 l/mm G=6065		6604 \AA	3	H α	6500 \AA - 6700 \AA	
60				"	1800 l/mm G=4810	"	4861 \AA	#5	H β		
20					1800 l/mm G=4460		4340 \AA	4	H γ		
60					1800 l/mm G=4310		4101 \AA	6	H δ		
								1			

9 pg#1

Date 1994 MAR 17/18... Observers T.K. / S.G. / T.n.....

Emulsion Batches:

CSS 386 10 sec ahead of WWV... Time.....

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.
CC20+37 38	Comp / stellar	HUTCHMAN						FeAr Clear	60/55
39	BIAS(4)								
40	Comp							FeAr Clear	60s
41	HD 15963	02 28 54	+57 38 08	19 19 24		04 37 W			180s
42	Comp							FeAr Clear	60s
43	Comp								?
44	HD 22192	03 29 24	+47 51	19 56 37		07 35 W			2HA
45	Comp							FeAr Clear	60s
46	HD 22192	03 29 24	+47 51	20 08 37				H?	180s
47	Comp							FeAr Clear	60s
48	BIAS(4)								
49	Comp							FeAr Clear	60s
50	HP 23862 Comp	03 43 06 03 43 06	23 51	01 30 44				FeAr FeAr	
51	Comp							FeAr	
52	HD 23850	03 43 06	23 45	20 30 44 20 30 44				an	134
53	Comp							FeAr	60s

Spectr. Temp. Dome Temp./Hum. -3.8° 60.2% H Transparency Conditions Fine - hazy down low.Focus 6.90 Spectr. Temp. Dome Temp./Hum. λ Lambda

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Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS	1800/1200	300 μ	60AA	3/4			S/N
				CD	G=0065	FULL		1			
								5			
1077	2.3"	7.8	A0p					6c	TK pym	sl hazy here Air 12.455 = 1.33 = 1401	
								7c			
								8c			
4500	2.3"	4.23	B5c					9c		H α saturated Air 12.455 = 1.27 Koptery way	
								9c			
2950		4.23	B5c					10c			
								11			
								1c			
830								12			
830			B8p					13			
								14			
260			B500					15			

11 p32

Emulsion Batches:

Date 1994 MAR 17/18 Observers J.K./r.G./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.
cc20434 55	HD 23850 HD Comp	03 43 06	23 45	20 38 22					142
56	HD 23850	03 43 06	23 45	20 44 34					254
57	Comp							Fear Clear	60s
58	HD 23862	03 43 0	23 51	20 52 02					232
59	HD 23862	03 43 0	23 51	20 56 56					281
60	Comp								60
61	bias (4)								
62 63	Comp HD 32630	04 59 0	41 06	21 11 57				Fear	103
64	HD 32630	04 59 0	41 06	21 15 53					103
65	HD 32630	04 59 0	41 06	21 20 10					210s
66	HD Comp.			21 24 59				Fear clear	
67	5x Flats							Fung 1/2 AP	55sec
68	Ecomp.							12 AP clear	
72	Comp.							12 AP clear	55sec

Spectr. Temp. Dome Temp./Hum.

Transparency Conditions *incr cloud*Focus *690*

Spectr. Temp. Dome Temp./Hum.

RG class tour = 20 students

(12)

Exp. Mtr.	Seeing	Prog. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2600				C455 -5D	1500/n 6606T	300	6604F	6i			
								14c			
2790								14i			
	4"							13i			
991								13i			
892								13i			
								14i			
6800								14i			
5100								18c			
								19c			
5700								20c			
								20c			
								20c			
								20c			
								20c			
								21a			
								21c			
										~ 13k ADU max	

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions

cloudy 14

Focus 6.90

Spectr. Temp.

Dome Temp./Hum. -6.3°C ... 72%

Exp. Mtr.	Seeing	PV Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
169			B3c	CMS CCD	1500/11mm G 6065	300 Full	CC048	26c			
297											
			B3c					26c			
292											
1922			B5V					26c			
4817								27			
1234			B5V					28			SIX 150/1
4160								29c			
1200			B5V					30c			
								31			
2550		1.36	B5V					31c	Telluric std.	Thick cloud	
1500			B7V					32	" "	1.20 Air mass	
								5c			
								33c		15 R ADU max	
								1c			

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pg #1

Emulsion Batches:

Date 1994 Mar 18/19 Observers T.K./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	Exp.
CC20495	Bias(4)								
96	Comp.							FeAr clear	60s
97	HD103287	114836	541500	01 05 13					72
98	HD103287	"	"	01 08 09					90
99	HD103287	"	"	01 11 26					106
500	Comp.							FeAr clear	60s
501	Comp.							FeAr clear	60s
502	HD 97633	11 09 00	15 59 00	01 19 33					163
503	HD 97633	"	"	01 25 59					282
504	HD 97633	"	"	01 30 11					253
505	Comp							FeAr clear	60s
506	Comp							FeAr clear	60s
507	HD 102647	11 43 54	15 08 00	01 42 42					128
508	HD 102647	"	"	01 45 51					83
509	HD 102647	"	"	01 47 40					66
510	Comp.							FeAr clear	60

Spectr. Temp.

Dome Temp./Hum.

Focus 6.90

Transparency Conditions cloudy 1/6

Spectr. Temp.

Dome Temp./Hum. 2/10/10

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3962				CAS CD	1300 G. 0065	300 FULL	6604F	1			
3962	3/5s	2.4	ADV						TK std		
5700	"	"	ADV						"	MAX 11.7K ADV.	
400	"	"	ADV						"		
6104								50			
8171	4/5s		A					50			
3534	"	3.31	ADV					60	TK std		
4000	"	"	"					"			
3500								"			
								50			
								50			
3600	3/5s	2.14	ADV					70	TK std		
3390	"	"	"					"			
3220								"			
								50			

Spectr. Temp. Dome Temp./Hum = 3.9°C ... 73.7 Transparency Conditions ... cloudy 1.8

Focus 0.90
Spectr. Temp. Dome Temp./Hum.

CLARA

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				C455 CCD	180°/1.5m G-6065	300μ Full	6604A	1c1		(Normally at MARISLEY ^{They} would be out)	
	2.3	6.45	K011	= love	300μ s 11T			2c1		Note - FAPS never on tonight ← winged Pmo WSW medium NW wind.	
1386	4"	6.42	B711 CSH					5c1			
1496	6"	"	"					8c1	TK pgn star	2.29 Air mass	
1618								11c1			
1419		11	"					5c1			
				C455 CCD	180°/1.5m G-6065	300μ Full	6604A	1c1			
838		7.5	B05H					5c1			
								11c1			
								5c1			
								5c1			

Spectr. Temp. Dome Temp./Hum. 5, 74, 8 Transparency Conditions ... clear 20

Focus 6.70

Spectr. Temp. Dome Temp./Hum. c. 12/10/60

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1718		6.08	Alex					12c			
1652		"	"					13c			
1756		"	"					14c			
								15c			
				CCD	180°/60° 6 = 60/65	300 F	600/40	1c			
								16c			
1826		6.35	M.P.P. 6.5h					17c			
1900		"	"					18c			
1850		"	"					19c			
								5c			
								17c			
								1c			

2) pg #1

Emulsion Batches:

Date 1994 Mar 19/20 Observers T.K./T.A.

CSS 386 12 sec. ahead of W.V.V. Time

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.
CC20548	bias(4)								
44	Comp.							rear clear 60	60
45	HD37202	05 31 00	21 05 00	21 38 41					63
46	HD37202	"	"	21 41 32					41
47	HD37202	"	"	21 42 44					34
48	Comp.							rear clear	60
49	Comp.							rear clear	60
50	HD44351	06 16 00	14 21 00	21 54 23		3 25 W			1290
51	Comp.							rear clear	60
52	HD44351	"	"	22 19 01		3 57 W			1303
53	Comp.			22 44 02				rear clear	60
54	HD44351	"	"	22 44 02		3 55 W			980
55	Comp.							rear clear	60
56	bias(4)								
57	Comp.							rear clear	60
58	HD45910	06 25 09	05 56 00	23 09 20		4 25 W			776
59	"	"	"	23 23 25		4 33 W			431

Spectr. Temp.

Dome Temp./Hum. ... 02 ... +50°

Transparency Conditions ... Partly cloudy ...

Focus ... 6.90

c Gusty N W wind

Spectr. Temp.

Dome Temp./Hum. e.l.a.n.d.a

COD = -100° 90CGAIN

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CR 25 CCD	1002/lin G=6005	30μ	1004	1c 2i			Tel Eastside Twilight
3500		2.78	B3V4					4c	TK pyro	(Very near moon exp motor rate 21/sec or less, start off slit)	
2976		"	"					5			
2850		"	"					5			
		8.5						30c			
								"			
783	3-5"	8.5	B3pe					7c	TK pyro	High RH propagation? west	
797		"	"					30c	"		S/N 125/1
		"	"					89c			
538		"	"					109		cloud @ end	
								3c			
				CR 25 CCD							
122	4"	6.77	B2 IIIc					11c	TK pyro	267 AIR mass some cloud Hd sl saturated*	
873	"	"	"					12	"		

Py#2 (23)

Emulsion Batches:

Date 1994 MAR 19/20... Observers J.K./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.
CC20560	HD45910	062512	0556	233104					
61	"			233715		4 47W			486
62	Comp							FeAr CLEAR	60s
63								TUNG Apl/2	55s
→ 67	FLATSx5					4 55W	+6°		
CG400 68	BINS(4)								
CG400 38 → 41	HD103095	11 4713	+38 2610	3 00 15		3 0	38°	4x	67s
CG400 42 → 44	"							3x	133
CC20569	Comp							FeAr CLEAR	60s
70	HD103095	11 4713	+38 2610	00 26 21					244
71	Comp							FeAr CLEAR	60s
72	FLATSx5					7 00	+38°		45s
73	Comp							FeAr	80s
	SN1994 D	12 34 03	+07 42 05	01 14 55					
73 73	Comp							FeAr CLEAR	60
74 74	HD220300	23 17 36	55 49 00	02 01 11				137 FeAr	
51 75	COMP							CLEAR	60s

Spectr. Temp. Dome Temp./Hum. -1.3° 56%RH Transparency Conditions Part cloudy

Focus ... 6:90

(24)

Spectr. Temp. Dome Temp./Hum. 2:10:00

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
755	4.5	6.77	B20	CASS CCD	1800 G 6065	300 Full	G604A	13c 14c 3c 2 1c	TK pym		
5030	6.45	G8ip	(12.5 Airy slit)	Above 300 slit						Seeing Test Dome ESE, mod WNW wind (Tel on East side this time)	
1430	6.45	G8ip						3c 15c 3c 16c 3c	st. vel		
<p>Note didn't write sheet exp. SN. Nothing seen @ this dispersion & wave length Sp.ova was $\approx 10''$ NW of nebulosity assumed to be NGC 4526</p>											
377	8'	7.9	B8					18c 19c 3c	TK pym	VV far NE	AIRWAS = 3.9

pg # 3 (25)

Emulsion Batches:

Date 1994. MAR. 19/20 Observers T.K./T.A.

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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 20576	HD 220300	23 17 36	55 49 07	02 29 34			E		1348
77	Comp							Feltr clear	60s
78	BIAS (4)								
79	HD 220300	23 17 36	55 49 00	02 57 55					1155
80	Comp.							Feltr clear	60s
81-83	Flats x 3							Tung. Ap 12	5sec
84	Comp.							Feltr clear	60s
85	HD 192954	20 12 36	15 33 07	03 28 10					1008
86	HD 192954	"	"	03 45 52					1023
87	HD 192954	"	"	04 03 35					1292
88	Comp							Feltr clear	60 sec
89	BIAS (4)								

Spectr.

Focus

Spectr.

Exp. Mtr.

468

488

753

736

1008

Spectr. Temp.

Dome Temp./Hum. = 34.58°C

Transparency Conditions clear 26

Focus 6.90

Spectr. Temp.

Dome Temp./Hum. constant

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
468	4"	7.9	B8	CASS RED	1800 618005	300 Full	6648	20	Tk shell Dew	3.53 Air mass	
								30i			
								10i			
428		7.9	B8					20i			
								30i			
								20i			
								30i			
753		7.3	B9					25i			
836	4"	"	"					24i		2.47 Air mass	
1008		"	"					250i			
								260i			
								10i			

27 pg #1 sun/moon

Emulsion Batches:

Date 1994 MAR 20/21... Observers Blm./Jm.....

CSS Time Reset to WWV Time on Accor. (D.D. 74, pg 4).

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.
CC20590								FeAr	
91	Comp/Stellar	HARTMAN	Posis			00	+36	Clear	60/55
92	BIAS(A)								
93	Comp							FeAr Clear	60s
94	HD 87901	10 0303	+12 2722	19 11 32					27
95	HD 87901	10 0303	+12 2722	19 1334		0317E			26
96	Comp							FeAr Clear	60s
97	Comp							FeAr Clear	60s
98	HD 93521	10 42 42	+38 06	19 2243		03 35 E			902
99	"	"	"	3812					869
600	Comp							FeAr Clear	60s
601	HD 93521	10 42 42	+38 06	19 56 35					
602	HD 93521	"	"	20 12 23					900
603	Comp, Then BIAS(A)							FeAr Clear	60s
CC20605	HD 93521	10 42 42	+3806	20 30 28					945
606	HD 93521			20 46 36		02 13E			761
607	Comp							FeAr Clear	60s

Spectr. Temp. Dome Temp./Hum. $+2.2^{\circ}$ $66\% H$ Transparency Conditions Fine - inc. cloudFocus ... 6.90

Spectr. Temp.

Dome Temp./Hum. $+0.8^{\circ}$ $65\% H$ CCDT \rightarrow -100° 90CGAIN

20

Exp. Mtr.	Seeing	Plu Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				C455 CD	1800 to 1800 6-2665	300 Full	6604A	3/4ci	F-focus		
								1ci			
								5ci	Comp		
5000		1.36	B7V					6	Tellurium Std	12K max	
4700								7		measured about 4000, more sensitive	
								8ci	Comp		
2330	2"	7.0x	095V					9ci	Blk pgm	\approx 170/1 S/N 1.32 AIR MASS	
2410								10ci		12000 2000	
								5ci			
1636	$<2''$							11ci		Cloud from 4000 1000 obs 0-4000 S/N	
1970								12ci		10000 2000 170/1	
								13ci			
2490	$<2''$							14	Blk pgm	thin cloud	
2400	1-2"							15			
								16			

201
p#2

Sun/Mon

Date 1994 MAR 20/21... Observers Blo. / 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.
CC20608	HD93521	10 42 42	+38 06	21 02 25		01 58 E			700
09	HD93521			21 14 32	21 24 40				668
10	Comp							FeAr Clear	60s
11	Comp							"	60s
12	HD 77327	08 56 48	+47 33 08	21 32 57					57
13	"	"	"	21 34 48		00 09 W			64
14	Comp							FeAr Clear	60s
15	Comp							"	"
16	HD93521	10 42 42	+38 06	21 42 04					600
17	HD93521			21 52 27		01 09 E			580
18	Comp							FeAr Clear	60s
19	HD93521			22 05 02					531
20	"			22 14 13					549
21	Comp							FeAr Clear	60s
22	BIAS(A)								

Spectr
Focus
Spectr

Exp. M

2450

2670

4000

4000

2440

2470

2407

2550

Spectr. Temp. Dome Temp./Hum. 7.00°C $66\% \text{RH}$ Transparency Conditions *Partly cloudy*

Focus 6.80

Spectr. Temp. Dome Temp./Hum.

(30)

< LAMBDA

Wave- len	Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
70	2450	1"	7.04	09.5X	C 435 560	1800nm 6-6065	300 Full	6604A	17c	Bln C* pgrm		
80	2670	1"							18c			
90									19c			
100									19c			
110	4000		3.66	A0					20c	Telluric STD	no cloud now Low AIR MASS	
120	4000		3.66	A0					20c	" "		
130									21c			
140									21c			
150	2440	1"	7.04	09.5X					22c	Bln O* pgrm		
160	2470								22c			
170									23c			
180									23c			
190	2407	1"							24c	Bln O* pgrm	(He dump gone now)	
200	2550								25c			
210									25c			
220									25c			
230									1c			

31 P9#3 Sun/man

Date 1994 DEC 20/21 Observers [Blk], J.T.A. some W.K.I.

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.
cc20623 -25	FLATS x3							TUNG Ap 1/2	55s
26	HD93521	10 42 42	+38 06	22 2628		00 34E			570
27	"			22 3822					564
28	Comp							FeAr clear	60s
29	HD93521	10 42 42	+38 06	22 5113					744
CG40045 -48	HD93521 for seeing test too							4x	66ms
49	"	"						2x	133ms
50									
cc20630	HD93521	10 42 42	+38 06	23 0822					772
31	Comp								
32	BIAS(4)								
33	HD93521	10 42 42	+38 36	23 2409					700
34	"			23 3649		00 36W			695
35	Comp							FeAr clear	60s
36	HD93521	10 42 42	+38 06	23 5203					685
37	"			00 0401					693
38	Comp							FeAr clear	60s

Spectr. Temp. Dome Temp./Hum. 70.5°C $66.1\% \text{H}$ Transparency Conditions *mostly clear again...*
 Focus ... $6:90$
 Spectr. Temp. Dome Temp./Hum.

32

Exp. Mtr.	Seeing	F ₀ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CNS CD	1800 G-6065	200 Full	66079	26i		122 AX 15.6 K AD4	
2665	1-2"	7.07	09.5V					26c	H ₂ O ^x pyro		
2550								27c			
								5c			
2670	2.2"							27i			
	1-2"					H ₂ O ²⁰ 200 _μ slit			Seeing Test		
2740	1-2"							30c		Em. better. Blue of He?	
								4c			
								1c			
2408	1"							28c			
2590								31c			
								5c			
2440	1"							32c			
2930								20c			
								5c			

33 0944

Date 1944... 12/24/21... Observers [Blk.] T.S.....

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.
CC20639	BIAS (A)								
40	HD93521	10 42 42	+38 06	00 18 45					732
41	"			00 31 16					742
42	Comp							FeAr Clear	60s
43	HD93521	10 42 42	+38 06	00 46 26					681
44	"			00 58 38					736
45	Comp							FeAr Clear	60sec
46	HD93521	10 42 42	+38 06	01 13 20					905
47	"			01 28 50					1005
48	Comp							FeAr Clear	60sec
49	BIAS (A)								
50									
→ 55	FLATS x6					0.1 W	+38°	TUNG Ap 1/2	5sec

Spectr.

Focus.

Spectr.

Exp. Mtr.

2550

2620

2540

2500

2000

1240

Spectr. Temp.

Dome Temp./Hum. -00.5° 70%Transparency Conditions *S.L. in a zig-zag* \rightarrow increasing

Focus... 6.90.....

Dome Temp./Hum. -01.3° 71%

complete cloud

34

Exp. Mtr.	Seeing	F ₀ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				C455 CCD	1500 mm 6.0005	300 FMC	1604A	1c;			S/N
2550	1"	7.04	09.5V					6c;	1hr 0 ^x , 1/2 hr		~ 200/1
2620	1"							7c;			
								5c;			
2540								20c;			
2500	1"							21			
								3c;			
2000								4c;		clouding in here now	
1240	1.2"							9c;			
								5c;			
								1c;		cent -10002 @ end	
								3c;		MAX IAK 104	
								All	OG 5. hrs To Periscope		
								=	To warm		

Pg 1
35

Tue Wed

Emulsion Batches:

Date 1994 Mar 22/23 Observers [Bln] Jwn/Hlw

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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
cc20656 7	Comp/Stellar	Hartman						FeAr Clear	30/30
58	Bias (4)								
59	Comp							FeAr Clear	60
60	HD87901	10 03 03	+12 27 22	19 29 29					93s
61	HD87901	10 03 03	+12 27 22	19 33 34		-2:50 E			40
62	Comp							"	60
63	Bias (4)								
64	Comp							FeAr Clear	60
65	HD93521	10 42 42	+38 06 00	19 46 06		-3:03			863
666	Comp							"	60
67	HD93521	10 42 42	+38 06 06	20 06 11		-2:45			900s
68	Comp							"	60
69	Bias (4)								
70									
73	4x Flats					-2:30 E	+37°36'	Tung 1/2 Ap	5s
74	Comp							FeAr Clear	60
75	Bias (4)								

Spectr. Te
Focus...
Spectr. Te
Exp. Mtr

13 K

10.2 K

1165

250

Spectr. Temp. -100.0%

Dome Temp./Hum. +7.4/65.3%

Transparency Conditions partially cloudy

Focus 6.80

Dome Fans ON

SE fan turned off @ 1950

Spectr. Temp.

Dome Temp./Hum.

(36)

Exp. Mtr.	Seeing	V Mag	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion lambda	PH el	Program	Remarks	Quality
				Cass CCD	1800 l/mm G = 6065	300µ	6604R	3/4	Focus Test	T = 7.7° foc = 6.80	good
								1			
								5			
13 K		1.36	BTV					6	Telluric	through some clouds	
10.2 K		1.36	BTV					7	Telluric	not through some clouds	
								8			
								1			
								9			
1165		7.04	09.5					10	Bln O* pgm	SNR ~ 150	
								11			
250		7.04	09.5					12	Bln O* pgm	80 SNR, (50 ↑)	
								13		very cloudy now.	
								1			
----- 3 hour break for solid clouds -----											
								15			
								1			

Spectr. Temp. Dome Temp./Hum. 6.2°C/67.1%. Transparency Conditions Cloudy, with clear patches. 38
 Focus 6.80
 Spectr. Temp. Dome Temp./Hum. 5.4°C/68.4%.
 → too haze.

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission Slits	PH	Program	Remarks	Quality
				Cass CCD	1800 λ /mm G = 6065	300 μ	6604A	14			
480		7.04	09.5V					16	Bln 0* St-	SNR = 85	clouded in at end
----- 1 hour break for clouds -----											
								17			
								19			
1775	3-4"	7.04	09.5V					20	Bln 0* pgm	SNR = 175	
1295		7.04	09.5V					21	Bln 0* pgm	Through much haze.	
								22			
								1			
857		7.04	09.5V					23	Bln 0* pgm	SNR = 115	
145		7.04	09.5V			40 S.N.R.		24		Down in <u>Muck</u>	
								25			
								14			
								25			
7000		1.36	87V					26	Telluric		
								27			

Spectr. Temp. Dome Temp./Hum. $+5.2^{\circ}\text{C}/69.2\%$ Transparency Conditions ... Partial clouds, very
 Focus 6.80 hazy
 Spectr. Temp. Dome Temp./Hum. (40)

Exp. Mtr.	Seeing	Pr. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	2-3"	6.7	F2	Cass (C)	18002/nm G = 6.665	300 μ m	6604A		Seeing Test	Dome W. no wind	
	2-3"	6.7	F2						Seeing Test	very hazy.	
								28			
2100		5.37	B9 V					29			
								30			
								14			
								1			
										All to WORM & Perseus	

Spectr. Temp. Dome Temp./Hum. $8.3^{\circ}\text{C}/57.5\%$ Transparency Conditions scattered clouds, much haze. 42
 Focus 6.80 Dome Fans OFF
 Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800l/mm G=6065	300 μ	6604	3/4	Focus Test	69% Humidity on catwalk @ 2000 74% @ 2050	good
5000	1-2"	1.36	87V					1			
								5			
								6	Telluric	Max ADU ~ 11K	
								7			
								8			
900		7.04	09.5V					9	Bln 0* pgm	SNR ~ 150- Through clouds	
900 1423		7.04	09.5V					10	Bln 0* pgm	SNR ~ 180-	
								11			
								1			
830	1-2"	7.04	09.5V					12	Bln 0* pgm	SNR ~ 135- Through clouds	
1369		7.04	09.5V					13	Bln 0* pgm	SNR ~ 180-	
								14			
1630		7.04	09.5V					13	Bln 0* pgm	SNR ~ 180	
1280		7.04	09.5V					14	Bln 0* pgm		
								15			

Spectr. Temp.

Dome Temp./Hum.

6.6°C/56.7% Transparency Conditions Scattered Clouds

Focus 6.80

→ thick clouds.

Spectr. Temp.

Dome Temp./Hum.

5.6°C/56.8%

(44)

Exp. Mtr.	Seeing	Pig-Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
								1			
								16			
5000		3.66	A0					17	Telluric		
								18		Done @ 21:57 (10 minutes late)	
								3/4	Focus Test	T=6.2°C	
								19			
1450		7.01	09.5V					20	Bln 0* pgn		
1375		7.04	09.5V					21	Bln 0* pgn	Cloud in last 300 ^s	
								22			
994		7.04	09.5V					23	Bln 0* pgn	Cloud from 120°-150°	
1417		7.04	09.5V					24	Bln 0* pgn	Totally clouded in right after end of this exposure	
								25			
								1			
								26			
								3/4	Focus test	5.6°C, foc=6.80	

*Note: Headers on cc20729,30,32 which were saved to WORM have wrong or incomplete object, ra & dec information EXABYTE copy is okay. Logbook is correct.

All to WORM & Perseus

pg 1
45 FITSAT

Date 1994 Mar 25/26 Observers [Eln] Tn/Hlw

Emulsion Batches:

css 386 clock set to EST from WWW time

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.
cc20744/5	Comp/stellar	Hartman	Mask			+0:17 W	+48° 48'	FeAr Clear	70/70
46	Bias (4)								
47	Comp							FeAr Clear	60
48	HD87901	10 03 03	12 27 22	19 18 06		2:53 E			30
49	HD87901	10 03 03	12 27 22	19 19 10		2:52 E			44
50	Comp							"	60
51	Comp							"	"
52	HD93521	10 42 42	+38 06 00	19 26 30		03 12 E			855
53	"	"	"	19 41 35		02 57 E			848
54	Comp							FeAr Clear	60s
55	HD93521	10 42 42	+38 06 00	19 58 10					830
56	"	"	"	20 12 24					1032
57	Comp							FeAr Clear	60s
58	BIAS(4)								
59	HD93521	10 42 42	+38 06 00	20 33 00		2:06 E			797
60	HD93521	10 42 42	+38 06 00	20:46:51		1 57 E			79

CCD Dewar → -100.0°C
Spectr. Temp.

Dome Temp./Hum. -0.3°C/62.2% Transparency Conditions Clear

Focus 6.87

Dome Fans OFF FULL MOON

Spectr. Temp. gain = 90

Dome Temp./Hum. -1.4°C / 62.4% 480 0 50 1024 4 1 cdfmt

46

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	Program	Remarks	Quality
				Cass CCD	1800L/mm	300μ	6604A	3/4 Focus Test	T = -0.8, foc = 6.87	good
					G = 6065			1	77% Humidity on catwalk	
								5	@ 1930	
5000	3-4"	1.36	B7V					6 Telluric	Max ADU 7000	
7100	3-4"	1.36	B7V					6 Telluric	9000	
								7		
								7		
* 550	3-4"	7.04	O4.5I					8 Bln 0* pgm	*Exp meter partial	S/N
590								9	Full moon @ 1925 EST	170/1
								2c	1.20 AIR MASS	
675	3"							10c		185/1
950								11c		
								5c		
								1c		
770								10c		
795								13		

Spectr. Temp.

Dome Temp./Hum. $-1.4^{\circ}\text{C}/62.4\%$ Transparency Conditions *Fine*Focus *6.87*

Spectr. Temp.

Dome Temp./Hum. *211130A*

(48)

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CNS CCD	1800 G-6065	300 μ FULL	6604A	5			
								5			
2500		3.66	A0					6	Telluric		
3500		3.66	A0					7	Telluric		
								8			
								9			
788		7.04	09.5 V					10	Bln 0* pgm		
988		7.04	09.5 V					11	Bln 0* pgm		
								12		78% Rel. Humidity on catwalk	
1022		7.04	09.5 V					13	Bln 0* pgm	@ 2130	
1094		7.04	09.5 V					14	Bln 0* pgm	80% Rel. Humidity on catwalk	
								15		@ 2230	
1138		7.04	09.5 V					16	Bln 0* pgm		
	3-4"								Seeing Test		
	3-4"								Seeing Test		

Pg # 3 49clean
" Manz

Emulsion Batches:

Date 1994 Mar 25/26

Observers B/n/Tn/Hlw/Wde/Manz

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.
CC20775	HD93521	10 42 42	38 06 00	22 42 58		0:04 W			800 s
76	Comp							FeAr Clear	60s
77	Bias (4)								
78									
79	Comp/Stellar	HARTMAN Posns				00 09 W		FeAr clear	30/30
80	HD93521	10 42 42	+38 06 00	23 11 32		00 33 W			803
81	HD93521	"	"	23 25 15		00 48 W			846
82	Comp							FeAr clear	60s
83	HD93521	10 42 42	38 06 00	23 42 48		1:05 W			867
84	HD93521	10 42 42	38 06 00	23 57 39					992
85	Comp							FeAr Clear	60s
86	Bias (4)								
87	HD93521	10 42 42	38 06 00	00 17 16		01 40 W			
88	"	"	"	00 37 10					799
89								FeAr Clear	60s
90	Comp								
→92	FLATS x3							TUNG Ap 1/2	5 sec

Spectr. Temp.

Dome Temp./Hum. $-2.1^{\circ}\text{C}/64.5\%$ Transparency Conditions ClearFocus 6.87

Spectr. Temp.

Dome Temp./Hum.

(50)

Exp. Mtr.	Seeing	P _v Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion λ	P.H. ci	Program	Remarks	Quality S/A
1080	2.3"	7.04	09.5	Cass CCD	1800/Am G = 6065	300 μ	6604A	17	Bln O* pgm		
								18			
								k			
								34ci	Focus test		
1056	2.3"							19ci	Bln O* pgm	Note - no previous comp after Res. H ₂ 1/2/1	
1127								20ci	Bln O* pgm	<u>FOCUS</u>	
								5ci			
1124		7.04	09.5					21ci	Bln O* pgm		
1277		7.04	09.5					22	Bln O* pgm		
								5			
								1			
1100	3"	7.04	09.5					23	Bln O* pgm	1.06 AIR MASS	
985	3.5"							24			
								2ci			
								2ci		MAX 13.6 K ADU	

No # 2

Pg # 9

(51)

Fri/SAT

Date 1994 MAR 25/26 Observers [Blu], [Tr], H/W

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.
cc20793	HD 93521	10 42 42	+38 06 00	00 50 32					991
94	"	"	"	01 07 28		2:32 W			972
95	Comp							FeAr Clear	60s
96	BIAS(4)								
97	HD 93521	10 42 42	+38 06 00	01 26 55		2:50 W			900
98	HD 93521	10 42 42	+38 06 00	01 42 35		3:06 W		900sec → 900s	729
99	Comp							FeAr Clear	60s
cc20800	HD 93521	10 42 42	+38 06 00	01 59 50		3:23 W			901
801	HD 93521	10 42 42	+38 06 00	02 15 17		3:46 W			999
802	Comp								
804 803	Bias (4)								
803 804	HD 93521	10 42 42	+38 06 00	02 35 27		3:59 W			899
805	HD 93521	10 42 42	+38 06 00	02 51 32		4:14			824
806	Comp							FeAr Clear	60s
807	HD 93521	10 42 42	+38 06 00	03 08 38		4:32 W			883

Spectr. Temp.

Dome Temp./Hum. -25°C 67.0%

Transparency Conditions ... Fine

52

Focus ~~6.87~~ 6.90

Spectr. Temp.

Dome Temp./Hum. ... C 47.0%

Exp. Mtr.	Seeing	PA Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1030	3.5"	7.04	09.5V	CAS CCD	1800/m/mm G-6065	300 Full	6604HP	25c	Bl _n 0* pgm		
1040								26c 5c 1c	Bl _n 0* pgm		
963		7.04	09.5V					27	Bl _n 0* pgm	SNR ~ 160	
729	5.6"	7.04	09.5V					28 5	Bl _n 0* pgm	SNR ~ 160	
718		7.04	09.5V					29	Bl _n 0* pgm	SNR ~ 155	
632		7.04	09.5V					30 5 1	Bl _n 0* pgm	Catwalk humidity = 84% S/N @ 0221 180/l	
560		7.04	09.5V					10	Bl _n 0* pgm		
641		7.04	09.5V					12 5	Bl _n 0* pgm		
640	4"	7.04	09.5V					11			

Spectr. Temp.

Dome Temp./Hum. -30°E 7:58^H Transparency Conditions *v.s./hazy*Focus ~~6.87~~ 6.90

Spectr. Temp.

Dome Temp./Hum. -40°C 77³

54

Exp. Mtr.	Seeing	P ₀ Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
700	3"	7.04	09.5V		1800 lines G 6065	300 μ	6604A	13c	Bln 0* pgm		
								5c			
								10c			
700								14c	Bln 0* pgm		
681		7.04	09.5V					15c	Bln 0* pgm		
								5c			
630		7.04	09.5V					16	Bln 0* pgm		
470		7.04	09.5V					15	Bln 0* pgm		
								5			
								6		West side of pier.	
								11			
								5		East side of pier	
377		7.04	09.5V				SNR. ~ 150	17	Bln 0* pgm	Xend = 2.745	
334		7.04	09.5V					18	Bln 0* pgm	Sunrise. Xend 3.05	
All to Perseus E.W.O.R.M.											

Spectr. Temp. Dome Temp./Hum. $+3.6^{\circ}\text{C}$ $66.0\% \text{H}$ Transparency Conditions PARTLY CLOUDY (56)Focus E-87

Spectr. Temp. Dome Temp./Hum.

90CGAIN CCD T-7-100E

Exp. Mtr.	Seeing	✓ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	K500 λ/nm G=5920	300 μ FULL	6400A	1c			
								1/4c	Focus Test		
158	6"	7.30- 8.07	F6Ib- 6.2Ib					5	6	STRONG SKY LINE AT ~ PIXEL 580 THROUGH CLOUDS	
								6	Sys	ABORTED DUE TO THICK CLOUDS SNR \approx 70	
								7			
1227	4"	6.33- 6.75	F7Ib- F9.5Ib					7		SAME SKY LINE AT ~ PIXEL 580 THROUGH CLOUDS AGAIN	
								8	Sys	SNR \approx 200	
								9			
820	4"	B 6.5 -8.0	F7Ib -K1Ib					9			
								10	Sys	THROUGH CLOUDS 1.49 AIR MASS	
								11			
										13000 MAX ADU	

Spectr. Temp.

Dome Temp./Hum. $+2.2^{\circ}$ 71.684Transparency Conditions *mostly cloudy*Focus *6.87*

Spectr. Temp.

Dome Temp./Hum.

*seeing Test info
only N/E FHM Letter*

58

Exp. Mtr.	Seeing	V.P.C. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1500/400 G=5920	300 FULL	6400A	12c.			
130	3"	6.54- 7.38	F5- G1					14c.	Sgs	THROUGH CLOUDS	
								15c.			
								16c.			
3500		1.14	K0II b					17c.	RV Std		
								18c.			
								19c.			
11.5K		1.35	B7V					19c.	Telluric std		
								20c.			
								21c.			
900	3"	6.9	K0III					20c.	Std/Vel	cloud again	
								5c.			
	Dome SW no wind.				ABOVE 3000 std. t				seeing Test medium cloud note last 2 exps have image mixed up from d. int. spectra		

Spectr. Temp.

Dome Temp./Hum. $+1.6^{\circ}$ 7348H

Transparency Conditions ... Cloudy

Focus ... 6.87

Spectr. Temp.

Dome Temp./Hum. ... C. LAMINA



Exp. Mtr.	Seeing	Flux Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
766	2.3	69		CAS CCD	1300 6-5920	300	6400Å	22ci	Std Vel	Repeat	
								23ci			
								24ci			
								25ci			
								26ci			
850	3"	5.25	Ha II _{ub}					24ci	Std Vel	Cloud	
								25ci			
								26ci			
5400		-0.04	K2 III					27ci	Std Vel	(LOW THIN)	
								28ci			
5000h		-0.04	K2 III					29ci	Std Vel	(LOW)	
								28ci			
								30ci			
3500		1.14	K0 III _b					31ci	Std Vel	(LOW (THICK!))	
								32ci			
								33ci		12000 MAX ADU	

b1 p9#1 Wed/Thurs

Date 1994. MAR. 30/31... Observers Bln. J. Tn.....

Emulsion Batches:

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 C55 386 5 sec. Ahead of D.D. 74, MIN. Time

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 20878 79	Comp / Stellar	Hertzsprung						FoAr Clear	70/70
80	BIAS(A)								
81	Comp							FoAr Clear	68
82	HD 97901	10 0303	+17 27 22	19 29 49					74
83	"	"	"	19 31 22		02 19 E			50
84	Comp							FoAr 2 Clear	66
85	Comp							"	"
86	HD 93521	10 42 42	+38 06 00	19 39 24		02 40 E			801
87	HD 93521	10 42 42	+38 06 00	19 53 07		02 27 30 E			726
88	Comp							FoAr Clear	603
89	BIAS(A)								
90	HD 93521	10 42 42	+38 06 00	20 08 54		02 00 E			691
91	"			20 20 47		02 00 E			685
92	Comp							FoAr clear	603
93 95	FLATS x 3							TUNG Ap 1/2	550

Spectr. Temp.

Dome Temp./Hum. 71.5°C 60.5% Transparency Conditions *Clearing nicely*Focus *6.87*

Spectr. Temp.

Dome Temp./Hum. *9006411* *WDT \rightarrow -100°C* *62*

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800- G-6065	300 FULL	6604A	3/4c	Focus Test		S/N
								1c			
								5c		7c 2.5 Side Row	
12K		1.36	B7V					6c	Telluric Std	1.405 Air Mass	
								8c	" "		
								5c			
								5c			
1750	2.4"	704	O915V					7c	Plan O ⁺ program	1.177 Air Mass	170/1
1880								8c	"		217/1
								9c			
								1c			
2150	3"							10c			
2200								11c			
								5c			
								12c			
										MAX K ADU	

Spectr. Temp. Dome Temp./Hum. ^{+00.0°C} 65.5³⁰ Transparency Conditions *Fine - sl. hazy*Focus *6.87*Spectr. Temp. Dome Temp./Hum. ^{00.0°C} 67.3³⁰
2.47.14.10

(64)

Exp. Mtr.	Seeing	Pr. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1960	2"	704	09.5V	CASS CCD	1800 G 0065	300 Full	6609A	13c	Bl. 0 ^x p _{ym}		
1910								14c			
								5c			
								10c			
								5			
6100		3.66	H0					15		MAX 7.5K ADD AIR MASS = 1	
5850								15	Telluride Std.		
								5			
								4c			
2070	2"	704	09.5V					16	Bl. 0 ^x p _{ym}		180/1
2400								17c			
								5c			
2150	2.3"							18c			
2170	2.3"							19c			
								5c			
								1c			

p4 #3

(65)

Emulsion Batches:

Date 1994 MAR 30/31... Observers Pln./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.
CG400 70 → CG400 73	HD 93521	10 42 42	+38 06 00					4x	67msq
CG400 74 -GG 75	"							2x	133msq
CC20912	"			22 20 00		0 0 E/W			750 ^s
CC 20913	"			22 34 18		0 14 W			700 ^s
CC 20914	"			22 47 18		0 27 W			703 ^s
CC 20915	Comp							Fe Ar Clear	60 ^s
CC 20916	HD 93521	10 42 42	+38 06	23 06 54					747
17	"	"	"	23 19 59					733
18	Comp							Fe Ar Clear	60s
19	BIAS(4)								
20	HD 93521	10 42 42	+38 06	23 36 04		01 16 W			728
21	"	"	"	23 48 40					736
22	"	"	"	00 02 08					707
23	Comp							Fe Ar Clear	60sec
24								TUNG	
→ 26	FLATS x3							Ap/2	5 sec

Spectr. Temp. Dome Temp./Hum. 10.1°C $70\% \text{H}$ Transparency Conditions *Fine to Slight*

Focus 6.87

Spectr. Temp. Dome Temp./Hum. *ONLY NE Fan ON, med ESE wind*

(66)

λ LAMBDA

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		7.04	09.5Z				ABOVE 300u>LIT		Seeing Test	Dome ESE, Tel East Side	
2075	2.3"			C455 CCD	1800 1/2 G-5065	30A Full	6409A	20c	Blk 0* Pgm		
2100					"	"	"	21c	"		
2055					"	"	"	22c	"		
								23c			
2166					1800 1/2 G-6065	"	6404A	24c	Blk 0* Pgm		
2040	2"							25c			
								9c			
								1c			
2040		7.04	09.5Z					26c	Blk 0* Pgm		
2050	2"							27c			
2045								28c			
								5c			
								29c	7c		
										15.2K ADU MAX	

Spectr. Temp. Dome Temp./Hum. -00.3°C 84.9% Transparency Conditions *sl. hazy - fog?*

Focus *6.87*

Spectr. Temp. Dome Temp./Hum. -00.9°C 88.0%

C LAMBDA

(69)

Exp. Mtr.	Seeing	Pl/ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulston	P.H.	Program	Remarks	Quality
2170	2-3"	70A	095E	C1120 200	9.20m/4 G.6085	300 F400	6604A	24c		<i>1/2" 0* paper</i>	
2130								30c			
2045								31c			
								5c			
								1c			
2050								32c			
2000	3"							8c			
2140								16c			
								7c			
								33c		<i>1/4" x 1" AD4</i>	
								1c			
<i>AN to PERSEUS & WOH M</i>											

CCDT → -100.0°C
 Spectr. Temp.
 Focus 6.87
 Spectr. Temp. 90.99

Dome Temp./Hum. 54.77% / +4.1°C Transparency Conditions .. partially cloudy

Dome Fans OFF

72

Dome Temp./Hum. ... 27.1/44.80 0.50 10.24 4 1 ccdfmt

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	F.H.	Program	Remarks	Quality
				Cass ccd	1800Å/ G=6065	300µ slit	6604A	3 4	Focus Test	T = +4.1 foc = 6.87	good.
								1c			
								5			
	12K	1.36	B7V					6	Telluric Std.		
	"							7			
								8			
								9c			S/N
	2250	1.2	704	09.5V				10c	Bln O* pgm	AIR MASS 1.100 @ start	150/1
	2535							11c			
	2280							12c			150/1
								5c1			
	2700	1.2						13	Bln O* pgm		
	2485							14	Bln O* pgm		
	2465							15	Bln O* pgm		
								16c			

Page 2
Thurs / Fri

73

Emulsion Batches:

Date 1994 MAR 31 / Apr 1. Observers [Blair] Jn / Hsu

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.
cc20958	Comp							FeAr Clear	60s
59	HD 77327	08 56 48	+47 33 08	20 54 57		0 0:13 W			147
60	HD 77327	08 56 48	+47 33 08	20 58 24		0:17 W			120
61	Comp							FeAr Clear	60s
62	Comp							"	"
63	HD 93521	10 42 42	+38 06	21 08 20		01 08 E			736
64	"	"	"	21 21 25		0 54 E			763
65	"	"	"	21 34 28		0:42 E			700
66	Comp							FeAr Clear	60s
67	Bias (4)								
68	HD 93521	10 42 42	+38 06 00	21 48 50		0:27 E			716
69	HD 93521	10 42 42	+38 06 00	22:01:10		01			761
70	HD 93521	10 42 42	+38 06 00	22:14:34					712
cg40076	4x -80 HD 93521	10 42 42	+38 06 00	22:28				Ax	.067
cg40081	2x 82 HD 93521	10 42 42	+38 06 00					2x*	.133

Spectr. Temp.

Dome Temp./Hum. $+3.1^{\circ}\text{C}/62.7\%$ Transparency Conditions *Partly Cloudy*Focus *6.87*

Spectr. Temp.

Dome Temp./Hum.

74

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	F.T.	Program	Remarks	Quality
				Cass CCD	18002/mm G=6065	300 μ	6604A	17			
8000	3.6	A0						18	Telluric. <i>slit</i> (Low Air mass)		
~6000	3.6	A0						18	Telluric		
								19			
								20			
2300	1.2	7.04	09.5E					21	Bln O* pgn		SIX 140/1
2597								22	Bln O* pgn	SNR ~ 155	
2780		7.04	09.5E					23	Bln O* pgn	SNR ~ 160	
								24			
								25	Bln O* pgn		
2475		7.04	09.5E					25	Bln O* pgn	Catwalk Humidity = 73% @ 2200	
2720		7.04	09.5					26	Bln O* pgn		
2248		7.04	09.5E					27	Bln O* pgn		
		7.04	09.5E						Seeing Test.		
		7.04	09.5E						Seeing Test	Also accidentally wrote a file called cg40083 which is not a seeing test.	

Pg #3

75

the one doing all the work

Emulsion Batches:

Date 1994 Mar 31/Apr 1 Observers [Bln] Tn/Hlw/Wde

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.
CC20971	Bias (4)								
972	Comp							FeAr Clear	60s
973	HD93521	10 42 42	+38 06 00	22 35 47		0:20 W			800
974	HD93521	10 42 42	+38 06 00	22 50 15					800
975	Comp							FeAr Clear	60s
976	HD93521	10 42 42	+38 06 00	23 07 05		0:51 W			744
977	HD93521	10 42 42	+38 06 00	23 ^{19 57} 07 10					670
978	HD93521	10 42 42	+38 06 00	23 ³¹ 07 33		1:17 W			770
979	Comp								
980	Bias (4)								
981	HD93521	10 42 42	+38 06 00	23 48 25		01 33 W			722
982	HD93521	"	"	00 02 01		01 49 W			900
983	HD93521	"	"	00 17 42		02 06 W			973
984 985 -987	Comp FLATS x3							FeAr Clear TUNG 4p/2	60s 530

CCD
Spectr. Temp. -100.0°C

Dome Temp./Hum. +1.4°C 70.8%⁸⁴

Transparency Conditions *incr high cloud*

Focus *6.87*

Spectr. Temp. *gain 90*

Dome Temp./Hum. *2.4°C 50%* *hour: ton cache #*

78

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Filter	Slit	Emission	Program	Remarks	Quality
702	2-2"	7.09	0915E	Cass CCD	1800 μ /mm G=6065	300 μ	6604A	15i	Blk. O ^x Ppne	SNR ~ 80
								16ci		
								2		
								1		
			G2V					18	Tours.	Max ADU ~ 7000 - Done to show on Apr 9 tour in a pinch.
<i>All to Processes & WORMs</i>										
				Cass CCD	1800 μ /mm G=5910	300 μ	6395A	1ci		- New G setting requested
							6395A	3/4	Focus Test	by Sgs
								5		
1480	4-5"	6.15	G0Ib					6	Rm Pgm	85% catwalk humidity @ 0230
								7		
								1		→ field checked in finder, looks okay.
								8		
5000			299 A0V					9	Telluric	Max ADU 9000, Star tracked back and forth on slit
								10		

Spectr. Temp. Dome Temp./Hum. +0.6°C/73.9% Transparency Conditions ... hazy, some scattered clouds
 Focus ... 6.87
 Spectr. Temp. Dome Temp./Hum.

clouds
 80

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800 μ /mm G=5910	300 μ Full	6395A	11			
3000		2.72	K3 II					12	Std. Velocity.		
								13			
								1			
								14			
428	3 ⁴	6.73 -7.54	F6 -G2 Iab					15	Rm pgm	Totally clouded in at end.	
								14c			

All do WORM & Perseus

Pg# 1/81 Good Friday.
↓
Fri Sat

Date 1994 Apr. 1/2 Observers H/W / LCK {Vys}

Emulsion Batches:

.....
.....
.....

aperture

File 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.
cc21022/3	Comp/Stellar	Hartman		19:00		0:50 W	+38:26	FeNe Clear	20/30
24	Bias x 4							"	60
25	Comp							"	60
26	HD95735	10 57 54	36 38 00	19:25:31		3:04 E			600s
27	Comp								60
28 -30	3 x Flats							Tung 1/2 ap	10
31	Bias x 4								
32	Comp							FeNe Clear	35s
33	BD-02 3000	09 48 10	-03 13 04	23 27 50		2:04 W			300s
34	Comp								
35	Bias x 4								
36	BD-02 3000	09 48 10	-03 13 04	23 35 22		2:16 W			600s
37	Comp							FeNe Clear	60
38	Comp							"	"
39	HD95735	10 57 54	36 38 00	23 55 23		1:20 W			283
40 Comp		FeNe Clear	35s	41 Bias x 4	42-44	3 x Flats	Tung 1/2 ap	10s	

*Note: cc21029-flts is a 10 second dark.
perhaps source misfired -H/W 04-94

CCD Spectr. Temp. -100.0°C Dome Temp./Hum. $5.2^{\circ}\text{C}/41.1\%$ Transparency Conditions Partially cloudy
 Focus 6.90 Fans OFF \rightarrow mainly
 Spectr. Temp. gain = 90 Dome Temp./Hum. $480 \ 0 \ 50 \ 1024 \ 4 \ 1$ ccd fnt. 82

Exp. Mtr.	Seeing	Pr. Mag.	Sp.	Inst.	Grating/ Cont. Filter	Slit	Central Emission wavelength	cache bit	Program	Remarks	Quality
				Case CCD	1800l/mm	200 μ m	5303Å	3/4	Focus Test	T = $+5.2^{\circ}\text{C}$, foc = 6.90	set to slightly colder
					G = 5115			1	bsum 4. bat		
								5			
674	7.48	M2				SNR ~ 110		6	Vys Std.	Through thick clouds.	
								7		Exterior humidity = 44% @ 1935	
								8			
								1		Totally cloudy now...	
								9		just about to do BD-02 3000	
7	10.54	M0				Weak		10	Vys Pgm	Cleared again Exterior humidity: 90% @ 2320 !!!	
								11			
								1		92 @ 2330, + SE winds,	
16	10.54	M0				Weak + lots of sky background		12	Vys Pgm	some clouds... \rightarrow Through many clouds	
								13		93% @ 2340	
								14		94% @ 0000	
26	5-6"	7.48	M2					15	Vys Std.	\rightarrow to very cloudy.	

Pg # 1

83

Σ Vys 3

Emulsion Batches:

Date 1994 Apr. 3/4 Observers H/W KK = safety backup

File 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.
CC21045/6	Comp/Stellar	Hartman Mask position						aper-t FeNe/clear 20/30
47	Bias x4							
48	Comp							FeNe Clear 35
49	BD-02 3000	09 48 10	-03 13 04	19 35 39		1:40 E		300s
50	Comp							" 35
51	BD-02 3000	09 48 10	-03 13 04	19 35 39		1:19 E		1200
52	Comp							" 35
53	Bias x 4							
54	Comp							" 35
55	HD36395	05 26 18	-03 41 00	20 09 19		3:17 W		511
56	Comp							" 35
57	Comp							" "
58	AC+16 777-164	05 36 15	+15 17 17	20 25 39				600
59	Comp							" 35
60	Comp							" "

CCD
Spectr.
Focus.
Spectr.

Exp. Mtr.

43

44

CCD Spectr. Temp. -100°C Dome Temp./Hum. $1.9^{\circ}\text{C}/67.6\%$ Transparency Conditions Clear for a change
 Focus 6.90 Dome Fans OFF
 Spectr. Temp. GAIN = 9.0 Dome Temp./Hum. $468\ 0\ 50\ 1024\ 4\ 1\ \text{ccd\ fnt}$

(84)

Exp. Mtr.	Seeing	Mag	Sp.	Inst.	Grating/ CTRL	Slit	Control WAVELENGTH	Filt.	Program	Remarks	Quality
				Cass CCD	1800 λ/mm	300 μ	S303 A	3/4	Focus Test		good
					G = 5115			1	brun + sat		
								5			
		10.5	MOI					6	Vys Pgm	Twilight.	
					<u>weak</u>			7			
43		10.5	MOI					8	Vys Pgm		
								9			
								1			
								10			
244		8.0	MI V					11	Vys Std.		
								12			
								13			
		10.6	MOI					14	Vys Pgm Vys Pgm	83% Humidity on	
								15		catwalk @ 20 30	
								16			

Pg #2

85

ΣVysZ

Emulsion Batches:

Date 1994 Apr 3/4

Observers

HW/LCK

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
1 cc21061	AC+68 3124	07 21 38	+68 49 42	20 46 22		2:03 W			1080
62	Comp							FeNe Clear	35 _s
63	Bias x 4								
64	Comp							"	"
65	AC+63 14097	07 25 17	+63 09 16	21 13 12		2:20 W			642
66	Comp							"	35
67	Comp							"	"
68	AC+55 30267	07 27 18	+55 03 45	21 30 36		2:48 W			1268
69	Comp							"	35
cg40084 -87	4x HD90861	10 24 17	29 05 35	22:00					.067
cg40088 -89	2x HD90861	10 24 17	29 05 35		22 04	0:05 W			.133
70	Comp							"	35
71	HD90861	10 24 17	29 05 35	22:07.42		0:16 W			331
72	Comp							"	35
73	Bias x 4								

Spectr.

Focus

Spec

Exp. Mir.

108

50

39

750

Spectr. Temp.

Dome Temp./Hum. +0.6/70.2%

Transparency Conditions Clear

Focus 6.90

Dome Fans OFF

Spectr. Temp.

Dome Temp./Hum.

86

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Filter	Slit	Emulsion	S.H.	Program	Remarks	Quality
108	10.9	M0 V	Cass CCD	1800 μ /mm G = 5115	300 μ	S303A	17	Vys Pgm			
							18				
							19				
50	10.5	M0 V					20	Vys Pgm			
							21				
							22				
39	11.3	M0 V					23	Vys Pgm	Catwalk humidity = 89% @ 2150		
							24				
	6.9	K2 III						Seeing Test			
	6.9	K2 III						Seeing Test			
							25				
750	6.9	K2 II					26	Std Vel.	RV = +36.3 \pm .4 km/s		
							27				
							1				

Spectr. Temp.

Dome Temp./Hum. $-0.3^{\circ}\text{C}/73.4\%$

Transparency Conditions .. Clear ..

Focus .. 6.90 ..

Fans OFF



Spectr. Temp.

Dome Temp./Hum.

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Central Emission Wavelength	C. P.T.	Program	Remarks	Quality
				Cass CCD	1800 μm G=5115	300 μ	5303 Å	28			
	~3"	10.5	M0 V					29	Vys Pgm		
								30			
								31			
								3/4	Focus test	T = -0.4°C , foc = 6.90	Ok.
								5			
	~200 ~4"	7.5	M2 V					6	Vys Std.		
								7			
								8			
	0	10.5	M0 V					9	Vys Pgm		
								10			
								11			
	0	10.9	M0 V					12	Vys Pgm		
								13			
								14			

91

Wed / Thurs

Emulsion Batches:

Date 1994 Apr. 6/7... Observers ... Th... Eckelke Tel Non Motion Tests.

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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.
ce06917	Th Ar			21 25 51		00 01 W	-33°	Th Ar	4 sec
18	"			22 52 01					
19	BIAS								
20	Th Ar			23 26 31					
21	"			23 47 16					
22	"			01 03 08					
23	FLAT			01 06 54				Th Ar	10 sec
24	Th Ar			01 44 13					
25	Before Topup.								
26	FLAT, then BIAS			02 29	Back down	00 01 W	-33°	Th Ar	10 sec
27	Th Ar			02 31 54	start of	NMTST. BAT		Th Ar	4 sec
ce0628- 14 37	Th Ar							Th Ar	4 sec

Spectr.
Focus.
Spectr.
Exp. Mtr.

Spectr. Temp. Dome Temp./Hum. $+1.2^{\circ}\text{C}$... Transparency Conditions $510W$ 12
 Focus 7203110710 9.5°C 10.7°C -123°C
 Spectr. Temp. Dome Temp./Hum. 100.6°C 410 0 170 10.2 1 100.6°C

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	* Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				1840	6895	6229		10	+1.1 \rightarrow +1.2 $^{\circ}\text{C}$	10.7 \leftarrow -123.6 $^{\circ}\text{C}$	
								2	+0.8		
								3	0.7		
								4	0.6		
								5	0.6		
								6	0.6		
								7	0.6		
								8	10.5 $^{\circ}\text{C}$		
								9c1	10.6 \rightarrow +10.7 $^{\circ}\text{C}$	Temp complete by 0202	
								9c2	100.6 $^{\circ}\text{C}$	0242	

45 min dark, less 2 sec comp. - 1.1 hr

Pg #1

93

Tues Fri

Date 1994 Apr. 7/8

Observers [KK] Tn/Hlw

Emulsion Batches:

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.....

Optical Band CSS 386 Time = U.U.V. Time

File 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 06938/9	Inboard/Outboard Hartman Mask							ThAr Star	5/4
40	Bias (4)								
41	Comp							ThAr Star	5
42	HD 34029	05 09 18	+45 54 00	20 11 47 20 05 06		3:44 W	46°		70
43	Comp							ThAr	5
44	HD 34029	05 09 18	+45 54 00	20 16 57				"	62
45	Comp							"	5
46	Comp							"	"
47	HD 47105	06 31 54	+16 29 00	20 29 06		+2:43 W	16°		277
48	Comp							ThAr	5
49	Comp							"	5
50	HD 62509	07 39 12	+28 16 00	20 41 53					141
51	Comp							"	5
52	Bias (4)								
53	Comp							"	"

Filter =
Red

CCD Spectr. Temp. -100.0 Dome Temp./Hum. $0.3^{\circ}\text{C}/45.6\%$ Transparency Conditions Clear (14)
 Focus $.200$ [for use with Real Filter] [set $.239$ us OK for no filter mark] Dome Fans OFF
 Spectr. Temp. $=90$ Dome Temp./Hum. 00256102441 ccd fnt

Exp. Mtr.	Seeing	Pr. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Filter P.H.	Program	Remarks	Quality
				Echelle CCD	300/mm 5695 18.40 cross grating	60u width = .277 400u height = .225 6300 Å	5/6 1	Focus Test		set for .25 pixels too cold.
							2		some lines are saturated.	
500	0.09		G8 III + F				3	KK pgm		
							2			
500	0.09		G8 III + F				4	KK pgm	13 K ADU max	
							2			
184		B=	A0 IV				3	KK pgm		
							2			
							2			
400			K0 III b				5	Std. Vel.		
							2			
							1			
							2			

Spectr. Temp. Dome Temp./Hum. $-0.1^{\circ}\text{C}/43.3\%$ Transparency Conditions ... Clear

Focus 200

Spectr. Temp. Dome Temp./Hum.

96

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
263		1.9	A2 IV	Echelle CCD	300/mm 18.40	width -60μ height =400μ	6300Å	6	KK pgm		
230		1.9	A2 IV					2			
								3	KK pgm		
								2			
225	3"	3.52	F6 II	A1-5X				3	KK pgm	12.4A = 8 KAD4	
225								2			
225	2-3"	3.52	F6 II	A1-5X				3	KK pgm		
								2			
								7.5			
400		0.34	F5 II					4	KK pgm		
								2			
								1			
								2			
397		1.35	B7 V					5	Telluric	Air Mass @ End = 1.46	

pg #3 (97)

Date 1994 Apr 7/8 Observers [K.K.] Tn/H/W/Wde

Emulsion Batches:

.....
.....
.....

File 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.
ce06970	Comp							ThAr 5sec
71	HD 8890	01 22 36	+88 46	22 28 ^{20 37}		09:03 W	89°	397
72	Comp							" 5
73	HD 8890	01 22 36	+88 46 00	22 31 32		09:12 W	89°	329
74	Comp							ThAr 5sec
75	HD 8890	01 22 36	+88 46 00	22 39 04		9:21 W		385
76	Comp							ThAr 5sec
77	Comp							" 5
78	HD 123299	14 01 41	+64 51 14	22 54 55		2:10 E		740
79	Comp							" 5
80	HD 123299	14 01 41	+64 51 14	23 08 54		1:55 E		800
81	Comp							" 5
82	Bias (4)							
83	Comp							" "
84	HD 121370	13 49 55	+18 54 00	23 33 39		1:23 E		600
85	Comp							" 5

[Filter
= Red]

Spectr. Temp.

Dome Temp./Hum. $-0.5^{\circ}\text{C}/47.9\%$

Transparency Conditions

FINE

(98)

Focus 200

Spectr. Temp.

Dome Temp./Hum.

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	λ (nm)	P.H.	Program	Remarks	Quality
				Echelle CCD	300/mm	60 wide 400 long	6300Å	2	KK pgm	* CD II 112 middle UPPER 6200-6348Å	
562		B= 1.9	F2					6		1.457 AIR MASS.	
330	2"	B= 1.9	F2					2 3	KK pgm		
344		B= 1.9	F2					4 2 2	KK pgm		
127			365 A0 III					5 2	KK pgm		
117			365 A0 III					6 2	KK pgm		
								1 2			
272		2.69	G0 IV					3 2	KK pgm		

Spectr. Temp.

Dome Temp./Hum. $-1.4^{\circ}\text{C}/53.7\%$

Transparency Conditions Clear - S. / K. Zyg.

Focus 200

CATWINK H = 60% only

Spectr. Temp.

Dome Temp./Hum.

1000

Exp. Mtr.	Seeing	V Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion classical	P.H.	Program	Remarks	Quality
250	2.69		G0IV	Echelle CCD	300m 18.40 xg = .5695	60m 400m	6300A	4	KK Pgm		
350								6c	st/vel	MAX 13K ADU 1.16 AIR MASS	
350								6c	st/vel		
								2c			
								2c			
150	3.4	3.2	F6D	121-5V				3c	KK Pgm	4500 ADU MAX except 1st pixel AIR MASS 1.755	
								7c			
160								4c	KK Pgm		
								2c			
								1			
								2			
300		1.35	B7V					5	Telluric	X _{end} = 1.81	
								2			

Pg # 5

(101)

Emulsion Batches:

Date 1994 Apr. 7/8 Observers [KK] T_n/Hlw

Plate No.	Object	R.A.		Declination		Starting Time		Ending Time		Hour Angle End	Declination	Comparison	
		1900	1900	1900	1900	E.S.T.	E.S.T.	E.S.T.	E.S.T.			Type/Filter	Exp
Ce07002	HD87901	10 03 03	+12 27 22	01 02 08	[Filter = Red]	+3:45 W						200	306
3	Comp										ThAr	5	
4	Comp										"	"	
5	HD175492	18 50 32	+22 31 06	01 14 14		4:30 E						1200	50
6	Comp										"	5s	
7	HD175492	18 50 32	+22 31 06	01 36 28		4 11 E						116f	65
8	Comp										ThAr	5s	
9	BIAS(4)												
10	Comp										ThAr	5s	
11	HD185734	19 35 26	+29 55 22	02 03 38		4 32 E						950	60
12	Comp										ThAr	5s	
13	HD185734	19 35 26	+29 55 22	02 22 11		4 09 E						1200	71
14	Comp										"	5	
15	Comp										"	"	
16	HD161096	17 38 30	+04 37 00	02 50 14		1:58 E						400	257
17	Comp wint										"	5	

Spectr. Temp. Dome Temp./Hum. $-1.6^{\circ}\text{C}/51.4\%$ Transparency Conditions Clear

Focus .. 0.200 .. with Red Filter or course

102

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
306		1.35	B7V	Echelle CCD	300L/min 18.40	60μm x 400μm	6300Å	5	Telluric std	Xend = 2.29	
					xg: 5.695			2			
								2			
50	3-4"	4.59	G4III +A6V					6	KK pgm	2002 AIRMAGS	S/N = 200/1
								2			
65	3-4"	4.59	G4III +A6V					6	KK pgm		
								7c			
								1c			
								2c			
60	2-3"	4.69	G8II-IV					3c	KK pgm	AIRMAGS = 1.84	
								2			
71		4.69	G8II-IV					3c	KK pgm		
								2			
								"			
257	3-4"	2.77	K2III					4	Std. Vel		
								2			

Spectr. Temp.

Dome Temp./Hum. $-1.9^{\circ}\text{C}/50.9\%$ Transparency Conditions

Clear

104

Focus : 200

Spectr. Temp.

Dome Temp./Hum.

Exp. Mtr.	Seeing	✓ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
365	45"	2.77	K2 III	Echelle CCD	300 λ /mm K.40 xg = .5615	60 μ x403 μ	6300A	5	Std. Vel.		
76	4"	3.23	B9.5 III					2c			
								5c			
								6c	KK pgm	2.97 Air mass	
								2c			
75		3.23	B9.5 III					3c	KK pgm		
								2			
								2c	KK pgm		
365	3"	2.69	G0 IV					4c	KK pgm	High Air mass Repeat	
								7c			
335		2.69	G0 IV					4	KK pgm		
								2c			
								2c			
410		B: 1.9	F					3c	KK pgm		

Spectr. Temp. -100°C Dome Temp./Hum. $+3.3^{\circ}\text{C}$ $44\% \text{H}$ Transparency Conditions $\dots V. \text{cloudy} \dots$ (108)

Focus $\dots 2.05$ with Red Filter

Spectr. Temp. $\dots 9.0$ Dome Temp./Hum. $+3.0^{\circ}\text{C}$ $44\% \text{H}$ $20:10$ ~~9:00~~
 CO_2 in \dots Water just visible on TV view

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD 300mm		$600 - 277$		1c		Te circulator 110km on	
				18.40 Hilt	5695	400H	(6300)	3c		HR 3275 at Zenith	
						<u>3:25</u>		4c	KK pgn	SRH -0019 54	S/N 70/1
0	1.2	B 1.9	F					5c		Sidel 00 00 48	
						$u: 60$		7c		MAX 805K ADQ	
						$H: 522 = 0.15$		1c			
						<u>Back to 400 H mag</u>		3c			
62								5c	KK pgn	partly cloudy	
								3c			
68	2"	B 1.9	F					6c			
								3c			
27								5c			
								8c			
								1c			
								3c			

pg #2 (109)

Emulsion Batches:

Date 1994 Apr 8/9..... Observers K.K./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.
ce07067	HD124897	141106	+19 42	23 50 20		01 33E			40
7068	Comp							ThAr	5sec
69	HD124897	141106	+19 42	23 55 04					190
70	Comp							ThAr	5sec
71	Comp							"	"
72	HD121370	134955	+18 54	00 06 22		00 50 E			424
73	Comp							ThAr	5s
74	HD121370	134955	+18 54	00 20 37					274
75	Comp							ThAr	5s
76	FLATS x 5							TUNG	1sec
81	BIAS(4)			01 12					
ce07083	BIAS(4)			07 13		00 01 W	-33 20		
ce07084	BIAS(4)			07 13		00 01 W	-33 20		
only 7085	Comp			23		311	"	ThAr	4sec

ce07083 with 2x
 ce07084
 only 7085
 TO
 ce07083

08/09/94
 For Non motion Tests
 Repeat ~~BIAS(4)~~

(FLAT 9sec)

Spectr.
 Focus
 Spectr

166

208

76

25

30

Spectr. Temp.

Dome Temp./Hum.

+22° 50%

Transparency Conditions

mostly cloudy

Focus .205

Spectr. Temp.

Dome Temp./Hum.

12.3° 52%
C 2 AM BDT

(110)

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
166	4"	2.69	6010			60μ width 500μ H. FORTLETS	62008		still vel		
208	5"		K2 III						still vel		
76	4"	2.69	6010					Sci. K ₂ pyrn		1.13 Air mass cloud again	
25	2"							Sci. K ₂ pyrn		cloudy a bit	
								Sci.			
								1c H. I. = working persons. Top up by 01:30			
								1c Dome T = +22°		349 126 / 100 / 635 / 1	
								3c Dome T = +20.2 → 21° @ 02:30 EST			

90 CGM CCD Temp = -120°

30 min between exps

pg#12

111

Emulsion Batches:

Date 1994 Apr. 9/10... Observers [K.H.] T.M.....

No Ref. Filter. Dev.....

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.
CE07097 98	Inboard/OUTBOARD HURTMAN							ThAr	5/3
99	BIAS(A)								
7100	Comp			21 59 30				ThAr	5sec
101	HD8890	012236	+8846	22 00 47		8 49 W			197
102	Comp							ThAr	5sec
103	Comp							ThAr	3sec
104	HD8890	012236	+8846	22 09 01					824
105	Comp							ThAr	3sec
106	HD8890	012236	+8846	22 26 17					618
107	Comp							ThAr	3sec
108	BIAS(A)								
109	Comp							ThAr	5 sec
110	HD124897	14 11 06	+1942	22 56 31					227
111	Comp							ThAr	5sec
112	HD124897	14 11 06	+1942	23 02 31		2 06 E			680
113	COMP							ThAr	5sec

CCD Spectr. Temp. -100°C

Dome Temp./Hum. 11.2°C $70\% \text{H}$

Transparency Conditions *Part. Clearing*.....

Focus 250

2 Large SAT TOURS looked at good

C.G.A. 100 Spectr. Temp. 90

Dome Temp./Hum.

DBL STAR COR Caroli

C LAMBDA

FILED IN TOUR 22

112

Exp. Mtr.	Secing	Pig. Mag.	Sp.	Inst.	XGrating/ 3.0m Tilt	Slit	Emulsion	P.H	Program	Remarks	Quality
11.8°C	set	250		CCD/1600 18.40 Tilt	3.0m -5695	60m width 12-1.8mm			3/4 focus test	out vs Blue \approx 2 pixels	
265		B 19	F						5ci KK pyrm	3300404 Real max 1.756 Air mass	
Too many str lines sl saturated.											
165		35°							6ci	UBA \approx 1819 1.6dec-00 0259	
19									5ci	med thick cloud	SIN > 200/L
									4ci	thick cloud	
									6ci		
									1ci		
									3ci		
6		3-5°	04	FOR 211					4ci	std vel	very cloudy
									3ci		
42									4ci	std vel	1.23 Air mass
									3ci		

pg #2 (113)
SAT 154M

Date 1994 Apr 9 110..... Observers KK/Tn.....

Emulsion Batches:

.....

Note CSS Time 5secs ahead of WWV Time

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.
ce07114 → 119	FLATS x 6			23 33		00 00	+43°		1sec
120	BIAS(4)			(Long cloudy stretch)					
121	Comp			01 29				THAr	5sec
122	HD 8890	01 22 36	+88 46	01 30 13		12 21W			600s
123	Comp							THAr	5sec
124	BIAS(4)								
125	HD 8890	01 22 36	+88 46	01 44 34					442
126	Comp							THAr	5s
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <p>Apr 10 after Topup completed Non Motion Tests commenced @ 02 55 30min Sep Between 4sec Thr exps</p> </div>									
						00 00	-31:30°	THAr	4sec

Spectr. Temp. Dome Temp./Hum. $+10.3^{\circ}\text{C}$ 78% H Transparency Conditions ... cloudy
 Focus 250
 Spectr. Temp. Dome Temp./Hum. $+9.1^{\circ}\text{C}$ 82% H

114

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				FLK10 18:40 Tilt	300nm 0.5695	60nm width 500nm offset = 0.215	CS009	2ci		MAX = 9.8 KADU	
								1ci	H11 To Kersaus & Worm to here.		
					with 60nm magnt 450nm gain			3ci		Pome T +9.5 @ 01:30 EST	
81	3-4"	B 1.9	F					4ci	K1pym	LR4 - as 0953 compare	
	4							5ci		30ci - 00 03 30 with 1st set	
								1ci			
1								6ci	K1pym	Too cloudy again	
								5ci			
										Last Batch 121-126 only to work	
										Done T _g 40 = +8.8°C	
										" @ 9:55 +8.7°C	
										D ₂ T _g 15119 = +9.7°C	
										" @ 18:44 = +4.3°C	

py #1

Sun / Mon

(115)

Emulsion Batches:

CSS 386 6 secs Ahead. timing out.....

Date .. 1944 Apr 10/11. Observers .. K.K. / T.Y.

No ORDER SEP. Filter used. OR revealed at this?

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.
CE07164 68	FLATS x 5					00 10 E	+43°		1 sec
69	BIAS (A)								
70	Comp							THAr	5 sec
71	HD 8890	01 22 36	+88 46	19 41 05		06 30 W			88 sec
72	Comp							THAr	5 sec
73	HD 8890	01 22 36	+88 46	19 45 30					255
74	Comp							THAr	5 sec
75	HD 8890	01 22 36	+88 46	19 53 01					300
76	Comp							THAr	5 sec
77	BIAS (A)								
78	Comp								
79	HD 8890 HD 34029	05 09 18	+45 54 00	20 12 43		03 55 W			46 sec
80	Comp								
81	HD 34029			20 15 20					43 sec
82	Comp							THAr	53
→ 83 85	FLATS x 3					04 W	+45 54	TUNG	2 sec

CCD Spectr. Temp. -100°C Dome Temp./Hum. 7.4°C $57\% \text{H}$ Transparency Conditions *Fine* 116

Focus 250 *X note Found That echelle Tilt was*

CCD Gain Spectr. Temp. 90 Dome Temp./Hum. *C LAMÉDA* *Really 18:51 This and previous nights*

Exp. Mtr.	Seeing	Pig Mag.	Sp	Inst <i>X</i>	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				<i>18.40</i> <i>tilt</i>	<i>32</i> <i>1n/mm</i>	<i>W 60u</i> <i>H 500u</i> <i>W 60u</i> <i>H 400u</i>	<i>6300</i>	<i>5c</i> <i>1c</i> <i>3c</i> <i>4c</i> <i>5c</i> <i>6c</i>	<i>K+pgm</i>	<i>11.24x 9K ADU</i> <i>CCDT = -101.7°C</i>	
<i>Zeroed (1st?)</i> <i>392 ?</i>		<i>B 19</i>	<i>F</i>								
<i>980</i>									<i>K+pgm</i>		
<i>1080</i>								<i>4c</i> <i>1c</i>		<i>MAX 11K ADU</i>	
<i>862</i>		<i>0.09</i>	<i>G8W</i> <i>+F</i>					<i>6c</i> <i>5c</i>	<i>K+pgm</i>	<i>10.5 K ADU MAX</i> <i>1.316 Air MASS</i>	
<i>882</i>								<i>6c</i> <i>3c</i> <i>2c</i>		<i>7K MAX ADU</i> <i>MAX K ADU</i>	

Spectr. Temp. Dome Temp./Hum. 15.5° $567/64$ Transparency Conditions *Fine*

Focus *250*

118

Spectr. Temp. Dome Temp./Hum. 75.2° 578
Change To other side of Box for gaps between ORDERS

Exp. Mtr.	Seeing	PV Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				<i>eduelle</i>	<i>300 μ/mm</i>	<i>60 μ</i>					
				<i>17.60mm</i>	<i>.5685</i>	<i>500 μ</i>		<i>2c</i>		<i>MAX 12.3 KADU</i>	
					<i>W=50 μ</i>			<i>1c</i>			
					<i>H=400 μ</i>			<i>3</i>			
<i>880</i>	<i>0.09</i>		<i>G81V</i>					<i>4c</i>	<i>KK ppm</i>	<i>MAX 6.4 KADU</i>	
			<i>1F</i>					<i>5</i>			
								<i>6</i>			
								<i>5</i>			
								<i>5c</i>			
<i>900</i>		<i>B</i>						<i>3c</i>	<i>d Gem KK</i>	<i>MAX 13 KADU</i>	
<i>900</i>		<i>1.9</i>	<i>ACIV</i>					<i>5c</i>		<i>AIR MASS 15.5</i>	
								<i>6c</i>	<i>KK ppm</i>		
								<i>5c</i>			
								<i>1</i>			
<i>1180</i>		<i>V</i>						<i>3c</i>	<i>KK ppm</i>	<i>MAX 11 KADU</i>	
		<i>0.34</i>	<i>F5IV</i>					<i>5</i>		<i>1.60 AIR MASS</i>	
								<i>1</i>			

p943

(119)

Emulsion Batches:

Date 1994 Apr. 10/11..... Observers ... K.K.I. Tan.....

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.
ce07204	HD61421	07 3404	+05 29	21 2016		2 42W			1185
05	Comp							Th Ar	55e
06	Comp							"	"
07	HD62509	07 3912	+28 1600	21 2811		2 44W			143
08	Comp							Th Ar	55
09	HD62509	07 3912	+28 1600	21 3523					180
10	Comp							Th Ar	55
11	"							"	"
12	HD40183	05 5212	+44 5615	21 4448		4 49W			309
13	Comp							Th Ar	55e
14	HD40183	05 5212	+44 5612	21 5446					310
15	Comp							Th Ar	55e
16	Comp								
17	HD83808	9 35.8	+10° 21'	22 1325	22 36				
18	Comp							Th Ar	55e

Pg #4

(121)

Emulsion Batches:

Date 1994 Apr 10/11 Observers KK/TN

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE07219	HD 83808	9 35.8	+10° 21'	22 41 50	23 09 50				167
20	Comparison							T/Ar clear	5
21	bias (4x)								
22	Comp							T/Ar	5
23	HD 87901	10 0303	+12 27 22	23 18 07		02 13 W			264
24	Comp							T/Ar	5
25	HD 87901	10 0303	+12 27 22	23 25 03					295
26	Comp							T/Ar	5
27	Comp							n	4
28	HD 123299	14 01 14	+64 51 14	23 38 12		01 12 E			913
29	Comp							T/Ar	5
30	HD 123299	14 01 14	+64 51 14	23 56 10		00 51 E			1085
31	Comp							T/Ar	5
32	Comp							n	5
CE073353	HD 8890	01 22 36	+88 46	00 30 21					456
35	Comp			39					

Spectr. Temp. ~~+3.0~~ Dome Temp./Hum. $+4^{\circ}\text{C}/59.1\%$ Transparency Conditions *Fine* (122)Focus *1250*

Spectr. Temp. Dome Temp./Hum.

C LAMP

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
900		3.52	Fe II A 7 V	17.60	3.0 285	60 μ 100 μ	6300A	3	KK / km Sp		6000
1065		1.36	B7 V					2	Telluric Std	<i>min. rsk</i> 1 "Heter checked" on during exp! AIR MASS 1.356	
1120								5c			
630	3"	3.65	A0 III					3c	<i>4+ ppm</i>	<i>5/1 ADU MAX</i> <i>1.062 AIR MASS</i> <i>min S/N for middle ORDER</i> <i>at Red end is 200/1</i>	
900	2"							4c			
	2"	1.9	F					5c			
								6c		<i>WRITER</i> Letter	

Spectr. Temp. Dome Temp./Hum. Transparency Conditions F12E 124
 Focus 250
 Spectr. Temp. Dome Temp./Hum. +2.9°C 67.4%RH

Exp. Mtr.	Secing	F ₀ Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				cello 17.60	W 60u	H 500u	6300A				
				X .5685		"					
				cello 18.51	H = 42u = 225					Back Tee original Spectro Blaze	
				X .5695							
760		2	F2								10000
798		2	F2								
						H = 50u = 215					
				cello 18.51	H = 800u	6301	4c1				
600		3 ^{off} 3 ^{on}	F0p	Note, Forgot to Reduce Height to 400u for these last observations noted Apr 11, next night to			5c1		KK pyrim	1.037 H.R. mass	
										All to UCR in 6 HOURS.	
										Ex by x to C007120 test night.	

Pg #1 125 Mon/Tue

Emulsion Batches:

Date 1994 Apr 11/12 Observers [KK] Tn/Hlw

css 386 clock is 8 seconds AHEAD of WWV clock.

File 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.
α07251	Comp							ThAr	5
52	HD8890	01 22 36	88 46 00	20 41 40		7:45 W			816
53	Comp							ThAr	5s
54	HD8890	01 22 36	+88 46	20 56 50		8:00 W			600s
55	Comp							ThAr	5
56	HD8890	01 22 36	88 46 00	21 09 03		8:11 W			600s
57	Comp							ThAr	5
58	Bias (4)								
59	Comp							ThAr	5
60	HD34029	05 09 18	+45 54 00	21 29 19		<u>5:19 W</u>			237
61	Comp							"	5
62	HD34029	05 09 18	+45 54 00	21 35 22		5:25 W			225
63	Comp							"	5
64	Comp								
65	HD 62509	07 39 12	+28 16 00	21 44 31		3:12 W			600

CCD Spectr. Temp. -100°C Dome Temp./Hum. $+5.8^{\circ}\text{C}/43.9\%$ Transparency Conditions *cloudy, but thin*
 Focus $.250$ Fans OFF
 Spectr. Temp. *again = 9.0* Dome Temp./Hum. $0 \quad 0 \quad 256 \quad 1024 \quad 4 \quad 1 \quad \text{ccdfmt}$

126

Exp. Mtr.	Seeing	$\frac{F}{\sqrt{\text{Mag}}}$	Sp.	Inst.	Grating/ Tilt	Slit	Central Emission Wavelength	F.H. C.	Program	Remarks	Quality
				Echelle CCD	300 l/mm	18.51	6300 Å	3			
100	2"	2	F2		300 l/mm grating = 5645	60 μm = 400 μm		4	KK pgm	Through clouds	
220	2"	2	F2					5	KK pgm		
255	2"	<	F2					6	KK pgm		
846		0.1	G8 III + F	Max ASU ~ 11 K				4	KK pgm	Note AirMass = 1.71 at end.	
820		0.1	G8 III + F					5	KK pgm	AirMass (end) =	
593		1.14	K0 III					6	Std Vel		

Spectr. Temp.

Dome Temp./Hum.

4.4°C / 50.6%

Transparency Conditions Thin clouds

Focus ... 250 ...

Spectr. Temp.

Dome Temp./Hum.

128

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	3002/mm 18.51	60x 400µ	6301A	3			
733	2-3	1.14	K0IIIb		x-grating 5625			4	Std. Vel.		
								3			
								1			
								2c		MAX 14K ADU	
				Echelle CCD	17-60	x-grating 5625	6300	2c		Other side forage's new	
								3			
475		1.14	K0IIIb					4	Std. Vel.		
								3			
392		1.14	K0IIIb					5	Std Vel	Cloud thickened at end.	
								3			
								1			
				All to	W.O.R.M.						
				and	perseus.						

CCD Spectr. Temp. -100°C Dome Temp./Hum. $+10.5^{\circ}\text{C}/70.8\%$ Transparency Conditions Clear 130

Focus $6.85/6.82$

Spectr. Temp. $\text{again} = 90$ Dome Temp./Hum. $480 \ 0 \ 50 \ 1024 \ 4 \ 1 \ \text{ccdfmt}$

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800l/mm G=5115	300 μ	5303	1			
								3/4	Focus Test	T=10.4 foc=6.85	good
								5			
53		10.5	M0					6	Vys Pgm		
								7			
								8			
406		7.5	M2					9	Vys Std.		
								10			
								1	bsum 4. Lat		
								11			
				Cass CCD	1800l/mm G=6065	300 μ FULL	6600R	1		START of Blm pgn work	
								3/4	Focus Test	T=10.8 $^{\circ}\text{C}$ foc=6.82	good
								5			
4900		3.6	A1Z					6	Telluric Std.	MAX 16K/ADU	
								7			

Pg #2

131

Date 1994 Apr 14/15 Observers [Bl] Tn/Hlw

Emulsion Batches:

Position Encoders. Not functioning

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination From Dec	Comparison	
								Type/Filter	Exp.
CC 21133	Comp						CIRCLE	FeAr Clear	60sec
34	HD93521	10 42 42	+38 06 00	21 14 56			+37 34		743
35	"	"	"	21 30 56					653
CG 40090 - 40093	"	"	"	22 14 2	(Image a box slit)			4x	0.67sec
CG 40094/5	"	"	"					2x	.133 sec
CC 21136	Comp							FeAr Clear	~ 60s
37	HD93521	10 42 42	+38 06 00	21 46 38		00 24 W			655
38	"	"	"	21 57 59		0:35 W		699 seconds	699
39	"	"	"	22 10 06		0:48 W			701
40	Comp							FeAr Clear	60sec
41	HD 93521	10 42 42	+38 06 00	22 24 06		1:02 W			713
42	"	"	"	22 37 11					905
43	"	"	"	22 52 41		1:33 W			820
44	Comp							FeAr Clear	60s
45	HD93521	10 42 42	+38 06 00	23 09 43		1:51 W			902

Spectr. Temp. Dome Temp./Hum. $\pm 10\% \approx 72\% \text{H}$ Transparency Conditions SI Hazy (132)

Focus 6.82

Spectr. Temp. Dome Temp./Hum.

Both Fans on at START
N E FAN on only after opening

C. LAMBERTA

Exp. Mtr.	Seeing	F _v Mag.	Sp	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
Exp meter Failed here				CAISS CCD	15000/line G=6065	3000 Full	6604B				S/N
53??	7.04	0.95	V				6604B	9c	Bln 0* pjm		180/1
??	1.2	"	"					10c	"		160
"	"	"	"						Seeing TEST	Tel East side Dome S E, no wind	
"	"	"	"					11	"	"	
1400	1.2	7.04	0.95	V				12c	Bln 0* pjm		160
1290	"	"	"					13c	"		150
1500	"	"	"					14c	"		150
								15			
920	7.04	0.95	V					16	Bln 0* pjm	88% Rel. Humidity on catwalk @ 2240	150
1500	2"	"	"					17	"		↑
1460	"	"	"					14	18c		150 170
								18		90% catwalk @ 2320	
1300	7.04	0.95	V					19	Bln 0* pjm		145

Spectr. Temp. Dome Temp./Hum. 8.2°C/80.4% Transparency Conditions Clear, a bit hazy
 Focus 6.82
 Spectr. Temp. Dome Temp./Hum.

134

Exp. Mtr	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality SNR
1300		7.04	09.5V	Cass CCD	1800L/mm G=6065	300μ	6604	20	Bln 0* pgm		145
								21			
								1			
1320	2"	7.04	09.5V					22	Bln 0* pgm		150/1
1160								23	"	AIR MASS 1.151	135
960	2.4"							24	"		120
								25			
								26		MAX 123K ADU/pixel	
1000		7.04	09.5V					27	Bln 0* pgm		130
937			"					28	Bln 0* pgm		125
								5		95% ! on catwalk @ 0100	
								1			
780		7.04	09.5V					6	Bln 0* pgm		
								7			

Spectr. Temp. Dome Temp./Hum. $+6.4^{\circ}\text{C}$ $85.3\% \text{H}$ Transparency Conditions ... inc. ... Fog
 Focus .. 6.82
 Spectr. Temp. Dome Temp./Hum.

136

Exp. Mtr.	Seeing	F. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
180		136	BTV	C455 CCD	1800/mm G-6065	300 Full	6604A	9c	Telluric Std	MAX 7.5 K ADU MAX 12.7 K ADU AIR MASS = 2.64 VERY Deep Telluric lines	
250								10c	"		
								11			
								1			
								13		Max ADU = 11.7 K Humidity Close: Fog + Dripping + 96% Relative Humidity	
				East Side of Piers							
				All to WORM & Perseus.							

Spectr. Temp.

Dome Temp./Hum. +3.2° 61%

Transparency Conditions PARTIAL Clearing

Focus 6.82 *

Temp dropping fast

Tipp from Ambient by O2EST 138

Spectr. Temp.

Dome Temp./Hum.

C. L. M. B. O. A.

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800/mm G=5910	300	6395A	3/4	focus test		
								1			
								5			
234	4*	6.15	G0.0					6	Rm pgm	Totally cloudy now	S/N 179/1
								7			
								8			
1836		-0.04	K2 III					9	Sta. Vel.	Through thick clouds	
								10			
								10			
								1			

Spectr. Temp. Dome Temp./Hum. $+5.3^{\circ}\text{C}$ 4484 Transparency Conditions *Fine*

Focus

(140)

Spectr. Temp. Dome Temp./Hum. *2.2 Air Mass*

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					18000/1mm G-4815	300 FWH	4870				
520							c 4870A	1			
311		298	B2M				c 4870A	5			
320		4	"				c 4870A	6			
352		4	"					7			
537								8			
530								50i			
1009		362	B81t					50i			
		4	"					90		AIR MASS 3.93	
		4	"					100i			
		4	"					90i			
								110i			
								120i			
								5			
								1			
								15			

S/N
R Hedy 136/1

Pg #2

(141)

Emulsion Batches:

Date .. 1.9.94. Apr. 17/18 Observers .. K.G.S. / T.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.
CC21205	HD 22192	3 ^h 29.4 ^m	+47° 51'	21 15 55					352
206	"	"	"	21 22 57					528
207	Comp.							FeAR clear	60
208	Comp							"	60
209	HD 2630	4 ^h 59.5	+41° 06'	21 38 08					215
210	"	"	"	21 42 43					382
211	Comp							FeAR clear	60
212	b125(4)								
213	Comp							FeAR clear	60
214	HD 103287	11 ^h 48.6	+54° 15'	22 04 28					291
215	"	"	"	22 10 19		00 06 E			602
216	Comp							FeAR clear	60
217	Comp							"	60
218	HD 34759	5 ^h 14.7 ^m	+41° 42'	22 30 56		06 53 W			946
219	"	"	"	22 47 22					890

Spectr. Temp. Dome Temp./Hum. 63.7 74.8 % Transparency Conditions 142

Focus

Spectr. Temp. Dome Temp./Hum. *c. LAMBDA* Tel on East Side of PERS Tower Mt

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Not counting	8"	4.23	BSV	CASS CCD	1500 h/m G-4815	300 μ Full	4870A	13			
		"	"					14			
								5			
								5			
		2.99	BSV					15		H. note ^{SIN} 170/1	
								16			
								5			
								1			
								5			
180	6"	2.44	AOV					17	* SPECTRUM STD AISKADY MAX Std Star Air MASS 1.02	SIN 7200/1	
276								18	Note* Program stars all had very Large Air masses.		
431								5			
533								5			
0	8"	5.09	BSV					19	Std star	(70% SIN) cloudy, higher 2.65	Air MASS
0	1	"	"					20			

Spectr. Temp. Dome Temp./Hum. ... $+3^{\circ}$... $+43^{\circ}$ 1 Transparency Conditions

Focus

Spectr. Temp. Dome Temp./Hum. *clambda*

144

Exp. Mtr.	Seeing	Fig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CRSS CCD	1800/1/6 G=4015	800" Exit	4870AP	5		Tel still on East side	
								21			
								22			
10801		331	A2V					23	Std. Star	max = 6 K AD4	
12010		"	"					24			
								5			
18782		214	A3V					25			
18844		"	"					26			
9637		"	"					26			
								5			

Pg # 4

(145)

Date 1994 April 17/18... Observers KOK, I. To... [SN FOR BH]

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.
CC21239 40	Comp / Stellar		Hα TWAN					FENE A 1/8	4/6
42	BIAS(A)								
41	Comp		1950					FENE A 1/8	6sec
43	SN 1994I	13 27 48	+17 26 58	01 04 47				FENE A 1/8	699
44	Comp							FENE A 1/8	6sec
45	SN 1994I			01 24 45					1040
46	SN 1994I OR M51 nucleus?			01 43 30					325
47	Comp							FENE Ap/8	6sec
48	BIAS(A)								
49	Comp		1950					FENE Ap/8	6sec
50	Feige 92	14 09 41	+50 21 07	01 59 28		0131 W			
51	Comp							FENE Ap/8	6sec
52 → 55	FLATS A					01 40 W	50°	Tung Ap/8	9sec
56 - 58	FLATS x3					"	"	"	7sec
59	Comp		No Red Filter. (At Nova Cas 93 posn)					FENE Ap/8	6sec

For Comp only
Red ORDER SEPT Filter

Spectr. Temp.

Dome Temp./Hum. $+2.5^{\circ}$ 96.9%Transparency Conditions *s1 hazy*

(146)

Focus ... *7.10**Another Topup done Before SN1994I*

Spectr. Temp.

Dome Temp./Hum. *2.10/94**Tel still east side of Piers*

Exposure No.	Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1/6	+2.8°C	Set	7.10		CASS CCD	150 nm/mg G 2400	300 FULL	6250A	24/30	Focus test	OK	
0		peak	13?									
					note OG 560 ORDER SEP NOT used, as it made it impossible to see image.							
									5c			
									6c	SN1994I	pgm	VERY HARD TO see as slit
									8c			
									9c			
									10c		Some H-L emission seen	
									5c		The "fuzzy" but brighter image	
									1c		2 15 arc secs NE of previous	
									5c		SN1994I frames	
									11c	std	for SN1994I	
									7c			
									3c			
									4c			

Spectr. Temp. Dome Temp./Hum. $+1.7^{\circ}$ $51/64$ Transparency Conditions $sl. hazy$
 Focus ... $7:10$
 Spectr. Temp. Dome Temp./Hum.

(148)

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	poor			CASD CSD	1500nm G-2400	300 full	6250A	12a	12a-593	? very difficult	
								13a	" "	Had to wait	
								4c			
								1			
	Focus			CASD CSD	1500nm G-4315		4869A				
11	1787	6.51	6901 ash				4869A	"			
11	1676	6.51	6901 ash				4869A	"			
								6			
								7	Fe-pgm		
84	757	4"	75	B5				8	"	S/N HAN-60/1	
16	976	"	"					2			
								1			
								28			

149

Date 1994 APRIL 18/M Observers .. [RBT]/Sgs./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.
CC 212 79	COMP						Red Filter	Felle Ap/8	6s
80	BIAS (4)		1950						
81	SN 1994 I	13 27 48	47 26 58	0:54:08	0:54:08		OG 560		274s
82	"	"	"				"		
83	"	"	"	01 21 32			"		1003s
84	COMP						Red Filter	Felle Ap/8	6s
85	BIAS (4)								
86-88	FLATS X3						OG 560 RED FILTER IN (same as stellar filter) ^{0000ME +420}	TUNG Ap/8	7sec

Spectr. Temp. Dome Temp./Hum. $+7.0^{\circ}\text{C}/66.9\%$ Transparency Conditions PARTLY CLOUDY; HAZY
 Focus ... 7.05
 Spectr. Temp. Dome Temp./Hum. $+7.2^{\circ}\text{C}/70\%$ 90 CGAIN than solid cloud (150)
CIT 604

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS LCD	150 μm $G = 2400$	200 μm FULL	6250 Å	3c:			
								1c:			
	no							4c:	BT1	VERY HARD TO SEE ANYTHING ON TV THERE MIGHT BE SOMETHING IN SPECTRUM OFFSETS: Ra. -0.06 Dec: +0.03	
								5c:	*		
								6c:	W	After using Home push to see M51 nucleus better (got it now) (2 H α em. components)	
								8c:		No, probably H II Region or M51 says Ernie Squist TH Apr 27	

(151) Pg #1 Tues/Wed

Date 1994. April. 19/20. Observers KOK. I.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.
CC2289 90	Comp / Stellar	HARTMAN				00	+47°	FeAr Clear	60/75
91	BIASCAJ								
92	Comp						FeAr	FeAr clear	60
93	5/ (HD 126315) HR 5191	1343.6	49 20	00 20 32					53
94	"	"	"	00 23 41					48
CC21295	Comp							FeAr Clear	60s
CG40096 -99	HD 120245	134311	+3823 33	20045				4x	67ms
CG40100 101	"	"	"	"				2x	133ms
CC21796	bias (4)								
97	Comp							FeAr Clear	60s
98	HD 183656	19 2533	+03 14 08	01 07 40					799
99	"	"	"	01 22 14					910
1300	Comp							FeAr CLEAR	60s
01	"							"	"
02	HD 192954	20 12.6	15 33 734	01 46 32		04 28 E			1646

Spectr. Temp. Dome Temp./Hum. 50°C $59\frac{5}{8}\%$ Transparency Conditions *PART. cloudy*Focus *6.92* *clearing up* (152)Spectr. Temp. Dome Temp./Hum. *2.2 um BBL* *90 CGAIN* *CCDT \rightarrow -100%*

Exp. Mtr.	Seeing	V. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
690	$T=+5.0^{\circ}\text{C}$			CAS CCD	1800W G-4815	300 FULL	4869A	3/4	Focus Test		
7980		1.67	B ₂ V					6ci	Kok ppm		
7860		"						"	"		
	poor	6.7	F2						Seeing Test Done west		
	poor								" " small ^{WNW} wind		
799	8"	6.05	A0e shell					7ci	Kok ppm		S/N > 100/1
998								8ci	" "	3.12 AIRMASS	
								5ci			
								5ci			
600	7"	7.3	B9					9ci	Kok ppm	2.60 AIRMASS	

Spectr. Temp. Dome Temp./Hum. $+3.5^{\circ}C$ $76.4\%H$ Transparency Conditions *CLEAR*Focus ... *G:90**(154)*

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
490	5"	7.5	B9	CASS CCD	1800nm G=7815	300 FULL	4869A	10c	Kok pgm		
								5c			
								1c			
								5c			
1400	6"	6.08	A104					11c	Kok pgm	2.05 HIA mass	
1400			7					12c			
								5c			
								13c		11.11X 12.5X AD4	
								14c			
320	5"	7.9	B8					15c	Kok pgm		S/N ~ 70/1
380								16c			
486								17c			
								5c			
								18c			
								1a			

pg 4/155 Wed/Thurs

Smt = Smith, of YAKU (RM)

Emulsion Batches:

Date 1994 Apr 20/21 Observers Sys/Smt./Tn.....

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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.
CC21321-2	COMP/STELLAR								
23	BIAS (4)								
24	COMP							FeAr Clear	60s
25	HD123782	14 04 36	49 56 00	19 51 36 20 06 42		4h 20E			172
26	COMP							FeAr Clear	60s
27	COMP							FeAr Clear	60s
28	HD126053	14 18 06	01 43	20 18 10		4h 15E			663
29	COMP							FeAr Clear	60s
30	COMP							FeAr Clear	60s
31	HD123782	14 04 36	49 56 00	20 39 41		3h 38 E			
32	COMP							FeAr Clear	60s
33-35	FLATS X 3					03 35E +50°		Tung 1/2	5s
36	BIAS (4)								
37	COMP							FeAr Clear	60s
38	HD126053	14 18 06	01 43	23 01 39		1h 36E			441s
39	COMP							FeAr Clear	60s

Spectr. Temp. Dome Temp./Hum. $+5.4^{\circ}\text{C}/41.0\%$ Transparency Conditions MOSTLY CLEAR
 Focus 6.83 HIGH CLOUDS AT TIMES
 Spectr. Temp. Dome Temp./Hum. 156

Exp. Mtr.	Seeing	V-Prp. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Cont. X Resolution	P.H.	Program	Remarks	Quality
				CASS CCD	1800 $\text{\AA}/\text{nm}$ $G=5410$	300 μ FULL	6400 \AA			GOOD NORMALISATION	
8000	3"	5.25	M2IIIab					5ci 7ci 8ci	std vel	12K MAX ADU	
1000	3-4"	6.27	G1V					9ci 10ci 11ci	std vel	2.96 AIR MASS CLOUDS COMING IN	
925	3-4"	5.25	M2IIIab					12ci 13ci 14ci 15ci	Std Vel	SOME CLOUDS	S/N 200/1
1146	4"	6.27	G1V					16ci 17ci	std vel	FLATS @ 3h 30E, +50' Arc 14K MAX ADU	

Spectr. Temp.

Dome Temp./Hum. $+33^{\circ}\text{C}/44.7\%$

Transparency Conditions FEN. CLOUDS. SOUTH.

Focus 6.83

Spectr. Temp.

Dome Temp./Hum.

158

Exp. Mtr.	Seeing	✓ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 h/p/m G=5910	300μ FULL	6400A	1ci			
								18ci			
2000	4"	5.25	MIIIab					19ci	RV STD	MOSTLY CLEAR NOW	
								20ci			
								21ci			
1000	3.5"	6.27	GIV					22ci	RV STD		
								23ci			
								24ci			
2000	4.6"	5.25	MIIIab					25ci	RV STD		
								26ci			
								26ci			
1000	6"	6.27	GIV					27ci	RV STD		
								28ci			
								29ci		AT POSITION OF CC21351 14.5K MAX ADU	

Spectr. Temp. Dome Temp./Hum. $+2.7^{\circ}\text{C}$ 46.9% H Transparency Conditions

Focus ... 6.83

Spectr. Temp. Dome Temp./Hum.

(160)

C. L. M. B. D. A.

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 \ln/mm C = 5910	300 μ FULL	6400A	2c.			
1000	~8"	6.15	G0 Ib				"	30c.	Sgs p9m	CLOUDS IN N SEEING BAD	
								31c.			
								2c.			
2000	4"	5.25	M2 II ab					3c.	RV Std	THROUGH CLOUDS	
								2c.			
								4c.			
1050	5"	6.27	G1 Y					5c.	RV Std	THROUGH CLOUDS	
								8c.			
								1c.			
								8c.			
2030	4.5"	5.25	M2 II ab					9c.	RV Std	CLEARING	
								10c.			
								11c.			
								1c.			
										12.6 K MAY 400	

Pg #4 (161)

Emulsion Batches:

Date 1944 20/21 Apr. Observers Sgs/Smt/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.
CC21374	COMP							FEAR CLEAR	60s
75	HD 126053	14 18 06	01 43	1 35 11		0h 59m W			477s
76	COMP							FEAR CLEAR	60s
77	COMP							"	60s
78	HD 123782	14 04 36	49 56 00	1 53 26		1h 27m W			138s
79	COMP							FEAR CLEAR	60s
CG46102 ₋₀₅	HD 144579							4X	67ms
CG40106 ₋₀₇	"							2X	133ms
CC21380	COMP							FEAR CLEAR	60s
81	HD 126053	14 18 06	01 43	2 14 46		1h 35m W			270s
82	COMP							FEAR CLEAR	60s
83	BIAS(4)								
84	COMP							FEAR CLEAR	60s
85	HD 123782	14 04 36	49 56 00	02 29 05		2h 2m W			150s
86	COMP							FEAR CLEAR	60s
87-89	FLATS x3					2h 5m W		TUNG 1/2	5s

Spectr. Temp. Dome Temp./Hum. $+2.3^{\circ}\text{C}$ 47.9% Transparency ConditionsFocus 6.83

Spectr. Temp. Dome Temp./Hum.

162

Exp. Mtr.	Seeing	Dis. Mag.	Sp.	Inst.	Grating/Tilt	Slit	CENTRAL 2 Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 $\text{\AA}/\text{mm}$ G = SA10	300 μm FULL	6400 \AA	10ci			
1020	5"	6.27	61V					11ci	RV STD	THIN CLOUDS	
								12ci			
								12ci			
2050	4.5"	5.25	M2IIIab					13ci	RV STD.	FURTHER CLEARING	
								14ci			
					NE FAN ON ALL NIGHT				SEEING TEST	DOME WEST	
									"	MED. NW WIND	
								15ci			
1140	3"	6.27	61V					16ci	RV STD.	CLEAR	
								17ci			
								1ci			
								18ci			
2030	3"	5.25	M2IIIab					19ci	RV STD	CLEAR	
								20ci			
								21ci		12.5K ADV MAX	

Pg #5 (163)

Emulsion Batches:

Date 1994 20/21 Apr Observers Sgs/Smt/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.
CC21390	COMP							FeAr CLEAR	60s
91	HD 126053	14 18 06	01 43	02 45 34		2h 07m W			315s
92	COMP							FeAr CLEAR	60s
93	BIAS (4)								
94	COMP							FeAr CLEAR	60s
95	HD 123782	14 04 36	49 56 00	03 01 50		2h 35m W			147s
96	COMP							FeAr CLEAR	60s
97	COMP							FeAr CLEAR	60s
98	HD 126053	14 18 06	01 43	03 13 34		2h 34m W			278s
99	COMP							FeAr CLEAR	60s
CC21400	COMP							FeAr CLEAR	60s
01	HD 123782	14 04 36	49 56 00	03 26 37		3h 00m W			145s
02	COMP							FeAr CLEAR	60s
03	BIAS (4)								
04-06	FLATS x3					3h 05m W		TUNG 1/2	5s

Spectr. Temp. Dome Temp./Hum. 11.6°C $47.9\% \text{H}$ Transparency Conditions

Focus 6.8.3

Spectr. Temp. Dome Temp./Hum.

(164)

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	C. LAMPADA Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 λ/mm 6-5910	300 μm Full	6400 \AA	22ci			
1000	4-5"	6.21	61Y					23ci	RV Std.	CLEAR!!	
								24ci			
								1ci			
								24ci	RV Std.	CLEAR!!	
2000	3-4"	5.25	M20ab					25ci	RV Std.	CLEAR!!	
								26ci			
								26ci			
1020	4"	6.27	61Y					27ci	RV Std.	CLEAR!!	
								28ci			
								28ci			
2010	3-4"	5.25	M20ab					29ci	RV Std.	CRYSTAL!!	
								30ci			
								1ci			
								31ci			
								32ci			
										12.0K MAX ADU	

Spectr. Temp. Dome Temp./Hum. $+0.9^{\circ}\text{C}$ 50.9% H Transparency Conditions ... F.W.R.

Focus 6.83

Spectr. Temp. Dome Temp./Hum. $+0.6^{\circ}\text{C}$ 51.6% H

(166)

Exp. Mtr.	Seeing	Exp. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	CEYDOR A Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1000 l/h G-5910	300 μ FNL	6400A	2ci			
1000	4"-5"	6.27	61V					3ci	RV STD.	CRYSTAL !!	
								4ci			
								4ci			
2000	3"-4"	5.25	M2IIab					5ci	RV STD.	CRYSTAL	
								6ci			
								1ci			
								2ci			
?	5"-6"	6.27	61V					7ci	RV STD.	CRYSTAL . CLEAR. F	
								8ci		perhaps spectrograph (exposure after)	
								8ci		controller failure.	
?		7.48	60IB					9ci	Sgs Pgm	" + SUN COMING UP	
								10ci		↑ almost 100:1 SNR	
								11ci		12.8 K MAX ADU	
								1ci			

CLD -100°C
Spectr. Temp.

Dome Temp./Hum. 6.2°C / 39.4% Transparency Conditions Clear

Focus 6.85

Spectr. Temp. 90.990 in

Dome Temp./Hum. 465 0 50 1024 41 ccd/mf

168

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	18000/mm G=5.15	300μ FULL	5303A	1	bsum 4. bat		
								3/4	Fovus Test	Heurikon crashed after sav'g cc21426, had to be reset.	
								3			
690		7.48	MZ					4	Vys std.	some twilight	
								5			
520		7.48	MZ					4	Vys Std		
								5			
								1	bsum 4. bat		
								6		clock; f written, Then CSS 386 froze up	S/N
61	2"	10.54	MO					1cc	Vys Pgm	Heurikon Reset below this exp	40/1
								2			
60		10.54	MO					3	Vys Pgm		
								4			
								5			
								1			

Pg#2

(169)

Emulsion Batches:

Date 1994 Apr 21/22 Observers [Bln] Tn/Hlw

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.
CC21442/3	Comp/Stellar	Hartman						FeAr Clear	60/60
44	Bins (4)								
45	Comp							"	60
46	HD 77327	08 56 48	+47 33 08	21 05 36		01 46 W			94
47	Comp							FeAr Clear	60
48	Comp							"	"
49	HD 93521	10 42 42	+38 06 00	21 15 32					606
50	HD 93521	10 42 42	+38 06 00	21 26 47					720
51	HD 93521	10 42 42	+38 06 00	21 39 14		0:45 W			637
52	Comp							FeAr Clear	60
53	Bins (4)								
54	HD 93521	10 42 42	+38 06 00	21 57 27					635
CG 40108	4x "	"	"	22 10				4x	67msc
CG 40112/13	"	"	"			1:05 W		2v	133ms
CC 21455	HD 93521		"	22:11:58					665

Spectr. Temp. Dome Temp./Hum. 4.2°C/41.1% Transparency Conditions Clear
 Focus 6.85
 Spectr. Temp. Dome Temp./Hum.

170

Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800l/mm θ = 606°	300μ	6604A	3/4	Focus Test		good.
								1			
								5			
5100	2.2"	3.6	A0		~330	S.N.R.		6c	Telluric Std	Max adu ~3000	
								7c			
								8			
1700		7.04	0.95V					9	Bln 0* pgn		
2100		7.04	0.95V					10	Bln 0* pgn		
2044		7.04	0.95V					11	Bln 0* pgn		
								12			
								1			
2008	2.2"	7.04	0.95V					13	Bln 0* pgn	Auto-Guiding with SBIG	S/N 170/1
		"	"			Above 300μ slit			Seeing test		
		"	"						" "		
2200								14	Bln 0* pgn		~180 SNR.

Spectr. Temp. Dome Temp./Hum. 3.3°C/40.9%. Transparency Conditions Clear

Focus 6.85

Spectr. Temp.

Dome Temp./Hum. 1.7°C 48.4% H

172

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Control Exposure wavelength	Str.	Program	Remarks	Quality
2200		7.04	0.5 V	Cass CCD	1800 l/mm G=6065	200 μ m	6604A	15	Blnd O* pgrm	Auto-guiding with SBIG	SNR ~185
								16			
								1			
1700		7.04	0.5 V		~155			17	Blnd O* pgrm	} Auto-guiding	
1830		7.04	0.5 V		~160			18	Blnd O* pgrm		
1820		7.04	0.5 V					15	Blnd O* pgrm		
								18			
2150	1.2"							19		} 1.25 Air mass hand guided.	
1915	2"							20			
1990								21			
								22			
1948								23			
1930								24			
2170	2"							25			
								26			
								100			

Spectr. Temp. Dome Temp./Hum. $7.1.8^{\circ}\text{C}$ $49.1\% \text{H}$ Transparency Conditions *Fine* (174)

Focus ... *6.85*

Spectr. Temp. Dome Temp./Hum. 0.0°C $57.2\% \text{H}$ *Tel East side all night*

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	800nm G-2065	300 Full	E600R	2c			
2030	2"	7.04	09.5V					27c	Bl. 0* pgrm	Auto-guiding with SBIG	
2000								28c	"		
								5			
								6			
7400								7	Telluric std	Max ADU ~ 14000	
								8			
								9			
1596	2"	7.04	09.5V					10	Bl. 0* pgrm	Auto-guided	
								11			
								1			
								29			
Focus	7.15			CASS CCD	150nm/mm G=2335	300 Full	5640A	3c		Blue half weak MAX 15K ADU	
0		13						4c	SN 1994I pgrm	(SBIG guided)	
								5	60 sec Int. on SBIG	Focus made	
								1			

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions ... Fine - v.s. / Wazy

Focus .. 7:15 ..

Spectr. Temp.

Dome Temp./Hum.

Tel still East side

176

Exp. Mtr.	Seeing	Mag.	Sp	Inst	Grating/ Tilt	Slit	Emulsion	P.H	Program	Remarks	Quality
				CAD5 CCD	150mm G-2335	300 FULL	5640A	5c			
0	2"	11.62						6c	STL Fog SLOW		
								5c			
					150mm G-2400	300	6250A	9c			
								10c	STL Fog SLOW		
								11			
								11			
0	13?			Twilight.				12	SN pgn	OK on SBIG vid. Difficult guiding.	
				↓				13			
				Dawn				14			
								1			
All to Perseus & WORM.											

Pg#1

177

Date 1994 Apr 22/23 Observers Kok/Hlw

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.
cc21512/3	Comp/Stellar	Hartman				0:20W	+41:48	Fear Clear	30/40
514	Bias (avg of 4)								
515	Comp							Fear Clear	60
516	HD15963	2 ^h 28 ^m 54 ^s	57 38 7.7	201242		7:30W			300
517	HD15963	s	s	201944		8:01 W			180s
518	Comp							Fear Clear	60
519	Bias (4)								
520	Comp							Fear Clear	60
521	^{wrong star} HD24841	1994.3: 5 50 57	28 15 39	21 11 57					600
522	Comp							Fear Clear	60
523	HD248411	5:45:30	+28:14	21 34 26		5:40W			608
524	n	n	n	21 45 46		6:10 W			1800
525	Comp							Fear Clear	60
526	Bias* (4)								
527	→ Comp								
528	HD45910	6 ^h 25.6	85 56	22 26 08		6:04 W		Fear Clear	60 86s

CCD
 Spectr. Temp. -100°C Dome Temp./Hum. $+6.6^{\circ}\text{C}/35.2\%$ Transparency Conditions Clear
 Focus 6.90 Fans ON
 Spectr. Temp. $\text{gain} = 90$ Dome Temp./Hum. $480\ 0\ 50\ 1024\ 41\ \text{ccdfmt}$

78

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800 λ /mm G: 4815	300 μ	4869A =HR	3/4 1	Focus Test		good
								5			
195	2-3"	7.8	AOp					6	Kok pgm	50 S/N	
1055	^	-	-					7	"	140 S/N	
								8			
								1			
								9			
								10			
								11			
								12	Kok pgm		
								13	"		
								14			
								1			
								15			
								16			
				6.77	B2						

Exposure
stop running
0 slow.

~10 ~K
~~8.8~~ Ape

pg #2

179

Date 1994... Apr. 22/23 Observers ... Kaky.. H.l.w.....

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.
CC21529	HD45910*	6h 25.0	05 56	22 54 45		60047W			394
530	Comp								60
531/2	Comp/stellar	Hertzsprung						fear clear	20/30
533	Bias(4)								
534	Comp							fear clear	60
535	HD183656	19 25 31	3 14 08	00 55 48					601
536	Comp							fear clear	60
537	HD183656	19 25 32	3 14 08	01 09 13					1200
538	Comp							fear clear	60
539	Comp							fear clear	60
540	HD192954	20 12 07	15 33 07	01 38 41					900
541	"	"	"	01 53 59					908
542	Comp							"	60
543	Bias(4)								
544	Comp							fear clear	60

Spectr. Temp.

Dome Temp./Hum. +4.2.....30.7

Transparency Conditions clear + some

Focus 6.90/6.95

Spectr. Temp.

Dome Temp./Hum.

180

very thin
cloud.

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		6.71	B214c					16		SV ~ 0	
								18			
					1200 lines 30µ G = 4460		43 to A	3/4		Focus changed to 6.95	
								5			
772		6.05	H215h					6		We do not see emission at H γ , is this the right star? It's the only one in the field. 12" → S/W	
								7			
2150		6.55	H215h					8			
								7			
								10			
452		7.3	B9					11			
478		"	"					12			
								13			
								1			
								14			

Pg #3

181

Date 1994 Apr 22/23 Observers Kok/Hlw

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.
cc21545	HD193182	20 13 49	+39 16 59	02 18 46					912
546	"	"	"	02 34 37					902
547	Comp							Fe Ar clear	60
548	bias (4)								
549	Comp							Fe Ar clear	60
550	HD 195407	20 26	36 39 77	02 57 07					900s
551	HD 195407	20 26 00	36 39 08	03 12 49					900
552	Comp							Fe Ar clear	60
553	Comp							"	"
554	HD 195325	20 25 30	10 33 39	03 34 21					700
555	"	"	"	03 46 26					700
556	Comp							Fe Ar clear	60
557	bias (4)								
558	Comp							Fe Ar clear	60
559	HD 220300	23 17 00	55 49 00	04 09 16					1064

Spectr. Temp.

Dome Temp./Hum.

+2.3°C / +3.9%

Transparency Conditions

Clear

Focus 6.95

Spectr. Temp.

Dome Temp./Hum.

182

Exp. Mtr.	Seeing	Mag	Sp.	Inst	Grating/ Tilt	Slit	Emulsion	pH	Program	Remarks	Quality
1012		6.5	B711	Cass CCD	1800/mm G=4460	300µ	4340A	15	Kok pjm		
R016		"	"					16			
								17			
								1			
								18			
313		7.0	B711					19			
350		7.7	R016					20			
								21			
								22			
1285		6.5	Alesh					23			
1415		"	"					24			
		R016						25			
								1			
								26			
338		7.6	B8					27			

Spectr. Temp.

Dome Temp./Hum.

72.2 / 43.9

Transparency Conditions ...

clear

184

Focus

Spectr. Temp.

Dome Temp./Hum.

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
270 278					1800 l/mm G=4060	300μ	4340A	28 29 1	1300 500	Into Sunrise, some GZ II background	
					1800 l/mm G=4060		4340A			Because we forgot to do them at the beginning	

P541

185

Emulsion Batches:

Date ... 1994 Apr. 26/27 Observers ... Kakl. Hlw.....

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 21573	Bias (4)								
74	Camp							FeAr clear	60
75	HD 32630	4h59 ^m	41 06	22 42 29					447
76	Camp							FeAr clear	60
77	Camp							FeAr clear	60
78	HD 34759	5 14.7	41 42	22 58 30					610
79	Camp							FeAr clear	60
580-2	Plots X3					~7 W	+41°	FeAr long clear	30s
583	Bias (4)								
584	Camp							FeAr clear	60
585	HD 97633	11 09 00	15 59 00	23 30 37					200
86	"	"	"	23 35 52					200
87	Camp							"	60
88	Camp							"	60
89	HD 102647	11 43 00	15 08 00	23 50 27					886
90	"	"	"	23 54 43					235

Spectr. Temp. ^{CD} -100°C

Dome Temp./Hum. 15.6...78%

Transparency Conditions clear with haze

Focus 6.85

Fan ON

186

Spectr. Temp. gain = 90

Dome Temp./Hum. 48° 0 50 1024 4 1 ccd fant

48° 0 50 1024 4 1 ccd fant

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/Filter	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	18000/mm G=4460	300μ	4340A				
1100	2.97	B3V						3ci		Spent first 3 hours trying to remove moisture from CCD window. Used hair dryer, etc.	
								4ci	Pgm 1st		
								5ci			
								6ci			
2444	4.91	B5V						7ci	Pgm 1st	87% Relative Humidity on catwalk @ 2300	
								8ci		40% @ 2330	
								9ci		42% @ 0000	
								1			
								10			
4700	3.31	A2V						11	stand		
4300	4	2						12	"		
								13			
								14			
5000	2.4	A3V						15	stand		
10000	4	4						16	"		

Pg #2

187

Emulsion Batches:

Date 1994 Apr. 26/27 Observers Kokf. H. W.

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 21591	Comp							TeAr clear	60
592	bias(4)								
593-5	Flats x 3							Tung clear	30
CG 401147	4x HD 128718	14 33 24	48 39 00	~ 00:20			0:13 E	+48°	.067
CG 40118.9	2x "	"	"		0:24				.133
cc 596-7	Comp/Stellar Hartman							FeNe clear	20/30
21598	bias(4) ← this was saved								
cc 21599	Comp							FeNe clear	60
600	HD 183656	19 25 328	3 14 08	24 50 52			4 35 E	+3°	1272
601	"	"	"	01 12 46					12891
602	Comp							FeNe clear	60
603	Bias (4)								
604-608	5x Flats							Tung clear	60s

(CC1)
 Spectr. Temp. -100°C Dome Temp./Hum. $+7.0^{\circ}\text{C}$ 54.5% Transparency Conditions *Positive clarity*
 Focus 6.80
 Spectr. Temp. Dome Temp./Hum.
485 0 50 1024 4 1 CCD FMT
90 GAIN E
190

Exp. Mtr.	Seeing	✓ Prg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 $\mu\text{m}/\text{mm}$ $\lambda = 5910$	300 μm FULL	6400 R				
2000			Q.77 K2 III					30			
								40	Av std		
								50			
								60		1000 MAX ADU	

CCD
Spectr. Temp. -100°C
Focus 6.90
Gain 90
Spectr. Temp. 90

Dome Temp./Hum. $+6.8^{\circ}\text{C}/59.9\%$
Dome Temp./Hum. $+5.3^{\circ}\text{C}/60\%$

Transparency Conditions Partially Cloudy
Dome Fans OFF

465 0 50 1024 4 1 ccdint.

192

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	center wavelength	PH	Program	Remarks	Quality
				Cass CCD	18002/mm	300 μ	5303 \AA	1	bsum 4 bat		
					G=515			3			
	4"	7.5	M2					4	Vys Std. Std.		
								5		*Check <u>All</u> Comps, Could be a Hartman Mask problem.	
								6			
	0	10.9	M0					7	Vys Pgm	*Note: Rack Motor malfunctioning mirrors not guaranteed to end up at the same position. → Check these comps.	
								8			
								9		*Note also we got a weird prompt: 'Hartman Mask Running' could be a glitch due to hitting the Manual/Auto switch	
								10	Vys Std.	*Note also. Aperture wheel is being set by hand, and could be getting out of sync and in the way of comps.	
	-200	8.5	M1					11			
								12			
	0	10.6	M0					13	Vys Pgm	Cut out early due to	
								14		CLOUDS	
								15			
								1			

* This indicates something is wrong because 15 seconds clear should have saturated. Perhaps aperture is in the way. Perhaps Mask is in the way

Spectr. Temp. Dome Temp./Hum. $+4.7^{\circ}\text{C}/61.4\%$. Transparency Conditions *Lots of clouds.*

Focus


Spectr. Temp. Dome Temp./Hum.

194

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800 μm G=5115	300 μm	5303A	16			
175		8.5	M2					17	Vys Pgm	Through some clouds.	
								18		*Aperture wheel set by hand.	
								19			
0		10.2	M0		Spectrum looks <u>WRONG</u> Field OK			20	Vys Pgm	Through even more clouds. (It's been perfectly clear between stellar exposures...)	
								21			
								1			
								22		80% humidity on catwalk @ 0235	
33		9.8	M0					23	Vys Std.		
								24			
								25			
48	4"	10.0	M1					26	Vys Pgm		
								27			
								28			
32		9.1	M5					29	Vys Pgm		
								30			

Spectr. Temp. Dome Temp./Hum. $3.2^{\circ}\text{C}/65.6\%$ Transparency Conditions *partly cloudy*
 Focus
 Spectr. Temp. Dome Temp./Hum.

196

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H	Program	Remarks	Quality	
				Cass CCD	1800 λ /mm	300 μ	S30SA	1	bsum 4, bat			
					G = 5115			31				
106		M&A 9.3						32	Vys Pym	Into Sunrise		
								33				
				All to WORM & perseus							chirp chirp chirp	
				The early bird always gets the WORM.								

Pg #1

Sun/Mon

197

Emulsion Batches:

Date 1994 MAY 1/2 ... Observers Tr. [Vyspam] ... H/w

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.
CC21657	BIAS(A)									
58	Comp							FeNe clear	35s	
59	VYS 560	09 48 10	-03 13 04	22 57 09		2:46 W	-4°		1214	10
60	Comp							FeNe clear	35s	
61	VYS 560 Comp	09 48 10	-03 13 04	22 23 07		3:07 W	-4°		901	5
62	Comp							FeNe clear	35s	
63	Comp							"	35s	
64	BD+01 2447	10 23 49	+01:21:36	23:01:05		3:08 W	+1°		839	31
65	Comp							FeNe clear	35s	
66/67	Comp/Stellar	Hartman Mask.				3 15 W	+1°		20/30	
68	Bias x 4									
69	Comp							FeNe clear	35s	
70	HDI 19850	13 40 36	+15 27 00	23:33:35		0:20 W	+15°		600s	253
71	Comp							"	35	
72	Comp							"	"	

CCD
 Spectr. Temp. ... -100°C Dome Temp./Hum. +4.5°C... 6.7664 Transparency Conditions ... clearing... some haze...
 Focus ... 6:40
 Spectr. Temp. ... 90 Dome Temp./Hum.
 465 0 50 1024 4 1 ccdfmt (198)
 note: setting irrelevant since no slt/mg (disabled)

Exp. Mtr.	Seeing	Mag	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				TASS CCD	1800/1/100 G 915	300 1/100	5305A	1c:	bias 4. bat		
				* Note	Hartman mask could be in comp			3c:		spat coat MAX 5K MADAME mode for write	
10	3-4"	10.59	M0			≈ 90 SNR		4c:	Vys. pyg		
				* Note:	Hartman mask could be in comp			5c:		with beam	
5		10.5	M 0					6c:	Vys pyg	←	
				* Mask probably fine now.				7c:			
								8c:		should be no HARTMAN MASK in other than Home*	
31		9.7	M2					9	Vys Std.		
								10c:			
				Set 6:40 Temp + 3.1°C				11/12c	Focus Test.		
								1	bsum 4. bat		
								13			
253		8.5	M1					14	Vys Std.		
								15			
								16			

pg #2 / 199

Emulsion Batches:

Date 1994 May 1/2 Observers Tn/Hlw & Vys

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File 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.
CCZ1673	AC+14 1105-9	13 57 29	+14 10 07	23 50 42		00 31W			1244
74	Comp							FeNe Clear	35
75	Bias x 4								
76	Comp							FeNe Clear	35
77	BD+21 2763	15 17 55	+21 20 06	00 21 11		0:14 E	+21°		1388
78	Comp							FeNe Clear	35
79	Comp							"	35
80	AC+26 3703D	15 23 45	+26 08 16	00 52 24		0:08 W	+26°		1244
81	Comp							FeNe Clear	35
82	Bias x 4								
83-85	3x Flats							Tung Clear	15,
86	Comp							FeNe Clear	35s
87	AC+38 34548	15 30 11	+38 15 00	01 34 54		0:49 W	+38°		1517
88	Comp							"	35
cg40120	4x HD144579	16 01 30	+39 25 36	02 10					.067
-3									
cg40124/5	2x HD144579	16 01 30	+39 25 36		02 12				.133

Spectr. Temp. Dome Temp./Hum. 2.9°C/74.7% Transparency Conditions Clear with Aurora borealis

Focus

Spectr. Temp. Dome Temp./Hum.

200

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
//		10.7	MO	Cusa CCD	1800L/mm G = 5115	300μm	S303A	17	Vys Pgm	88% Hum. on catwalk @ 0000	
								18			
								1	bsum 4. bat		
								19			
86		10.1	MO		SNR ~ 55			20	Vys Pgm		
								21			
								22			
0		11.1	MO					23	Vys Pgm	Auto-guiding screwed up.	
								24		2x star- ingge	
								1			
					Max ADU ~ 12K			25			
								26			
0		11.3	MO					27	Vys Pgm	92% Hum. on catwalk @ 0130	
								28			
		6.7	G8V						Seeing Test	Light WNW wind	
		6.7	G8V						Seeing Test	Dome WSW	
										94% Hum @ 0200	

Pg#3 (201)

Emulsion Batches:

Date 1994 May 1/2 Observers Tn/Hlw {Vys}

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.
cc21689	Comp							FeNe Clear	35s
90	HDI44579	16 01 30	+39 25 36	02 15 53		0:38W	+39°		305
91	Comp							"	35s
92	Bias x 4								
93	Comp							FeNe Clear	35s
94	BD-074156	15 5429	-075811	02 29 42		1 15W	-8°		1361
95	Comp							FeNe Clear	35s
96	Comp							"	"
97	BD+053409	17 2528	+05 3749	03 04 16		00 10 W	+6°		808
98	Comp							FeNe Clear	35s
99	Comp							"	"
cc21700	BD-08 4352	16 50 05	-08 09 47	03 25 09		1:06 W	-8°		804s
701	Comp							FeNe Clear	35s
702	Bias x 4								
703	Comp						+45°	"	"

Spectr. Temp.

Dome Temp./Hum. 1.4°C/83.6%

Transparency Conditions

Hazy

Focus ... 6:90

Spectr. Temp.

Dome Temp./Hum.

(202)

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800Å/mm G=5115	300µm Full	S303A	29			
600		6.7	G8V					30	Std Vel.	RV = -60 ± .3 km/s	
								31			
								1			
23	3"	10.50	M0					4c:	Vys pgm		
								5c:		Start button used	
								7c:		" "	
100	3"	9.3	M1					8c:	Vys pgm		
								9c:			
								10c:			
159		9.0	M5					11c:	Vys pgm		
								12		Start button fired	
								1	bsum 4. bat		
								13		Auto fired OK	

Pg #4

(203)

Emulsion Batches:

Date 1994 May 1/2 Observers Hlaw. / 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.
cc21704	BD+45 2743	18 32 26	+45 39 53	03:48:41		0:03E	+45°		1216
05	Comp							FeNo Clear	355e
706	Comp							"	"
707	HD161096	17 38 30	+4:37	04:14:51		0:55W	+4		40
708	Comp							FeNo Clear	355
707	FLHTS x3							TUNG Clear	155
- 11						01 W	+4		
12	BIAS x4	using BSUM4, BAT							

Spectr.

Focus.

Spectr.

Exp. Mtr.

65

230

205
pg#1 Mon/Tues

Date 1994 MAY 21.3... Observers [Blair/Vgs/B.H.]... H/w. I.Tn

{V4s}

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.
cc21713	Comp							FeNe Clear	35s
14	Bias x4								
15	HD95735	10 57 54	+36 38 00	19:42:43		0:50 E	+36°		300
16	HD95735	10 57 54	+36 38 00	19:48:10		0:44 E	+36°		335
17	Comp							FeNe Clear	35s
18	Comp							FeNe Clear	35s
19	BD-02 3000	09 48 10	-03 13 04	20 08 14		1:00 W	-3°		1200s
20	Comp							"	35
21	Bias x4 Comp								
22	BD+05 2447	10 23 49						FeNe Clear	35s
23	BD+01 2447	10 23 49	+01:21:36	20:34:15		0:43 W	+1°		721
24	Comp							FeNe Clear	35s
25	Bias x4								
⁷⁶ → 29	FLATS x4					00:48 W	+1°	Jung Clear	5
cc21730/1	Comp / Stellar	Hartman						FeAr Clear	60/60

CCD) Spectr. Temp. -100°C Dome Temp./Hum. 7.8°C $38.5\% \text{H}$ Transparency Conditions \dots Fine
 Focus \dots 6.90 great seeing (206)
 Spectr. Temp. \dots 9.0 gain Dome Temp./Hum. \dots 465 0 50 1024 4 1 cadfrnt

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	central emission wave length	P.H.	Program	Remarks	Quality
				Cass CCD	1800 μ /mm G=5115	300 μ	5303A	3			
								1	bsum 4. kat		
4730	1"	7.5	M2					4	Vys Std.	still Twilight. Lots of sky background, G2 4	
2480		7.5	M2					4 4	Vys Std.		
								5			
								6			
231		10.54	M0					7	Vys Pgm		
								8			
								1			
								9			
227	4"	9.6	M2					10	Vys Std.		
								11			
								1			
								12			
				Cass CCD	1800 μ /mm G=6065	300 μ	6604A	3/4	Focus Test	12.2 K H04 mark T=+6.8 $^{\circ}\text{C}$, foc=6.85	set for 1/4 pix too cold

Pg#2 207 Mon/Tues

Date 1994 May 2/3 Observers [Bin] Tn/Hlw

Emulsion Batches:

CSS 386 a 5 secs ahead of U.W.V. Time

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.
cg40126 -9	4x HD93521	10 42 42	+38 06 00						.067
cg40130 -2	3x HD93521	10 42 42	+38 06 00						.133
CC21732	Comp							FeAr Comp	60s
33	HD93521	10 42 42	+38 06	21 06 21		0:52 W			537
34	HD93521	10 42 42	+38 06 00	21 15 44		1:03 W			626
35	HD93521	10 42 42	+38 06 00	21 26 35		1:16 W			711
36	Comp							FeAr Comp	60s
37	Bias (4)								
38	HD93521	10 42 42	+38 06 00	21 42 28					742
39	"	"	"	21 55 19		1:45 W			747
40	"			22 08 30		1:58 W			723
41	Comp							FeAr Clear	60s
42	Bias (avg of 4)								
43	HD93521	10 42 42	+38 06 00	22 24 07		2:15 W			782
44	HD93521	10 42 42	+38 06 00	22 37 36					776

Spectr. Temp. Dome Temp./Hum. $+6.7^{\circ}\text{C}/40.9\%$ Transparency Conditions *Clear*

Focus *6:8.5*

Spectr. Temp. Dome Temp./Hum.

208

Exp. Mtr.	Seeing	Mag. / VMag.	Sp	Inst.	Grating/ Tilt	Slit	Emulsion	PH EI	Program	Remarks	Quality
		7.04	0.95 V	CAS5 CCD	1800 λ /nm G=6065	300 μ m FULL	6604 A		Seeing Test		
		7.04	0.95 I						Seeing Test		
								5			
2150		7.04	0.95 V					6	Bln 0* pgm.		
2576	1*	7.04	0.95 I					7	Bln 0* pgm.		
2677		7.04	0.95 V					8	Bln 0* pgm.		
								9			
								1		average of 9 bias frames	
2340	1.5*							10			
2350								11			
2300								12			
								13			
								1			
2160		7.04	0.95 V					14	Bln 0* Pgm.		
2230		7.04	0.95 V					15	Bln 0* Pgm.		

Spectr. Temp.

Dome Temp./Hum.

 $+5.8^{\circ}\text{C}/41.9\%$

Transparency Conditions

Clear

Focus 6.85

North Fan on

Spectr. Temp.

Dome Temp./Hum.

210

Exp. Mtr.	Seeing	√ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	#	Program	Remarks	Quality
2260		7.04	09.5 II	Cass CCD	800 μm G=6065	300 μm	6604Å	16	Bln O* pgm		
								17			
								1			
2450	2"							18	Bln O* pgm	180/1 SN	
2370								19c	"		
2300								20c	"		
								21c			
								22c		MAX ADU 127K	
2100								23c	Bln O* pgm	1.33 Air mass	
1870								24c	"		
1830								25	Bln O* pgm		
								26			
								1			
								27			
4100		5.37	B9 II					28	Telluric Std.	Low Air Mass	
								29			

Spectr. Temp.

Dome Temp./Hum. $+4.8^{\circ}\text{C}/44.9\%$ Transparency Conditions *Clear*Focus *6.85**Faint Aurora tonight*

Spectr. Temp.

Dome Temp./Hum.

212

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				<i>CAS</i>	<i>1820/low</i>	<i>300</i>	<i>6604A</i>	<i>30</i>			
<i>4200</i>	<i>2.99</i>	<i>A0Jm</i>		<i>CCD</i>	<i>G6085</i>			<i>31</i>	<i>Telluric std.</i>	<i>Air Mass = 1.81</i>	
								<i>32</i>			
								<i>22</i>			
<i>0</i>	<i>(prob good)</i>			<i>Signal to</i>	<i>1.50/low</i>	<i>300</i>	<i>5450A</i>			<i>CCD/INT</i>	
				<i>Noise of</i>	<i>62318</i>	<i>Full</i>		<i>4c</i>	<i>SN attempt</i>	<i>500 0.50 1024 4 1</i>	
				<i>Supernova</i>	<i>u</i>	<i>u</i>	<i>u</i>	<i>5c</i>		<i>(OFF towards M51 at start)</i>	
				<i>~14</i>				<i>1</i>		<i>Then, on SN for most.</i>	
<i>0</i>	<i>1.5"</i>	<i>11.62</i>						<i>6c</i>			
								<i>7c</i>	<i>SN std star</i>		
								<i>8</i>			
								<i>9</i>			
								<i>1</i>			

Spectr. Temp.

Dome Temp./Hum.

 $+4.0^{\circ}\text{C}/45.6\%$

Transparency Conditions

Clear

Focus 7.15

Spectr. Temp.

Dome Temp./Hum.

410 0 50 1024 4 1 ccdfmt

214

Exp. Mtr.	Seeing	Ptg. Mag	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	831 / 16mm G=3616	300 μ	6563A	13		^{Range} 6300Å - 6750Å	
0		~12	em					13		This is it.	
0		~12	em					14			
								15			
								16			
								1			
								2			
								1			

All to Terseus
E. Worm

Pg#1 Tues/Weed. 215

Emulsion Batches:

Date 1994 May 3/4 Observers KK/HLW

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.
CE07285	Hartmann IN								
7286	Hartmann OUT								
87 88	^{Comp} HD 87901	10 03 03	+12 27 22	19 57 19		0:21 W		ThAr	1s 142s
89	Comp							ThAr	1s
90	HD 87907	10 03 03	+12 27 22	20 02 48		0:25 W			90s
91	Comp							ThAr	1s
92	Bias (4)								
93	Comp							ThAr	1s
94	HD 83808	09 35 48	+10 21 00	20 18 29		1:14 W			464
95	HD 83808 Comp							ThAr	1s
96	HD 83808	09 35 48	+10 21 00	20 28 09		1:24 W			487
97	Comp							ThAr	1s
98	Comp							ThAr	1s
99	HD 95735	10 57 5A	+36 38	20 45 31		0:43 W			1800
7300	Comp							ThAr	1s

Spectr. Temp.

Dome Temp./Hum. +10.4°/35.3%

Transparency Conditions Clear, some haze + wispy

Focus 0.245

Dome Fans Off

clouds

Spectr. Temp.

Dome Temp./Hum.

0 0 256 1024 4 1 ccdfmt

216

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				echelle 18.51	300 .5682	60μ	6300				
1450	1.35	B7V						3 4	Telluric Std.		
1380	1.35	B7V						3 4 3			
900	3.52	F6IV-A						1 3 4	KK pgm		
760	3.52	F6IV-A						3 4	KK pgm		
9	7.60	M2Ve						5 4	Harvey std vel.		

Pg #2 217

Emulsion Batches:

Date 1994 May 3/4 Observers KK/H/w

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.
ce07301	Bias (4)								
302	Comp							ThAr	1s
303	HD8890	01 22 36	+88 46 00	21 29 34		9:50 W			194s
304	Comp							ThAr	1s
305	HD8890	"	"	21 34		9:53 W			123s
306	Comp							ThAr	1s
307	HD8890	"	"	21 38 32		9:57 W			99s
308	Comp							ThAr	1s
309	Comp							ThAr	1s
310	HD116657	13 19 55	+55 27 00	21 51 38		0:55 E			362
311	Comp							ThAr	1s
312	HD116657	13 19 55	+55 27 00	22 00 30		0:48 E			321
313	Comp							ThAr	1s
314	HD116656	13 19 54	+55 27 00	22 08 18		0:44 E			98s
315	Comp							ThAr	1s

Spectr. Temp.

Dome Temp./Hum.

+9.4°C/37.2%

Transparency Conditions

Clear

Focus

Fans off

Spectr. Temp.

Dome Temp./Hum.

218

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst	Grating/ Tilt	Slit	Emulsion	P.H	Program	Remarks	Quality
				Echelle CCD 18.51	300 .56x2	60 μ *400 μ	6300Å	1			
								3			
800		2	F					4	KK pgm	Max ADU ~ 15K	
								3			
500		"	"					4	KK pgm	Max ADU ~ 8600	
								3			
565		"	"					4	KK pgm		
								3			
								3			
500		4.0	Am					4			
								3			
510		4.0	Am					4	KK pgm		
								3			
600		2.4	AZV					4	KK pgm		
								3			

Spectr. Temp. Dome Temp./Hum. $+8.5^{\circ}\text{C}/+1.67$. Transparency Conditions ... Clear

Focus

Spectr. Temp. Dome Temp./Hum.

220

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD 1851	300 5682	60 μ x40 μ	6300A	1	bias 4. bat		
								3			
520	1.8		K0IIa					4	KK pgm		
								3			
530	1.8		K0IIa					4	KK pgm		
								3			
								3			
505	4.3		F2IV					4	KK pgm		
								3			
500	4.3		F2IV					4	KK pgm		
								3			
								3			
135	6.2		G8V					4	KK pgm		
								3			
								3			

Spectr. Temp.

Dome Temp./Hum. +6.8°C/44.0%

Transparency Conditions Hazy

Focus

Spectr. Temp.

Dome Temp./Hum.

222

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
550		0	K2 III	Echelle CCD	18.5° 3002/nm .5682	60μ x400	6300A	4	Std. Vel.		
								3			
720		0	K2 III					4	Std Vel		
								3			
								1			
								3			
602		3.7	F0p					4	KK pgm	Double lines ⇒ Zaman splitting	
								3			
650		3.7	F0p					4	KK pgm		
								3			
								3			
506		4.59	G4 III +A6V					4	KK pgm		
								3			
								5			
								1			
										Alt to Worn and Perseus	

$$\frac{60\mu}{x600\mu} = .215$$

Spectr. Temp.

Dome Temp./Hum. $+8.4^{\circ}\text{C}/78.8\%$

Transparency Conditions

Partial Clouds

Focus $\dots 2480$

Spectr. Temp.

Dome Temp./Hum. $+6.5^{\circ}\text{C}/84.7\%$ Dome Fans ON

South One

turned off at 2100

226

101kPa

~~101kPa~~ Bar Pressure 22 EST going up

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	18.51 300/mm x-grating @.5682	60x 400 μ	6300A F.225	3		ORA -0142 4+	
830	32	F						7	KK pgm	Max ADU ~ 14.2 K	
								5			
								1			
								2		Topped up ccb dewar.	
									Focus Test.	foe = .2480, T = 7.9°C	good
								3c.			
30	3"	7.72	MOIV					4	KK pgm	1158 Airmass	East One
				Md-chip SNR. ≈ 100				3c.			
32		7.62	MOI					5c.	KK pgm	1.796 Airmass	West One
								6c.			
								1		Barometric Pressure	
								6		101.8 kPa	
359		352	FGII-A					4	KK pgm		
								3			

no focus change needed

Pg #2

227

Emulsion Batches:

Date 1994 May 6/7 Observers [KK] Tn/Hlw

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.
ce07377	Comp							ThAr	1
78	HD87901	10 03 03	+12 27 22	22 53 43		3:32 W			268
79	Comp							"	1
80	HD87901	10 03 03	+12 27 22	22 59 55					358
81	Comp							"	1
82	Comp							"	"
83	HD8890	01 22 36	+88 46 00	23 17 58		11:48 W			274
84	Comp							"	1
85	HD8890	01 22 36	+88 46 00	23 23 ^{23 49}		11:55 W			312
86	Comp							"	1
87	HD8890	01 22 36	+88 46 00	23 30 19		12:02 W 11:58 W			334
88	Comp							"	1
89	Bias (4)							"	"
90	Comp							"	"
91	HD95689	10 57 36	+62 17 00	23 43 19		3:26 W			270

Spectr. Temp.

Dome Temp./Hum.

16.1°C/84.4%

Transparency Conditions

Grungy

Focus 2980

Spectr. Temp.

Dome Temp./Hum.

228

Exp. Mtr.	Seeing	Mag	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	18.51 300L/mm @.5682	60μ 400μ	6300Å	3			
41	~1100	1.35	BTV					5	Telluric Std.		
								3			
57	~1300	1.35	BTV					5	Telluric Std.		
								6			
								6			
74	1000	2	F					5	Kk pgm		
								6			
82	1000	2	F					5	KK pgm		
								6			
85	1000	2	F					5	Kk pgm		
								6			
								1			
								6			
20	1000	1.79	KOIIIa					5	Kk pgm		

Spectr. Temp. Dome Temp./Hum. 6:6°C/84.4% Transparency Conditions Hazy

Focus ... 2480

very very light west wind tonight

Spectr. Temp. Dome Temp./Hum.

230

Exp. Mtr.	Seeing	Exp. Mag.	Sp	Inst	Grating/Tilt	Slit	Emulsion	P.H	Program	Remarks	Quality
				Echelle CCD	18.51 3002/nm .5682	60μ 400μ	6300A	6			
965		179	K0IIa					5	KK pgm		
								6			
								6			
340	2-3"	B=4.34	F2II					5	KK pgm	1.75 H.A. muss	SN 250/1
								3ci			
238	3'							5ci	H.A. pgm		
								3ci			
								1c			
								3	H.A. pgm		
50		23	G8I					4ci	KK pgm	1.277 H.A. muss	
								3			
								3			
617		B=3.27	G0					5	KK pgm		

Pg# 4 231

Emulsion Batches:

Date 1994 May 6/7 Observers [KK] Tn/H/W

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.
ce07407	HD121370	13 49 54	+18 54 00	01 26 22		2:24 W			600
408	Comp							ThAr	1
409	Comp							"	"
410	HD124897	14 11 06	19 42 00	01 44 ⁴⁹ 50		2:12 W			66
411	Comp							"	1
412	HD124897	14 11 06	19 42 00	01 47 37		2:15 W			60
413	Comp							"	1
414	Bias (4)								
415	Comp							"	"
416	HD8890	01 22 36	+88 46 00	01 59 16		9:46 E			433
417	Comp							"	1
418	HD8890	01 22 36	+88 46 00	02 08 24		9:39 E			341
419	Comp							"	1
420	HD8890	01 22 36	+88 46 00	02 15 33		9:32 E			324
421	Comp							"	1
422-26	5 x Flat							Tung	1

Spectr. Temp. Dome Temp./Hum. 5.4°C/87.9% Transparency Conditions Pretty hazy, some clouds.

Focus

Spectr. Temp. Dome Temp./Hum.

232

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
620		^B 3-27	G0	Echelle CCD	18.5; 7002/mm 5682	60 x 400μ	6300Å	5 3 3	KK pgm	Very humid, 97% on catwalk @ 0130	
848		0	K0					4 3	Std Velocity		
872		0	K0					4 3 1 3	Std. Velocity	Max ADU ~13K	
880		2	F					4 3	KK pgm		
700		2	F					5 3	KK pgm		
700		2	F					4 3	KK pgm		
All to WORM & Perseus								3			
60m 600m Height for Flats											

Pg#1 (233) Sub/mon

Emulsion Batches:

Date 1994 MAY 8/9 Observers K.K./Tn

CSS 386 4-5 secs ahead of WWV Time

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.
CE0727	Hartmann - IN					≈ 3 W	≈ 30°	ThA	1
28	- OUT								1
29	Bias								
30	Comp							ThAr	1
31	HD8890	1 22.6	+88 46	20 23 51					150
32	Comp							ThAr	1
33	HD8890	1 22.6	+88 46	20 28 52					110
34	Comp							ThAr	1
35	HD8890	1 22.6	+88 46	20 32 50					120
36	Comp							ThAr	1
37	Comp							ThAr	1
38	HD79210	9 7.8	+53 07	20 43 33					629
39	comp							ThAr	1
40	HD79211	9 7.8	+53 07	20 56 14		2 44 W			737
41	Comp							ThAr	1
42	HD79210	9 7.8	+53 07	21 10 21		2 58 W			761
43	Bias (A) Comp							ThAr	1

CCD
Spectr. Temp. -100°C

Dome Temp./Hum. 713.2°C 44.2%

Transparency Conditions FINE

Focus changed to 12.550

Spectr. Temp. C.G.A.M. = 9.0

Dome Temp./Hum. 712.0°C 44.2%

234

Exp. Mtr.	Seeing	Mag	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				18.51	300/ 5685	69u	6300			* Height should have been $400 = 1.25$ FOR NON EXITS THIS PAGE.	
					300/ 5685						
NA	2"	2	FBI						Asm/Sp KK	close to saturated MAX 9.7 K ADU	
500										MAX 14 K ADU	
500										MAX 15.352 K ADU	
20		7.62	MOV					4c	Asm/Sp KK	W component peak center ~ 700	
73	1.2"	7.62	MOV					5c	Asm/Sp KK	r 2.5	
								3		MAX 12.5 K ADU	
22		7.62	MOV					4c		1.14 AIRmass	
								3			

Spectr. Temp. Dome Temp./Hum. 7/11.8°C 45-02H Transparency Conditions ... Mostly clear

Focus ... 2550

Spectr. Temp. Dome Temp./Hum.

236

Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
21	1.5"	7.72	MOV	CCD 1807	300/ 5683	600 4000 height 5000	6300A	5c	Hum Sp/KK	Slit height mistakenly at 600 instead of 400 Till CE 07450	
						600 6000 height		3c			
						4000 height		1c			
								2c			
								6c		Correct slit H now	
16	2"	7.62	MOV					4c	Hum Sp/KK		
								3c			
17		7.72	MOV					6c		Eastone	
								3c			
								3c			
267	2"	4.79	F6 IV					4c	Std Vel		
								3c			
103								4c	Std Vel		

Spectr. Temp. Dome Temp./Hum. $+10.9^{\circ}$ $46/81$ Transparency Conditions *fine*

Focus ... 2550 ... *incr cloud 238*

Spectr. Temp. Dome Temp./Hum. *22.1/64*

Exp. Mtr.	Seeing	Mag.	Sp.	Inst	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
250		3.5	F6U +A	18.51 +11	300/ 7-833 11	50 400x	G300A	5c	Amp Sp/HR		
								3c			
								1c			
250								3c			
14	2"	7.60	M6					4c	Amp Sp/HR		
								3c			
56	2"	6.21	G8V					5c	Amp Sp/HR		
								5c			
380			F0					4c	Amp Sp/HR	<i>S/N</i> <i>≈ 300/1</i>	
468			F0					4c			
								3c			
								1c			

1944 239

Emulsion Batches:

Date ..1994 MAY. 8/9... Observers ..K.T./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.
007475	Comp							THAr	1s
76	HD 175492	18 5032	+22 3100	00 3002					1139
77	Comp							THAr	1s
78	bias (4)								1s
79-81	FLATS x3								
82	FLATS x3								
84	FLATS x3								
85	Hartmann-IN							THAr	1s
86	HARTMANN-OUT							THAr	1s

[0 0 128 1024 8 1 CCD FMT for focus]

Spectr. Temp. Dome Temp./Hum. 10.1°C 49.5% Transparency Conditions ... 51. hazy
 Focus ... 2550
 Spectr. Temp. Dome Temp./Hum. 10.1°C 52.2% 240

Exp. Mtr.	Seeing	Mag	Sp	Inst	Grating/ Tilt	Sht	Emulsion	P.H.	Program	Remarks	Quality
				18.5' Echelle		600 400 H	63008	3c			
250		4.49	G043					6c	Abn. Sp/4H	peak 4000	
						600 600 height for Frats.					
				6301		700 height for early evening				600 H observations	
						400 height					
						"					
										All to WASH $\frac{1}{2}$ parsecs	

93+1 24 Mon/Tues

Date ..1994.. May.. 9/10 Observers ..Kok./..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.
cc 21793									
cc 21794	BIAS(4)								
94-78	focus test					00 30	+40°	FcAr Clear	60/80
cc 21796	Comp							n	60sec
97	HD15463	2 28 54	57 38 08	20 20 22		09 06 W			1723
98	Comp							FcAr Clear	60sec
cc 21799	Comp							n	n
1800	HD37202	05 31 42	21 05 00	20 58 20		06 21 W			421
1801	Comp							FcAr Clear	60sec
02	Comp							n	n
03	HD 44351	06 16 18	14 21 00	21 12 29		05 44 W			1218
04	Comp							FcAr Clear	60sec
05	BIAS(4)								
06	Comp								
07	HR 120315	13 43 36	49 49 00	21 47 07		01 5 E			178
08	n	n	n	21 50 17		n			82

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Emulsion Batches:

Date 1994 May 9/10 Observers Kok / To

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.
cc21808	HD Comp							FeAr clear	60
09	HD120315	134336	494900	215533					61
810	Comp							FeAr clear	60
811-5	Flats X5					≈ Zenith Meridian	Tel East side	Tung clear	22
816	bias(4)								
817-8	Comp/stellar	Martian						FeNe clear	60/45
819	Comp							FeNe clear	60
820	HD 120 31 5	13 43 36	+49 49	23 0850		00 18 W			
821	Comp							FeNe clear	60s
822	HD120315	13 43 36	+49 49	23 1436					73s
823	Comp							FeNe clear	60s
824	BIAS(4)								
825	Comp							FeNe clear	60s
826	HD 193182	20 13 48	39 16 59	233018		E			150s
827	Comp							FeNe clear	60s

Spectr. Temp. ^{ced} Dome Temp./Hum. ^{ca. 4} 57.6 Transparency Conditions clear

Focus .. 6.92 for 7340A

Spectr. Temp. 6.96 for 4101 Dome Temp./Hum.

244

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS	1800 N/m	300 μ					
				CCD	G 4460	FULL	4340	5			
7630		1.86	B3V(L)					14	Kok std		
								5			
								15			
								1			
					1800	300 μ	4101A			Focus test	
					6=4310			7			
15 K		1.88	B3V(L)					8c	Kok std.	Tel still East side	
								9c			
14K								10c	Kok std.	12.5 K AD4 MAX 35011	S/N
								12c			
								1c			
								13c			
2033	6"	6.51	B9Wesh					14	Kok pgm		
								15			

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Emulsion Batches:

Date 1994 MAY 9/10.... Observers Fok, 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.
cc21828	39 Flats x8 x2							Tung clear	150
831	HD 195407	20 26 00	36 39 7.7	00 11 01					1237
830	830 Comp Done before stellar.							Fene clear	60
832	Comp							4	5
833	HD 192954	20 12 36	15 33 07	00 54 03					1242
835	Comp							Fene clear	60
836	bias (4)								
837	Comp							Fene clear	60s
838	HD 195325	20 25 30	10 33 39	01 35 47		-340 E			1225
839	Comp							Fene clear	60s
840	Comp							Fene clear	60s
841	HD 220300	23 17 36	55 49 00	02 05 94		05 54 E			1798
842	Comp							Fene clear	60s
843	Bias (4)								
844-6	Flats x3							Tung clear	45

Spectr. Temp. ... CCD

Dome Temp./Hum. ... 7.5 ... 60.4

Transparency Conditions ... clear ... - inter cloud.

Focus ... 6.96

Spectr. Temp.

Dome Temp./Hum.

poor seeing

246

C LINDNER

Exp. Mir.	Seeing	Fig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
				CASS CCD	1800 μ m/mm G 4910	300 μ Full	4101 A			MAX 15.2 K ADY	
549		7.7	B0sh					18	Kok pgm		S/N 60/1
								19			
								20			
642	5"	7.3	B9					21	Kok pgm		
								25			
								1			
								5			
2064		6.8	A1esh					21	Kok pgm		S/N 130/1
								22			
								23			
661	5.8"	7.6	B8					24	Kok pgm		
								25			
								1			
								26			

W pg# 249 Tues 1/wal

Date 1994 May 10/11 Observers Tn, Wde [BLN]

Emulsion Batches:

CSS 384 Time = 5 secs ahead of U.W.U. Time

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.
21847/48	comp/stellar hotman					0:30W	+37°	FeAr clear	50/60
49	bias x4								
50	comp							FeAr clear	60
51	HD 93521	10 42 42	380600	203100		0:50W			600
52	HD 93521	10 42 42	380600	204100		1:01W			619
53	HD 93521	10 42 42	380600	205150					600
54	comp							FeAr clear	60
55	HD 93521	10 42 42	380600	210633		1:26W			600
56	HD 93521	10 42 42	380600	211706		1:37W			600
57	HD 93521	10 42 42	380600	212733					600
58	comp							FeAr clear	60
59	Bias(4)								
60	HD 93521	10 42 42	+380600	214218					600
61	"	"	"	215240					600
62	"	"	"	220306					600
63	Comp							FeAr clear	60

CCD T - 100°C
 Spectr. Temp. Dome Temp./Hum. +10.5°C Transparency Conditions Time: 21.42z
 Focus 6.8 The solar eclipse day (250)
 Spectr. Temp. Dome Temp./Hum. 46.9 Tel East Side of P. CK's fee

Exp. Mtr.	Seeing	PV Mag	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	T ₁ Run	Quality
				CASS CCD	1800 on =6065	30um	6604A	314	focus +cot			
								1	bias4bot			
								5				
	1850							6	BLN0*pm			
	2000							7	BLN0*pm	170:1	S/N	
	1880	42"						8	BLN0*pm			
								9				
	2250							10	BLN0*pm			
	2435							11	BLN0*pm			
	2870							12	BLN0*pm	190:1	S/N	
								13c				
								14c				
*	152"							14c				
	2620							15c				
	2310							16c				
								17c				

> 2000, meter fueled 300/1 S/N

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Emulsion Batches:

Date 1994 MAY 10/11... Observers [Blu] Jn... Hude.....

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.
CC21864	HD93521	10 42 42	+38 06 00	22 16 18					600
65	HD93521	"	"	22 26 43					600
66	"	"	"	22 37 09					600
67	Comp							Fe Ar clear	60
68	HD93521	10 42 42	+38 06 00	22 50 06					613
69	"	"	"	23 00 50					792
70	"	"	"	23 14 35		03 35 W			647
71	Comp							Fe Ar clear	60s
72	Bills (4)								
73	HD93521	10 42 42	+38 06 00	23 29 26					745
74	"	"	"	23 42 21					680
75	"	"	"	23 54 18		04 15 W			660
76	Comp							Fe Ar clear	60
77	HD87901 Comp							"	60
78	HD87901	10 03 03	12 27 22	00 19 19 19 15		05 09 W			24

Spectr. Temp. Dome Temp./Hum. 47.7/41 19.1°C Transparency Conditions

Focus . . . 6.80

Spectr. Temp. Dome Temp./Hum.

252

Exp. Mtr.	Seeing	Pr. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2485		7.04	09.5V	(70) CCD	1820nm G 6065	300μ F42	66M48	18ci	B1n0* pgn	1.1344 a mass	
2200		7.04	09.5V					19ci	"		
2370	1-2	7.04	09.5V					20ci			
2320	>1	7.04	09.5V				B1n0*	22ci	B1n0* pgn		
2480								23ci			
2000								24ci			
								25ci			
								26ci			
2000								26ci	B1n0* pgn	200 S/N	
1720								27ci	"		
1640	1-2							28ci	"		
								29ci			
* Exp meter sens. livity reduced somehow before								25ci			
2000		1.36	BTV					6ci	Telluric std	Fe	

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Emulsion Batches:

Date 1944. MAY. 10/11... Observers [Bla.]... Tr. / wide.....

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.
CC2 87 79	HD 87901	10 0303	+12 27 22	00 20 36		25 20 W		245	235
80	Comp						FeAr clear	60	
81	Comp						"	"	
82	HD 136849	15 17 48	33 17 30	00 29 58				287	300
83	comp						FeAr clear	60	
84	BINS(A)								
85	Comp						FeAr clear	60	
86	HD 93521	10 42 42	+38 06 00	00 45 41		05 09 W		814	680
87	"	"	"	00 59 47		05 21 W		663	505
88	"	"	"	01 11 21				727	610
89	comp						"	60	
90	HD 93521	10 42 42	+38 06 00	01 26 26				727	570
91	"	"	"	01 39 12				720	555
92	"	"	"	01 51 38		06 W		725	434
93	Comp						"	60	

Spectr. Temp. Dome Temp./Hum. ^{+85°C} ^{48.5%} Transparency Conditions ... *sl. hazy*

Focus ... 6.80

Spectr. Temp. Dome Temp./Hum.

254

Exp. Mtr.	Seeing	M. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2300		1.36	B7V	455 CCD	1800 G-6065	300 Full	66048	7ci	Telluric std	MAX 85 K HDU	
			9					9ci			
								13ci			
3000		5.37	B9V _n					11ci	Telluric std	8 K HDU MAX NEAR Zenith	
								17ci			
								1ci			
								3ci			
680	2"	7.04	09.5V					4ci	Blk 0 ^o ppm	Airmass. 1.72 ^{S/N} 200/i	
505								5ci		150 S/N	
610								6ci			
								7ci			
570	2"	7.04	09.5V					8ci		> 170 S/N	
555								9ci			
434								10ci		2.474 AIR MASS	
								11ci			

Spectr. Temp. Dome Temp./Hum. $+7.5^{\circ}$ Transparency Conditions *S/a. hazy* 256
 Focus *6.80*
 Spectr. Temp. Dome Temp./Hum. 54.7° *no wind tonight.* } For Seeing Tests
ONLY NE FWH on Tonight

Exp. Mtr.	Seeing	Pig. Mag.	Sp	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
379	3"	7.04	09.5V	CASS CCD	1800 G=6065	300u	6604 Å	12ci	BLNO* PM	Attempting autoguiding	
305	5"							13		> 150 SIN	
								14ci			
								16ci			
								17ci		Bias 4. bat	
		6.96	K0111						seeing too t	Tel still East Side Dome ENE	
								18ci			
2350	2"	5.59	B7W					17ci	[Looks OK for Telluric purposes, No emission]	Telluric Std search 1.0005 Airmass	
								19ci			
2100	2.4"	5.77	B8V _m					21ci		Telluric std search 1.0448 AM	
2100								20ci			
								22ci			
								23-24ci		focus too t.	
								1ci		bias 4. bat	

All to perseus & worm

CCD
 Spectr. Temp. -100°C Dome Temp./Hum. 7.3-9°C 7240H Transparency Conditions PART cloudy
 Focus ... G.92 VERY gusty SW wind
 Spectr. Temp. 90°C G.A.M. Dome Temp./Hum. Telescope East Side of Piers 258

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
pad strength match				CASS CCD	1800 μ m G-4310	300 μ m FULL	4101A	3/4			
								5	kok pgr		
* 20	8"	298	B2Ip					6	kok pgr	*exp meter erratic	5/4 7/10/1
50		298						7	"		7/10/1
								8			
								9			

Spectr. Temp. ^{CCD} -100°C Dome Temp./Hum. 8.5°C/44.9% Transparency Conditions Clear, some thick haze at horizons
 Focus 6.90 Dome Fans ON
 Spectr. Temp. 90.5 GAIN Dome Temp./Hum. 480 0 50 1024 4 1 ccdfmt (260)

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	18000/mm θ=5115	300μ	5303 Å	B/4	Focus Test	focus = 6.90, T = 8.5°C	
									1	bsum 4 bat.	
									5		
4000		1.98	K3 IIIa						6	Std. Vel.	
									7		
									8		
89		10.5	M0						9	Vys Pgm Vys 560	
									10		
69		10.5	M0						11	Vys Pgm	
									12		
									1		
									13		
146		9.7	M2						14	Vys Std.	
									15		
									15		

Spectr. Temp.

Dome Temp./Hum. 7.1°C/48.0%

Transparency Conditions Clear

Focus 6.90

Spectr. Temp.

Dome Temp./Hum.

262

C LAMBDA

Exp. Mtr.	Seeing	F ^W Mag	Sp	Inst	Grating/ Tilt	Slit	Filter/mon	P.H.	Program	Remarks	Quality
704	2.3	7.5	M2	CASS CCD	1800/norm	300 Full	5303A	16c	Vys Std. Mym		
								17			
								18			
37		11.2	MD					19	Vys Pgm	SNR ~ 45	
								20			
								21			
88 *	23	11.5	MD					22	Vys Pgm	* Turned off exposure meter for 5 minutes, also played with "Buck".	
								23			
127 *		10.7	MD					24	Vys Pgm	* twiddled Buck again	
								25			
								26			
160		8.5	MI					27	Vys Std		
								28			
								1			

Spectr. Temp. Dome Temp./Hum. $+6.0^{\circ}\text{C}$ $48\pm 7\% \text{H}$ Transparency Conditions ... Fine

Focus .. 6.90

Spectr. Temp.

Dome Temp./Hum. $+6.0^{\circ}\text{C}$ $48\pm 7\% \text{H}$

264

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
* 1	2.3"	11.8	MO	C422 CCD	18000-line 6.5115	300 μ FULL	5303A ^o	29 μ	Vys pgm	* Exp. meter looks Balanced too	SIX 30/11
								30		MAX 15.4/K/NO4	
59	3"	10.8	MO					31	Vys pgm		40
								5			
								1			
								6			
543		6.7	G8V					7	Std. Vel.	RV = $-60 \pm .3$ km/s	
								8			
		6.7	G8V						Seeing Test	Done SW, no wind	
		6.7	G8V						Seeing Test	N fan ON T = 5.0°C	
								9			
54 54		10.5	MO					10	Vys Pgm		25
								11			
								12			

pg# 4 265

Emulsion Batches:

Date 1994 May 12/13 Observers Tn/Hlw {Vys}

File 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.
cc21973	BD-12 4523	16 24 44	-12 25 38	01 15 42		0:06 W	-13°		903
74	Comp							FeNe Clear	20s
75	Bias x4							"	"
76	Comp							"	"
77	AC-2 1529-17	17 13 09	-01 40 36	01 38 55		0:13 E			1200
78	Comp							"	20
79	Comp							"	20
80	BD-10 4471	17 13 39	-11 00 57	02 06 24		0:23 W			1812
81	Comp							"	20
82	Bias x4							"	"
83	Comp							"	"
84	BD+45 2743	18 32 26	+45 39 53	02 44 02		0:36 E			518
85	Comp							"	20
86 90	FLATS x 5							TUNG Ap/2	5s
91 92 93	Comp/Stellar	Hartin				00 30 E	+45 44		

Spectr. Temp.

Dome Temp./Hum. 53.77/4.7°C

Transparency Conditions

Clear

Focus... 6.90

Spectr. Temp.

Dome Temp./Hum. 3.9°C 60.18%

266

Exp. Mtr.	Seeing	Pig-Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	SNR Quality
130	~4"	10.1	M2	Cass CCD	1800 μ /mm G=515	300 μ	5303A	13	Vys Pgm		40
								14			
								1			
								15			
102		10.6	M0					16	Vys Pgm		
								17			
								18			
69	4"	12	M					19	Vys Pgm	Fainter and NORTHON	24
								20			
								1			
								21			
113		9.8	M0					22	Vys Std		
								23			
								24		Not written to file.	

Spectr. Temp. Dome Temp./Hum. $3.7^{\circ}\text{C}/61.4\%$ Transparency Conditions *Clear*

Focus

Spectr. Temp. Dome Temp./Hum.

268

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40				Cass CCD	831 λ /mm	300 μ	6563 \AA	5			
41	5		emiss.		G=3616			6c		still some faint structure from previous scan.	
42	OK							7c		1 frame, 0 + blue field in large acquisition view	
43								5c		now is bright + point of	
44	10							9c		lower left.	
45											

B#1 269

Emulsion Batches:

Date 1994.. May. 13/14.. Observers Kok. / H.l.w.....

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.
cc22000-1	Comp/stellar	Hactman						FeNe Clear	30/45
002	Bias (4)								
003	Comp							FeNe clear	60s
004	HD 45910	06 25 12	05 56 00	20 40 51		05 19 W			1200
005	Comp							FeNe Clear	60s
006	Comp							FeNe Clear	"
007	HD 32630	4 59 30	41 06 00	21 31 21		07 50 W			9/7
008	"	"	"	21 47 57					530
009	Comp							FeNe clear	60s
010	Bias (4)								
011	Comp							"	60s
012	HD 34759	05 14 42	41 42 00						1209
013	Comp							FeNe clear	60s
014-16	Flats x 3							Tung clear	40
017	Comp							FeNe clear	60

— 22015 is Comp
~ Lcl

+8:20 W +42°

Spectr. Temp. ^{CCD} -100°C Dome Temp./Hum. 09.5 40.9 Transparency Conditions clear 270

Focus 6.95 Spectr. Temp. ~~2110~~ Dome Temp./Hum. 480 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800 λ /mm G=4310	300 m	4101A	3	Selfi	Focus Test	T=94°C, foc=6.95 ✓
								1/ci			
								5		-Telescope East of Piers.	
580		6.77	B2					6	Kel. prism	*Note: exposure meter sounds very slow to comps and stellar exposures	
								7			
								8			
570		2.97	B3V					9	Kel. prism		
915								10	"		
								11			
								1			
								12			
939		4.91	B5V					13	Kel. prism		
								14			
								15			
								16			

Pg #2 271

Emulsion Batches:

Date .. 1994 May 13/14 Observers ... Kohf. Hlw.....

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.
cc22018	HD102647	11 43 54	15 08 00	22 45 34					78
019	"	"	"	22 47 29					87
020	Camp							Fene clear	60
021	Bras(4)								
022	Camp							Fene clear	60
023	HD 97633	11 09 00	15 59 00	22 58 08			02 57 W		165
024	"	"	"	23 02 05					181
025	Camp							Fene clear	60
026-8	Flats X3							Tung clear	40
cg40155 -8	4 x HD144579	16 01 30	+39 25 36	01 23				40	06
cg40159 60	2 x HD144579	16 01 30	+39 25 36		01 28				.133
029	Bras (4)								
030	Camp							Fene clear	Camp
031	HD 15963	02 28 54	57 38 08	01 55 49					1800
031									
032									
* Dewar topped up again, cc22029 & 30 overwritten with more									

Not written.

CCD
 Spectr. Temp. -102°C Dome Temp./Hum. 7.6... 40.2 Transparency Conditions Clear
 Focus 6.95
 Spectr. Temp. Dome Temp./Hum. 272

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
15000		2.14	A3V					17	Kohler stud.		
"		"	"					18	"		
								19			
								1			
								20			
10800		3.31	A2V					21	Kohler stud.		
10900		"	"					22	"		
								23			
								24		↓ Backed up to WORM & Perseus.	
		6.7	G8V						Seeing Test	Dome SE, Tel on East	
		6.7	G8V						Seeing Test	Side of piers. No Wind.	
								↓			
								25			
470		7.8	A0p					26	Kohler pgrs.	Saturated due to warm-up of CCD. Not enough LN2! Cap up to 41°C	
recent frames.											

Spectr. Temp. -100°C Dome Temp./Hum. $+6.7^{\circ}\text{C}/44.1\%$ Transparency Conditions Clear
 Focus 6.95
 Spectr. Temp. Dome Temp./Hum.

274

Exp. Mtr.	Seeing	$\sqrt{\frac{F}{\text{Mag}}}$	Sp.	Inst.	Grating/ Tilt	Slit	Emulston	$\frac{S}{R.H.}$	Program	Remarks	Quality
CCD		7.8	AOp	Cass CCD	1800 μ /mm G = 4310	300 μ	4101 \AA	4	kok pgn		
								5			
								6			
								7/8	Focus Test	T = 6.1°C	
								1			
				All to Worm E. Parsons.							

Spectr. Temp. Dome Temp./Hum. $+8.9^{\circ}/44.2\%$ Transparency Conditions CLEAR
 Focus 6.83 to cloudy
 Spectr. Temp. Dome Temp./Hum. 276

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	Exp.	Program	Remarks	Quality
				Cass CCD	1800/inn 300m G=6065 FULL		6604A	3/4	FOCUS TEST	LONG tour, also CCD had to be cooled from -23°C 6.83	
								1			
								5		Exposure meter slow !!	
21	2.3"	7.04	09.52					6	B/n 0* pgn		
5	"	"	"					7	B/n 0* pgn	Totally clouded in half-way through exposure	
								8			
								9			
1900		2.79	A0In					10	Telluric STD		
463								11	Telluric	Mainly clouds	
								12			
								1			
								13			
								14			

Pg #1 277

Emulsion Batches:

Date 1994. MAR. 17.18 Observers [Bin] III / HW

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 22057/e	Comp / stellar Hartman							FeAr clear	60/60
59	Bias (4)			20:17:10					
60	Comp							FeAr clear	60
61	HD93521	10 42 42	+38° 6'	20:32:01		1:22 W			800
62	- " -			20:45:43		1:35 W			800
63	Comp							FeAr clear	60
64	HD93521			21:02:11		1:50 W			750
65	"			21:15:07		2:06 W			800
66	Comp							FeAr clear	60
67	Bias (4)			21:31:10					
68-70	FLATS (x3)							Twin 1/4 ap.	7
71	HD93521			21:38:19		2:25 W			800
72	HD93521	10 42 42	+38:06	21:49:15		2:39 W			800
73	Comp			22:03:53				FeAr Clear	60
74	HD93521	10 42 42	+38.06	22:06:02		2:56 W			803

Spectr. Temp. Dome Temp./Hum. +9.2 / 65.4% Transparency Conditions Partly cloudy

Focus 6.83

Dome fan off 278

Spectr. Temp. ..C.g.a.n...=90

Dome Temp./Hum.

480 0 50 1024 4 1 ccd fnt

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800.8/mm G=6065	300 um	6604 A	3/4	FOCUS TEST		
								1		79% Humidity on catwalk	
								5		@ 2050	+8.7
1900	4"	7.04	09.5I		180:1	S/N		6	Bln 0* pgm	some tw. light	
1755					185:1	S/N		7	"		
								8			
1673					185			9	Bln 0* pgm	81% humidity on catwalk	
1864								10	"	@ 21:20	+8.3
								11			
								1			
								12			
1732					180:1	S/N		13	Bln 0* Pgm		
1766	3-4"	7.04	09.5I		180:1	S/N		14	Bln 0* Pgm		
								15			
1984		7.04	09.5I		180:1	S/N		14	Bln 0* Pgm	79% humidity on catwalk	+7.9
										@ 22:08	

pg#2 279

Emulsion Batches:

Date 1994 May 17/18 Observers [EBlJ III/Hlw

Fire 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.
CC2 2075	HD93521	10 42 42	+38 06 00	22 20 23		3:10W			800
76	Comp			22:34:37				Fe Ar clear	60
77	Bias (4)			22:36:01					
78	HD93521			22:37:57		3:20			800
79	"			22:52:40		3:42			
80	Comp			23:07:32				Fe Ar clear	60
81	HD93521			23:11:26		4:01			800
82	HD93521	10 42 42	+38 06 00	23:25:47		4:18			914
83	Comp			23:42:27				Fe Ar clear	60
84	Bias (4)			23:43:50					
85-89	5x flats							Tung Tung Ap	7
90	Comp			23:48:13				Fe Ar clear	60
91	HD 136849	15 17 48	+33 17 30	23:58:22		0:14W			780
92	Comp			00:12:39				Fe Ar clear	60
93	Bias (4) 100701			00:14:01					

Spectr. Temp. Dome Temp./Hum. 7.6°C/68.7% Transparency Conditions Partially Cloudy
 Focus
 Spectr. Temp. Dome Temp./Hum. 280

Exp. Mtr.	Seeing	√ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1944	~3"	7.04	095I	Cass CD	1800 0 /mm G=6065	300 μ	66049	16c	Bln O* pgn		
								17c			
								1			
1848								18c	Bln O* pgn	22:45 humidity 79% on catwalk	+7.3
1833								19c	"		
								20			
1580								21c	Bln O* pgn	hum. dif 80% on catwalk @ 23:15	+7.1
1759		7.04	095I					22	Bln O* pgn		
								23			
								1			
								12			
								24			+6.7
3300		5.37	B9Vn					25c	telluric std	observing through clouds	+6.4
								26c			
								1			

Spectr. Temp. Dome Temp./Hum. 6:50/70.8% Transparency Conditions Partly cloudy

Focus

Spectr. Temp. Dome Temp./Hum.

282

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
								27ci		TELESCOPE NOW REVERSED	
3000	6"	1.35	137V	Cass CLD	1800 81mm 300 G=6065	um	6604A ^o	28ci	telluric std	← no clouds here	
5000					5.58	air mass		29ci	telluric std	← observing through clouds	
								5		81% humidity overcast	
								6ci		@ 00:45	+6.3
117		7.04	09.5V		weak exposure - totally clouded in 1/2 way through (lots of sky background)			7ci	131n O ⁺ pgm	TELESCOPE STILL REVERSED	
								8ci			
								1			
								9ci			+6.7
					All to WORM & Perseus			1			

pg#1 203 wed/Thurs

Emulsion Batches:

Date 1994 MAY 18/19.... Observers Sgs./Tn./H/ev.....

CSS 386 Time Restered Reset a 2 secs. behind. W.U.V Time

FL ₂ 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 22111 12	Comp/Stellar Huraiman posiks					00 06W	+34°	FeAr Clear	50/50
13	BIAS(4)								
14	Comp							FeAr Clear	60s
* 15	HD 103095	11 47 12	+38 26 00	20 36 22		00 22W			566s
16	Comp							FeAr Clear	60s
17	COMP							FeAr Clear	60s
18	HD 107328	12 15 18	+63 53 00	21 02 22		00 16W			
19	COMP							FeAr Clear	60s
20	COMP							FeAr Clear	60s
21	HD 114762	13 07 30	+18 02 00	21 23 47					605s
22	Comp							FeAr Clear	60s
23	Bias (4)								
24	COMP							FeAr Clear	60s
25	HD 161096	17 38 00	04 37 00						69s
26	COMP							FeAr Clear	60s

Spectr. Temp.

Dome Temp./Hum. $+11.1^{\circ}\text{C}$ 63024Transparency Conditions *partly clear* (254)

Focus ... 6-23

*mod NNE wind
St Only NE Fan on for
Seeing Test*

Spectr. Temp.

Dome Temp./Hum.

Exp. Mtr.	Seeing	F. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 λ /mm G=5910	300 μ Full	6400P	3/4c	Focus test		
1920	3"	6.45	G8Vp					5c		* Note standard Seeing Test Done after this exposure. CG40161-63 @ 106700s CG40164-65 @ 133500s	
								6c	Std Vel		
								7c			
								7c			
								8c	Std Vel		
2800		4.96	K05 III					9c			
800		7.31	DF7					10c			
								11c	Std Vel	SNR ~ 170	
								12c			
								13c			
1750		2.77	K2 II					14c	Std Vel	SNR ~ 310	
								15c			

Spectr. Temp. Dome Temp./Hum. ... +10.4°C / 66.1% Transparency Conditions ... CLOUDS SE

Focus ... 6.83

286

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	V. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 λ /mm G=5410	300 μ FULL	6400A	16i		ISK MAX 400	
								17i			
700	9"	6.5	6016					18ci	Sys p3m	CLOUDS ROLLING IN FROM EAST! SNR ~ 170	
								19ci			
								16			
								1			
				All to WORM & Perseus							

Spectr. Temp.

Dome Temp./Hum. 11.4°C/67.7%

Transparency Conditions

Clear, some cirrus

Focus 6.83

Spectr. Temp.

Dome Temp./Hum.

290

Exp. Mtr.	Seeing	$\sqrt{\frac{P.S.}{Mag.}}$	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CLD	1800 λ /mm G = 5115	300 μ	5303A	17			
102		11.6	M0					18	Vys Pgm		
								19			
								20			
105		11.5	M0					21	Vys Pgm		
								22			
								1			
								23			
0		13 12	K? M0					24	Vys Pgm	Spectrum looks wrong. wrong star.	
								25			
33		12.0	M0					26	Vys Pgm	okay.	
								27			
								1			
								52B			
530		8.5	M1					6	Vys Std		

Spectr. Temp. Dome Temp./Hum. 711^{°E} 69.3^{°H} Transparency Conditions S1. Hazy

Focus 6.83

292

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800 μ /mm G=5115	300 μ	5303A	7.	std vel		
905	4 ^{''}	666	G8V					8	std vel		
								9			
		666	G8V						Seeing Test	Light w/ wind	
		666	G8V						Seeing Test	Dome west	
								9			
								1		Sum of 4.	
T=10.8 ^{°E} set= <u>6.83</u>					1800 μ /mm G=5410	300 μ FULL	6400A	3/4	Focus Test		
								1		Average of 4.	
								5			
2100	2 ^{''} 3 ^{''}	666	G8V					6	std vel		S/N 7300/1
								7			
								8			
1950	3 ^{''} 4 ^{''}	619	F6I-IIb					9c.	Rm pgrm	P=1.49 days High priority	
								1			
								1			

Spectr. Temp.
 Focus ... 6:83
 Spectr. Temp.

Dome Temp./Hum. +10.2°C 71.6%
 WARM Room +27°C
 Dome Temp./Hum.

Transparency Conditions ... 51 hazy
 Nice BRT F. nebula, Balise?
 Moving South 5 West THROUGH Cygnus
 AT 01:10 EST

294

Exp. Mtr.	Seeing	F _v Mag.	Sp.	Inst	Grating/Tilt	Slit	Emulsion	P.H	Program	Remarks	Quality
				CASS CCD	1800nm G-5916	300 FULL	6400A8	10c			
1950	3"	6.15	G0J6					11c	Run pgr		
								12			
1890	3"	5.75	G0J6					14c	Run pgr		
								16c			
314		8.40	G0J6					17c	Run pgr / Sgs??		
								18			
855	5"	7.48	G0J6					20c	Run pgr		
1770	4"	5.14	G8IV					23	std vel		

Spectr. Temp. Dome Temp./Hum. $+98^{\circ}\text{C}$ 71.984 Transparency Conditions *S. hazy*
 Focus ... 6.83
 Spectr. Temp. Dome Temp./Hum. $+92^{\circ}\text{C}$ 72.984

296

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Filt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass -50	1500	300	51009				
22K	5"	6.8 -5.9	F2						26c. 1.5 hr		
								1c.			
								27			
1700		6.9	FGJ-IIb					28c.	Wagon	Repeat of 27c. P.C. 100%	
								29c.			
3100	5"	2.9	60TB					30c.	36/100		
								31			
								32c.			
								1			
										-101.4°C MAX 14K ADX	

Spectr. Temp. Dome Temp./Hum. +17.2°C 48% Transparency Conditions FINE

Focus ... 6.75

Spectr. Temp. Dome Temp./Hum.

298

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				155 CC1	6-6065	300 FULL	66008	2/40	Fours		
								10			
								50			
5000								60		6212x 13K AD4	
								70			
								8			
78	3"	10.4 10.8						7	CV camera	(H ₂ & He Emission) seen	< 30/1 SIX
71								10			
79								11			
								12			
								13			
8000				136 BOVI				14	Telluric Std.		
								15			
								16			

Spectr. Temp. Dome Temp./Hum. 11.3°C 49.6% Transparency Conditions *SI. Hazy*
 Focus ... 6.75
 Spectr. Temp. Dome Temp./Hum. 300

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200				CASXCO	1800nm G-6565	300x F200	6600	17c		Phi ... max 2KAD	Comparison 100/1 SR
228	1.2"							18c			
								19c			
237								20c			
220								21c			
								22c			
								23c			
								1c			
T = 14.4°C set 6.85					1800nm G-4520		4860A	24			
								5c			
260								24c			
160								25c		some cloud	
								26			
								27		12 K ADU max	
								1c			

Spectr. Temp. Dome Temp./Hum. 11.4° 54% Transparency Conditions *clouding in*

Focus *6.85*

Spectr. Temp. Dome Temp./Hum.

302

Exp. Mtr.	Seeing	H/Mag	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800nm G 4520	300 Full	4860A	28.			
170		374	A0V					29.		Sp phot Std. Cloudy	
480								30.		"	
738								6c			
								7c			
	1.2	756	G5IV							Cloudy Dome West	
										" " Light NNE wind	
								2c		12.2k ADU max	
								12c			
1820	1.2	5.78	A0V _n					13c		New Bc's	
			B3V					15			
1750		4.78	B3V					16			
1750								17			
								15			
								1			

Pg#4 303

Emulsion Batches:

Date 1994 MAY 20/21 Observers Tlr/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.
84	Comp							FeAr Clear	60s
85	HD 192685	201102	25 17	02 19 52					493s
86	"			02 30 37					296s
87	"			02 35 53					136s
88	Comp							FeAr Clear	60s
84 → 92	FLATS x 4					00 00	+18	Junc Ap 1/4	8s

305 Page #1 SAT/Sun

Date 1994 May 21/22 Observers Tlr Hn

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.
⁹³ CC22294	Comp / Stellar	HARTMAN						Felr Clear	
95	Comp							Felr Clear	20s
96	HD 34787	05 14 54	+57 27	20 41 23		27W			145
97	Comp							Felr Clear	20
98	FLAT							Tung Ap 1/4	9sec
99	Comp							Felr Clear	20
300	HD 34787	05 14 54	+57 27	21 00 21					177
301	Comp							Felr Clear	20
302	HD 34787	05 14 54	+57 27	21 08 22		07 29W			143
303	Comp								20s
304	BIAS (A)								
305	Comp							Felr Clear	20s
306	HD 74280	08 38 00	+3 45	21 30 32					99.
307	Comp							Felr Clear	20s
308	FLAT x3							Tung Ap 1/8	12sec
310						04 30	+3°		

CCD Spectr. Temp. -100°C Dome Temp./Hum. $+18.7^{\circ}\text{C}$ 57% Transparency Conditions *Fine*
 Focus 6.90
 Spectr. Temp. 90.9cm Dome Temp./Hum. 306

E. Kunkov

Exp. Mtr.	Seeing	Pr. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		∇		CASS CCD	600nm G 2740	300 FULL	4800A	4/5	New Bis		
			523	ADV				6c.			
960			523	ADV				7c.			
								8			
								9		15.8 K ADV	
				CASS	600nm G 3100		6563A	11			
900	13"		523	ADV				12.			
900								13			
800			523	ADV				14			
								15			
								1			
								15			
	24"		4.3	B3V				16	Spectra Std		
								17			
								18			

Page #2 307

Date ... 1994 ... May 21/22 Observers ... Tlr / 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.
311	Comp		(1950.0)					FeAr Clear	20s
312	T Cr B	15 57 25	+26 03 36	21 49 17					916s
313	"			22 05 33					943s
314	"			22 23 04					949s
315	Comp							FeAr	20s
316-318	FLATS x 3							JUNG Ap 1/8	7s
319	Bias (4)								
320	Comp							FeAr Clear	20s
321	T Cr B	15 57 25	+26 03 36	22 49 51					946s
322	"			23 06 47					959s
323	"			23 23 09					924s
324	Comp					-0 ^h 37'	+25° 54'	FeAr Clear	20s
325-327	Flat x 3							JUNG A=1/4	7s
328	Comp							FeAr Clear	20s
329	HD 172 167	18 33 33	+38 41 00	23 51 49					25*

Spectr. Temp.

Dome Temp./Hum. +18.6°C 57%

Transparency Conditions .. Fine .. v. sl. hazy ..

Focus ... 6.40 ..

Spectr. Temp.

Dome Temp./Hum.

308

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	600 n/m G 3100	500	6563 Å	4c			
200	1.2"	10.8	Me?					20c	CV emission		
214								21c			
208								22c		2 4.6 KADU @ Hd emission	
								4		13.5 KADU max	
								5		13.5 K ADU max	
								1c			
					600 n/m G 3740	300	7800 Å	4			
185	2"							23c			
185								24c		5" 2 60/1 filter	
204								26c			
								4c			
								5c		apparent ghosting of bottom columns in red (same as in comparison)	
								4c			
1700								27	Std.	* star dragged across slit	

Date 1994 May 21/22 Observers Tlr/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.
330	HD 172 167	18 33 33	+38 41 00	23 58 13				F₀ Ar Clear	25
331	Comp. (cd cl pl etc)							F ₀ Ar Clear	20s
332	Comp.							F ₀ Ne Clear	20s
333	HD 172 167	18 33 33	+38 41 00	00 15 17					11s*
334	"								10s*
335	Comp							F ₀ Ne Clear	20s
³³⁶ 338	FLATS x 3						2 35E + 39°	Tung Ap 1/2	13s
339	BIAS(4)								
340	Comp							F ₀ Ne Clear	20s
341	TC B	15 57 25	+26 03 36	00 27 42					1264s
342	"			00 49 15					1264s
343	Comp							F ₀ Ne Clear	20s
CG ⁴⁰¹⁷⁹ 82	HD 15 33 79	16 54 18	+43 50	2 01 20			00 03W + 44°	4 x	167s
CG ⁸³ 84	"							2 x	133s
CG 22344	Comp							F ₀ Ne Clear	20s

Spectr. 1

Focus .

Spectr. 1

Exp. Mfr.

1700

335

311

Spectr. Temp. Dome Temp./Hum. $+17.4^{\circ}\text{C}$ 53% Transparency Conditions *Sl hazy*

Focus *6.90*

Spectr. Temp. Dome Temp./Hum.

310

Exp. Mtr.	Seeing	Pig No.	Sp	Inst	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1700				C495 CCD	600/nm G 2700	300 μ	4800A	27c	Std	star dragged across slit	
								28c			
					600/nm G 2605		4100A	29c			
								300 μ	Std	* star dragged across slit	
								31c		* "	
								29ci			
								2c		min 3.4 K AD4	
								1c		MAX 15.2 K AD4	
								29c			
333								6c			
	1.2" \leq 108										
311								7c			
								29c			
									Seeing	v light NW wind	
									"	no fans	
								29c			

Spectr. Temp. Dome Temp./Hum. $+16.5^{\circ}C$ 51.7% Transparency Conditions *Sl. 400.2g*Focus *6.80*Spectr. Temp. Dome Temp./Hum. $+16.3^{\circ}C$ 55.5% CCD T $-100^{\circ}C$ Still 312

Exp. Mtr.	Seeing	Fig. No.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0		14?			600/n/mm G 2603	300μ Feldh	4100Å	9c 2c 2c 1c	CV emission	<i>something actually</i> * star directly north of Vsgc	
sky	1.2"	14?			600/n/mm G 3100	300μ	6563Å	3 4 5		* star directly north of Vsgc 40/1 SN in continuum	
22	1.2"	12?		Yes, good H α emission				9c		<div style="border: 1px solid black; padding: 5px; display: inline-block;"> Ant Note companion also on Slit at higher column # </div>	
27	"						9c				
35	1"						9c				
								10c 10c			
969		5.53	A0III					11c 12c 13c 1c	Std	8K ADU Max	
										<div style="border: 1px solid black; padding: 5px; display: inline-block;"> * CCD T noted at -75° @ 04 EST </div>	

pg#1

Sun/Mon 313

Emulsion Batches:

Date . 1994 MAY 22/23. Observers .. T.L. / 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.
CC 22368 69	Comp / Stellar HURTMAN					00 17 E	+39°	FeAr CLEAR	60/90
70	Bias (4)							FeAr CLEAR	60s
71	Comp							FeAr CLEAR	60s
72	HD 130109	14 41 11	+02 18 51	20 47 52		02 11 E			122s
73	"			20 58 35					90s
74	"			20 00 18					90s
CC 22375 - 374	"			20 03 21	20 37 52	01 24 E			90s/clear
395	Comp							FeAr CLEAR	60s
396 401	FLATS x 6					01 20 E	-1 22	TUNG CLEAR	5 s
402	BIAS (4)								
403 404	Comp							FeAr CLEAR	60s
→ 423	HD 142983	15 52 36	-13 59 00	21 50 38	22 24 24	01 48 E			90s/clear
424	Comp							FeAr CLEAR	60s
425	Comp							FeAr CLEAR	60s
426	HD 142983	15 52 36	-13 59 00	22 31 14	22 31 14				90s

CCD
 Spectr. Temp. -100°C Dome Temp./Hum. $+22.1^{\circ}\text{C}$ 53% Transparency Conditions *PART. CLOUDY*
 Focus *6.75*
 Spectr. Temp. *90.5.6Ain.* Dome Temp./Hum.
314

C LAMBDA

Exp. Mtr.	Seeing	Ptg Mag	Sp	Inst	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 μm G 4520	300 μm FULL	4860 \AA	3/4	focus test		
								1			
								5c.			
4278	2.3"	3.74	ADV					6c.	Std		
3800								7c.		STAR905.BAT using 90 OBS batch	
3600								"			
								8c.		20x90s exposures taken automatically w. STAR905.bat	
								9c.			
								10c.		MAX 12.2KADU	
								1c.			
								11c.			
	3"	4.86	Bpc					12c.	Be variability	Batch of 20x90secs	
								13c.			
					1800 $\mu\text{m}/\text{mm}$ G6065	300 μm	6500 \AA	13c.			
685			486 Bpc					14c.		Max 6K	

pg #2 315

Emulsion Batches:

Date ... 19.94. May. 22/23 Observers ... Tlr./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.
CC22429	HD 142983	15 52 36	-13 59 00	22 34 34		01 05 E			90s/ea
46									
47	Comp							Fe Ar Clear	60sec
48	BIAS (4)								
49	Comp							Fe Ar Clear	60
50	HD 130109	14 41 11	+02 18 51	23 15 32		0 18 W			90s
51-60	"	"	"	23 18 57-23 35 44		00 35 W			90s/ea
61	Comp							Fe Ar Clear	60s
62								TUNG Ap 1/4	8sec
→ 67	FLATS x 6					00 40 W	+2°		
CG40185	HD 144579	16 01 30	+39 25 36					4 x	.06F
-89									
CG40190	"				2000F	00	+39°	2 x	1135
91									
CC22468	Comp							Fe Ar Clear	60s
469	HD 192685	20 11 02	+25 17 00	00 16 35	00 33 22	3 57 E			90s/ea
-78									
79	Comp							Fe Ar Clear	60s
80	BIAS (4)								
81									
-82	Comp / Stellar					00	+11	Fe Ar Clear	60/60

Spectr. Temp. Dome Temp./Hum. +20.8°C 54.5% Transparency Conditions .. Sl. hazy ..
 Focus ... 6.75 Dome Temp./Hum. 20.0 55.5% → cloudy 316
 Spectr. Temp. C LAMBDA

Exp. Mtr.	Seeing	Flt. No.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	3"	486	B pe	CASS CCD	1800 l/mm G6065	300 μ F/4.6	6600A	15c 16c 1c 17c		Batch of 20 x 90 secs	
1274		3.71	AOV					18c 19c 20 21	Tell Std.	Batch of 10 x 90 secs	
										114 x 15 k AOV Seeing Test Done west v light WNW	
										note 1st Blank one, 4 good ones through 666 68V Above 300 μ slit	
790		4.78	B3V					23c 24c	B _c variability	Batch of 10 x 90 secs Cloud at end.	
	20.0°C		6.75 set				6600A	B/4c			

Spectr. Temp. -100°C ^{cooled from ambient} Dome Temp./Hum. $14.6^{\circ}\text{C}/56.8\%$ Transparency Conditions Some scattered clouds
 Focus 6.78 Fans OFF
 Spectr. Temp. 91.1 = 90 Dome Temp./Hum. 480 0 50 1024 41 ccd/mnt 318

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800/mm G=5115	300	5303A	5/4	Focus Test bracket	<u>Full Moon</u>	good
								1	bsum 4. bar	Some Victoria Day	
								5		Fireworks going on outside.	
130		10.5	M0					6	Vys Pgm	Still some twilight	
								7		+ some light clouds	
83		10.5	M0					8	Vys Pgm	drift by	
								9		Again, clouds	
								10			
326		7.5	M2					11	Vys Std.	Encoders messing up in Dec.	
								12			
								13			
135	4"	10.7	M0					14	Vys Pgm		S/H 50/11
								15c			
								1c			

Spectr. Temp. Dome Temp./Hum. ^{+13.6°} ^{57.0%} Transparency Conditions *Part. Cloudy*Focus *6.78*Spectr. Temp. Dome Temp./Hum. *320*

Exp. Mtr.	Seeing	PV Mag.	Sp	Inst.	Grating/ Tilt	Slit	Emulsion	P.H	Program	Remarks	Quality
	7.5	8.48	10.1	145 150	19.2 6.119	300 1.22	5303A	16.			
465	7.5	8.48	10.1					17.	Very Std		
								18			
								19			
192	4"	10.5	MO					20	Nys Pgm		
								21			
								1	beam 4 bat		
								22			
179		10.1	MOe					23	Nys Pgm	Vigs 740	
								24			
								25			
83		11.1	MO					26	Nys Pgm		
								27			
	para 666		G8V							Seeing test Dome West	
										" 4 No Fang	

Pg #3 321

Date 1944 May 23/24 Observers Tn/Hlw {Nys} [Rm]

Emulsion Batches:

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File Plate No.	Object	R.A.		Declination		Starting Time		Ending Time		Hour Angle End	Declination	Comparison	
		1900	1900	1900	1900	E.S.T.	E.S.T.	Type/Filter	Exp.				
CC22512	HD Comp					00 4						Felt Clear	20
13	HD 14579	16 0130	+39 25 36			00 44/4		0:38 W	+39°				635
14	Comp											"	20
15	Bias x 4											"	"
16	Comp											"	"
17	BD+45 2743	18 32 26	+45 39 53			01 06 29		1:26 E	+45°				816
18	Comp											"	20
19-24	6 x Flats							1:20 E	+45°			Tung 1/2 Ap	5s
25	Bias x 4												
CC22526/7	Comp/Stellar	Hartman	Mask	Test				200	+30°			Felt Clear	60/60
CC22528	Comp Comp											Felt Clear	60s
529	HD 162714	17 47 17	-06 07			01 48 24		00:07 E					473
530	Comp											Felt Clear	60s
531	Comp											Felt Clear	60s
532	HD 173297	18 39 20	-20 45 00			02 02 38		00:29 E					1461
533	comp D											Felt Clear	60s

Spectr. Temp. Dome Temp./Hum. $12.5^{\circ}\text{C}/61.4\%$ Transparency Conditions Partial Clouds

Focus 6.78

Spectr. Temp. Dome Temp./Hum.

322
CCDT still -10.5°C

Exp. Mir.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800 μm G = 5115	300 μm Full	5303A	28			
1340	6.66	68V						29	Std. Vel		
								30			
								1			
								5			
121	9.83	M0						6	Vys. Std.		
								7			
								7			
								1			
Still sel 6.78, still ok								3/4	Focus test	of dewar done here at 0136	
								6c			
1850	4.5	615	GO16					6c	Rm ppm	SIN > 300/1	
								7c			
								7c			
1250	6	7.48	GO16					8c	Rm ppm	SIN and. rem. to 6c > 200/1	
								9c			

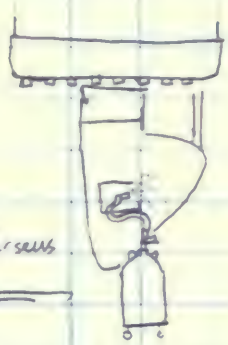
Spectr. Temp. Dome Temp./Hum. 11.9°C 66% Transparency Conditions *Fine*

Focus *G: 78*

Spectr. Temp. Dome Temp./Hum. 11.9°C 66% 324

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				<i>CMS</i>	<i>1000/60</i>	<i>300</i>	<i>54008</i>	7			
<i>1870</i>	<i>4"</i>	<i>617</i>	<i>F65-Ib</i>	<i>50</i>	<i>G-5710</i>	<i>200</i>		10	<i>Kimpys</i>	<i>Period 149 days</i>	
								12			
								12			
<i>361</i>		<i>8.4</i>	<i>GOIb</i>					14	<i>Kimpys</i>		
								15			
								16			
								16			
<i>650</i>		<i>2.91</i>	<i>GOIb</i>					17	<i>std vel</i>	<i>in cloud</i>	
								18		<i>Totally cloudy now</i>	
								1		<i>and Mr. Sun is</i>	
										<i>approaching</i>	
								15			
<i>Set G 78</i>	<i>13.9°C</i>							3			
								4			

All to *WORM* & *Persaus*



Pg#1 325 Fri/Sat

Emulsion Batches:

Date 1994 May 27/28 Observers Tn/Hlw Σ Vys

CSS 386 Time fs. 8 sec. wh. and lat. W.U.V. Time

File 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.
cc22557/8	Comp/Stellar	Hartman Mask						FeNe Clear	20/30
59	Bias \times 4							FeNe Clear	20
60	Comp							FeNe Clear	20
61	BD-02 3000	09 48 10	-03 13 04	20 49 18		03:21 W	-4°		1202
62	Comp							FeNe Clear	20
63	BD-02 3000	09 48 10	-03 13 04	21 13 31		3:40 W	-4°		900
64	Comp							FeNe clear	20
65	Comp							"	"
66	BD+01 2447	10 23 49	01 21 36	21 34 07		3:22 W	+1°		730
67	Comp								
68	Bias \times 4								
69-71	3 \times Flats					3 30 W	+1°	JUNG A 1/2	7s
72	Comp							FeNe Clear	20s
73	HD 119850	13 40 36	+15 27 00	22 01 11		00:27 W			
74	Comp							FeNe Clear	20

CCD Spectr. Temp. -100.0°C

Dome Temp./Hum. +10.4°C / 50.6% Transparency Conditions Clear

Focus 6.87

Fans OFF

326

Spectr. Temp. Cyair = 10

Dome Temp./Hum. 480 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Mag	Sp	Inst	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800L/mm G = 5115	300 μm	5303 Å	3/4	Focus Test		
								1		Telescope Reversed	
								5		Max ADU = 14959	
167	1-2"	10.5	M0					6	Vys Pgm	deltas -0 0 20 -0 0 54	
								7		→ Still some twi' light.	
85		10.5	M0					8	Vys Pgm		
								9			
								10			
~100		9.7	MZ					11	Vys Std.		
								12			
								13		12.5 K ADU.	
								14		Telescope on west side now.	
267				All to WORM & Perseus				15	Murcy Std		
								16			

pg#2 327

Emulsion Batches:

Date 1994 May 27/28... Observers H/w./J.n. {V.g.}.....

.....

File 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 22575	Comp							Fenle Clear	203
76	AC+794347	13 54 15	+79 20 23	22 18 19		0:44 W	+79°		900
77	Comp							Fenle Clear	203
78	Comp							"	7
79	BD+81 465	14 10 24	+81 04 30	22 44 24		0:52 W	+81°		745
80	Comp							Fenle Clear	203
81	Bias x 4							"	"
82	Comp							"	"
83	AC+66 4437	14 40 33	+66 28 51	23 03 23		0:40 W	+66°		915
84	Comp							"	20
85	Comp							"	"
86	AC+38 34548	15 30 11	+38 15 00	23 25 34		0:20 W	+38°		1360
87	Comp								
88	Bias x 4								
cg 40198 -201	4 x HD144579	16 01 30	+39 25 36	23 56 exp		0:01 E	+39°		.067
cg 40202-3	2 x HD144579	16 01 30	+39 25 36		23 57				.133

Spectr. Temp.

Dome Temp./Hum. $+9.0^{\circ}\text{C}$... 52.4% Transparency Conditions .. Fine

Focus ... 6.87

328

Spectr. Temp.

Dome Temp./Hum.

Cumbria

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				C455 CCD	1500nm G-5115	300 FULL	5303	17c			
71	2.3	10.6	M0					18c	Vys Pgm		
								19			
								20			
70	2.3	10.4	M0					21	Vys Pgm		
								22			
								1			
								23			
64		10.8	M0					24	Vys Pgm		
								25			
								26			
70		11.3	M0					27	Vys Pgm		
								28			
								1			
		6.66	G8I								
		6.66	G8II								
									Seeing Test		
									Seeing Test		
										Dome WSW very light NNW wind	

Pg#3 329

Emulsion Batches:

Date 1994 May 27/28 Observers T_n/Hlw {Nys}

File 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.
cc22589	Comp							FeNe Clear	20
90	HD144579	16 01 30	+39 25 36	00 00 36		0:04 W	+39°		234
91	Comp							"	20
92	Comp							"	"
93	BD-07 4156	15 54 29	-07 58 11	00 12 41		0:29 W	-8°		730
94	Comp							"	20
95	Comp							"	"
96	BD-12 4523	16 24 44	-12 25 39	00 34 19		0:18 W	-13°		600
97	Comp							"	20
98	Comp							"	"
99	BD-08 4352	16 50 05	-08 09 47	00 51 54		0:08 W	-8°		423
cc22600	Comp							"	20
601-603	3 × Flats					0:11 W	-8°	Tung 1/2 Ap	7 s
604	Bias × 4								
605	Comp							FeNe Clear	20

Spectr. Temp.

Dome Temp./Hum. $+7.7^{\circ}C/56.8\%$ Transparency ConditionsSome very light
scattered clouds.

Focus 6.87

Spectr. Temp.

Dome Temp./Hum.

330

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	PH	Program	Remarks	Quality
				Cass CCD	1800 λ /mm $G = 5115$	30 μ m	5305 A	29			
470		6.66	68V					30	Std. Vel		
								31			
								5			
76		10.5	M0					6	Vys Pgm		
								7			
								9			
96		10.1	M2					11	Vys Pgm		
								12			
								14			
144	4"	9.0	M5e					15	Vys Pgm	($\frac{S}{N}$ 50/1)	
								16			
								13		Max ADU = 15.8K	
								1			
								17			

Spectr. Temp.

Dome Temp./Hum. $+7.5^{\circ}$ 59.2H Transparency Conditions ... Some cloud

Focus ... 6.87

to lots of cloud.

Spectr. Temp.

Dome Temp./Hum.

332

Exp. Mtr.	Seeing	✓ Mag.	Sp.	Inst.	Grating/ Filt	Slit	Emulwon	P.H.	Program	Remarks	Quality
136	5"	10.59	M0	CND CCO	1800nm/mm G-3715	300 5.11	5703A	18	Vys Pgm		
								19			
								20			
150	4"	9.3	M1					21	Vys Pgm		
								22			
								23			
73		9.2	M5					24	Vys Pgm		
								25			
								26			
76		9.8	M0					27	Vys Std	In+o some pretty thick clouds now	
								28			
								1			
								29			
670		2.72	K3II					30	Std Vel.	Through thick clouds	
								5			
								13			

py #1 Sun mon (335) CSS 13^s ahead of WWV time.

Emulsion Batches:

Date 1994 May 29/30 Observers Tn./Wde, [BLN]

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.
CC22640	BIAS x4								
CC22641/42	comp stellar Hartman					0 ^h 24 ^m	40°51'	FeAr clear	40/7
643	comp							FeAr clear	60
644	HD 118232	13 30 22	49 32 38	23 52 44					300
645	"			23 57 00					646
646	comp							FeAr clear	60
647	comp							FeAr clear	60
648	HD 138629	15 28 12	41 14 19	00 17 07	01	01 19 W			1283
649	"	"	"	00 38 42		01 30 W			642
650	comp							FeAr clear	60s
→ 655	FLATS x5					01 38 W	+11°	Fe	15s
656	BIAS x4								
657	comp							FeAr clear	60
658	HD 148287	16 21 50	37 37 18	01 03 14		01 22 W			1880
659	comp							FeAr clear	60

Spectr. Temp. -100°C Dome Temp./Hum. 16.6°C 59% H

Transparency Conditions part cloudy

Focus 6.85

Spectr. Temp. 90.5 gain

Dome Temp./Hum. ~~59.9~~ 2
 15.3°C 62% H

→ increasing cloud. (336)

Exp. Mtr.	Seeing	Pig. Mag.	Sp	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	16002/1mm G=4565	300 Full	67 4490A	1		BSUM4. BAT	
								3/4	FOCUS TEST		
								5			
2700		4.82	A5V					6	BLN A-shell *	S/N = 190 : 1	
2600	23"							7			
								8			
								9			
2600	3"	5.09	A5V					10	BLN A-shell *		S/N 165/1
2600								11			
								130		MAX 12.9 K HD9 BSUM4. BAT	
								140			
840	3.4"	5.6	A5V					150	BLN A-shell *	cloud again	S/N 110/1
								16			

Spectr. Temp. Dome Temp./Hum. Transparency Conditions *cloudy*Focus *4.85*Spectr. Temp. Dome Temp./Hum. *15.2° 61% H**338*

Exp. Mtr.	Seeing	Prg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>300</i>		<i>5.66</i>	<i>A5V</i>	<i>CMS CCD</i>	<i>1800 lines G-1565</i>	<i>200-</i>	<i>44908</i>	<i>17c</i>		<i>VERY good (Too dark)</i>	
								<i>18c</i>			
								<i>19c</i>		<i>MAX = 12.6 KADP</i>	
								<i>3/4</i>	<i>Focus Test</i>		
										<i>Bsum 4. BAT</i>	

pg #2 (341) Mon/TUE

Date 1994 MAY 30/31 Observers Sgs./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		Exp. Mtr
								Type/Filter	Exp.	
CG 687-89	FLATS X3					04:15 E	+13°	Tung 1/4	8s	
90	Comp							FeAr Clear	60s	
91	HD 162714	17 4717	-060712	22 4339		02:39 E			816s	1500
92	Comp							FeAr Clear	60s	
93	COMP							FeAr Clear	60s	
94	HD 144579	16 0130	+39 24 00	23 08 19					619	1430
95	Comp							FeAr Clear	60s	
96	BIAS(4)									
CG 40209 -12	HD 144579	16 0130	+39 2400					4x	0.067ms	
CG 40213,14	" "	"	"			00 25 E		2x	1.133ms	
CG 22697	Comp							FeAr Clear	60s	
98	HD 214975	22 3655	+56 1824	23 4409		05 55 E			2700s	800
99	Comp							FeAr Clear	60s	
700	Comp							FeAr Clear	60s	
701	HD 215159	22 38 15	+53 23 00	00 36 15		05 42 E			442s	1500

Spectr. Temp. Dome Temp./Hum. ... 20.3°C / 57.6% Transparency Conditions ... Hazy, Pt. Cloudy

Focus 6.72

Spectr. Temp. Dome Temp./Hum.

C LAMBDA

ONLY NEFAN on now

342

Exp. Mtr.	Seeing	VPTG. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 Å/mm G-S110	300 μm FULL	6400A	16c		TAKEN AT POSITION SE HO 17724	
								17			
1500	3-5	6.15	60Ib					18	Sgs pgm	Y oph Hazy	
								19			
								20			
1430	3"	6.66	68					21	RV STD		
								22			
								1c			
		666	G8		(ABOVE 300 μm slit)				Seeing Test	Dome S.W., no wind	
		"	"						" "		
								23c			
800	4"	8.40	60Ib					24c	Sgs pgm	Z Lac in & out of cloud	
								25c			
								25c			
1500	4"	6.19	K2					26c	Sgs pgm	(For velocity check)	

Pg#3 (343) MON/TUE

Date 1994 MAY 30/31 Observers Sgs/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.
CC22702	COMP							FeAr Clear	60s
03	BIAS(4)								
04	Comp							FeAr Clear	60s
05	HD203156	21 1523	+37 49	00 50 59		04 00 E			60s
06	Comp							FeAr Clear	60s
07	COMP							FeAr Clear	60s
08	HD 173297	18 39 20	-20 45	01 09 48		00 32 E			270s
09	Comp							FeAr Clear	60s
10-12	FLATS X3							Tung 1/4	8sec
13	Comp							FeAr Clear	60s
14	HD 180583	19 12 00	+27 45	02 07 12				*	428
15	BIAS(4)								
16	COMP							FeAr Clear	60s
17 → 19	FLATS X3							TUNG 1/4	7sec

Spectr.

Focus

Spectr.

Exp. Mir.

1440

832

Spectr. Temp. Dome Temp./Hum. $\pm 19.4\%/59.4\%$ Transparency Conditions .. Partly cloudy, Hazy

Focus 6.72

Spectr. Temp. Dome Temp./Hum. λ LAMBDA ONLY NE FAN ON (344)

Exp. Mtr.	Seeing	V ⁴ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 μ /mm $\lambda = 510$	300 μ FULL	6400A	27c 1c 28c			
1440	3-4"	5.8- 5.9	F2					29c 30c 5c	Sys pgm	V1334 Cyg Through clouds	
832	4"	7.48	G01B					6c 7c 8c 10c	Sys pgm	BOTH FANS NOW OFF V350 Sgr 2.5A AIRMASS BRIGHT SKY LINE @ PX 50°	
?	4"	6.19	F6I-1b					11c 1c 5c 13c	Sys pgm	TAKEN AT V350 Sgr POSITION MAX 12.07 KADU * POWER FAILURE DURING EXPOSURE LAST TWO MINUTES OF EXPOSURE WITH NO POWER SPECTROGRAPH CONTROLLER FAILED BECAUSE OF POWER FAILURE POWER FAILURE MAX 12.1 K ADU TAKEN AT V453 Cyg POSITION	
									THIS COMP FOR H01805B3		

Pg 41 (345)

TUE/WED

Emulsion Batches:

Date 1994... MAY 31 / JUN 1 Observers Sgs./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 22720 21	Comp / Stellar	HARTMAN				00 14W	390	FeAr Clear	60/65
22	BIAS(4)								
23	Comp							FeAr Clear	60s
24	HD 145001	16 03 36	17 19 00	20 39 25		03 03E		FeAr Clear	263s
25	Comp							FeAr Clear	60s
26-28	FLATS X 3					03 00E		Tung 74	8s
29	Comp							FeAr Clear	60s
30	HD 180583	19 12 00	+27 45 00	21 02 39		05 32 E			1013s
31	Comp							FeAr Clear	60s
32	BIAS(4)								
33	Comp							FeAr Clear	60s
34	HD 182572	19 20 12	+11 44 00	21 38 48		05 16 E			610s
35	Comp							FeAr Clear	60s
36	Comp							FeAr Clear	60s
37	HD 215159	22 38 15	53 03 00	21 56 10		08 13 E			729s

CCD
 Spectr. Temp. -100°C Dome Temp./Hum. 13.7%/81.2% Transparency Conditions 5/ Hazy
 Focus 6.75
 Spectr. Temp. 90.5 g.s.m Dome Temp./Hum.
 C LAM60A

346

Exp. Mtr.	Seeing	V _{max} Mag	Sp	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Set 6.75	T = 17.7°C			CASS CCD	1800 l/m G=5A10	300µm FULL	6400 Å	3/4ci 1ci			
1850	3"-5"	5.00	G5 III					5ci 6ci 7ci 8ci 9ci	RV std	STILL DUSK	
1383	5"	6.19	F62-46					10ci 11ci 1ci 12ci	Sgs p/gm	V473 Lyr BAD COSMIC RAY @ COLUMN 26 ROW 4240	
1509	5"	5.16	G7 II					13ci 14ci 14ci	RV std		
860	6"	6.19	K2					15ci	Sgs p/gm	3.1AIR MASS SNR > 200 EXPOSURE CURTAILED DUE TO CLOUDS FOR RV COMPARISON PURPOSES IN AND OUT OF CLOUD SEEING TRULY AWFUL!	

CCD
Spectr. Temp. -100°C

Dome Temp./Hum. ... 16.5°C/85.5%

Transparency Conditions PARTLY CLOUDY NORTH

Focus 6.75

SLIGHTLY HAZY

348

Spectr. Temp.

Dome Temp./Hum. 16.5°C 86.5%
C LAMBDA

Exp. Mtr.	Seeing	V ₄ ⁺ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 h/μm G=5910	30μ FULL	6700A	16ci		COMPARISON FOR HD15159	
500	5"	6.15	G0Ib					17ci		Sgs pgm } Y OPH SNR ~ 150 BECOMING MAINLY CLOUDY ABORTED DUE TO CLOUDS TAKEN AT Y OPH POSITION 11.2K MAX ADU	
								18ci			
								19ci			
								20ci			
								1ci			
H// to WORK = PERSEUS											

page #1 (349) Wed/Thur

Emulsion Batches:

Date 1994 June 1/2 Observers Ebin J. III / Tn

CSS 386 Time 3 secs ahead of U.W.V. Time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time		Ending Time		Hour Angle End	Declination	Comparison	
				E.S.T.	E.S.T.	E.S.T.	E.S.T.			Type/Filter	Exp.
CC 22747	Hartman Focus Test			20:26				0:17:48W	39°3'6" N	Fe Ar clear	60/60
48	Bias x4	BSUM4.BAT		20:52						Fe Ar clear	60
49	Comp										
50	HD 93521	1042 42	+38° 6'	21:04:30				2:53W			767
51	HD 93521 1/2	1042 42	+38° 6'	21:17:41				3:8 W			872
52	Comp			21:32						Fe Ar clear	60
53	Bias x4	BSUM4.BAT		21:35							
54	HD 93521	10 42 42	+38 06	21:36				3:26W			861
55	HD 93521	"	"	21:51:55				3 42 W			853
56	Comp									Fe Ar CLEAR	60s
57	Comp									"	"
58	HD 87901	10 03 03	+12 27 22	22:11 50							47s
59	HD 87901			22:13 34							51s
60	Comp # D136849	15 17 43	+33 17 30							Fe Ar clear	60
CC22762	Comp HD 136849	15 17 43	+33 17 30	22:23				0:25		Fe Ar	60 53+

CCD
 Spectr. Temp. -100°C Dome Temp./Hum. $11.8^{\circ}\text{C}/49.9\%$ Transparency Conditions *Fine*
 Focus 6.80 Dome Fans off
 Spectr. Temp. *again = 90* Dome Temp./Hum.
350
420 0 50 102 + 4 1 ccd fnt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
11.0° for focus test				Cass CCD	1800 $\text{\AA}/\text{mm}$	300 μm	6604 A	3/4	Focus Test		
					7=6065	1 μm		1/ci			11.0
								5ci		Telescope Reversed (ie Telescope East side of Piers for this star)	
1400	4"	7.04	09.5 V		150:1	S/W		6ci	Bin 0* pgm		10.7
1546								7ci			10.4
								8ci			10.2
								1ci			10.0
1520	4"							9ci		64% humidity on catwalk	
1450	3-4"							10ci			
								11ci			
								12ci			
7700		635	B7V					13	telluric std		
3741								13ci			8.9
								14ci			
								15ci			
3648		5.37	B9V					16ci	telluric std		

Page # 23

Wed/Thu

351

Emulsion Batches:

Date ... 1994 ... June 1/2 Observers [B. B. J. H. (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.
cc 22763	Comp			22:33:50				Fe Ar clear	60
64	Bias x 4	Bsum 4. BAT		22:35:34					
65	Comp			22:42:22				Fe Ar clear	60
66	HD 93521	10 42 42	+38° 6'	22:44:40		4:35 W			900
67	HD 93521			23:00:04		4:51 W			900
68	Comp			23:16:03				Fe Ar clear	60
69	HD 93521			23:19:36		5:10 W			900
70	HD 93521			23:35:32		5:26			900
71	Comp			23:52:02				Fe Ar clear	60
72	Bias x 4	Bsum 4. BAT		23:53:30					
73	HD 93521			23:56:13		5:47 W			900
74	HD 93521			0:12:34		6:03 W			900
75	Comp			0:28:30				Fe Ar clear	60
76	HD 93521			0:31:14		6:22 W			900
77	HD 93521			0:47:03		6:38 W			900

CCD Spectr. Temp. -1.00°C Dome Temp./Hum. .. 8:8°C/58.3% Transparency Conditions ... Mostly clear

Focus 6.80

Dome fine off

Spectr. Temp. Gain = 9.0

Dome Temp./Hum.

352

Exp. Mtr.	Seeing	Pig Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				C455 CCD	18006/1 6-8065	300 F442	6604A	17c 1 13c			
1381		7.0	095I		160:1	SIN		19c	Bin 0* pgm		8.8°
1286								20c			8.1°
†								8c			
1119								21c	3ln 0* pgm		
1159		6"			145:1	SIN		22c			7.9°
†								18c			
								1c			
1064								23c			7.2°
951								24c			
-					135:1	SIN		8c			7.0°
792		7"						25c		2.744 air mass at end	6.8
648								26c		84% hum. d. by on the catwalk	

PgH 3

Wed / Thurs

353

Emulsion Batches:

Date 1994 June 1/2 Observers [Blm], III, 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 2777B	Comp			1:02:51				Fe Ar Clear	60
79	Bias x 4	Bsum 4.	BAT	1:04:30					
80	Comp							Fe Ar Clear	60s
81	HD 124224	14 07 12	+02 53 00	01:44:03		03 37W			600s
82	HD 124224			01 24 52					600s
83	HD 124224			01 35 14		3:57W			600
84	Comp			01:46:15				Fe Ar clear	60
85	Bias (4)	Bias 4.	BAT	01:47					
86	HD 124224			01:50:06		4:12W			600
87	HD 124224			02:01:03		4:23W			600
88	HD 124224			02:11:48		4:34W			600
89	Comp			02:22:38				Fe Ar clear	
90	Bias x 4	Bsum 4.	BAT	02:24:17					
91	HD 124224			02:27:13		4:49W			500
92	HD 124224			02:38:11		5:00W			60

CCD
 Spectr. Temp. ... -100 °d ... Dome Temp./Hum. ... 6, 0°C / 70.9% Transparency Conditions ... F110 ... (354)
 Focus ... 6:80 ...
 Spectr. Temp. ... 9.0 ... Dome Temp./Hum. ...
 Gusty NNW wind starting up.

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS ccd	1800/100	300 FULL	6604A	8ci			
								1ci			
								8ci			
2950	5.8"	5.00	Ap51	LCUV.12	265	SIN		9	Plan He *	2116 AIR MASS SIN 265/1	6.6°
2700								10		humidity on the catwalk	
2695								11			
								8ci			
								1ci			6.5°
2720								12ci			
2893								13ci			7.3°
2870								14ci			7.5°
								8ci			7.6°
								1ci		80% humidity on the catwalk	
2450	6"							15ci			
2070								16ci			

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Wed / Thu (355)

Emulsion Batches:

Date .. 1994 June 1/2. Observers .. F. B. J. III. L. T. O. ...

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.
CC27793	HD 124224			2:48:59		5:11 W			600
94	COMP			3:00:20				Fe Ar clear	600
95	Bias (4)		Bias 4. BAT	3:01:55					
96	HD 124224			3:03:31		5:31 W			920
97	Comp			3:20:32					
CG 40215-18	HD 187120		19 43 12 + 45 29 00					4 x	0.067
19,20	HD 187120							2 x	0.1335
CC27798	FLAT x1		+45°43'			2:30 W		Twin 1/4	60
799,800	FLAT x2								
801-810	FLAT x10			3:47:13					
811,812	Comp / STEWAR FOCUS TEST					0:0 E + 39° 20'		Fe Ar clear	60
813	Bias x4		Bism 4. BAT	4:15:07					

CCO Spectr. Temp. -100.0°D. Dome Temp./Hum. 7.6°/70.0% Transparency Conditions Five

Focus 6.80

Spectr. Temp. ... again = 9.0

Dome Temp./Hum. 7.1° 75%N

Dome fans off

(356)

Exp. Mtr.	Seeing	Pris. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1690	235 S/N			Cass CCD	180°/N	300 um	6604A	17ci		82% humidity in catwalk	7.40
								3ci			7.30
1695								1ci			
								18ci		7.69 air mass (?)	7.20
								8ci			
								19ci		SEEING TEST	
								8ci		Dome East, gusty NNW wind	7.30
								10ci			
								8ci			
								8ci			
								314		Focus TEST	7.00
								1ci			
ALL TO WORM = PERSEUS											

