



spectr. Temp. Dome Temp./Hum. Transparency Conditions 4

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spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality

David Dunlop Observatory
74" Logbook
Vol. 80
Plate Nos. 30812 - 33192
February 1995 - May 1995

5 pg #1 Sun / mon

Emulsion Batches:

Date 1995 Feb 19/20 Observers [Hlw.] [Vg.] [Tg.]

CSS 386 Time Reset to ... U.T.C. 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 30812	BIAS(A)			18 08					
13	Comp							FeNe Clear	25s
14	HD 24760	03 51 08	+39 43 16	18 21 33					49s
15	Comp							FeNe Clear	25s
16	Comp							"	"
17	HD 29587	04 34 30	+41 57 00	18 39 56		00 10 E			687
18	Comp							FeNe Clear	25s
CGA07 ⁸⁶ / ₈₉	HD 29587	04 34 30	+41 57						4x .0675
CG 407 ⁹⁰ / ₉₁	"	"	"			00 01 W			2x .1335
19	BIAS(A)			18 57					
20	Comp							FeNe Clear	25s
21	HD 36395	05 26 18	-03 41 00	19 10 16		00 24 E			984
22	Comp							FeNe Clear	25s
23	Comp							"	"
24	BD-09 956	04 35 43	-09 23 20	19 35 05		01 13 W			2267
25	Comp							FeNe Clear	25s

CCO Spectr. Focus Spectr. Exp. No. Filter 214K 3800 2620 800

^{CCD}
 Spectr. Temp. -100°C Dome Temp./Hum. $+2.0^{\circ}\text{C}$... $72.3\% \text{H}$ Transparency Conditions... *Clear, but hazy* 6
 Focus... 6.94 90C gain
 Spectr. Temp. Dome Temp./Hum. $+1.0^{\circ}\text{C}$... $73.3\% \text{H}$ 410 0 50 1024 41 CCD ^{ROUT} ^{MAX} ^{ADU}

Exp. Mtr.	Seeing	Obj. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
No Filter				CASSCOB	1800h/m G-5740	306 μ	5303A	1/2			
								3			10K
214K		2.81	B0-51R	A1 E				4	well, it was	Star for encoder normality	11K
								5			
								6			
3,800	3"	7.29	dG2					7	std vel		3-7K
								8			
		7.29	dG2		ABOX	306 μ slit		1/2	Seeing test	No Fans, Dome West	
		"	"						"	very light NW wind	
								1/2			
								9			
2620	3"	7.97	M1					10	std vel (marcy)	> 100/1 S/N	
								11			
								12			
800	(3.25")	1030	M0					13	Vys 452 AB	> 50/1 S/N ↓ some 5 Big galilei with 1/4 sec int worked OK	
								14			

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Emulsion Batches:

Date 1995. Feb. 19/20..... Observers [H. Lu.]... 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 30826	BIASCA)			20 14					
27	Comp							FeNe Clear	25s
28	BD-02 3000	09 48 10	-03 13 04	20 22 07		3 14 E			2178
29	Comp							FeNe Clear	25s
30	Comp							"	"
31	HD 95735	10 57 54	+36 38 00	21 06 21		4 02 E			849
32	Comp							FeNe Clear	25s
33	BIASCA)			21 22					
34	Comp							FeNe Clear	25s
35	BD+2 1729	07 34 11	+02 24 52	21 28 20		00 07 W			2221
36	Comp							FeNe Clear	25s
37	BIASCA)			22 11					
38	Comp							FeNe Clear	25s
39	BD-02 3000	09 48 10	-03 13 04	22 13 35		01 19 E			2371
40	Comp							FeNe Clear	25s

CCD
Spectr. Temp. -100.5°C

Dome Temp./Hum. 100.8°C 74.18H

Transparency Conditions OK, but increasing haze.

Focus 6.94

Spectr. Temp.

Dome Temp./Hum. -00.2°C 76.62A

$P = 10.19$ Kps and fillings

MAX
ADU

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CASS CCD	1800 h/m G=5140	306a	5303A	1/2			
								15c			12K
850	4"	10.54	M0					16c	Vys 560	Field checks OK (750/1 S/N) ie not the bright star to SW	
								17c		Thin cloud at end	
								18			
4000	3-4"	7.48	M2					19	std vol (marcy)		2.6K
								20			
								1/2			
								21			
1340	2.2"	9.6	M0					22	Vys pgm	(85/1 S/N) Auto guided Vys 503 SBIG Rack 00, 500 best	
								23			11K
								1/2			
								24			
800	2.4"	10.54	M0					25	Vys 560	2nd exp 560/1 S/N	11K
								26			11K

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Sun/Mon

Date 1995. Feb. 19/20..... Observers [H.W.] J.A.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
Cc 30841	Comp							FeNe Clear	25s
42	BD+01 2447	10 2349	+01 21 36	22 5844		01 11 E			2235
43	Comp							FeNe Clear	25s
44	BIAS(4)			23 3748					
45	Comp							FeNe Clear	25s
46	BD-08 2689	09 2357	-08 49 46	23 4751		00 43 W			2576
47	Comp							FeNe Clear	25s
48	BIAS(4)			00 36					
49	Comp							FeNe Clear	25s
50	BD-02 3000	09 48 10	-03 13 04	00 3818		01 06 W			2369
51	Comp							FeNe Clear	25s
52									
- 60	FLATS x 9					00 00	-3 40	JUNG Ap1/2	5sec
61	BIAS(4)			01 27					

CCD Spectr. Temp. -100.3°C Dome Temp./Hum. -00.3°C 7662A Transparency Conditions Fine, some haze only.....¹⁰

Focus.....6.9f.....

CCD Spectr. Temp. Dome Temp./Hum. -00.9°C 8107
Some Fog increasing to MAX

Exp. Mtr.	Seeing	F _v Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				C455 CCD	1800 λ /m G=5140	306 μ	5303A	27			
1430	2"-3"	9.65	M 2					28		std vel (muncy)	1K
								29			
								1/2			
								3			
800	3"-4"	10.52	M 0					4	Vys 268	60/1 s/n	
								5			
								1/2			
								6			
850	3"-4"	10.57	M 0					7c	Vys 560	Exp #3	
								8			
								9			14.3K
								1/2			
All worms & recorded.											

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Mon/Tues

Emulsion Batches:

Date ... 1995. Feb. 20/21... Observers [Pb]... Jn.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC 30862	BIA 5(4)			00 35	after Top up	01 12W	-21 34		
63	Comp. FeAr			00 35				FeAr Clear	90 sec
64				START					
-66	TL 850 x 3			01:10:15	00 35			400s	1500s
67	BIA 5(4)			01 32					
68									
→ 70	FLATS x 3							WING Ap/4	12 sec
71									
→ 73	TL 841 x 3			01 39 37					300s
74									
-76	TL 830 x 3			02 00 00					5W
#7	Comp							FeAr Clear	90 sec
	Comp							FeAr Clear	90 sec

CCD
Spectr. Temp. -100°C

Dome Temp./Hum. $+00.5^{\circ}\text{C}$ $85\% \text{H}$

Transparency Conditions *Cloudy, Closed Sea Tests*

Focus 6.89

90C gain

410 0 50 1024 4 1 CCD/FMT

CCD
Spectr. Temp.

Dome Temp./Hum. $+00.3^{\circ}\text{C}$ $85\% \text{H}$
climbed at Row 512

(no 'Hot' MAX added)

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				C455 CCD	180° in plane $G=5499$ $\text{tilt} = 50.8^{\circ}$	306 μ	5749A $\pm 100 \text{ \AA}$	1/2a	Fluorescent	fair lamp tests	
								3c		[Felle no good here due to very strong tail end MAX 15.6K 12.2K	620
(8000 counts for 360 sec exp test)								6c			
3A.4K for 1500 sec								1/2			
								8c			15K
= 7K								9c			84K
								10c		just that "Hot" pixel saturated The Rodden lumps	15-3K
								11c			620
Now setup to do					1500 in plane			11c			307K
(15 min exp each)					$G=5584$						

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Date 1995 Feb 21/22 Observers Mki / Smt

Emulsion Batches:

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Plate No.	Object	R.A.		Declination		Starting Time		Ending Time		Hour Angle End	Declination	Comparison	
		1900		1900		E.S.T.		E.S.T.				Type/Filter	Exp.
cc30878/9	INBOARD/OUTBOARD									0 ^h 4 ^m W	+44°	Fehr clear	60/60
80	BIAS(4)					19 20							-
81-85	FLAT x 5									1 ^h 35 ^m W	+17°	Tung 1/4 Ap Fehr clear	6 60
86	COMP												
87	BD+16 516	3 44 43	+16 57 06	19 43 06						1 57 W			900
88	BD+16 516			19 58 39						2 14 W			990
89	BD+16 516			20 15 25						2 29 W			910
90	BD+16 516			20 30 49						2 44 W			900
91	COMP											Fehr clear	60
92	BIAS(4)			21 08									-
93-97	FLAT x 5									3 10 W	+17°	Tung 1/4 Ap Fehr clear	6 60
98	COMP												
cc30899	BD+16 516	3 44 43	+16 57 06	21 15 58						3 29 W			900
cc30900	BD+16 516			21 31 10						3 44 W			900
01	BD+16 516			21 46 28						4 00 W			900
02	BD+16 516			22 01 41						4 15 W			950

CCD Spectr. Temp. -100°C Dome Temp./Hum. $-6.6^{\circ}\text{C}/52.1\%$ Transparency Conditions *clear* 14

Focus 6.90

Spectr. Temp.

Dome Temp./Hum. $-8.6^{\circ}\text{C}/54.4\%$ @ U30901

TEL ON E SIDE
FANS OFF

410 0 50 1024 4 1 CCDFIT

Exp Mtr. Or. Slit	Seeing	V Pts- Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. C.	Program	Remarks	max Quality ADU
FILTER				CASS CCD	1800 Å 6-6100	30 Å	██████ 6604A	3/4 1/2	FOCUS TEST		13.3K → 12.7K
241	5"	9.40 -9.71	0.65 Å KOV _{0.04}					6	Mki V471 Tau	S/N ~ 65:1 cosmic ray in strongest column	130 above b/g
281	4.5"							7	"	S/N ~ 85:1 nasty cosmic ray @ row 765 <small>(align 28 column)</small>	350 above b/g
	4"							6	"	S/N ~ 75:1	400 above b/g
538 for with	3"			good for proof of failure only. all is fine for this one.				7	"	signal REALLY low for this one. will check CCD - its shutter & heater.	51 above b/g!
								8		ADU cracked (or 580) reset before hand.	
								1/2			
								2			13.1K → 12.4K
								9		fading cosmic ray.	
280	4"	9.40 -9.71	0.65 Å KOV _{0.04}					10	Mki V471 Tau	S/N ~ 70:1	400 above b/g
280	4.5"							11	"	cosmic ray in strongest signal column S/N ~ 75:1	350 above b/g
269	5-4"							10	"	S/N ~ 70:1	400 above b/g
266	4"							11	"	S/N ~ 70:1	400 above b/g

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Date 1995 Feb 21/22 Observers Mki / Smt

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.
CC30903	COMP							FeAr Clear	60
04	BIAS(4)			22 20					-
05-09	FLAT x 5					4 20 W	+17°	Tung K4 Ap FeAr clear	6 60
10	COMP								
11	BD+16 516	3 44 43	+16 57 06	22 26 41		4 42 W			960
12	BD+16 516			22 44 13					1220
13	BD+16 516			23 05 57		5 20 W			900
14	BD+16 516			23 23 37		5 38 W			900
15	COMP							FeAr clear	60
16	BIAS(4)			23 42					
17-21	FLAT x 5					5 47 W	+17°	Tung K4 Ap FeAr clear	6 60
22	COMP								
23	HD 26793	4 09 08	+9 45 32	23 57 34		5 48 W			1000
24	COMP							FeAr Clear	60
25	BIAS(4)			00 18					

Exp. Mir.
06.500
Filter

Exp. Mir.

06.500
Filter

290

380

244

220

2860

CCD
Spectr. Temp. = 100°C

Dome Temp./Hum. = 8.8°C/54.4%

Transparency Conditions = Clear 16

Focus = 6.90

FANS OFF

Spectr. Temp.

Dome Temp./Hum.

TELESCOPE ON E SIDE

Exp. Mtr.	Secing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	ADU Quality
06560				CAS5	1800 λ /mm	306 μ	6604 Å	12			
FILTER				CCD	G-6100			1/2			
								2			13.2K → 12.4K
								13			
290	4.5"	9.40 - 7.71	0654 KOV. ind					14	Mki V471 Tau		
360	6"							15	"	FITS Files mis-named corrected →	250 above 0/9
244								16	"		200 above 0/9
220	7"							17	"		
								18			
								1/2			
								2			17.3K → 17.1K
								19			
2850	8" + 5.22		BATV n					20	Telluric Std.		2.8K
								21			
								1/2			

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Emulsion Batches:

Date 1995 Feb 21/22 Observers Mki/Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc30926-30	FLAT x 5					5 55 W	+10°	Tung 4 dp	6
31	COMP							FeAr clear	60
32	HD 32963	5 01 48	+26 12	0 29 33		5 32 W			1240
33	COMP							FeAr clear	60
34	COMP							"	"
35	HD 35770	5 22 01	+15 47 23	01 00 51		5 32 W			600
36	COMP							"	60
37	BIAS (4)			1 15 45					-
38-42	FLAT x 5						+16°	Tung 4 dp	7
43	COMP							FeAr clear	60
44	BM CAS	6 48 36	+63 33	1 38 03		~10 ^h 45 W			680
45	BM Cas			1 56 44		11 ^h 07 W			1260
46	BM Cas			2 12 13		11 ^h 27 W			1200
47	BM Cas			2 32 33		11 ^h 47 W			1200
48	COMP							FeAr clear	60

CCD
 Spectr. Temp. -100°C Dome Temp./Hum. $-9.7^{\circ}\text{C}/53.9\%$ Transparency Conditions *clear* 18
 Focus 6.90 FANS OFF
 Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Secing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H. CI	Program	Remarks	MAX Quality ADU
				CASS CCD	1800 λ/mm G=6100	300 μ	6609 λ	2ci		TELESCOPE STILL ON EAST SIDE	12.5K \rightarrow 11.7K
								22			
1335	8"	772	G2V					23	Std Velocity	$RV = -63.1 \pm 0.4$ Ast. Almanac	1.8K
		772	G2V					24			
								25			
2300	8"	5.50	B1.5I _n					26	Telluric Std.		
								27			
								1/2			
								2			14.2K \rightarrow 16.0K
								28			
~300	7"	8.82 -9.33	e					28	Mki	H α emission 500 ADU above b/g	700 above b/g
845	7"							29	"		1.8K
475	8"							28	"		1.5K
355								29	"	getting close to trees in N and N pier.	1.2K
								30			

COO Spectr. Temp. -100°C Dome Temp./Hum. $-10.6^{\circ}\text{C}/54.4\%$ Transparency Conditions *still clear* 20

Focus 6.90

Spectr. Temp. Dome Temp./Hum. $-11.2^{\circ}\text{C}/54.9\%$ *after seeing test* TELESCOPE STILL ON EAST SIDE

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 λ mm 6-6100	300 μ	6604A	1/2			
								2		(JUST BARELY ON EAST SIDE)	13.4K → 12.6K
								5		TELESCOPE ON W SIDE NOW	
4900	5"	5.25	M2 III b					6	Std. Velocity	Ast. Almanac RV = -13.4 ± 0.3 km/s	9.1K
								5 1/2			
								2			15.3K → 14.6K
				CEV CCD GUIDE CAMERA		above 300 μ		-	SEEING TEST	Dome WSW, light NW wind, clear, bad seeing,	
						"		-	"		
All to WORM & Perseus.											

-60 Spectr. Temp. -100² Dome Temp./Hum. -7.6°C/53.6% Transparency Conditions most ^{H₂O} cloudy 22

Focus 7.01 Dome Temp./Hum. N DOME FAN ON ONLY
410 0 50 1024 4 1 CCD FMT

Exp. Mtr. NO FILTER	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 λ /mm 6.5140	36 μ	5303 \AA	3/4	FOCUS TEST		max AD4
								1/2			
								5			
1660	4"	7.97	M1					6	Mary Standard	some cloud at beginning Vys 9 RV=+8.52 km/s	950
								7			
								8			
353		10.54	M0					9	Hlw E _{vys} ?	Vys 560 Lots of cloud at start lots more cloud, star gone.	150 above b/g
								10			
								1/2			
								2			16.1K -715.0K
								1/2			
									All backed up to Perseus & Worm		

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S4715UN

Emulsion Batches:

Date 1995 Feb 25/26 Observers [Hlw] Tn./Smt.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC30984/5	INBOARD/OUTBOARD							Fene clear	25/38
86	BIAS X4			18 28					
87	COMP							Fene clear	25
88	HD18884	2 57 03	+3 41 51	18 31 36		~ 1 30 W			54
89	COMP							"	25
90	HD18884	2 57 03	+3 41 57	18 35 56		~ 1 35 W			68
91	COMP							"	25
92	COMP							"	"
93	HD 36395	5 26 18	-3 41	18 48 29		0 27 E			721
94	COMP							"	25
95	COMP							"	"
96	BD-2 3000	9 48 10	-3 13 04	19 08 19		04 10 E			1798
97	Comp							Fene clear	
98	BIAS X4			19 43					
30,00 ⁹⁹ 08	FL4TS x 9 BIAS x4			20 38		~ 3 30 E	-3°	TUNG Ap/2	55

CCD Spectr. Temp. -10.3°C Dome Temp./Hum. -8.7°C @ focus test Transparency Conditions clear but cloud in S. over horizon. 24
 Focus 7.21
 Spectr. Temp. Dome Temp./Hum. -10.1°C / 47.6% @ 18:52 FANS OFF
410 0 50 1024 4 1 CCD

Exp. Mtr	Seeing	Ptg Mag	Sp	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CASS CCD	1800 R/m G=5140	306 μ	5303A	3/4 1/2 5		sum of 4 biases.	
10K	✓ 2.55	B 4.19	M1.5 III a					6 7	Std. Velocity	sky still brightish.	11.1K 5.2K
16K								8 9 10	Std. Velocity		8.6K
1610	3.5"	✓ 2.97	M1					11 12 13	Marcy Std Vel	V _{LS} 9 RV = +8.52 km/s	6.70 clearly 11.2K
* 625		10.54	M0	well 201 μ S/N above background				14 15 1/2 1/6 1/2	Hlw Sp Bin	* 1/3 of sky. hard to see star V _{LS} 560 thru cloud. very cloudy really	max 15.7

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Emulsion Batches: A

Date 1995 Feb 25/26 Observers [Hew] T. J. Sant... t. E. U. S. 3

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC31,009	Comp							FENE Clear	25
10	H095735	10 57 54	+36 38 00	21 51 17		2 47 E			1200
11	Comp							FENE Clear	25
12	BIAS X4			22 14					—
BA40788-801	H073992	8 36 12	+39 25						4x. 47
802/803	"				22 30	07° E	85° Alt	1.004 <small>aperture</small>	2x. 137
CC31013	COMP							FENE Clear	25
14	The star to ESE of intended star								
	AC+53 2527-109	16 06 49	+53 12 11	23 02 14		6 37 E			1500
15	COMP							"	25
16	BIAS X4			23 32					
17	Comp							FENE Clear	25
18	THE REAL AC+53 2527-109	16 06 49	+53 12 11	01 22 53		4 29 E			749
19	COMP							FENE Clear	25
20	BIAS X4			1 40					—
21/22	INBOARD/OUTBOARD					4 22 E	+53°	FENE Clear	25/38

CCD Spectr. Temp. -100.1°C Dome Temp./Hum. -14.5°C 79.7% Transparency Conditions Mostly cloudy 26

Focus 7.01

Spectr. Temp.

Dome Temp./Hum. -12.0°C / 46.8% @ seeing test FANS OFF

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
no filter				CHSS CCD	1800 lines G=5140	306 μ	5303A	17c			
1545	4"	\checkmark 7.48	M2					18	ST/VEL	mercy RV = -84.70 km/s.	600 above Wg
								19			
								1/2			
		\checkmark 7.5	M2UL	EVV CCD		above 316 μ			SEE #6 TEST	Dome WSW, lite W wind. cloudy as low as thickest in S	
				60100 CAMERA					"		
								20			
695	4.5"	\checkmark 10.19	Kish MO	Indeed, the	Brighter Field Star.			21	{Vys} ppm	not quite so cloudy here Counts/strength seems right but spectrum looks earlier, K?	400 above Wg
								22			
								1/2			
								23			
167		\checkmark 10.19	MO					24	{Vys}?	S/N > 10:1! Vys 759 Then cloud again	middle.
								25			12.9K
								1/2			
								3/4	FOCUS TEST.	in focus -14.12	

Spectr. Temp. -100°C Dome Temp./Hum. $-14.4^{\circ}\text{C}/49.1\%$ Transparency Conditions *mostly clouds* 28
 Focus *7.01*
 Spectr. Temp. Dome Temp./Hum.
- getting better

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>no fl/42</i>				CASS CCD	1800 2/m 6-5140	36 μ	5303A	22			
475		V 10.19	M0					23 ²⁴	Σ Vys	Vys 759 clearish here	
								25			
								23 ³		RESET HOUR/ROW BECAUSE CCD3 HUNG UP TWICE BEFORE RE-ADJUST a little less cloudy, not much.	
260 ^{1/2} <i>light ok sky</i>		V 10.54	M0					4	Hlw Sp. Bin.	Vys 560, = acca-see it,	
								5			
								1/2			
353		V 10.54	M0					6	Hlw Sp. Bin	Vys 560 same out of field for a bit. too close to platform to continue.	
								7			
								8		clear here now.	
1124	3 rd	V 9.65	M2					9	std vel	Vys 127 mancy RV = +836 km/s	
								10			
								11		TEL ON E SIDE NOW	
490		V 10.54	M0					12	Hlw	no cloud but refraction noticeable.	
								13		\searrow Est rel vel to Sun = +60 km/sec	

29
Pg #4

Date ..1995.. Feb. 25/26.. Observers ..[HLW, E. V. G. S.] Tn. / Smt

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.
CC31038	BIAS x4			5 00					
39	COMP							FeNe clear	25
40	BD+01 2447	10 23 49	+01 21 36	5 02 05		5 14 W			2123
41	COMP							"	25
42	Comp							"	"
43	AC+53 2527-109	16 06 49	+53 12 11	5 51 28		0 10 W			1207
44	Comp							FeNe clear	255
45	BIAS x4 with CCD TEMP WARMING (for 43)			6 14					-
46-48	FLAT x3 (for 42-45)					0 14 W	+53°	Tung 1/2 Ap	5

Spectr. Temp. Dome Temp./Hum. $-15.4^{\circ}\text{C}/48.3\%$ Transparency Conditions *clear now* 30

Focus 2.01

Spectr. Temp. Dome Temp./Hum. $-16.2^{\circ}\text{C}/49.1\%$

MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion λ	P.H.	Program	Remarks	Quality
				CASS CCD	1400 L/mm 6-5140	306 μ	5303 Å	1/2		Still East Side	
								14			14A
895	6"	9.65	M2					15	Merq Sid. Vel.	RV = +8.36 km/s	
								16			
								17		CCD warming here 1 hr.	
541	4.5"	10.9	M0					18	Vys 759	CCD T = -90.8°C at mid exp.	
								19			
								1/2		daybreak.	
								2			15.1K → 1482
										CCD T = -81°C at night's end	
									All backed up to Perseus & WORM.		

3 pg 41

Sun/Mon

Date 1995 Feb 26/27 Observers [Hlw] Tn/Smt

Emulsion Batches:

.....

Plate No.	Object	R.A.		Declination 1900	Starting Time		Ending Time		Hour Angle End	Declination	Comparison	
		1900			E.S.T.		E.S.T.				Type/Filter	Exp.
CC 31049/5a	INBOARD/ OUTBOARD										FeNe Clear	25/38
51	BIASx4					18 38						
52	COMP										FeNe Clear	25
53	HD 18884	2 57 03	+ 3 41 51		18 44 35				~ 1 50 W			42
54	HD 18884				18 47 00				1 55 W			45
55	COMP										FeNe Clear	25
56	COMP										FeNe Clear	25
57	HD 36395	5 26 18	- 3 41 00		18 55 31				0 18 E			602
58	COMP										FeNe Clear	25
59	BIASx4					19 08						
60	COMP										FeNe Clear	25
61	BD-2 3000	9 48 10	- 3 13 04		19 28 41				3 40 E			2150
62	COMP										FeNe Clear	25
63	BIASx4					20 11						-
64	COMP										FeNe Clear	25

CCD Spectr. Temp. -100°C

Dome Temp./Hum. $-9.3^{\circ}\text{C}/51.3\%$
 @ FOCUS TEST

Transparency Conditions \dots very clear... except to S 100%

Focus \dots 7.01

N FAN ON ONLY

Spectr. Temp. \dots

Dome Temp./Hum. \dots

410 0 50 1024 4 1 CCD/FMT

Exp. Mtr.	Seeing	V-Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	S.F.T.	Program	Remarks	max ADU Quality
no filter				CASS CCD	1800 L/m 6-5140	300 μ	5303 Å	3/4	FOCUS TEST		
								1/2			
								5			
20K	3"	2.53	M151A					6	BRIGHT IAD STD. VEL.	mond star around... x Cet double-peaked.	13K
17.7K								7		traced... single-peaked	13K
								8			
								9			
2631	3"	7.97	M1					10	MARCY STD. VEL.	$\approx (150/1 \text{ S/N})$ $V_{\text{ys}} 9, RV = 18.52 \text{ km/s}$	2.6K
								11			
								1/2		AFTER BIASING, TAPPED UP CCD DEWAR WHILE CCD TEMP HAD @ -100.2°C	
								12			
797	5"	10.54	M6					13	HLW	thin cloud + refraction $V_{\text{ys}} 560, \text{ S/N} \sim 50:1$	800 above v/g
								14		Estimated Vel rel to Sun $\pm 32 \text{ km/sec}$	
								1/2			
								15			

33
Pg #2

Date 1995 Feb 26/27 Observers [Hlw] Tn./Smt. + {Vys}

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 31065	BD+01 2447	10 23 ⁴⁹ 50	+01 21 36	20 14 08		3 46 E			1200
66	COMP							FeNe clear	25
67	COMP							FeNe clear	25
68	BD-02 3000	9 48 10	-03 13 04	20 43 01		2 29 E	-34'		1948
69	Comp						"	FeNe clear	25
70	BIAS X4			21 20			'		
→ 71 79	FLATS x 9					2 24 E	"	TUNG Ap/2	550
80	Comp							FeNe clear	255
81	BD+10 1857	08 37 20	+09 55 22	21 27 54		~0 30 E			1988
82	Comp							FeNe clear	255
83	COMP							"	"
84	BD-02 3000	9 48 10	-3 13 04	22 05 58		1 00 E			2310
85	COMP							FeNe clear	25
86	BIAS x 4			22 48					-

CD
Spectr. Temp. ... -100. ... °C

Dome Temp./Hum. -10.3°C/49.9%

Transparency Conditions clear except for ³⁴partly cloudy to S (-5°) _{to S (-5°)}

Focus ... 7.01

Dome Temp./Hum.

N FAN ON ONLY

410 0 50 1024 2 1 CCD/FIT

Exp. Mtr.	Seeing	V _{mag} Mag.	Sp.	Inst.	Grating/Tilt	Slit	λ Emission	F ₁₁	Program	Remarks	Quality
679		9.65	M2	CASS CCD	1800 1/2 G=5140	306μ	5303 Å	16	MARLY STV. VEL.	S/N ~ 60:1 Vys 127, RU = +8.36 bands	320 above 6/9
								17			
								18			
755	4"	10.54	M0					19	Hlw	" ~ 55/1 S/N Vys 560, mostly clear here	
								20			
								1/2			
								21			m4 (15K=16K)
								22			
1150	3-4"	9.6	M2					23	{Vys} pgn	some cloud	
								24			11.9K
								25			
743		10.54	M0					26	Hlw	Vys 560 - clouds on and off and on	170 above 6/9
								27		clouded over	
								1/2		closed dome.	
										All backed up to Perssons & WORN	

35

Mon/Tues

Emulsion Batches:

Date 1995 Feb 27/28 Observers [Blg] J.G.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp
cc 31087/86	in board/out board					0 0	+38°	F4r Clear	90/90
C 89	BIAS(4)								
90	Comp					01 12W	-21°	F4r Clear	90s
91/93	TL 830 x 3			20 40 59		"	"		1200
94/96	FLATS x 3					"	"	TUNG Hpl/4	9s
cc 31097/99	TL 841 x 3			21 51 43		"	"		1800
cc 31100	BIAS(4)								
101/103	TL 850 x 3			23 27 45					2400
cc 31104	Comp							F4r Clear	90s
05	BIAS(4)								
cc 31106/12	In board/out board			Next Night Feb 28/29		6 0	+30°	F4r Clear	90/90
08	Comp					01 12 W	-21 28	F4r Clear	90s
cc 31111	TL 850 x 3			19 07 58					1800
→ 13/14	TL 841 x 3			20 47 34					1200
cc 31115	BIAS(4)			22 12					

CCD Spectr. Temp. -100.6 °C

Dome Temp./Hum. -36° 76% H

Transparency Conditions. Starting to clear a bit
Dome closed for tests

Focus 6:93

Spectr. Temp. -101.8 °C

Dome Temp./Hum. -41° 71.5% H
Large delay

MAX 404

Exp. Mtr. in Filter	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
14,000	for 3 exp. sum			CCSS CCD	1900 Å/mm G=5725 Tilt 531°	30x	6120 Å ± 1 Å How 512	8		I was too busy.	35K
								9	*	(Note, Manual gating before getting Exp. Amp)	13K
				CCSS CCD	1900 Å/mm G=5865 Tilt 533°		6307 Å ± 1 Å How 512	10		only 200 ADU above background	1.1K
3260 each								11		one weak control emission	
3450 each								12		continuum > 10 ADU above background	300
13,500 (For All 3)								13			280
								14			1.1K
								15			12.6K
								1/2c		All to warm & rezero	

Oh Heck, Tonight's work done with Secondary covered, ie CC31106 →
Thought exp. meter a tad slow.
These repeat well MAR 10/12/95 Use Them, Ja
But 5926 Å Region (previous page) is fine.

39

p9#1 wed/Thurs

Date 1995 MAR. 1/2 Observers [H.W.]..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.
CC301 ^{38/39}	Comp/stellar [inbound/outbound]					00 00	+40	Fine Clear	
140	BIASx4								
141	Comp							Fine Clear	25
142	HD 18884	02 57 03	+3 41 57	18 48 31		02 07W			45
143	Comp							Fine Clear	25
144	Comp							"	"
145	HD 36395	05 26 18	-03 41 00	19 00 24		00 04 <input checked="" type="checkbox"/>			425
146	Comp							Fine Clear	25
→ 155	FLATSx9							TUNG Ap=1/2	5
156	BIASx4			19 19					
157	Comp for Lamp test							Fine	255
158	TL 850			19 37 08		01 12W	-21 26	"	2107
159	"			20 14 13		"	"		942
160	Comp					"	"	Fine Clear	255
161	Comp							"	255
162	BD-02 3000	09 48 10	-03 13 04	20 39 11		02 22E			1906

CCD Spectr. Temp. -100.4°C Dome Temp./Hum. -36°C 55% H Transparency Conditions. Fine, then cloud 40

Focus 6.93

Spectr. Temp. Dome Temp./Hum. -5.0°C 65% H 90 c gain
 λ 410 0 50 1024 + 1 CCD FWHM (ADU MAX)

Exp. Mtr	Seeing	Mag	Sp.	Inst	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
No filter				CCD	1800 lat/lon	30 μ	* 5303A	3/4	focus test		
					G=5142		$\pm 0.3^{\circ}$	1/2			
					(To get same as previous G=5140)		$\pm 0.3^{\circ}$	5			
					Tilt = 5.8 47.8 $^{\circ}$		<u>0.4512</u>				
15.5K	good	2.53	M15 U _A					6	std Vel (Bright)		
								7			
								8			
470	3"	7.79	M1					9	std Vel Marcy	Too cloudy 730/1 sh RV +8.52 km/sec	10.8K
								2			15K
								1/2			
33K								11c1	Those strong fluorescent		8K
15K								11c1	em lines aren't the same lines as in typical sky spectrum.		
								9c1			
								9c1			
680	5"	10.57	M0					10	H ₂ V _{gs} 560 (Hindland)		5/1

CCD
Spectr. Temp. -100.4°C

Dome Temp./Hum. -6.0°C 68.5% H

Transparency Conditions Part. Cloudy \rightarrow mostly 50 ⁴²

Focus 6.93.....

Dome Temp./Hum. -6.3°C 66.8% H
c double

snow again @ 22 EST
or so.

Spectr. Temp.

Exp. Mtr.	Seeing	P. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASSCG	1820 h/mm G=5142 520° alt 41.8°	306μ	5303A exactly	12c 12c			
730	3"	1054	M0					13c; 15c; 16	Vys 560	clear here, mainly	
1950	4.5"	77	M1					17 18 1/2 19	std vel maacy		
730	4"	965	M2					20 21	std vel maacy (maybe no comparison anyway?)	some cloud SN Vys 127 L6/1	
								3/4c	Focus test	Encoder Δ clac should be -00 02 00 not -00 00 33 ?	

T = -70°C

43
Pg # 1

Emulsion Batches:

Date 1995 Mar 2/3

Observers [HLW]/[EVNS]/Smt. Miki as backup

CSS 386 9 seconds ahead of WWV

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC31177/8	INBOARD/OUTBOARD					19 05		FeNe clear	20/30
79	BIASx4			19 08					—
80	COMP			23 01 30				FeNe clear	25
81	BD-02 3000	9 48 10	-3 13 04	23 03 36		0 05 E			1200
82	COMP							FeNe clear	25
83	BIASx4			23 26					—
84	COMP							FeNe clear	25
85	BD+01 2447	10 23 49	+01 21 36	23 31 36		0 12 E			1260
86	COMP							FeNe clear	25
87	COMP							"	"
88	BD-02 3000	9 48 10	-3 13 04	00 01 36		1 09 W			2130
89	COMP							"	25
90	BIASx4			00 39					—
91	COMP							FeNe clear	25
92	HD96135	10 57 54	+36 38	00 59 40		0 30 W			510
93	COMP							FeNe clear	25

CCD
Spectr. Temp. -100.0°C

Dome Temp./Hum. $-7.3^{\circ}\text{C}/51.7\%$

Transparency Conditions just cleared, cloud moved S... 44

Focus 6.96

BOTH DOME FANS ON

Spectr. Temp.

Dome Temp./Hum.

410 0 50 1024 4 1 CCDENT

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Wavelength λ	P.H. C	Program	Remarks	Quality
NO FILTER				CASS CCD	1800 lines 6.5142	36 μ	5303Å	3/4	FOCUS TEST	set a bit cool intentionally $T = -4.3^{\circ}\text{C}$ at the time.	
								1/2		sum of 4 biases	
								5		done just opened.	
442	10.54	M0				S/N ~ 45:1		6	Hlw Sp. Bin	Vys 560	150 above b/g
								7			
								1/2			
								8			
1000	9.65	M2						9	Marcy Std. Velocity	Vys 127	400 above W/g
								10			
								11		S DOME FAN TURNED OFF BEFORE HAND	
789	10.54	M0				S/N ~ 50:1		12	Hlw SB	Some cloud now \rightarrow retreating Vys 560	300 above b/g
								13			
								1/2			
								14			
2285	4.5"	7.46	M2					15	Marcy Std. Velocity	Vys 594	clearer here.
								16			1.3K

45
pg #2Date 1995 Mar 2/3... Observers [HLW]/EV₄₅₃/Smt...Emulsion Batches:
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.....

Plate No.	Object	R.A.		Declination		Starting Time		Ending Time		Hour Angle		Declination		Comparison	
		1900	1900	1900	1900	E.S.T.	E.S.T.	End	End	Type/Filter	Exp.				
CC 31194	BIAS x 4					1 10									-
95	COMP												FeNe clear		25
96	BD-02 3000	9 48 10	-3 13 04			1 16 27				2 32 W					2630
97	COMP												FeNe clear		25
98	BIAS x 4					2 02									-
CG 40804-7	HD 108100	12 20 06	+43 25												4x.067
08/09	"							2 13		0 13 W	88° Alt	1.00	lenses		2x.133
CC 31199	BIAS x 4					2 41									-
						reset to WWV									
31200-208	FLAT x 9									0 15 W	+46°		Turn 1/2 Ap		5
09	COMP												FeNe clear		25
10	BD+38 2445	13 20 59	+38 14 21			2 53 11				0 33 W					2400
11	COMP												FeNe clear		25
12	BIAS x 4					3 36									-
13/14	INBOARD/OUTBOARD									0 40 W	+38°		FeNe clear		20/30

Spectr. Temp. -10.9°C Dome Temp./Hum. $-8.9^{\circ}\text{C}/56.7\%$ Transparency Conditions partly cloudy \rightarrow clear 46
 Focus 6.96 N DOME FAN ON ONLY
 Spectr. Temp. Dome Temp./Hum. $-9.6^{\circ}\text{C}/59.8\%$ @ end of seeing test
 410 0 50 1024 4 1 CCDPMT

Exp Mtr	Seeing	Ptg Mag	Sp	Inst.	Grating/Tilt	Slit	Emulsion λ	P.H. $^{\circ}\text{C}$	Program	Remarks	Quality
$\sim 27B$ ↓				CAS CCD	1800 λ 6° 51' 42"	306 μ	5303A	1/2			
								17			
911		10.54	M0					18	HDW SB	Vys 560	Surprisingly not much stay at all! 330 above 4g
								19			
								1/2			
		7.14	F2	EEV CCD GUIDE CAMERA		above 306 μ		-	SEEING TEST	Dome W, no wind, 75% catwalk humidity	
	4"							-	"		
								1/2		DIPPED OP CCD VIEWAR BEFORE HAND WITH CEPT = 100.2°C	
								2			14.8K \rightarrow 13.6K
								20			
497	3"	11.2	M0			S/N \sim 45:1		21	{Vys}	Vys 689AB first time.	200 above 4g
								22			
								1/2			
								3/4	FOCUS TEST	-10.2°C at time of test.	
										All backed up to Perseus & WORK	

47
pg 41

Date 1995 Mar 3/4 Observers Km/Smt

Emulsion Batches:

.06.560. IN. COMP. TRAY
.06.385. IN. STELLAR BEAM

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
215/16	inboard/outboard focus Test							Felt clear	40/60
17	BIAS (4)			18 48					
18	COMP							Felt clear	60
19	V45 428B AC+17 449-111	03 38 05	+16 24 12	19 14 33		02 04 W			300
20	COMP							Felt clear	60
21	COMP							Felt clear	60
22	BD+2 1729	07 34 11	02 24 52	19 ²¹ 44 02		?			480
23	BIAS (4)			22 06					
24	COMP							Felt clear	60
25	BD+10 1857	08 37 20	09 55 22	22 15 28		0 10 W			510
26	COMP							Felt clear	60
27	COMP							Felt clear	60
28	brighter one BD+33 1646	08 02 34	+33 06 25	22 42 47		0 54 W			660
29	COMP							Felt clear	60
30	fainter one BD+33 1640	"	"	23 00 00		1 40 W			1230

Comp
Spectr.

Focus.

Spec

Exp. Mir.

411

478

461

517

Spectr. Temp. -100°C Dome Temp./Hum. -42°C 60% Transparency Conditions *clear* 48
 Focus 7.01 FANS OFF
 Spectr. Temp. Dome Temp./Hum. 390 0 50 1024 4 1 CCD/INT

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1200k/um G=4520	306um	6563A	3/4	FOCUS TEST	done with 410 & 50 1024 4 1 ccid/INT	
								1/2			
								5			
	$\sim 1.5''$	11.1	MO					6.5	Km H α		0.2K 0.5K X
								7		might have v-does as Fe+ in alpha cash but not saved and rewritten.	
								8			
411	$\sim 1.8''$	9.6	MO					9	H α emission search.	wanted to long \therefore only one comp done.	$\sim 4.8K$
								1/2			
								10			
478	$\sim 1.5''$	9.6	M2					11	"		1.6K
								12			
								13			
461	$1.5''$	12.1	MO					14	H α search	brighter of pair and has <u>Hα emission</u>	2.7K H α 1.8K other
								15			
217	$1''$	12.1?	MO					16		dimmer and has H α emission strong.	1.6K H α too dimly contrast

CCO Spectr. Temp. -100.2°C Dome Temp./Hum. $-5.8^{\circ}\text{C}/66.3\%$ Transparency Conditions *clear!* 50

Focus 7.01

FANS OFF

Spectr. Temp. Dome Temp./Hum.

390 0 50 1024 4 1 CCFMT

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.F.T. C.	Program	Remarks	Quality
				CASS CCD	1200 λ/mm G=4520	306 μ	GS63A	17			
								1/2			
								18			
143		10.9	MO					19			0.7K MAX
								20			
								21			
112		11.0	MO					22			0.5K
								23			
111		10.6	MO					24			0.5K
								25			
								25 1/2			
								26			
58		11.5	MO					27		East ONE	
								28			
68		11.5	MO					29		West ONE	0.3K
								30			

51 p#3

Date 1995 Mar 3/4 Observers Km/Smt

Emulsion Batches:

CG 560 FILTER IN COMP BEAM

GG 785 " " STELLAR "

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
31247	COMP							Fedv clear	60
48	BD+16 2222	11 04 29	16 05 39	01 14 31					400
49	COMP							"	60
50	COMP							"	"
51	HD+33 2071 A	10 58 11	33 25 38	01 36 14					620
52	BD+33 2071 B			1 47 48		1 25 W			700
53	BD+33 2071 C			2 01 30		1 50 W			1335
54	COMP							"	60
55	BIAS(4)			2 28					-
CG 40810-3	HD 113811	13 01 12	+40 08			0 05 W	86° Alt	4 x .007 1.003 <small>airmass</small>	208
14/15	"	"	"		2 42			2 x .133	10
56	COMP							Fedv clear	60
57	AC-2 1513-110	11 28 16	-2 51 02	3 00 57		2 12 W			900
58	COMP							"	60
59	BIAS(4)			3 19					-

CCD
 Spectr. Temp. -100°C Dome Temp./Hum. $-7.4^{\circ}\text{C}/70.2\%$ Transparency Conditions *clear!* 52
 Focus 7.01
 Spectr. Temp. Dome Temp./Hum. $-7.9^{\circ}\text{C}/71.5\%$ @ seeing test **FANS OFF**

Exp. Mtr	Seeing	√Pr. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Exposure	P.H.	Program	Remarks	Quality
				CASS CCD	1200 K/m G=4520	30 μm	6563 Å 5891 Å	4			
69		11.5	M0					5	Km H α search		0,3 K
								67			
								8			
208		?	M?		S/N ~ 75:1			9	"	brightest on furthest east Vys 597A? one in middle	900 above b/g
101		11.8	K8					10		Vys 597B	
100		>11.8	?					11		faintest and furthest west Vys 597C	not much
								12			
								1/2			
2 strong 2 weak strong	2-3"	7.53	K5 III	CCD		above 30 μm		-	SEEING TEST	Done w, no wind, clear!	
				CASS CCD				13			
178		11.2	M0					14	Km H α search	Vys 613	300 above b/g
								15			
								1/2			

CCD
Spectr. Temp. -100.0°C

Dome Temp./Hum. $-7.8^{\circ}\text{C}/71.5\%$

Transparency Conditions *clear* 54

Focus 7.91

FANS OFF

Spectr. Temp.

Dome Temp./Hum.

340 0 50 1024 4 1 CCD/FMT

Exp. Mtr.	Seeing	Pix. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CAS CCD	1200.21 G-4520	306 μ	6563A 6563A	17			
121 121	2"	11.7	MO					19	Kim Ha search	took a while to find. Vys 622	0.4K
								20			
								21			
56		11.4	MO					22		Vys 637	280 Max
								23			
								1/2			
								24.5			
61		11.5	MO					27		Vys 138	270 Max
								28			
								30			
209		10.5	MO					5		Vys 640	350 350
								7			
								8			
80 82		11.2	MO					9			200 above 6/9
								12			

CCD Spectr. Temp. -100°C

Dome Temp./Hum. -14°C 62%RH

Transparency Conditions Hazy 58

Focus 6-98

90 Cgsin

no RA encoder tonight

Spectr. Temp.

Dome Temp./Hum. -3.0°C 67%RH

390 0 50 1024 4 1 CCD FWHM

Exp. Mtr	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
no filter				CASS CCD	1200/W G=4520 T.H=4245°	2x	6563A	3/4	focus test	(for slightly cooler temp)	
							6585B Actual Row 512 center	1/2			
270	2"	11.0	M0					6		> 80% S/N continuous	5.5K
								7	Hα search	Vys 424: Hα emission exist	
								8			
								9			
490	2"	9.9	M2					10	Hα search		
								11			
								11/2			
								11			5.5K
275	<2"	11.2	M0					12	Hα search	(Yes, An M0 type) no Hα em. > 80% S/N	
								13			5.5K
								14			5.9K
350	<2"	10.9	M0					15	Hα search	an the m0 type (all right) no Hα em.	100% S/N
								16			5.8K
								1/2			

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P9#2 SAT/Sun

Date 1995 MAR 4/5..... Observers Km./T.A.....

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.
cc31314	Comp							Foto Clear	60s
15	AC+55 30267	07 27 18	+55 03 45	21 35 02		00 59 W			1513
16	comp							Foto Clear	60s
17	Comp							"	"
18	Vys 488	07 04 19	+52 26 28	22 09 36		W			1254
19	Comp							Foto Clear	60s
20	B1A5(4)			22 34					
21	Comp not intended star							Foto Clear	60s
22	*BD+10 1857C	08 37 20	+09 55 22	22 42 56		W			1308
23	Comp							Foto Clear	60s
24	Comp							"	"
25	BD-02 3000	09 48 10	-03 13 04	23 15 59		00 12 W			873
26	Comp							Foto Clear	60s
27	B1ASC4)			23 34					
28	Comp							Foto Clear	60s

Spectr. Temp. Dome Temp./Hum. -3.1°C 70.8H Transparency Conditions .. Slightly hazy .. 60

Focus 6.98

Spectr. Temp. Dome Temp./Hum. *6.98*

Exp. Mtr.	Seeing	H. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulston	P.H.	Program	Remarks	Quality
				CASS CCD	1200 Å/mm G=4520	306-	6563A	17			
340	2.2"	11.3	M0					18	Hx em search	no Hx em seen	5.6K
								19			
								20			S/N
350	2.2"	11.3	M0					21		no Hx em	100/1
								22			5.8K
								1/2			
								23			6K
215	2.3"	11.8	M2					24		not on m stars star WNW of ν_{45} 257AB	
								25		<u>ABOUT 1' WNW of ν_{45}</u>	6K
								25			6.2K
315	2.4"	10.54	M0					26		(still around + ν_{45} / sec) No Hx em	
								27			
	2"							1/2			
								28			

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Emulsion Batches:

Date 1995 MAR 15 Observers K.M./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.
CC31329	AC+19 001-69	09 5837	+19 1658	23 3940		00 25 W			932
330	Comp							Feltr clear	60s
331	Comp							"	"
332	BD+01 2447	10 2349	+01 2136	00 0347		00 23 W			856
333	Comp							Feltr clear	60s
334	Comp							"	"
335	BD-09 13070	10 2015	-09 4325	00 2844		00 48 W			712
336	Comp							Feltr clear	60s
37	BHS(4)			00 44					
38	Comp							Feltr clear	60
39	HD103095	11 4713	+38 2610	00 5238		00 22 E			303
40	Comp							Feltr clear	60s
GC40 ⁸¹⁶ 819	HD103095	11 4713	+38 2610					4x	67ms
GC40 ⁸²⁹ 821	"					00 15 E		2x	133ms
CC31341	Comp	far next star (over)						Feltr clear	60s

^{COO}
Spectr. Temp. ... -100.3°C

Dome Temp./Hum. -40°C 73.1% H

Transparency Conditions ... Free, slight haze 62

Focus ... 6.98

Spectr. Temp. ~~100.3~~

Dome Temp./Hum. -44°C 73.3% H

S/N

Exp Mtr	Seeing	V Mag	Sp	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200	2"	11.34	M0	C455000	1200 λ G-4520	306	6563A	29		M0 type, No em	> 70/1 59K
								30			
								60			
500	3"	9.65	M2					100		Std vel tracey (no H α em as expected)	
								11			
								13			
326	2-3"	10.2	M0					15		no H α em ok M0 type	
								16			
								17			
3450	2-3"	6.45	G8Vp					18		Std vel (VAV)	M1H α 117K
								19			
	2"	6.45	G8Vp					19c		Seeing test Dome SW, no wind " "	
					(Above 306a slit)						

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P944

Emulsion Batches:

Date 1995 MAR 4/5 Observers Km/Ta

Plate No.	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 31342	Vys 638	12 08 17	17 15 24	01 16 29		00 07 W			1808
43	Comp							Felt Clear	60s
44	Comp							"	"
45	Vys 635AB	12 04 52	+06 00 42	01 57 39		W			1792
46	Comp							Felt Clear	60s
47	BIAS(4)			02 31				"	"
48	Comp							Felt Clear	60s
49	AC+17 478-60	13 03 29	+17 30 27	02 40 04		W			1785
50	Comp							Felt Clear	60s
51	Comp							"	"
52	AC+37 30242	13 13 23	36 49 50	03 24 04		W			1675
53	Comp							Felt Clear	60s
54	BIAS(4)			03 55					
55	Comp							Felt Clear	60s
56	BD+35 2439	13 16 20	34 48 28	04 03 54		W			1725
57	Comp							Felt Clear	60s

Spectr. Temp. Dome Temp./Hum. ... -4.4° 73.2% Transparency Conditions ... OK, slight haze in SW ⁶⁴
 Focus ... 6.98 cloud coming gradually
 Spectr. Temp. Dome Temp./Hum. ... -5.1° 74.9% S/N

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter 265	2"	11.6	M0	CASS CCD	1200 lines/mm 69520	306 μ	6563A	20 μ	Hd search	No Hd em (good M0 type)	80/1
								22			
								22			
311	3"	11.4	M0					21		M0 OK, no Hd em	
								23			
								25 1/2			6.1K
								25			
240	2"	11.8	M0					26		Vys 686 CCOT = -102° C	
								28			
318	2.4"	11.3	M2					29		Vys 44 no Hd em	
								30			
								1/2			
								5			
480	1-2"	10.6	M0					6		Vys 47	7 100/1
								11			

CCD Spectr. Temp. ... -100.1°C

Dome Temp./Hum. = 5.1°C / 75.0% H Transparency Conditions Increasing. cloud..... 66.

Focus ... 6.98

ESD Spectr. Temp. ... -100.6°C

Dome Temp./Hum. = 5.0°C / 73.1% H A

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		to		CASSIO	1200/n 64520	306	6838				
158		10/11	MOE					12		WRONG star ad m type not the bright one	
								13			
220	2"	10/19	MO					14		Vys 759	
								16			
								1/2		CCOT = -99.3°C	
								17		Vys 744	
175		11/1	MO					18		weak but a M star	
								19		no H α em	
								2		MAX 12.5K HD9	
-5°C	6.98 set			Just warming now CCOT = -96°C				30/31		S&A OK	
										All to warm c Perseus.	

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→ Entire night is useless - indicator LED on in fiber fed room throughout ←
Emulsion Batches:

Date 1995 MAR 6/7... Observers [K.F.]... T.n./Sant.....

Reticon Fiber Fed

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
RF00147/51	FLATS x 5		diffuser IN	19 00	→ 19 15		00 02 20 +42 35	TUNG Clear	60s
RF00162	Comp		diffuser OUT	19 17 24			Folk encoder BRT Star NORMALIZATION	Felto Clear	30s
53	HD16970	2 38 07	+2 48 52	19 26 41	19 46 11	3 44W			
54	Comp			19 47 51				Felto Clear	30s
55	HD33111	5 02 56	-5 12 56	19 56 59	20 23 47	~ 1 50 W			
56	Comp			20 32 53				Felto Clear	30s
57	HD 56537	07 12 21	+16 43 15	20 32 53	20 07 46	00 30 W			
58	Comp							Felto Clear	30s
59	HD97603	11 08 47	+21 04 18	21 16 11	21 47 56	02 45 E			
60	Comp							Felto Clear	30s
61	HD 97603	11 08 47	+21 04 18	21 51 10	22 4 24				
62	Comp							Felto Clear	30s
63	COMP			22 15 28				"	"
64	HD97603			22 17 48	22 27 43	2 ⁰⁰ E			
65	COMP			22 29 16	22 29 56			"	30

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Pg#1 Thurs / Fri

Emulsion Batches:

Date 1995 MAR 9/10

Observers [K.K.] J.n.

CSS Time was ahead 8 secs at start

CSS Time Reset to wave. 20 E.S.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.
ce086 ⁶⁷ / ₆₈	inboard/outboard					00 16W	+46°	THAr	20/20
69	BIAS(A)								
70	Comp							THAr	15s
									encoders normalized on HD34029 also
71	HD34029	05 0918	45 5347	19 0840		00 57.5W			840
72	Comp							THAr	15s
73	HD34029			19 2509		01 11.5W			700
74	Comp							THAr	15s
75	HD34029			19 3851		01 26W			740
76	Comp							THAr	15s
77	Comp							"	"
78	HD32068	04 5529	40 5548	19 5716		02 16W			1762
79	Comp							THAr	15s
80	BIAS (4)			20 29					
81	HD32068			20 3042		02 53W			1970
82	comp							THAr	15s

CCD Spectr. Temp. -100°C Dome Temp./Hum. -90°C 565% H Transparency Conditions *Fine* 72

Focus ... *2310*

Spectr. Temp. Dome Temp./Hum. -107°C 58% H *c lambda* MAX AD4

Exp. Mtr	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				edelle CCD	1200 lines	60u W				CCD FWHM for focus	4.4
				17.80 x 14	4470 AH	50u L	3960A	1/2	focus test	0 0 128 1024 8 1	6.6
						60u W	.277 set	1/2		CCD FWHM	
						50u L	.215 set			0 0 256 1024 4 1	
								3			6K
14K	med	0.08	G5 III					4	KK composite Sp pgr	(Focus not counting) Hot pixel	3K
								3			6K
15K								5			
								3			5.8K
15K								6			
								3			6.1
								3			6.6
1270	Var	3.75	K4 II					5	KK composite sp		2
	2-5		188 V					3			200 above 1300 sqd
								3			6.6
								1/2			
1100	3.5"							4			
								3			785K

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p9#2

Thurs/Fri

Emulsion Batches:

Date 1995 Mar 9/10

Observers [K.K.] J.n

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
ce08683	Comp							ThAr	155
84	HD 80586	09 1536	-09 0753	21 1425		00 30 E			2640
85	Comp							ThAr	15
86	BIAS(4)			22 01					
87	Comp							ThAr	153
88	HD 61421	07 3404	+5 2853	22 1002		01 37 W			847
89	Comp	This Comp lost (not written)						ThAr	15
89	Comp							"	7
90	HD 83808	09 3549	+10 2050	22 3127		00 14 W			1885
91	Comp							ThAr	155
92	BIAS(4)								
93	HD 83808	09 3549	+10 2050	23 0827		00 58 W			2312
94	Comp							ThAr	15 ₂
95	Comp							"	11
96	HD 102509	11 4250	+20 4629	23 5925		00 06 E			3001
97	Comp							ThAr	153

CCD Spectr. Temp. -100.7°C Dome Temp./Hum. -10.8°C 5708H Transparency Conditions *Fine* 74

Focus 2310
 CCD Spectr. Temp. -101.8°C Dome Temp./Hum. -12.6°C 6312H 2

Exp. Mtr.	Seeing	PV Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Revised CCD 17.807:4	12006/122 0.7470:44	50μ W/L 500. Mag 13960A		3			5.7K
250	5.4	4.8	G511-V +F5V					6	KK composite spectra	↑ = 70 max ABOVE	5.7K
								3			
								1/2		Comp	6.1 K
								3			
8500	poor	0.74	F511-V					4	Std vel use "Procyon"		2.4K
								3	(But no end comp)		8.5K
								3			7.85K
1000	4.6	3.52	F611 +A1-SV					5c.	KK composite	Above bkquad	370 N44
								3			7.1 K
								1/2			
1550	4.7							5c.	KK composite repeat		
								3			
								3			
690	4"	4.53	G511-V +A7V					6	KK composite 93 Leo		MAX 300 ABOVE
								3			Backquad

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P9#3 Thurs/Fri

Emulsion Batches:

Date 1.9.95 MAR. 9/10... Observers [K.K.] T.H.....

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.
ce08698	BIAS(4)					06 55							
99	HD 102509	11 42 50	20 46 29	00 56 28				00 37 W					2149
8700	Comp											ThAr	155
01	Comp											"	"
02	HD 124897	14 11 06	+19 42 11	01 40 27				01 35 E					460
03	Comp											ThAr	155
04	BIAS(4)			01 50									
05 -10	FLATS x 6						02 30	01 00 W	+19 12			TUNG	300
11	Comp for Arcturus after topup & changing slit H back to 500μ											ThAr	155
12	HD 124897	14 11 06	+19 42 11	02 48 23				00 19 E					889
13	Comp											ThAr	155
14	BIAS(4)			03 06									
15	Comp			0								ThAr	155
16	HD 116658	13 19 55	-10 38 22	03 15 04				00 56 W					775
17	Comp											ThAr	155

CCD
Spectr. Temp. -100.78

Dome Temp./Hum. -12.2° 63.3% H

Transparency Conditions OK... slightly hazy 76

Focus 2310

Dome Temp./Hum. -12.8° 62.1% H
C 2

some cloud in SW
ADY
MAX

Exp. Mtr	Secing	Filter Mag.	Sp.	Inst.	Grating/Tilt	Slit	Resolution	P.H.	Program	Remarks	Quality
				edelle CCD 17.80° N/E	1200 n/m 4476 h/H	60- W 52 h/H	3960 Å	1/2			
710	3" H	453	G512-We + A7 V					6c	kk composite	Repeat exp	
								3			8.2K
								3			75K
5,600		0	K21UP					4	std vel		1K
								3			74K
								1/2		CCDT = -113° C	
								2c		CCDT = -102.0° C 2:20	12K
								3c		(Flat profile looks good spectrum)	7.2K
8650	3'	0	K21UP					4c	std vel	in some cloud	
								3c			7.7
								1/2			
								3			
4300	5"	0.98	B10-2 +82 V					5	kk composite pgrm		1.5K
								3			8.5K

Then Topog done by 02:40
900 n/H = 1.85
500 n/H = 1.15

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19#4 Thurs/Fri

Date 1995 MAR 9/10

Observers [K.K.] 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.
ce08718	HD116658	13 19 55	-10 38 22	03 30 25		01 11 W			763
19	Comp							Th Ar	155
20	Comp							"	"
21	HD139006	15 30 27	+27 03 04	03 50 14		00 29 E			1350
22	Comp							Th Ar	155
23	BIAS(4)			04 31					
	HD143454, TCRB		apparently	has gone	Star to NW in Finder (seen)		Dec circle +25 58	when	Taking for TCRB START from encoders
ce087 ²⁴ / ₂₀	Inboard/outboard					2 34 W	+25 58		

Spectr. Temp. Dome Temp./Hum. Transparency Conditions *part clear* 78Focus ... *2310*Spectr. Temp. Dome Temp./Hum. *-12.7°C 62%RH**Thicker by 0420*

Exp Mtr.	Seeing	<input checked="" type="checkbox"/> Mag	Sp	Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4600	4"	0.98	<i>B 10-12 +B2V</i>		<i>100N +470</i>	<i>60u W 500H</i>	<i>3960A</i>	5	<i>kk composite p9m</i>		
								3			
								3			73K
2500	3"	203	<i>AOK +G5V</i>					6	<i>kk composite</i>		15K
								2			8.0K
								1/2			
<i>Thin to median cloud in area of 725 EST</i>											
20/20 secs								7/8	<i>focus Test</i>	<i>CCDFMT for focus 0 0 128 1024 8 1</i>	7K

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P401 Fri/Sat

Date 1995 MAR 10/11... Observers [H.W.] Vys./T.A.,.....

Emulsion Batches:

CSS 386 Time Right on W.V. Time.....

Plate No.	Object	R.A.	Declination	Starting Time	Ending Time	Hour Angle	Declination	Comparison	
		1900	1900	E.S.T.	E.S.T.	End		Type/Filter	Exp.
CC 313 78	BIAS(4)			18 43					
79	Comp							FelNe Clear	25s
80	HD 18884	0 25703	+3 4151	18 5400		W	Far		29
81	"			18 5601					40
82	Comp							FelNe Clear	25s
83	Comp							"	"
84	HD 36395	05 2618	-034100	19 0640		00 49	W		10% 2250
85	Comp							FelNe Clear	25s
86	BIAS(4)			19 27					
87	Comp							FelNe Clear	25s
88	BD-02 3000	09 4810	-031304	19 3125		02 58	E		1684 980
89	Comp							FelNe Clear	25s
90	BD-02 3000			20 02 53		02 24	E		1834 1030
91	Comp							FelNe Clear	25s
92	BIAS(4)			2037					

Spectr. Temp. -100°C Dome Temp./Hum. -5.0°C 670% Transparency Conditions *Some cloud* 80

Focus 6.96

Spectr. Temp. Dome Temp./Hum. -5.1°C 62.5% ^{90C gain}
 CCD FWHM 410 0 50 1024 4 1 MAX ADX

Exp. Mtr.	Seeing	✓ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
No Filter (Elastic used to go)				CASS CCD	1800 W/mm G=5740	300	5303A	1/2			
								3			
	253		M15					4	Std vel	Bright	8K
≈ 15K	253							4			9K
								5			10.8K
								6			10.3K
2250	1.2"	7.97	M1					7	Marcy Std vel	(some cloud)	1.5K
								8			
								1/2			
								9			10.5K
980	2.3"	10.54	M0					10	Vys 560	Very cloudy → medium cloud	≈ 45/1 SN
(when seen)								11	Vys 19m	(AB51 Pixels Blue of skyline)	
								12	Vys 560 again	(clearer now)	SN
1030	2"							13			55/1
								1/2			10.5K

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 ppts Fri/Sat

Date . 1945 MAR 10/11..... Observers [H.W.] [Vas] . Tr.....

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 cc31401	FLATS x9					2 43 E	+0050	TUNG Ap 1/2	5 sec
02	Comp							Fc No clear	25s
03	BD+01 2447	10 23 49	+01 21 36	20 07 50		1 59 E			1571
04	Comp							Fc No clear	25s
05	BIAS(A)			21 37					
06	Comp							Fc No clear	25s
07	BD-02 3000	09 48 10	-03 13 04	21 41 15		00 36 E			2473
08	Comp							Fc No clear	25s
GC40 ⁸²² 825	CERES		^{2000 equinox} 08 55 16	+31 43 00	22 30			4x	67ms
CG40 ⁸²⁶ 827	"		"	"		00 34 W		2x	133ms
cc31409	Comp							Fc No clear	25s
10	Ceres	08 55 16	+31 43 00	22 36 05		00 49 W			744
11	Comp							Fc No clear	25s
12	BIAS(A)			22 53					

CCO Spectr.
 Focus. cap Spectr.
 Exp. Mtr
 Elastostat
 21200
 1200
 680

CCD Spectr. Temp. -100.4°C Dome Temp./Hum. -5.2°C 62.4% Transparency Conditions *cloudy now* 82

Focus 6.96

CCD Spectr. Temp. -100.5°C

Dome Temp./Hum. -5.3°C 65.5% *No focus tests possible tonight.* ADG
MAX

Exp. Mtr.	Seeing	Pr Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASSED	1800 λ/mm G=5140	308 μ	5300A	14c			15K
								15			10.5K
<i>Elastickon</i>	2" 1300	2.3	965	M2				16	Marcy std vel	At $-00 00 12$ & $05 00 02 02$ some cloud (18 pin set of 4850 Nov 182 and 5K V line of 164K28)	10.6K
								17			
								1/2c			
								18			
1200	2"	1097	M0					19	Vys 560 μ gain	using SBIG for mag ^s (look good) SKY just hazy now.	
								20	2.5 Kms Rad of BD 01 2447		10.6K
	1.2"	70	G2			4800 μ 30 μ slit				Seeing test, well, it's a (big asteroid) Dome S'W thinly cloudy, Only NE Fan on now.	
								21			
G80	2"	F7	G (Solar)					22	std vel use		
								23			10.9K
								1/2			
All to warm & per sears											

83
Pg#1 SAT/Sun

Emulsion Batches:

Date 1995 MAR 11/12

Observers [Bl.] T.

(Lamp tests due to
advancing cloud)

Again, No Focus Test possible.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC31413	BIAS(4)								
14	Comp					01 12W	-2 43	FeAr Clear	90s
15 17	TL 850 x 3			19 41 24					280s 240s 320s
18/ 20	TL 841 x 3			20 20					320s
21/ 23	TL 830 x 3			22 0 38					220s
CC31424	Comp			20 50				FeAr Clear	90s
25/ 27	FLATS x 3							TUNG Ap/4	9s
28	BIAS(4)			21 04					
29	Comp							FeAr Clear	90s
30/ 32	TL 830 x 3			21 13					95s
33/ 35	TL 841 x 3			22 08					1320
36/ 38	TL 850 x 3			23 17 39					900
CC314 39	Comp							FeAr Clear	90s
40/ 42	FLATS x 3							TUNG Ap/4	

CCD Spectr. Temp. -100°C Dome Temp./Hum. $+00.5^{\circ}\text{C}$ $80.0\% \text{RH}$ Transparency Conditions *Actually, more cloudy than thought at first.* ⁸⁴
 Focus ... 6.92
 Spectr. Temp. Dome Temp./Hum. -00.42 ^{90 Cyoin} $80.0\% \text{RH}$ (SHI closed) 410 0 50 1024 4 1 CCD FWHM
 Control A (Kaw 512)

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
None Filter				CASS CCD	1800 l/cm G=5723	306 μ	6119A $\pm 0.8^{\circ}$	1/2c 3c	Fluorescent Lamp Pairs under Top end of Telescope.		174x 404 3.2K
7000 lstone					Tilt = 531° G=5723			4c	As in other tests, MIRRORS uncovered.		114K
7000 6400 lstone								5c	strongest line of scale $\approx 6120\text{\AA}$		12K
8200								6c			13K
								7c			34K
								8c			15K
					1800 l/cm G=5860	306 μ	6302A ± 0.5	1/2 9c		CCD T = -100°C (Main em line $\approx 6310\text{\AA}$)	1K
21,800					T.H = 54.3°			10c			6.8K
233K								11c		Some central strong line \rightarrow	7.2K
21,500 each								12c			4K
								13	Note for over exp of next Red		1K
								14	(Red end exactly 6400 \AA) $\approx 6401\text{\AA}$.		11K

CCD Spectr. Temp. -100.5°C Dome Temp./Hum. -00.3°E 77.5% H Transparency Conditions ... Slightly hazy ... 86

Focus ... 6.92 Dome Temp./Hum. ... 90C gain medium East wind (SE) but clearing well!

Spectr. Temp. ... Dome Temp./Hum. ... CCD FWHM 410 0 50 1024 41 CCD FWHM

Exp. Mtr.	Seeing	P/Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
None no filter				C455 CCD	1800 H G-5140	306	5303A	1/2			
								3			10K
670	6" ^{pod}	1054	M10					4	Vys 560	moon 30° to west	45/1 SN
								5			10.2K
760	4"							6	Vys 560 2nd exp	estimated velocity $\approx 50/1 \text{ SN}$	
								7		Same as PREVIOUS night or 1/5 scale	
								1/2		CCD T = -100.4°E	
								8			102
620	* 3.965 m2							9		* Very, very poor seeing of cal	102
								11			19K
								12			
5500	(10+20"?)	(A.96V)	(K0.5 Wb)	(sp. size Fe-0.5)				13	std vel	some cloud too	max 208K
								1/2		All warned to persons	

CPD
Spectr. Temp. -100°C @ 0031469

Dome Temp./Hum. 8.8°C/67.6%

Transparency Conditions ... clear! (melting ice & snow
causing dome telescope
to drip) 88
+ mirrors wet.

Focus

Spectr. Temp.

Dome Temp./Hum.

EARS ON

410 0 50 1024 4 1 ccd/ant

Exp Mtr	Seeing	Pig Mag	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	600/6- 2650	306	4200 Å	4			
								5			
					1800 Van 6-5140	306	5303 Å	6			
								7		one strong line only.	
								1/2		All 4 to Perseus & WORM	

Spectr. Temp. ^{CD} -100°C

Focus 6.82 (cod)

Spectr. Temp.

Dome Temp./Hum 11.8°C/47.9%

Dome Temp./Hum.

Transparency Conditions clear & dry, some very thin cloud.
FANS OFF

410 0 50 1024 4 1 scd Ast

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 Å/mm 6-5.40	300µm	5903 Å	3/4	FOCUS TEST	AUTOGUIDING TONIGHT. WITH SBIG	
								1/2			
								5			
682	2"	11.2	M0					6	{Ugs} ^{vis} 202	light leak? b/g runs from 200 to 150 across length.	500 above b/g
								7			
								1/2			
								8			
744		11.3	M0					9	{Ugs}	still light leakish b/g.	200 above b/g
								10			
								1/2			
								11			
4600*		9.6	M2					12	{Ugs} Ugs 257AB	close to moon, shadow on slit. * mostly sky	1K above b/g
								13			
								1/2			
								14			

91
V9#2

Date 1995 Mar 13/14

Observers [Ellen] V. V. V. Smt. + BC. Wray as backup

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		Exp. Mir.
								Type/Filter	Exp.	
CC31486	BD-02 3000	9 48 10	-3 13 04	22 51 16		0 31 W			1500	990
87	COMP							FeNe clear	25	
88	BIASx4			23 20					—	
89	COMP							"	25	
90	BD+01 2447	10 23 49	+1 21 36	23 28 47		0 24 W			900	908
91	COMP							"	25	
92	COMP							"	"	
93	BD-02 3000	9 48 10	-3 13 04	23 53 42		1 35 W			1200	1000
94	COMP							"	25	
95	BIASx4			0 37						
96	COMP							"	25	
97	AK+19 1471-31	11 47 55	+19 28 59	00 45 32		0 55 W			3200	1077
98	COMP							"	25	
99	BIASx4			1 42						
CC31500	COMP							"	25	

Spectr. Temp. Dome Temp./Hum. 10.1°C/53.0% Transparency Conditions .. clear, bright moon .. 9.2
 Focus 6.82 FANS OFF
 Spectr. Temp. Dome Temp./Hum. 410 0 50 1024 4 1 ccd/fat

Exp. Mtr	Seeing	Pg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
940	10.54	MO	CASS CCD	1800 21mm 6-5140	300μ	5303A	15	Hlw/ΣV ₄₅ ?	Very clean.		500 above V ₄₅
							16				
							1/2				
							17				
968	9.65	MZ					18	Maruy Std. Velocity			400 above V ₄₅
							19				
							20				
1000	10.54	MO					21	Hlw/ΣV ₄₅ ?			420 above V ₄₅
							22		late.		
							1/2				
							23				
777	11.7	MO					24	ΣV ₄₅ ?	V ₄₅ 602		200 above V ₄₅
							25				
							1/2				
							26				

93
pg #3

Date 1995 Mar 13/14 Observers {Vys} Smt BC Wray as backup

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.
CC31501	Vys 635AB	12 04 52	+6 00 42	1 50 36		1 29 W			2400
02	COMP							FoNe clear	25
03	BIAS x4			2 35					
04	COMP							"	25
05	AC+40 512-31	12 07 25	+40 14	2 48 18		2 45 W			3600
06	COMP							"	25
07	BIAS x4			4 03					-
08	COMP							"	25
09	AC+61 23349	13 42 12	+61 28 51	4 05 37		1 54 W			1500
10	COMP							"	25
11	BIAS x4			4 33					-
12	COMP							"	25
13	HD119850	13 40 36	+15 27	4 39 40		2 13 W			600
14	COMP							"	25
15-23	FLAT x 9					2 27 W	+15°	Tung 1/2 Ap	5
24/25	INBOARD/OUTBOARD							FoNe clear	20/30

Spectr. Temp. -100.2°C Dome Temp./Hum. $9.3^{\circ}\text{C}/52.2\%$ Transparency Conditions *clear. \rightarrow increasing cloud.*Focus 6.82

FANS OFF

94

Spectr. Temp.

Dome Temp./Hum.

410 0 50 1024 4 1 *center*

Exp Mtr	Seeing	Pig Mag	Sp	Inst.	Grating/Tilt	Slit	Emulsion	P.H	Program	Remarks	Quality
557		11.41	MO	CASS CCD	1800 th G-S140	706 μ	5303A	27	{V ₄₅ }	AUTOGUIDING TONIGHT	
								28			
								1/2			
								29			
723	2.5	11.4	MO					30	{V ₄₅ }	V ₄₅ 637	95% above V ₄₅
								31			
								1/2			
								5			
319		11.0	MO					6	{V ₄₅ }	some cloud at end V ₄₅ 637 639	90% above V ₄₅
								7			
								1/2			
								8			
534		8.48	M1					9	Marcy Std Velocity	patchy clouds	100% above V ₄₅
								10			
								2			M.9K \rightarrow B.4K
								3/4		all to Perseus & Wern	

95
pg #1

Date 1995 Mar 14/15 Observers Smt./ΣV.ΣB..... iks. as backup

Emulsion Batches:

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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.				
CC31526/ 27	INBOARD/ OUTBOARD											FeNe clear	20/30
28	BIASx4					19 40							-
29	COMP											FeNe clear	25
30	AC+51 2576-63	4 50 58	+50 47 35	19 49 02				2 38 W					2160
31	COMP											"	25
32	BIASx4					20 30							-
33	COMP											"	25
34	AC+54 2311-89	3 33 54	+54 53 34	20 37 57				4 45 W					2230
35	COMP											"	25
36	BIASx4					21 20							-
37	COMP											"	25
38	HD36395	5 26 18	-3 41	21 31 42				3 21 W					526
39	COMP											"	25
40	COMP											"	"
41	BD+17 1348	7 10 07	+27 19 08	21 50 11				2 21 W					2160
42	COMP											"	25

CCD
Spectr.Focus.
Spectr.

Exp. Mir.

974

743

1030

805

CCD Spectr. Temp. -100.5°C

Dome Temp./Hum. $14.2^{\circ}\text{C}/45.4\%$

Transparency Conditions *clear, bright moon* 96

Focus 6.75

DOME FANS ON
USING SBIG AUTOGUIDER

Spectr. Temp.

Dome Temp./Hum.

410 0 50 1024 4 1 ccd/mt

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
								3/4		14.8°C 6.74 was a bit warm chip not saturated at red end again today upon startup.	
								1			
								5			
974	2"	10.99	MO					6	{Vys}	some residual saturation Vys 457 affects the spectrum	1.1K
								7			
								1			
								8			
743	2"	11.0	MO					9	{Vys}	Vys 424	420 above b/g
								10			
								1			
								11			
1230	3"	7.97	M1					12	{Vys} ^{Marcy} ₅₇₉ _{Velocity}	Vys 9,	1.1K
								13			
								14			
865	2"	10.9	MO					15	{Vys}	slim comparison to SE Vys 49(A?)	
								16			

97
#2

Date 1995 Mar 14/15 Observers Smt. E. V. S. Z. iks as backup

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.
cc31543	BIASx4			22 30					
44	COMP							Fake clean	25
45	BD+27 1348 (B?)	7 10 07	+27 19 08	22 46 56		3 24 W			2500 25
46	COMP							"	25
47	BIASx4			23 30					—
48	COMP							"	25
49	AC+47 256-150	7 15 58	+46 16 52	23 45 38		4 15 W			2400
50	COMP							"	25
51	BIASx4			0 30					—
52	COMP							*"	25
53	BD+33 1646	8 02 34	+33 06 25	0 40 03		4 26 W			2530
54	COMP							"	25
55	BD+33 1646 B?			01 29 01		5 13 W			2403
56	COMP							"	25
57	BIASx4			2 13					—

CCD Spectr. Temp. ~ 120

Dome Temp./Hum. $12.1^\circ\text{C}/53.8\%$

Transparency Conditions *clear, bright moon* 98

Focus 6.75

N FAN ON ONLY NOW

Spectr. Temp.

Dome Temp./Hum.

410 0 50 1024 4 1 CCDPMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 λ tan G=5140	50 μ m	5303A ^o	1			
								17			
500	>12	not M		subtract sky				18	{Vys}	dion SE companion Vys 490B?	
								19			
								1			
								20			
892	16.5	M2		subtract sky				21	{Vys}	Vys 493	450 above 6/9
								22			
								1			
								23			
1120	>12.0	M0		subtract sky				24	{Vys}	brighter & NE of two Vys 250A?	450 above 4/9
								25			
631	12.1	M0		subtract sky				26	{Vys}	fainter & SW of two. Vys 250B	100 above 4/9
								27			
								1			

pn #3
99

Emulsion Batches:

Date 1995 Mar 14/15 Observers Smt {Uys} iks as backup

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC31558	COMP							FeNe clear	25
59	HD 95735	10 57 54	+36 38	2 19 30		2 38 W			600
60	COMP							"	25
CG40828-31	HD120245	13 43 11	+38 23 33						4x.067
32/33	"				2 40	0 04 W	84° Alt	Airmass 1.0055	2x.1330
CC31561	BIAX 4			2 51					
62	COMP							FeNe clear	25
63	BD+22 2632	13 42 58	+21 57 25	2 54 23		0 49 W			1802
64	COMP							"	25
65-73	FLAT x 9					1 ^h W	+21°	Tung 1/2 Ap	5
74/75	INBOARD/OUTBOARD							FeNe clear	26/30

Spectr. Temp. -100.3°C Dome Temp./Hum. $9.8^{\circ}\text{C}/55.3\%$ Transparency Conditions: clear, bright moon, 100
N FAN ON LOWLYFocus 6.75

Spectr. Temp.

Dome Temp./Hum. $9.6^{\circ}\text{C}/56.3\%$ @ end of seeing test

410 0 50 1024 9 1 ccdflat

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800R/mm 6:5.40	500μ	5303A	28			
3210	3"	7.48	M2					29	$\{V_{45}\}$ ^{Mary} V453 ^{star} V454		2.6K
	3"	6.95	KO III	EEV CCD GUIDE CAMERA		above 306μ		30	SEEING TEST	Dome SW, light SW wind, clear unseasonably warm past 2 days 9.8	
								1			
								5			
438		11.1	MO					6	$\{V_{45}\}$	V45 309 - not done before	150 above big
								7			
								2			14.7K → 13.7K
								3/4	FOCUS TEST	9.4°C @ start.	
										All backed up to lenses & WORK	

101
Wed/Thurs

Emulsion Batches:

Date 1995 Mar 15/16 Observers [Rm].Tn./Smt... + [Hlw]

CCS 386 27 secs ahead of. 4244. 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.
CC 315 ⁷⁶ / ₇₇	INBOARD/OUTBOARD					20 0	+400	Felt Clear	60/60
78	BIAS(4)			20 10					
79	COMP							"	60
80	HD 44990	6 19 49	+7 08 25	20 19 24		1 26 W			1000
81	COMP							"	60
GG40834-7	HD65583 x4	7 54 21	+29 31 04						.067
39/39	" x2				20 46	0 01 W	75° ALT	Arrows 1.0334	.133
CC31582	COMP							Felt Clear	60
83	HD65583	7 54 21	+29 31 04	20 49 43		0 34 W			1720
84	COMP							Felt Clear	60
85	BIAS(4)			21 25					
CC315 ⁸⁶ / ₉₀	FLAT x5					0 44 W	+2914'	Tung 1/4 Ap	7
CC315 ⁹¹ / ₉₂	Inboard/outboard							Felt Clear	20/30
93	BIAS x4							"	25
94	COMP								
95	BD-02 3000	9 48 10	-3 13 04	1 27 06		3 26 W		Felt Clear	2100
96	Comp								253

~~CC31594~~
~~# BIAS sum 27 (201 02 18)~~

CCD Spectr. Temp. -100.4°C Dome Temp./Hum. $+12.4^{\circ}\text{C}/55.3\%$ Transparency Conditions *just cleared* 102
 Focus *6.75/6.82 @ 5300* **DOME FANS OFF**
 Spectr. Temp. Dome Temp./Hum. $11.1^{\circ}\text{C}/57.6\%$ *at seeing test* (FULL MOON Transparency)
Central 2 410 0 50 1024 4 1 *central*

Exp. Mtr.	Seeing	F [✓] Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
06 560 FILTER				CASS CCD	1800 <i>in vac</i> G=5930	206 μ	6400 \AA	3/4	FOCUS TEST		
								1/2 μ			
								5			
4150 <i>*filter</i>								6	Rin pgn	T Mon	9.1K
								7			
	5"-6"	7.00	68V	KEY CCD GUIDE CAMERA		above 306 μ		-	SEEING TEST	Dome SW, no wind, cold front coming in, been exceptionally warm (with SW) during the day.	
								8			
2500	4"	7.00	68V					9	^{10W} Std. Velocity	$\approx 200:1$ SW Some cloud and increasing	5.0K
								10			
								11			13.5K $\rightarrow 12.9K$
705 FILTER					1800 <i>in vac</i> G=5190	306 μ	5303 \AA	3/4	FOCUS TEST	set a bit cool intentionally.	
								12			
1295		10.54	M0					13	Vys 560		220 above 10.54
								14			

103

P9#2

Wed / Thurs

Emulsion Batches:

Date 1995 Mar 15/16... Observers E. V. S. Jr. / Smt.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC31597	BIASx4			2 09					
98	COMP							FeNe clear	25
99	HD95735	10 57 54	+36 38	2 12 12		02 38W			760
C031600	COMP							FeNe clear	25
01	Comp							"	25
02	BD+49 2126	12 10 11	+49 17 23	2 32 21		2 19 W			2700
03	Comp							FeNe clear	25
04	BIASx4			3 24					-
05	COMP							FeNe clear	25
06	BD+35 2439	13 16 20	+34 48 28	3 26 28		2 11 W			2899
07	Comp							FeNe clear	255
08	BIASx4								-
09	Comp							"	25
10	BD+35 2436	13 14 56	+35 38 42	4 22 31		2 40 W			1206
11	COMP							"	25
12-116	FLATx5					2 47 W	+35°	Tung 12 Ap	5

Spectr. Temp. -100.5°C
 Focus 6.82
 Spectr. Temp.

Dome Temp./Hum. $8.1^{\circ}\text{C}/71.6\%$
 Dome Temp./Hum. $5.5^{\circ}\text{C}/88.5\%$ @ end of night.

Transparency Conditions *partly cloudy \rightarrow foggy* 104

+ Full moon
 410 0 50 1024 + 1 CCD FMT

Exp Mtr	Seeing	PA Mag	Sp	Inst	Grating/ Tilt	Slit	Emulsion	P.H	Program	Remarks	Quality
NI FILTER				CASS CCD	1800 R/mm 6:5140	306 μ	5303 \AA	1			
								15			
3000	4"	7.48	M2					16	$\{V_{45}\}$ <i>Harper</i>	$V_{45} 594$	<i>max</i> 22K
								17			86K
								18			11K
696	3-5"	10.5	M0					19	$\{V_{45}\}$	<i>some cloudy stretches</i> CCDT = -100 + c $V_{45} 610$	280 above 69
								20			
								1			
								21			
706		10.6	M0					22	$\{V_{45}\}$	<i>s/n ~ 50:1</i> $V_{45} 47$ cloudy stretch	
								23			
								101			
								24			
645		9.5	M2					25	$\{V_{45}\}$	<i>s/n ~ 60:1</i> $V_{45} 46A$ - foggy	
								26			
								27			14.2K $\rightarrow 13.4K$

All backed up to WORKS PROCESS

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pg#1 Thurs/Fri

Date 1995 MAR 16/17

Observers

For Lamp tests
 [Blair] [Tol/smt] [Hew] [Vys] [Tol/smt]

Emulsion Batches:

Note meter long sky buff/ie installed for most lamp tests

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Type/Filter	Comparison Exp.
CC316 17/18	inboard/outboard					01 12W	-2P	FeA Clear	60/80
19	BIIS(A)					"	"		
20	Comp					"	"	FeA Clear	180
21/23	TL 850 Lamps			19 5356		"	"		1200
24	Comp					"	"	FeA Clear	180
CC316 25/26	inboard/outboard	CSS 386		Time now corrected				FeNo Clear	20/30
27	BIHSA SUM.			21 39					
28	COMP							"	25
29	BD -02 3000	9 48 10	-3 13 04	21 4706		0003E			2606
30	Comp							FeNo Clear	25
31	BIAS x4			22 35					-
32	COMP							FeNo Clear	25
33	BO+01 2447	10 23 49	+01 21 36	22 3906		0 02 W			1931
34	Comp							FeNo Clear	25
35	Comp							"	"

complete
 Use set of MAR 19/20
 for CSS 386 center

Actually 19 00 because CSS 386 slow 6 mins?

CCD
Spectr. Temp. -100°C Dome Temp./Hum. $+10.7^{\circ}\text{C}$ $59\% \text{RH}$ Transparency Conditions *cloudy Dome closed for* ¹⁰⁶
Focus 6.78 *90 cgain* Tests
Spectr. Temp. Dome Temp./Hum. $+4.5^{\circ}\text{C}$ 56.8% during first star obs
4.0 0 50 1034 41 CCD Faint

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CASS CCD	1500b/w/mm G-6000 <u>T.H-55.7</u>	306 μ	6495A 2.8 <u>At Am 512</u>	3/4 1/2 5 μ	focus test		max 8K
107K	for all 3							6 μ 7 μ		Strongest @ <u>650A + 38</u>	3.2K
no filter				CASS CCD	1500b/w/mm G-5140	306 μ	5303A exactly	3/4 1 8		Right on @ center	
1.160*		10.54	MO					9 10 1	HLW	* lots of sky to subtract. Vys 560 60:1 structure 1/4 (Clear though)	
1465*		9.65	M2					11 12 14 15	$\left. \begin{array}{l} \text{Vys} \\ \text{velocity} \end{array} \right\} \text{Mercury}$ ↓ AUTOGUIDER lost it for a bit and star drifted.	* lots of sky. Vys 127	

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p9#2

Thurs/Fri

Emulsion Batches:

Date 1995 MAR 16/17

Observers

[Vys] Tr/Sat

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC31636	BD-17 3088	10 07 24	-18 07 26	23 19 03		1 12 W			2622
37	Comp							FeNo clear	25
38	BIAS x4			00 06					
39	Comp							FeNo Comp	25
40	HC+38 28746	09 30 07	+37 58 38	00 13 33		2 50 W			3193
41	Comp							FeNo clear	25
42	BIAS x4			01 10					
CG40840 843	HD103095	11 47 13	+38 26 10	01 15				4x	67ms
844 845	"	"	"			00 43W		2x	133ms
CC31643	Comp							FeNo clear	25
44	HD103095	11 47 13	+38 26 10	01 19 59		00 55 W			491
45	Comp							FeNo clear	25
46	Comp							"	"
47	HC+40 512-31	12 07 25	+40 14 00	01 39 36		1 37 W			3000
48	Comp							FeNo clear	25
49	BIAS x4			2 32					

CCD
Spectr. Temp. -100.0°C
Focus 6.78
Spectr. Temp.

Dome Temp./Hum. $+5.0^{\circ}\text{C}/60.9\%$
Dome Temp./Hum.

Transparency Conditions *clear, full moon* 108.
N DOME FAN ON ONLY
(NW wind 4 km/hr)
410 0 50 1029 4 1 ccd/fat

Exp. Mtr	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1730	3"-4"	9.9	M0	CASS CCD	1800 λ/mm G=5.40	306 μm	5303A	16	EVys3	S/N > 70:1 above 6g Vys 570 lots of moon	100 11K
								17			11K
								18			11.2K
840	3"-5"	11.0	M0					19	EVys3 549	$\approx 60/1$ S/N	11.5K
								20			11.5K
								1		CCOT = -100.5°C	
	POA	645	G8Vp		Above	306 μm	slit			Seeing test Dome WSW 1019 Air mass Light NNW wind	
								21			
3570	4"-6"	645	G8Vp					22	Std Vel IAU		MAX 3K
								23			
								24			11.3K
621		11.4	M0					25	EVys3 637	S/N $\sim 60:1$	
								26			

Spectr. Temp. -100.4°C Dome Temp./Hum. $+1.4^{\circ}\text{C}/70.8\%$ Transparency Conditions *clear* 110Focus 6.78

ONLY N FAN ON

Spectr. Temp.

Dome Temp./Hum. $+1.8^{\circ}\text{C}/77.7\%$ *axe closed*410 0 50 1024 4 1 *codfat*

Exp Mtr	Seeing	Mag	Sp	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASSCO	1800lines 6-5140	36 μ	5303A	27			
393		11.3	M2					28	{EV ₁₅ } 44		
								29			
								1			
								5			
393		11.5	M					6	{EV ₁₅ } 138	SN ~ 25: 1 cut short, some low, fast clouds.	
								7			
								1			
								2			14.1K → 13.0K
								3/4	focus TEST		
All backed up to Persone & WORM.											

Spectr. Temp. -101.0°C Dome Temp./Hum $0.2^{\circ}\text{C}/65.5\%$ Transparency Conditions *clear, full moon* 112
 Focus 6.85 *FANS OFF*
 Spectr. Temp. Dome Temp./Hum. *4100 50 1024 4 1 CCD*

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	<i>2. Lambda Emission</i>	P.H.	Program	Remarks	Quality
2560 FILTER				CASS CCD	1800 λ mm G=5930	306m	6400A ⁰	3/4	FOCUS TEST	warmed CCD to -50°C and ran disc to rid chry of saturation.	
								1			
								5			
5125 325	6.8	F7Jab						6	Rm T Mem	encoders re-normalized NOT GUARDED	8.2K
	8.0	K1Jab						7			
								1			
								8			
2820								9	Rm AWPev		4.6K
								10			
								1			
								11			
600	8.88	60J						12	Std. Vel	there is another star 0.3's similar brightness and 3" W but could seem to agree better with present position.	
								13			
								13			
								14			

Spectr. Temp. ... 1.00, 3.6... Dome Temp./Hum. -1.1°C/69.2% Transparency Conditions .. clear, Full moon, 114

Focus 6.85.....

Spectr. Temp.

Dome Temp./Hum. -0.8°C/69.4% @ seeing test

FANS OFF

410 0 50 1024 41 ccd/fit

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
4290 FILTER 5500		4.39	K2III F2-0.5	CASS CCD	1800 Å/mm 6-930	30µm	6400 6400 A	15	Std. Vel.	sure about this one.	10K
								16			
	3.4"	7.45	K2III	EVV CCD GUIDE CAMERA		above 30µm		-	SEEING TEST	Done W, very light wave and clear, cold front moved in	
								-			
								2			15.2K → 14.9K
								1			
								17			
4230	8"	<v> = 6.19	F6J-IIb					18	Pm V473 hγ	retracted image.	7.0K
								19			
								20 20			
								21	Std. Vel.	very near same telescope position as for V473 hγ third spectral type	1.7K
1038		9.00	F7V					22			
								1			
								23			

CCD
Spectr. Temp. -100.3°C

Dome Temp./Hum. $-1.0^{\circ}\text{C}/71.5\%$

Transparency Conditions *clear, full moon* 116

Focus 6.85

Dome Temp./Hum. $-1.1^{\circ}\text{C}/72.3\%$ @ FOCUS TEST

FANS OFF
410 0 50 1024 41 CCD TEST

Exp. Mtr	Secing	V _{PH} Mag	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
560	3-4"	9.8	F8-62 Ib	CASS CCD	1800 Rlm 6-930	300μ	6400A	24	Rm MW(Cyg)		750
								25			
								1			
								3/4	FOCUS TEST	no more safety backup.	
All backed up to Perseus & WORM.											

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pg #1

Date 1995. Mar. 18/19. Observers [Rm] Smt. Bla. as backup

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.
cc31711/12	INBOARD/OUTBOARD							Fear clear	60/65
13	BIAS(4)			19 52				"	60
14	COMP							"	60
15	HD25361	3 56 42	+58 23	20 09 00		3 55 W		"	1400
16	COMP							"	60
17	BIAS(4)			20 35				"	60
18	COMP							"	60
19	HD30282	4 41 06	+36 32	20 41 58		3 42 W		"	1230
20	COMP							"	60
21	COMP							"	60
22	HD44990	6 19 49	+7 08 25	21 11 21		2 22 W		"	500
23	COMP							"	60
24	BIAS(4)			21 24				"	60
25	COMP							"	60
26	HD42347	6 05 24	+25 02	21 32 58		3 12 W		"	1400
27	COMP							"	60

cc0
Spectr.
Focus.
Spectr.

Exp. Mir.

06 540
F4.700

2356

2500

3820

1475

CCO
Spectr. Temp. -100.4°CDome Temp./Hum. 15.5°C/62.1%
@ FOCUS TESTTransparency Conditions Clear, some cloud to S¹¹⁸
BOTH FANS ON AT START

Focus 6.81

Spectr. Temp.

Dome Temp./Hum.

410 0 50 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
06560 FILTER				CASS CCD	1800/11 6- 5 30	30μ	6400i	3/4			
								1			
								5		S DOME FAN OFF NOW	
2356	2.5 ^u	7.30 -8.07	F6 Ib -42Ih					6	Rm RX Cam	high wispy clouds	5.8K
								7			
								1			
								8			
2500	3 ^u -2 ^u	B ⁻ 7.1-8.8	F6-G1					9	Rm AW Per	clear again	6.5K
								10			
								11			
3820	2.5 ^u	B 6.5-8.0	F7 Iab -K1 Iab					12	Rm T Mon		10.5K
								13			
								1			
								14			
1475		8.03	60IV					15	IAU Std. Velocity		2.7K
								16			

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pg #2

Emulsion Batches:

Date 1995 Mar 18/19 Observers [Rm] Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC31728	BIAS(4)			22 00					—
29	COMP							Fastr clear	60
30	HD62509	7 39 12	+28 16 04	22 11 42		1 55 W			21
31	COMP							"	60
CG40852-55	HD85373 x4	9 46 18	+38 24						.067
50/57	" x2				22 28	0 02 W	Alt 84°	air mass 1.0054	.133
CC31732-40	FLAT x9					0 10 W	+38°	Tung 4Ap	8
41	BIAS(4)			22 36					—
CG40858/59	HD74010 x2	8 36 18	+49 15						.133
60/61	" x2				22 54	1 39 W	Alt 72°	air mass 1.05	.067
62-65	BD+37 2174 x4	11 16 12	+37 19		23 06	0 48 E	Alt 79°	1.02	.067
CC 31742/43	INBOARD/OUTBOARD							Fastr clear	60/65
44	BIAS(4)			1 33					—

CLD Spectr. Temp. -100.3°C

Dome Temp./Hum. $+3.9^{\circ}\text{C}/64.5\%$

Transparency Conditions *clear, wispy clouds* 120

Focus 6.81

ONLY NFW ON NOW.

Spectr. Temp.

Dome Temp./Hum. $+3.3^{\circ}\text{C}/68.5\%$ @ seeing test

910 A SO 1024 4 1 cutback

Exp Mtr	Seeing	Pr. Mag	Sp	Inst.	Grating/Tilt	Slit	Exposure	P.H.	Program	Remarks	Quality
				CASS CCD	1800 21mm G=5930	300μ	6400 Å	1			
								17			
7K								18	1AU Std Vel Beta Gem	traced	14.4K
								19			
	2-3"	6.74	FOV	EEV CCD GUIDE CAMERA		above 300μ		-	SEEING TEST	Done SW, no wind, increasing cloud normal for season.	
								-	"		
				CASS CCD				2			16.0K → 15.0K
								1			
	2"	$\sqrt{\text{primary}}$ 6.9	FO	EEV CCD GUIDE CAMERA		above 300μ		-	SEEING TEST CALIBRATION	Done W, no wind, increasing cloud.	
						"		-	DOUBLE STAR		
	3"	$\sqrt{\text{primary}}$ 9.1	?			straddling 300μ		-	"	Done S, no wind, increasing cloud stars at edges of field.	
								3/4		too much cloud.	
								1			
All to Perseus & WORM											

121

Sun / Mon

Date 1.9.95. 12.14.19.20... Observers (Blw). Tr.....

Emulsion Batches:

Use this set of G.A. 98A. Rather than previous attempts of MAR 16.

Normal Lamp tests with straight by file in place as usual

Plate No.	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 31745/46	Inboard / outboard			19 20		00 16W	+29 20	Felt Clear	60/60
47	BIAS(4)								
48	Comp			19 33		01 12W	-21 41	Felt Clear	180s
49 51	TL 830 x 3			19 39 59		01 12W	"		1700s
52 54	FLATS x 3					"	"	TUNG Ap 1/4	75s
53 57	TL 841 x 3			21 14 07		"	"		1300
58 60	TL 850 x 3			22 23 33		"	"		1100
61	Comp			23 39 40		"	"	Felt Clear	180s
62	BIAS(4)			00 02 44					
63	Comp			00 03 37				Felt Clear	120s
64 66	TL 850 x 3			00 06 24					800s
67 69	TL 841 x 3			00 50 22					700
70 72	FLATS x 3			01 28				TUNG Ap 1/4	7s
CC 31773/75	TL 830 x 3			01 32 13					600s
76	Comp			02 08 05				Felt Clear	120s
77	BIAS(4)			02 10 44					

CCD Spectr. Temp. -100.5°E

Dome Temp./Hum: 9.7°C $80\% \text{H}$

Transparency Conditions 122
 Cloudy, Vena closed for
 Fluorescent Light tests.

Focus... 6.85

90C gain 86.7H

Spectr. Temp.

Dome Temp./Hum: 4.0°C 86.7H

410 0 50 1024 4 1 CCD FMT

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
26560 AKA				Cass CCD	1800 l/mm G=6000	30 μ m	6498A $\pm .3A$	3/4	focus test	Just Fine	MAX ADU
					Tilt 5.5°			1/2			MAX
								5			75K
								6		Continuum $\approx 1.1 \text{K ADU}$ Strongest Line $\approx 5.3 \text{K max}$	
								7			
								8			
								9		2.5K ADU max	
								10		CCD = -103.0°	70K
					1800 l/mm G=6100	30 μ m		1/2			
					Tilt = 5.6°		* Actual 6620A	11a	* Bln usual 6604A Region	[610-154 Red of usual Region]	10K max
							At Row 512 $\pm .1h$	12ci	Continuum 700 ADU	Strongest Line	102K
								13ci	Continuum 7200 ADU	above background	13K
								14			145K
								15			
								16		rock hound during middle of 1st attempt	
								1			

Lamps UNDER end of Telescope
 upper Platform by
 Dome opening buffers
 Shine N's for other tests

(13K ADU max Flat)

1800 l/mm
G=6100
Tilt = 5.6°

* Actual
6620A
At Row 512
 $\pm .1h$

* Bln usual 6604A Region [610-154 Red of
usual Region]

See to Progress & WORK

123 Mon/Tues

Emulsion Batches:

Date 1995. MAR. 20/21... Observers [Bl]. J. 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.
cc317 ⁷⁸ / ₇₉	Inboard / Outboard H ₂ ATM ₁₁					01 12 W	-21 36	FeAr Clear	90/95
80	BIAS(4)			19 50					
81	Comp							FeAr Clear	80sec
⁸² / ₈₄	TL830x3			19 51 17					1000
⁸³ / ₈₇	TL841x3			21 00 00					1200
⁸³ / ₉₀	FLATSx3			22 11				Tung Ap 1/4	7sec
⁹¹ / ₉₃	TL850x3			22 17 12					1200
cc317 94	Comp			23 18 51				FeAr Clear	80sec
95	BIAS(4)			23 46				FeAr Ap 1/4	
96	Comp			23 45				FeAr Ap 1/4	30s
⁹⁷ / ₉₉	TL850x3			23 46 57					600s
cc318 ⁰⁰ / ₀₂	FLATSx3							Tung Ap 1/4	
⁰³ / ₀₅	TL841x3			00 29 30					700s
cc318 ⁰⁶ / ₀₈	TL830x3			01 08 42					700s
cc31809	Comp			01 56 41				FeAr Ap = 1/4	30s
cc318 10	BIAS(4)			01 56					

CCD
Spectr. Temp. -100.6 °C

Dome Temp./Hum. +8.2 °C 7408H

Transparency Conditions. Cloudy. Some cloud fog 124
Tests.

Focus... 6.80

CCD
Spectr. Temp. -101.3 °C

Dome Temp./Hum. +8.6 °C 9402H

90C gain

C. L. L. L. L. L.

410 0 50 1024 4 1 CCD FOOT

Exp. Mtr	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter OG 560 FILTER				CASS CCD	1800/1mm G=6290 T.H=578	306	6810A ± 28 at Res 52	3/4 1/2 5	focus test		104K 8K
19K each								6	Para + Fluorescent Lamps	Continuum > 3000Å above background	3:2
19K each								7	Strong, narrow	emission lines at both ends	4K
								8			19K
								9			
								10			68K
				CASS CCD	1800/1mm G=6395 T.H=541	306	± 7000Å Very uncertain so far, no yr. lamps here.	1 11ci 12ci		Better than FEN source But slit poor	135K
5, 760 each								13		Continuum > 2000Å above background	2K
								14		Continuum (→ TO ADV above)	
								14		Strongest line at Red edge	3:2K
12, 500								15		Redist source	40K
								1/2			136K

All to ucam = PEASONS.

CCD Spectr. Temp. -100.5°C Dome Temp./Hum. $+5.3^{\circ}\text{C}$ $60\% \text{H}$ Transparency Conditions *Mostly cloudy* 126

Focus 680 Dome Temp./Hum. $+4.0^{\circ}\text{C}$ $70\% \text{H}$ *Drive closed for lamp tests*

Spectr. Temp. -100.4°C Dome Temp./Hum. $+4.0^{\circ}\text{C}$ $70\% \text{H}$ *c Lambda* MAX 404

Exp Mtr	Seeing	Pig Mag	Sp	Inst	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>no filter</i>				CASSCO	1800 lines $G=6590$ $T.H.=60.6^{\circ}$	30μ	$\approx 7200 \text{ \AA}$ <i>very roughly known</i> $\pm 20 \text{ \AA}$	3/4	<i>focus test</i>	<i>Just Red a 10A of very strong comparison lines</i>	
								5ci			13.9K
								6ci 15ci		<i>Reddest of 3 TL sources</i>	5K
<i>77750 each</i>								<u>7ci</u>	<i>(for last 2 exps)</i>		14K
								8ci			
								9ci	<i>(no features of red end)</i>	<i>Continuum > 40 ADU above background</i>	4.2K
<i>53400</i>					<i>Continuum > 60 ADU above background</i>			10ci	60 ADU <i>(no features of red end)</i>	<i>The bluest of 3 sources seems to go with increasing T.H. (no obvious)</i>	5.2K
								11ci			
								1ci			

FOR Next Region $\leftarrow 7400 \text{ \AA}$, use $G=6680$
(For good FeK α comp overlap)
Note FeNe source no good here
(Lots of ghosts and peculiar offset in Y)

$\text{Po } 7 \text{ sec FeK } A_p = 1/4 \rightarrow 127 \text{ K max}$
 $e' \text{ } 20 \text{ sec FeK } A_p = 1/4 \rightarrow 124 \text{ K max}$

127

p9#1

Wed/Thurs

Date 1995 MAR 22/23... Observers [Bln]/[Tu.]/[Rm.]/[Tn].....

Emulsion Batches:

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Near end of Lamp Tests

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC318 ^{29/30}	Inboard/OUT board	HORTMAN				00 17W	+27 26	F4r Ap/4	30/27
31	BIAS(4)								
32	Comp					01 12W	-21 30	F4r Ap/4	20 sec
^{33/35}	TL 850 x 3			19 26 02		"	"		900s
^{36/38}	FLATS x 3					"	"	TUNG Ap/4	7 sec
^{39/41}	TL 841 x 3			20 23 36		"	"		600
^{42/44}	TL 830 x 3			= 21 02		"	"		600s
CC318 45	COMP					"	"	F4r Ap/4	20 sec
46	BIAS(4)								
47	Comp	For Line ID purposes:						F4r CLEAR	60 sec
48	HD 89021	10 11 04	+43 24 50	22 00 33		00 30 E			152
49	Comp (the only one to use for previous star)							F4r CLEAR	20s
CC318 50/51	Inboard/out board							F4r CLEAR	60/65
52	Comp							"	60s
53	HD 44990	06 19 49	+07 08 25	22 26 35		3 57 W			670
54	Comp							F4r CLEAR	60s

CCD Spectr. Temp. -102.4°C

Dome Temp./Hum. $+3.8^{\circ}\text{C}$ 61.4%RH

Transparency Conditions Cloudy - Fast clearing 128

Focus 6.82

CCD Spectr. Temp. -101.8°C

Dome Temp./Hum. $+2.0^{\circ}\text{C}$ 68.2%RH
c 2 lambda

90C gain
MAX 404
410 0 50 1024 4 1 CCD/FMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
+3.8c no filter	set 6.82			C455CCD	1500 bl/min G=6680	306 μ	27400Å	3/4	focus test		8K
								1/2			
								5		[2 strong lines = 7440Å F330 blues to 3 sets]	12K
23,500 each								6			10K
								7			12.5K
17,850								8			9.4K
5,280								9			9.3K
								10			
								1/2			
								11c		displaced to low col H α + ghosts at large col H α s	
20 K		V 345	A2IV	Probably lots of water vapor at blue end, just clearing about 7400Å				12		Tel encoder normalization. (1000 Å range)	9K
								13		(5K, clear now)	
					1500 bl/min G=5930	306 μ	4400Å	14/15		focus test (Right on center)	
no filter								16			26K
1060		B E-5 -8.0	F7 Job -K1 Job					17	Rm pgn	T MON somewhat	7/10/1 SKN
								18			

CCD Spectr. Temp. - 1005 °C Dome Temp./Hum. +1.7°C 69.9% Transparency Conditions Cloudy 130

Focus 6.82

Spectr. Temp. Dome Temp./Hum. c Lambda ADU MAX

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
				CASS CCD	15.204/ 6-5430	306 _u	6900A	1/2			
								14			
	no filter							20	Std Vel I44	7250/15/N	
	F739		1:14	NO RT6				24			24K
								22			145K
								1			

131
pg #1

Emulsion Batches:

Date 1995 Mar 23/24 Observers Smt [Ely] [Bin] backup

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC31869/70	INBOARD/OUTBOARD							FoNe clear	20/30
71	BIASx4								-
72	COMP							FoNe clear	20
73	AC+68 3124	7 21 38	+68 49 42	19 55 08		0 50 W			2401
74	COMP							FoNe clear	20
75	BIASx4			20 38					-
76	COMP							FoNe clear	25
77	BD+10 1857C ?	8 38 12	+9 55 13	21 05 09		0 52 W			2515
78	COMP							FoNe clear	25
79	BIASx4			21 51					-
80	COMP							FoNe clear	25
81	BD+10 1857C ?	8 38 12	+9 55 13	21 58 22		1 50 W			2800
82	COMP							FoNe clear	25
83	BIASx4			22 49					-
84	COMP							FoNe clear	25

CCD Spectr. Temp. ... 100.4°C

Dome Temp./Hum. 13.0°C / 48.4%

Transparency Conditions clear

132

Focus ... 6.86

Spectr. Temp.

Dome Temp./Hum.

FANS OFF

410 0 50 1024 4 1 CCDMT

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	PH	Program	Remarks	ADD to Quantity
				CASS CCD	1600L 6=5140	30μ	5303 Å	3/4			
								1			
								5			
400	3"	10.9	M0					6	{V ₄₅ } 245		340 above b/g
								7			
								1			
								8			
275	3"	11.8?	M2?					9	{V ₄₅ } 257C	no star at core. This one has Ax = 40" and is faintest of dim stars at same dec as 257AB not very M-like but noisy	150 above b/g
								10			
								11			
353		11.8	M2					12	{V ₄₅ } 257C	this one further from axis (ax = 50") but close to shell of 257AB slightly brighter. It's an M-type I'm pretty sure of it.	
								13			
								14			

133
pg #2

Emulsion Batches:

Date 1995 Mar 23/24... Observers Smt. E. V. S. B/n as backup

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC318 85	BD+10 1857	8 37 20	49 55 22	22 55 12		2 20 W			1200
86	COMP							Fene clear	25
87	BIAS x 4			23 20					—
88	COMP							"	25
89	BD+01 2447	10 23 49	+01 21 36	23 28 30		1 07 W		"	1200
90	COMP							"	25
91	COMP							"	"
92	HD95735	10 57 54	+36 38	0 03 09		0 58 W			660
93	COMP							"	25
94	BIAS x 4			0 18					—
95	COMP							"	25
96	CERES	^{est. 2000} 8 52 54	+31 17 10	0 27 18		3 30 W			500
97	COMP							"	25
CG40066-69	HD 108100 x 4	12 20 06	+43 25						0.067
70/71	" x 2				0 46 30	0 09 W	Alt 88°	arr mass 1.0006	0.133
CC31898- 31906	FLAT x 9					0 21 W	+43°	Tune 1/2 Ap	5

CCD Spectr. Temp. -100.3°C Dome Temp./Hum. $+1.4^{\circ}\text{C}/47.6\%$ Transparency Conditions *clear* 134

Focus 6.86

Spectr. Temp. Dome Temp./Hum. $0.8^{\circ}\text{C}/47.7\%$ @ seeing test

FANS OFF
910 0 50 1024 4 1 CCENT

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	BH	Program	Remarks	Quality
642	3"	9.6	M2	CASS CCD	1500 21m G-5140	306 μ	5303A	15	$\{U_{45}\}$ 257 AB		500 above bly
								16			
								1			
								17			
644		9.65	M2					18	$\{U_{45}\}$ ^{Maven} _{Std. Vel.}		410 above bly
								19			
								20			
3535		7.48	M2					21	$\{U_{45}\}$ ^{Maven} _{Std. Vel.}		3.1K
								22			
								1			
								23			
1146		~ 8	reflected G1					24	Minor planet. Std. Vel		1.2K
								25			
	3"	7.14	F2	EEV CCD GUIDE CAMERA		above 30 μ m		-	SEEING TEST	Done w/ med SW wind, clear tonight but last 4 nights were cloudy	
	"	"	"					-	"		
				CASS CCD			5303A	2		All backed up to wormholes	14.8K 13.7K

CD
Spectr. Temp. -100.3°C

Dome Temp./Hum. $+1.8^{\circ}\text{C}/47.1\%$

Transparency Conditions *clear, windy* 136

Focus 6.84

Spectr. Temp.

Dome Temp./Hum.

N FAN ON
410 0 50 1024 4 1 ccdAmt

Exp Mtr	Seeing	Ptg Mag	Sp.	Inst.	Grating/Tilt	Slit	Emission	#H	Program	Remarks	Quality
08560 FILTER				CASS CCD	1800L G=5930	30 μm	6400 \AA	3/4	FOLIOS TEST		
								1			
								5			
9340	4"	B 6.5- 9.0	F7Iab -K1Iab					6	Rm T Mon		11.8K
								7			
								8			
3200	4"	V 1.38- 2.07	F6Ib G2Ib					9	Rm RX Cam		8.0K
								10			
								11			
3270	4"	B 7.9- 9.8	F6 -G1					12	Rm AWP _{Per}	SBIG USED	8.5K
								13			
								14			
3500	4"	V 7.29	dG2					15	1AV Std. Vel.		7.5K
								16			

^{ced}
 Spectr. Temp. -100.2°C ... Dome Temp./Hum. $+0.8^{\circ}\text{C}/42.3\%$ Transparency Conditions ... *clear, windy \rightarrow dry, no glare* ¹³⁸

Focus 6.84

Spectr. Temp. ... Dome Temp./Hum. $+0.7^{\circ}\text{C}/41.7\%$ ^{see first test} ONLY N DOME FAN ON
 410 0 50 1024 4 1 ccd/fit

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
				CASS CCD	1800 λ G-5930	36 μ	6400 \AA	1			
								17			
5300	4"	4.39	K2III					18	IAU Std Vel Candidate		13.2K
			F2-0.5					19		spec controller mess't after comp and moving to next star	
	3"	6.9	K2III	EDU CCD GUIDE CAMERA		above slit		-	SEEING TEST	Dome SSW, mod W wind but was strong earlier and now it's dying down, clear	
	3"	"	"	"				-	"	"	
				CASS CCD				1			
								20			
530	"	7.20	K2III					21	IAU Std. Vel	note V may change between seeing test list and almanac	8.1K
								22			
								2			5.6K \rightarrow 13.7K
								1			
								23			
4444	5.5"	6.19	F0I-III					24	Rm V473 Lyr	retracted image on slit.	9.4K
								25			

CED
Spectr. Temp. ... 100.2°C ...

Dome Temp./Hum. ... 0.0°C / 40.9%

Transparency Conditions ... clear ... some thin cloud to SW ... ¹⁴⁰

Focus ... 6.54 ...

Spectr. Temp. ...

Dome Temp./Hum. ...

ONLY N FAN ON
410 0 50 1024 41 ccdnet

Exp. Mtr	Seeing	Ptg. Mag	Sp.	Inst.	Grating/Tilt	Slit	Emission	PH	Program	Remarks	Quality
				CASS CCD	1800 l/mm G-5932	30μ	6400Å	26			
1062		V 9.05	FTV					27	IAU 5th Vel candidate		2.5K
								28			
								1			
								29			
1184		V 9.1-9.8	F8 -G2IV					30	Rm MW Cyg		3.4K
								31			
								1			
								5			
2183		C/D 8.40	~G0Ib					6	Rm Z Lac		5.5K
								7			
								1			
								8			
5000		V 6.19	K2					9	Rm Lac velocity comparison		12.5K
								10			

CCD Spectr. Temp. -100.4°C Dome Temp./Hum. $-1.2^{\circ}\text{C}/47.7\%$ Transparency Conditions *clear* 142
 Focus 6.84
 Spectr. Temp. Dome Temp./Hum.

Exp. Mtr	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Filter/Strap	P.H.	Program	Remarks	Quality
				CASS CCD	1800 lines G = 5930	306 μ	6480 \AA	1			
								11			
3960	7.53	K404						12	IAU Std. Velocity	sun rising @ end.	78X
								13			
								3/4	FOCUS 785T		
All to Resens & WORM											

143
pg #1

Emulsion Batches:

Date 1995 Mar 25/26 Observers [Rm] Smt..... Blm as backup

Plate No.	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 31965/ 66	INBOARD/ OUTBOARD					0 ^h	+43°	F40r Clear	60/60
67	BIAS(4)			19 46					
68	COMP							"	60
69	VY Per	2 20 19	+58 28 04	20 03 55		6 29 W			3400
70	COMP							"	60
71	BIAS(4)			21 05					—
72	COMP							"	60
73	HD44990	6 19 49	+7 08 25	21 23 32		3 10 W			960
74	COMP							"	60
75	BIAS(4)			21 43					—
76-84	FLAT x 9					3 14 W	+7°	Tung K4 Ap F40r Clear	8
85	COMP								60
86	HD66141	7 57 04	+2 36 34	22 05 43		2 02 W			180
87	COMP							"	60
88	BIAS(4)			22 11					—

Exp. Mtr. ^{old} Spectr. Temp. -100.44°C

Dome Temp./Hum. +3.8°C / 46.2%

Transparency Conditions mostly clear 144

Focus ... 6.84

Dome Temp./Hum. +3.4 / 39.6% @ 2130

FANS OFF
410 0 50 1024 4 1 ccd/fant

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
CG 560											
FILTER								3/4	FOCUS TEST		
								1			
								5		TELESCOPE ON E SIDE	
500		10.8 -11.66	F5 -F9					6	Rm	poorly guided for 5 minutes or so while sub 6 relay to E-W was reversed.	1.0K
								7			
								1			
								8			
3465	3"	B 6.5 -8.0	F7 Inb -K1 Inb					9	Rm T Mon	TEL ON E SIDE STILL	8.2K
								10			
								1			
								2		TEL ON E SIDE STILL	15.0K → 13.9K
								11			
3500		✓ 4.39	K1016 F2-05					12	1AV Std. Vel. candidate.	thin cloud here, windy tel on E side still	9.3K
								13			
								1			

145
M #2

Emulsion Batches:

Date 1995 Mar 25/26 Observers [Rm] Smt. Kn/Bin as backup

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC31989	COMP							Felt clean	60
90	HD25361	3 56 42	+58 23	22 20 58		6 45 W			2000
91	COMP							"	60
92	COMP							"	"
93	HD30282	4 41 06	+36 32	23 02 55		6 49 W			2300
94	COMP							"	60
95	BIAS(4)			23 44					—
96	COMP							"	60
97	HD62509	7 39 12	+28 16 04	23 58 55		4 11 W			120
98	COMP							"	60
99/ cc 31000	INBOARD/OUTBOARD					0 ^h	+38°	"	60/60

40 Spectr. Temp. ... -100.3°C ... Dome Temp./Hum. +3.0°C / 43.9% Transparency Conditions ... thin cloud everywhere ... 146

Focus 6.84

Spectr. Temp.

Dome Temp./Hum. +2.5°C / 49.4% @ FOCUS TEST
 FANS OFF
 410 0 50 1024 4 1 ccdant

Exp Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2514	4"	7.30 -8.07	F6Ib -G2Ib	CASS CCD	1800/1mm G=5930	306μ	6400 ^o A	13		TELESCOPE ON E SIDE OF PIERS	
								14	RX Cam		6.7K
								15			
								16			
414		B 7.9-8.5	F6- G1					17	AW Per	cut short by increasing cloud	
								18			
								19			
3520		1.14	KOIII					20	1AU Std Uoi β Gem	cloudy now.	10.8K
								21			
								22/23	FOCUS TEST		
All backed up to WORK & PERSONS.											

147
pg# 1

Emulsion Batches:

Date 1945. Mar. 26/27... Observers EV 453 Smt... Kun. as backup

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
432001/02	INBOARD/OUTBOARD							FeNe clear	20/30
03	BIAS x 4								
04	COMP							"	25
05	AC+37 3024	13 13 23	+36 49 50	01 00 24		0 43 W			3670
06	COMP							"	25
07	BIAS x 4			2 05					—
08	COMP							"	25
09	BD+22 2632	13 42 58	+21 57 25	2 12 34		1 17 W			3130
10	COMP							"	25
11	BIAS x 4			3 07					—
12	COMP							"	25
13	HD 119850	13 40 36	+15 27	3 16 41		1 42 W			701
14	COMP							"	25
15	COMP							"	"
16	AC+53 2527-109	16 06 49	+53 12 11	3 41 02		0 07 W			2130
17	COMP							"	25

Lab Spectr.
Focus.
Spectr.

Exp. Mtr

551

587

1190

873

CCD Spectr. Temp. -100.3°C Dome Temp./Hum. $+0.2^{\circ}\text{C} / 49.0\%$ Transparency Conditions *clear now* 148
 Focus *6.90*
 Spectr. Temp. Dome Temp./Hum.
 BOTH FANS ON TO START
 410 0 50 1024 4 1 ccd/fmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.T.	Program	Remarks	Quality
				CAOS CCD	1500 Å/mm G=5140	306 μ m	6400 λ	3/4	FOCUS TEST		
								1			
								5			
551	\checkmark 11.3		M2					6	{V ₄₅ } 44	SB16 GUIDED RIGHT ON HOT PIXEL	380 above Wg
								7			
								1			
								8			
587	\checkmark 11.1		M0					9	{V ₄₅ } 309		380 above Wg
								10		S DOME FAN TURNED OFF	
								1			
								11			
1190	\checkmark 8.48		M1					12	{V ₄₅ } <i>Mary Stel used 6.7m 308</i>		1.0K
								13			
								14			
893	\checkmark 10.99		M0					15	{V ₄₅ } 759		700 above Wg
								16			

149
P4 #2

Emulsion Batches:

Date 1995. Mar. 26/27... Observers E.V.S. S.M. Km. as backup

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC32018	BIASx4			4 19					—
19	COMP							FeNe clear	25
20	BD+47 2415	16 55 06	+47 30 55	4 32 33		0 20 E			360
21	BD+47 2415B BD+47			4 41 59		0 03 W			1150
22	COMP							"	25
CG40878-81	HD153399 x4	16 54 18	+43 50						.067
82/83	" x2				5 13	0 15 W	Alt 87°	atmass 1.0012	.133
CC32023	BIASx4			5 14					—
24-32	FLATx9					0 28 W	+44°	Tung 1/4 Ap	5
33/34	INBOARD/ OUTBOARD					0 32 W	"	FeNe clear	20/30

CCD
 Spectr. Temp. -100.4°C Dome Temp./Hum. $-1.5^{\circ}\text{C}/59.0\%$ Transparency Conditions *clear* 150
 Focus 6.92
 Spectr. Temp. Dome Temp./Hum. $-1.8^{\circ}\text{C}/60.0\%$ @ seeing test ONLY N DOME FAN ON
 410 0 50 1024 4 1 CCD font

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 lines 6-5140	306 μ	5303Å	1			
								17			
642		~8	?					18	{U ₄₅ } 887	887B held off of slit	530 above why
911	not good enough	11.2	K8					19	{U ₄₅ } 887B	887A held as far off of slit as possible - still drained out by 887A.	
								20			
	4.5	7.56	GS IV	CCD GUIDE CAMERA		above 306 μ		-	SEEING TEST	Done w, light variable directia wind, clear, morning light in E	
				CASS CCD				1		sky too bright for {U ₄₅ }	
								2			74.7K → 73.7K
								3/4	FOCUS TEST		
All backed up to WORM & Porseus.											

151

Pg#1

Mon/Tues

Emulsion Batches:

Date 1995 MAR 27/28 Observers [Signature] Surt./Tan... EV. G.S., [HLW]
CS5 386 Time Reset to 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.
cc 320 ^{35/26}	Inboard/outboard					00 05W	+40 45	FelNe clear	20/30 60/75
37	BIASx4			22 04					-
38	COMP							FelNe clear	25
39	BD-02 3000	9 48 10	-3 13 04	22 08 59		0 43 W			1450
40	Comp							FelNe clear	25
41	BIASx4								
42	Comp							FelNe clear	25
43	BD+01 2447	10 23 49	+01 21 36	22 42 12		0 43W			1585
44	Comp							FelNe clear	25
45	Bias x4			23 12					
46	Comp							FelNe clear	25
47	Ceres (Hopefully)	08 53 05	2000 equinox +31 07 00	23 17 37		2 50 W			1345
48	Comp							FelNe clear	25
CG40 ⁸⁸⁴ 881	HD 103095	11 47 13	+38 26 10					4v	67ms
CG40 ⁸⁸⁴ 889	n	n	n			00 01 W		2x	133ms

CCO Spectr. Temp. -99.5°C Dome Temp./Hum. $+30^{\circ}\text{C}$ 50% RH Transparency Conditions *partly cloudy* 152

Focus ~~6.87~~ 6.87

Spectr. Temp. Dome Temp./Hum. $+0.7^{\circ}\text{C}$ / 59.3% @ focus test
 DOME FANS OFF
 410 0 50 1024 4 1 cell per

Exp. Mtr	Seeing	Mag.	Sp	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
650 650 no filter	T=	100x		CASS CCD	1800 Gr 5140	30um	5300	5/4	Focus test	right in focus now.	
								1/2			
								5			
442		10.5x	M0					6	HLW	cloud increasing Vys 560 S/N ~ 40:1	150 above Wg
								7			
								1			
								8			8.6K
620		9.65	M2					9	MARG slud	some cloud	
								10			10.6K
								1/2			
								11			
520		27	G2K	From monitor calc 1995.24 x 08 52 51 5+31 0 8 30			68-00 0003 46-00 0230	12	for sid vel	complex field. Drawn cloud again	
								13			
		6.45	G8Vp			Above 306um Slit			Seeing test	Dome WSW Light NE breeze	

153

pg #2

Mon/Tues

Emulsion Batches:

Date 1995 MAR 27/28

Observers [H.W.]... Jn. / Smt. ... E.V. 3

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC32049	Comp							Felke Clear	25
50	HD 103095	11 47 13	+38 26 10	23 53 48		00 26 W			1338
51	Comp							Felke Clear	25
52	BIAS x 4			0 19					
53	Comp							"	25
54	AC+70 4336	9 33 58	+70 29 25	00 55 05		3 57 W			2400
55	COMP							"	25
56	BIAS x 4			1 39					-
57	COMP							"	25
58	AC+76 3952	9 36 30	+76 30 57	1 47 33		4 46 W			2437
59	Comp							Felke Clear	25
60	BIAS x 4			2 32					-
61	COMP							"	25
62	AC+61 23399	13 42 12	+61 28 51	2 47 38		1 59 W			3203
63	Comp							Felke Clear	25

^{CLD}
 Spectr. Temp. -100.3 °C. Dome Temp./Hum. +100.4°C. +56.7% Transparency Conditions, H. 4.16. cloudy..... 154

Focus ... 6.87

Spectr. Temp. Dome Temp./Hum.

MAX
ADU

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
06560 Fuller				CASS CCD	190° unknown G=5148	306	5303A	140			11K
3700	3"	G45	G8Vp					15	std vel IAU		
								16			
								1/2			
								16			
630	3"	✓ 10.58	M2					17	{V ₄₅ } 550A	Telescope East side	370 200 169
								18			
								1			
								19			
520	3"	✓ 10.64	M2					20	{U ₄₅ } 120	3/4 ~ 60:1 Telescope still East side	
								21			12K
								1			
								22			
644		✓ 11.0	M0					23	{U ₄₅ } 699	3/4 ~ 60:1	
								24			

155
199 #3

Emulsion Batches:

Date 1995 Mar 27/28... Observers E.V. S3... In/Smt.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC32064	BIASx4			3 14					
65	COMP							Fene clear	25
66	HD119850	13 40 36	+15 27	3 50 44		2 27 W			1100
67	COMP							"	25
68	COMP							"	"
69	BD+35 2436	13 14 56	+35 38 42	4 22 38		3 51W			2635
70	Comp							Fene clear	255
71/ 79	FLATS x 9					0 22E	+34°	TUNG Ap/2	5s
80	BIAS(4)					"	"		
81/ 82	Inboard/outboard					"	"	Fene clear	20/30

Spectr. Temp. -100°C Dome Temp./Hum. $10.4^{\circ}\text{C}/54.5\%$ Transparency Conditions *partly cloudy* 156.

Focus 6.87

Spectr. Temp. -101.8°C Dome Temp./Hum. $0.00^{\circ}\text{C}/53.7\%$

10X
ADU

Exp. Mtr	Seeing	PG Mag	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
NO FILTER				CAS CCD	1800 lines G5440	300 μm	5303A	1			
								25			
1367		\checkmark 8.48	M1					26	{V45} Macro 5th Vol 308	3/W ~ 90:1	532 2000 Wg
								27			
								27			
1220	4.5	\checkmark 9.5	M2					28	{V45} 46A		
								29			
								30			1A
								1/2			
								3/4			
All backed up to WORM & Perseus.											

Ccd Spectr. Temp. -101.0°C

Dome Temp./Hum. $+7.3^{\circ}\text{C} / 38.7\%$

Transparency Conditions *clear* 158.

Focus *6.84*

90 cyaia
@ focus test

Spectr. Temp.

Dome Temp./Hum.

FANS ON
410 0 50 1024 4 1 ccdFnt

Exp. Mtr.	Seeing	Pl _g Mag	Sp	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
09560 FILTER				CASS CCD	1800 R/In 6-5930	300 μ	6400i	3/4	FOCUS TEST		
								1/2			
								5			
1520			inflated G2V					6	Std. Vel Minor Planet.		4.9K
								7			
								8	(slit shift to power @ Red to Tel)	telescope on E side of the piers now.	
1505	<3"	27	G0V					9	Std Vel - Minor Planet (Field drawn)	Test with telescope East side	
								10			
								11			
432	25"	10.9 -11-66	F5 -F9					12	Rm	tel E side SB16 auto-guided S/N > 60:1	1.1K
								13			
								14			
4200	3"	6.5 -8.0	F7 Iab -K1 Iab					15	Rm T Man	S/N ~ 340:1	
								16			

C=0
 Spectr. Temp. -101.3°C Dome Temp./Hum. $+5.2^{\circ}\text{C}/40.4\%$ Transparency Conditions *clear* 160
 Focus *6.84*
 Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	<input checked="" type="checkbox"/> Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emission	F.H.	Program	Remarks	Quality
507560 FILTER				CASS CCD	1800 λ max 6-5930	306 μ	6400 λ	17		Telescope on E side of piers	
1948	3.5"	7.30 -8.07	F6 Ib G2 Ib					18	Rm RX Cam	S/N $> 220:1$	4.5K
								19			
								$\sqrt{2}$			
								20			
2400		8 2.9 -7.8	F6 -G1					21	Rm AW Per	S/N $\sim 240:1$	5.5K
								22			
								23			
2330	4"	7.29	dG2					24	1AU Std Velocity	S/N $\sim 250:1$ RV = 112.4 ± 0.2 km/s	4.8K
								25			
								1			
		439						26			
5K		439	K2 IIIb	(K2 IIIb) type Fe ~ 0.5 ? type n. #95 Aluminac				27	1AU Std Vel Candidate		6.7K
								28			
								29			

161
Pg #3

Date 1995. Mar. 28/29 Observers [Rm] Tn/Smt

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.
CC32115	CERES ?	CALC. 2000.0 8 53 22 +31 00		22 50 18		2 28 W			14/8
16	COMP							FeAr clear	60
17	star to SW of ? CERES ?	actual 1995.24 8 52 38 +31 01 21		23 17 53		2 39 W			415
18	COMP								
19	BIAS(4)			23 31					
GG40890-93	HD103095 x4	11 47 13	+38 26 10						.067
94/95	" x2				23 48	0 02 W	84° 42'	ATM MASS LOSS	.133
CC32120	COMP							FeAr clear	60
21	HD103095	11 47 13	+38 26 10	23 53 02		00 15 W			468
22	COMP							FeAr clear	60
23 31	FLATS x9					20020W	+38°	TUNG Ap/14	8'50"
CC32132	Comp							FeAr clear	60 sec
33	HD87901	10 03 03	+2 27 22	00 26 36		2 26 W			164
34	Comp							FeAr clear	60
35	BIAS(4)			00 30					

CE0
Spectr. Temp. ... -100°C ... Dome Temp./Hum. 74.8°C/40.2% Transparency Conditions ... C/EXX 162.

Focus ... 6.84

Spectr. Temp. ... Dome Temp./Hum. 74.1°C/41.1% after seeing test N DOME FAN ON ONLY
410 0 50 1024 4 1 cell fan

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
06560 2800	3-4"	~7	reflected G2II	CASS CCD	1900 21ma	304µ	6400Å	30	Std. vel. Minor planet	small drawing Telescope still best side	
								31		most likely it - brightest in field as it was last night	
								32	check.	star to SW of Ceres not likely, but very close in sp. type	
								33	*CC224	most likely Ceres or cf. for comparison to Vesta spectrum	
								1			
	2.5"	6.45	98Ip	EPV CCD GUIDE CAMERA		above 304µ		-	SEEING TEST	Dome E, light NW wind (9km/h), clear still!!!, dry, ice - this clear for days.	
	"	"	"					-			
				CASS CCD				5			
4350	2"	6.45	98Ip					6	IAU Std Velocity	RV = -89.1 ± 0.3	
								7			
								80			MAX 14K
								11			207K
	1.36		B7V					12	Telluric Std		12K
								13			
								1/2			

~1K

Faintest than T44
LT ~G2

Cosmic Ray on Col 22, Row 600, made spectrum appear
unlike previous Vesta Spectrum

COO Spectr. Temp. -100°C Dome Temp./Hum. 41.2°C $40\% \text{ H}$ Transparency Conditions ... FIRE 16.7

Focus ... 6.87

Spectr. Temp. Dome Temp./Hum. c Lambda

Exp Mtr	Seeing	✓ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
CG 560 Filter				CAS CCD	1800nm	30 μ	6400A	14			
1080	2"	2.75	G2V					15	std vel	? 7 (diamond) SW of pair	
								16		Note: Previous exposure probably a star To SW of Baeyer's cross	
								17		Tel westside now	2.85K
5200	5"	6.19	F67-7b					18	V473Lyr Rm pgr	(350/1 S/N) 2.45 AIR mass	
								19			
								1/2			
								20			
2600	3.4"	7.73	G8III					21	std vel		
								22			
								23			
8950	4.5"	5.8 -5.9	F2					24	Rm pgr	refraction	
								25			
								26			
1856	5.6"	8.40	G0Ib					27	Rm 2 Lac	refraction S/N ~ 225:1	7.0K
								28			

165
pg #5

Emulsion Batches:

Date 1995 Mar 28/29 Observers [Rm] Tn/Sat.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC32152	BIAS(4)			3 12					—
53	COMP							FeAr clear	60
54	HD215159	22 38 15	+53 23 08	3 18 47		7 11 E			280
55	COMP							"	60
56	COMP							"	"
57	HD331970	20 0827	+32 3416	03 3307		3 49 E			2545
58	Comp							"	60
59	BIAS(4)			4 19					—
60	COMP							"	60
61	HD180583	19 11 59	+27 44 59	4 23 51		2 37 E			470
62	COMP							"	60
63	Comp							"	60
64	HD173297	18 3920	-20 4500	4 40 06		1 30 E			1630
65	Comp							FeAr Clear	60
66	BIAS(4)			5 10					
67/68	INBOARD / OUT BOARD			5 16		0 0	2 38 ⁰	FeAr Clear	60/50

Spectr. Temp. -100°C Dome Temp./Hum. $13.4^{\circ}\text{C} / 91.6\%$ Transparency Conditions ... *clear, some doublines* 167Focus 6.84

Spectr. Temp.

Dome Temp./Hum. $13.3^{\circ}\text{C} / 46.8\%$

Exp. Mtr.	Secing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Resolution	P.H.	Program	Remarks	Quality
05560 FILTER				CASS CCD	1800 R/n 6=5930	30 μm	6400 \AA	1			
								29			
2750	4 ^u -5 ^v	6.19	K2					30	Rm	$\frac{2}{3}$ Lac. velocity comparison	9.4K
								31			
								11			
1089		9.1 ^v 9.8	F8 -G2I ₀					12	Rm ppm	MW Cyg $\frac{2}{3}$ SN ~ 150:1 SB169 grid	
								13			
								1			
								14		COOT - 101.3 $^{\circ}\text{C}$	
4260	3 ^v	6.19	F6I-II ₀					15	Rm	V473lyr	
								16			
								17			
3390	6 ^v	7.18	G0I ₀					18	Rm ppm	V350 Sqr	
								19			
								1/2			
								3/4		focus Test	

All backed up to WORM & Resens

167
pg#1~~Thurs~~ Fri/SATDate 1995 MAR 31 / APR 1 Observers [Bm.] ~~Sat. / Jan~~.....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.
CC321 ^{69/70}	Inboard / outboard					00 07E	+28	Feltr Clear	60/60
71	BIAS(4)			19 20 45					
72	Comp							Feltr Clear	60s
73	HD62509	07 39 12	+28 16 04	19 24		200 03E			21
74	Comp							Feltr Clear	60s
75	Comp							"	"
76	Vesta	06 10 50	+24 54 00	19 44 07		02 13 W			1285
77	Comp							Feltr Clear	60s
78	Star to East of Vesta exposure			20 09 49		02 30 W			769
79	Comp							Feltr Clear	60s
80	BIAS(4)			20 26					
81	Comp							Feltr Clear	60s
82	Vesta	06 10 50	+24 54 00	20 41 57		03 14 W			1457
83	Comp							Feltr Clear	60 s
84	FLATS x 9					03 23 W	+250	TUNG AP1/A	8s
913	BIAS(4)			21 26					

52000 Astrometric fix date

n
[Actually
SAO 7869]

CCD Spectr. Temp. - 100.2 °C

Dome Temp./Hum. + 1.5°C ~~AD 76~~

Transparency Conditions *Clearing, partially* 168

Focus... 6:8.7

90C gain

Spectr. Temp.

Dome Temp./Hum.

c samples 410 0 50 1024 * 4

Exp Mtr	Seeing	Mag	Sp.	Inst	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
06 560 Filter				CASS CCD	1800nm G=5430	300u	6400A	3/4	focus test		
								1/2			
								5			
27K		1.14	KO III 6					6	STD Vel (J44)	+ Telescope encodes NORMALIZATION A bit low in DEC for this.	max 13K
								7			
								8			
1530	3.4"	27	G2V					9	std vel (minus planet)	2455 AU distance Field drawing	200/1
								10		Brighter and west of pair, sep 2.4".	max 2.6K
365	3"	28	<u>B/A type!</u>					11	By encoders, its	Looks like (Yes, Jan checked float its a B3 [Its a close dbl. N/S sep 6" 16 sec time East of J44])	2.6K
								12			
								1/2			
								13			2.6K
14 50	3.4"	27	G2V					14	std vel (minus planet)	Telescope Eastside	
								15c			
								16			
								1/2		(#ats at this configuration too)	15K

169
1992 ~~Thurs~~ / Fri / SAT

Emulsion Batches:

Date 1995. MAR. 31 / Apr. 1. Observers [R.M.] T.L.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC 32194	Comp							F4r Clear	60s
95	VY Per	02 2019	+58 2804	21 2852		7 57 W			2222
96	Comp							F4r Clear	60s
97	Comp							"	"
98	HD 44990	06 1949	+07 0825	22 1954		4 27 W			
99	Comp							F4r Clear	60s
CC 32200	BIAS (4)			22 37					
01	Comp							F4r Clear	60s
02	HD 25361	03 5642	+58 2300	22 4719		7 27 W			1534
03	Comp							F4r Clear	60s
04	Comp							"	"
05	Vesta again	06 1056	+24 5400	23 2627		5 55 W			1597
06	Comp							F4r Clear	60s
07	BIAS (4)			23 50					
CG 40 ⁸⁹⁶ 1899	HD 103095	11 4713	+38 2650			00 26 W		4x	67ms
CG 40 90901	"							2x	133ms

s 9000 Astronometric

CCD Spectr. Temp. -100.3°C Dome Temp./Hum. -01.0°C 96.3% H Transparency Conditions. Fine 170

Focus 6.87

medium NW wind

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	V Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
06580 F16a				CASS CCD	1800w/len G=5930	306	6400A	17			
2400	4"	10.9 -11.6	F5 -F9					18	Run pgn	SBIG guidel, but found about "Relay" change for Tel East for a while. is some bad guiding.	
								19			
								19			26K
3650	7"	B= 6.5 -80	F7Iab -KIab					20	Run pgn	T mon	
								21			
								1/2			
								22			26K
2800	6"	V 7.30 -807	F6Jb -G2I6					23a	Run pgn	RX Cam	
								24			
								24			
750	5"	8	G2V					25	std vel	For extreme Hz effects much closer to rld star now. Identify known known for sure.	S/N 150/1 277K
								26			
								1/2			
				645 G&V	High coming in Today	Have 306a slit			Seeing Tests	medium NW wind Dome SE, Telescope East side	

171
P#3 Fri/Sat

Emulsion Batches:

Date 1995 MAR 31 / Apr. 1. Observers [Ry.] T. G.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC 32208	Comp							FeAr Clear	60s
09	HD 103095	11 4713	+38 2610	00 059		00 42 W			65
10	Comp							FeAr Clear	60s
11	Comp							"	"
12	Ceres	08 5400	+30 48	00 2745		4 19 W			1557
13	Comp							FeAr Clear	60s
14	BIAS(4)			00 57					
15	Comp							FeAr Clear	60s
16	HD 214975	22 36 54	+56 19 00	01 49 06		7 52 E			2413
17	Comp							FeAr Clear	60s
18	BIAS(4)			02 32					
19	Comp							"	"
20	HD 215159	22 3815	+53 2308	02 3634		7 39 E			480
21	Comp							"	"
22	Comp							"	"
23	HD 180583	19 11 89	04 4459	02 54 55		3 52 E			593

Spectr.

Focus

Spectr.

Exp. Mtr.

2900

1480

1500

3850

3050

Spectr. Temp. Dome Temp./Hum. -20°C 52/184 Transparency Conditions *Fine* 172
 Focus 6.87
 Spectr. Temp. Dome Temp./Hum.

Exp. Mtr	Seeing	Mag	Sp.	Inst.	Grating/ Filt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CHSS CD	18004/m G-55430	306	64098	27			
2900	4"	6.45	G8I _p					28	Std Vel		
								29			
								30			S/N
1400	5"	5.75	G2V					31	Std Vel (Asteroid)	Fold drawn	170/1
								32			
								1/2			
								5	Telescope west side now		S/N
1600	4.6"	8.40	G0I _B					6	Rm p _{ym}	Z Lac	200/1
								7			28K
								1/2			
								8			
3050	5"	6.19	K2					9	Rm Vel std for Z Lac		
								10			
								13			
3050	6"	6.19	F6I-II _B					14	Rm p _{ym}	V 473 Lyr	

173
1944

Fri / SAT

Date ... 1995 MAR 31 / Apr 1 Observers [Rm] ... T.O.

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 3222A	Comp							Fed Clear	60
25	Comp							"	"
26	HD 331970	20 0827	+32 3416	03 1147		4 00 E			244A
27	Comp							Fed Clear	60
28	BIAS(4)			03 56					
29	Comp							Fed Clear	60
30	HD 173232	18 2830	+25 25	04 0153		1 55 E			945
31	Comp							Fed Clear	60
32	Comp							"	"
33	HD 173297	18 3920	-20 45 00	04 3059		01 26 E			1700
34	Comp			05 00				Fed Clear	60
35	Comp			5 00				"	"
36	HD 203156	21 1523	+37 4855	05 1148		03 40 E			480
37	Comp							Fed Clear	60
38	BIAS(4)								
39/40	In board / OUT BOARD			HARTMAN		3 34 E	+38°	Fed Clear	60/60

CO₂
Spectr. Temp. -100.4°C

Dome Temp./Hum. -30°C 5758H

Transparency Conditions... Slightly hazy... only 174

Focus 6.87

Specfr. Temp. -100.3°C

Dome Temp./Hum. -3.7°C 598H

Exp Mtr	Seeing	F _v Mag	Sp	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0650 p. 14p				CAS500	1800m G 7430	306	6900f	15			
								17			
1058	4"	9.1 -9.8	F8 -G2Ib					18	Rm pgm	MW Cyg for Ben Sugars.	S/N 7/10/1
								19			
								1/2			
								23			26K
2050	5"	7.73	G8III					23	Std vel IAY		
								24			
								24			
1700	6"	7.48	G0Ib					25	Rm pgm	V350sgr	
								26			
								27			
3800	4"	5.8 -5.9	F2					28	Rm pgm		
								29			
								1/2			
								3/4	Focus		

-3.7°C 6.87 set

175

pg#1 SAT/SUN

Emulsion Batches:

Date . 1995 Apr. 1./2.

Observers

[Rm]

Tn

Blk. phone in

CSS 386 Time Reset to WWV from .en.coder.pg.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.
CC 322 ^{A1/42}	Inboard /outboard HURTAN					00 19W	+34°	F4A clear	60/60
43	BIAS(4)			19 40 40					
44	Comp			48				F4A clear	60s
45	HD65583	7 54 18	+29 31 00	19 43 39		00 14 W			509
46	Comp							F4A clear	60s
47	Comp							"	"
48	HD44990	6 19 49	+7 08 25	20 02 21		02 13 W			606
49	Comp							F4A clear	60s
50	Comp							"	"
51	HD30282	4 41 05	+36 32 36	20 22 37		04 15 W			164
52	Comp							F4A clear	60s
53	BIAS(4)			20 44 58					
54	Comp							F4A clear	60s
55	HD62509	7 39 12	+28 16 04	20 52 07		01 31 W			70
56	Comp							F4A clear	60s

CCD
Spectr. Temp. -100.3 °C

Dome Temp./Hum. +20.2 °C 38.8% RH

Transparency Conditions Part Cloudy 176

Focus 6.87

Dome Temp./Hum. +30.5 °C 38.7% RH 90 C gain

(Wind ESE 11 knts/hr @ 20 EST)
(Pasco Airport)

Spectr. Temp.

Dome Temp./Hum.

410 0 50 1024 41 CCD/FW

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0650 1. HCR				CSS CCD	1000nm G=5930	30um	6400A	3/4	focus	Telescope west side	
								1/2		All tonight	
								5			
2400	<2"	7.00	dG7					6	std vel	Also encoder normalization	max 5.2K
								7		on 19955 coord's	2.7K
								8			
2780	1-2"	6.5 -8.0 4	F7 Job - K1 Job					9	Rm pjm	T Mon highest priority	
								10		Increasing cloud	
								11	Rm pjm	cloudy at end	
2500	2"	7.9 -8.8	F6 -G1					12	Rm pjm	AW Per	
								13			2100/1 SA
								1/2			2.6K
								14			
22K	2"	1.14	K0115					15	std vel	Bright IAU (Thick cloud)	max 11K
								16			

177

Pg#2 Sat/Sun

Emulsion Batches:

Date 1995 Apr 1/2 Observers [Rm] Tn

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.				
CC322 ⁵⁷ / 65	FLATS x9									20140	+28 ⁰⁰	TUNG Ap 1/4	85
[Rm] Tn	Next night, probably very short again 1995 Apr 2/3 Done T=+3.0 ⁰										H-48 ⁸		
CC322 ⁶⁶ / 64	In board / out board											FeAr Clear	60/60
68	BIAS(4)						19 14						
69	Comp											FeAr Clear	60s
70	HD65583	7 54 18	+29 31 00	19 21 44						00 05 E			460
71	Comp											FeAr Clear	60s
CGA08 ⁰² / 07	HD65583	"	"							00 02 W		4x	1067s
CGA08 ⁰⁶ / 07	"	"	"									2x	133s
CC322 72	Comp											FeAr Clear	60s
73	HD44990	06 19 49	+7 08 25	19 41 53						01 50 W			453
74	Comp											FeAr Clear	60s
CC32275	HD44990	"	"	19 54 55						02 10 W			870
76	Comp											FeAr Clear	60s
77	BIAS(4)						20 12						

Spectr. Temp. Dome Temp./Hum. $+00.8^{\circ}\text{C}$ 42% H Transparency Conditions .. Complete Cloud .. 179

Focus 6.87

Closed @ 21:10

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0650 F. Her				CASSCO	1800nm G=5930	306	6900A	17c:			145
Focus 6.87 again -				CCOT \rightarrow	-100°C 1800nm G=5930	306	6900A			Telescope still west side setting UV touched since PMK 31/Apr 1	
								3/4	focus Test		
								1/2			
								5			max
2400	1.2"	7	d67					6	std vel	clear, but a bit cloudy to start.	6K
								7			26K
	1.2"	7	d67		ABae 306 slit				Seeing test		
								8c		some cloud	
2050	1.2"	$\frac{8}{6.5}$ -8.0	F7Tab -K2Tab					9	Rim page	T Mon	
								9c	Rim page	written OK	
1050								9c	Rim page -	Hole in cloud, but was the cloudy	
								11c			
								1/2			

Spectr. Temp. Dome Temp./Hum. $+1.7^{\circ}\text{C}$ 49.124 Transparency Conditions *PART. Cloudy* 120
 Focus 6.87
 Spectr. Temp. $-1.01.0^{\circ}\text{C}$ Dome Temp./Hum.

Exp. Mtr.	Seeing	FV Mag	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0650 F.148				CHSSCP	1800nm G-5930	306a	G4508	12a			
2000		8	G2V					13c	std vel	minor planet	
								14			
								1/2			
								15		after sp contr failure	124x
3000	3.4"	7.9 -88	F6 -G1					16	Houppin	AWPer	63K
								17			
								18			
2730	1.2"	7.9	G2V					19	std vel	minor planet	
								20		Eld drawn that checks well with previous nights locations.	
								1/2			
								21			27K
1100	2.3"	8	G2V					22	std vel	minor planet	
								23			
								24			

Spectr. Temp. Dome Temp./Hum. +1.0°C 60% H Transparency Conditions ... Slightly hazy only. 182

Focus ... 6.87 - 6.96 for 5303A

A. PORT
Poisson
Wind SSE 6 knts/hr @ 00 00Z

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	F _v Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
OG 560 Filter 3000	1.2"	645	G8Vp	CASS CCD	1800A/W G=51.30	306μ	64008	25c	Std Vel	IA4	
								26			MAX
								27			15K
								7/2			
										Seeing test 2nd of night Dome SW Only NE Fan on now.	
NO Filter now For Eyr meter				CASS CCD	1800A/W G=51.40	306μ	5303A	3/4			
								1/2			MAX
								5			11K
2000	1"	645	G8Vp					6	Std Vel		4.2K
								7			
								7			
650	1"	10.5F	MO					8	H/w pgn	<u>Fluxes § 560</u>	S/N ≈ 40/1

183

P9#4 Sun / moon

Emulsion Batches:

Date 1995 Apr 2/3..... Observers [V.g.s.] J.L.....

Plate No.	Object	R. A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC32315	BD+01 2447	10 2349	+01 2136	00 2239		2 48 W			1677
16	Comp							Felto Clear	25
17	BIAS x 4			00 52					
18	Comp							Felto Clear	25
19	Ceres	08 5431	+30 4020	00 5735		4 42 W			701
20	Comp							Felto Clear	25
21	Comp							"	25
22	BD+35 2439	13 1620	+34 4828	01 1619		01 00 W			7229
23	Comp							Felto Clear	25
24	BIAS x 4			01 58					
25	Comp							"	25
26	BD+31 2500	13 2723	+31 3859	02 0349		01 24 W			1501
27	Comp							Felto Clear	25
28	"							"	"
29	AC+14 1105-9	13 5729	+14 1007	02 4529		01 50 W			

J 1000 Astrometric

CCD Spectr. Temp. -98.9°C Dome Temp./Hum. $+00.1^{\circ}\text{C}$ 62% Transparency Conditions *Slight Hazy* 184

Focus 5.90 Spectr. Temp. Dome Temp./Hum. -00.1°C 79% *Cygn*
c. Leonida *increasing cloud/fog*

Exp Mtr	Seeing	Mag	Sp	Inst	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1100	1"	9.65	M2	CASS CCD	1800/na	306c	5303A	9	Std Vel	Murcy	
								7			
								1			
								7			
1520	2"	7.5	G2E					10	Std Vel	Minor planet	
								7			
								7			
1000	* 1"	10.6	M0					11	V ₉₅ ppm	CCOT = -100.4°C	S/N 7.5/1
								7*	Grf SBIG	Histogram says { Sec. 5 .5 } x y	
								1/2		Is that seeing?	
								7			
700	1"	10.45	M0					12	V ₉₅	69/AB	
								7			
								7			10.7K
700	1.2"	10.7	M0					13	V ₉₅	150	7.50/1 S/N

Spectr. Temp. Dome Temp./Hum. -00.3°C 88%# Transparency Conditions .. Part. cloudy 186..

Focus 6.90

^{sed} Spectr. Temp. -100.3°C .. Dome Temp./Hum. 00°C 88%#

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				C15500	1800/4/m G-5940	30 μ	5303A	7		75/11 slit	
								1			
								7			
250	1"	8-18	M1					15	stavei, mag	* spectrum not in type to check to field.	
								7			
								17			1A/C
	-00.2°C		6.90 set					3/4	focus		
									All to persons & worm		

187

p981

Mon/Tues

Emulsion Batches:

JBL Class Tour - Lookalike NGC 2392

Date 1995 Apr. 3/4

Observers

Vys

Tn

Clown face or Eskimo PLneb

H α @ 500nm. Spectra. Lookalike interesting

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC323	^{46/} ₄₇ Inboard 1st board					= 3 W	+25°	FeNe Clear	20/30
48	BIAS x 4							FeNe Clear	25s
49	Comp								
50	Vesta	06 14 30	+24 57 00	20 43 15		03 11 W			619
51	Comp							FeNe Clear	25s
52	Comp								7
53	Vys 488	07 04 19	+52 26 28	21 12 13			W		
54	Comp							FeNe Clear	25s
55	BIAS x 4								
56	Comp							FeNe Clear	25s
57	AC 147 2368-79	09 04 48	+47 01 33	22 07 13		02 00 W			1987
58	Comp							FeNe Clear	25s
59	BIAS x 4								
60	Comp							FeNe Clear	25s
61	KUI 39	11 31.9	+48 01	22 55 36		00 11 W			1318
71	Comp							FeNe Clear	25s

2000 Astronutric

1900 hepatally

CLO
Spectr. Temp. ... -100.0°C

Dome Temp./Hum. 7.3°C 77.524

Transparency Conditions ... Clearing nicely ... 188 ...

Focus ... 6.87

Dome drying out quickly too.

Spectr. Temp.

Dome Temp./Hum. +5.0°C 88.801
C. Lankala

Some increasing cloud by 22 EST

Exp. Mtr	Seeing	Mag	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CHSSCO	1800 l/m G=5140	30um	5305A	3/4	focus test		
								1/2			
								5			
1400	3"	2.8	G2V					6	stl vel	minor planet	
								7			
								8			
2500	1"	11.3	M0					9	Vys pgn	NE of 115' spiral	SN 50/1
								10	SB	Grf says it has X's	
								11			max 10.5 k
520	<1"	10.9	M0					12	Vys pgn		
								13			
								1/2			
								14		(Posn Angle if there, looks ~ 90°, along slit)	
570	<1" ± 11	M						15	KK close	dbl pgn	(used SBIG totally for guiding)

Star. pair? just perhaps looks dbl.
 Uncertain about Finder Field
 used COORDINATE Epoch 2 program

189

Pg #2

Mon/Tues

Date 1995 Apr 3/4 Observers {Vys} Tm

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.
CC32362	Comp							FelNo Clear	25s
GC406 ¹⁴ / ₁₇	HD103095	11 4713	+382610					4x	67ms
GC408 ¹⁸ / ₁₉	"					00 19W		2x	133ms
CC32363	Comp	Then CC32364	BIAS x 4	done @ 22 48				FelNo Clear	25s
CC32365	HD103095	11 4713	+382610	23 44 48		00 33W			618
66	Comp							FelNo Clear	25s
67	BIAS x 4			23 57					
68	Comp							FelNo Clear	25s
69	HD123782	14 04 33	+495550	00 02 59		1 21E			444
70	Comp							FelNo Clear	25s
71 ¹⁷ / ₁₉	FLATS x 9					0 0	+35°	TUNC Ap 1/2	5s
80 ¹⁸ / ₁₉	In board / out board					0 0	+35°	FelNo Clear	20/30

Spectr. Temp. Dome Temp./Hum. $+5.0^{\circ}\text{C}$ 87% H Transparency Conditions increasing cloud 190
 Focus 687
 Spectr. Temp. -100.4°C Dome Temp./Hum. $+4.5^{\circ}\text{C}$ 90% H

Exp. Mir	Seeing	F ₀ Mag	Sp	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
No filter				CASS CCD	1800 μ /mm G-SFD	30 μ	5305A	16 _g			MAX
	1.2"	6.45	687 _p							Seeing Test Pure west medium west wind	
						ABOVE 30 μ SLIT					
								16			OK
1100	1.5"	6.45	687 _p					17	Std Vel IAY		OK
								18			OK
								1/2			
								19			
1400	2"	5.25	5.25 m 2 III.6					20	Std Vel (IAY) Cloudy		
								21			
								22			MAX 135% K
								3/4	Focus test		
									All to PERSEUS & WORM		

191

Date 1995 ~~Mar~~ Apr 4/5 Observers Hdy./Smt

Emulsion Batches:

n.o. Hantmann. mask available.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CG32382	BIAS(4)			23 07					—
83	COMP							FoAn clear	60
84	ADS9537C	15 09 54	+62 13	23 17 07		2 20 E			3600
85	COMP							"	66
86	FLAT							Tung K4p	8
87	BIAS(4)			0 27					—
CG40820-73	HD 113811 x4	13 01 12	+40 08						.067
24/25	" x2				0 46	0 15 W	85° Alt	1.0039 armass	.133

CCD
Spectr. Temp. -101.9°C
Focus 6.92
Spectr. Temp.

Dome Temp./Hum. $-7.6^{\circ}\text{C}/57.7\%$
Dome Temp./Hum. $-F.1/57.7\%$ @ seeing test

Transparency Conditions clear ... was snowing earlier.
windy
ONLY THE N DOME FAN IS ON
410 0 50 1024 4 1 red flat

1992

Exp. Mtr.	Seeing	Frg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
09 560 FILTER				CASS CCD	1000 λ/mm 6-6060	20 μm	6563 Å	1		met spec controller 3x before	
157	" " very faint							3			
								4	Hdy	auto-gated with SBIG guided on bright star to S he over half.	220 above b/g
								5			
								6			
								1			
	5.6"	7.53	K5 III	EV9 CCD 6000 CAMERA		above 30 μm		-	SEEING TEST	Pmc W, strong W wind, clear but snowed 5 hours ago, unseasonably cold during day and right now focus 2807	

All to Persens & WORM

193

Date 1995 ~~Apr~~ 5/6 Observers E. U. S. Smt iks as backup

Emulsion Batches: no. Hartmann mask... available tonight...

Plate No.	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 32388	BIASx4								—
89	COMP							FeNe char	25
90	AC+19 909-69	9 58 37	+19 16 58	21 42 31		0 35 W			1100
91	COMP							"	25
92	BIASx4			22 04					—
93	COMP							"	25
94	HD95735	10 57 54	+36 38	22 11 20		0 04 E			580
95	COMP							"	25
96-98	FLATx3					0 ^h	+36°	Tung 1/2 Ap	5
99	BIASx4			22 27					—

CCO
Spectr.
Focus.
Spectr.Exp. Mir.
No. Filter

255

255

CCD
Spectr. Temp. -100.9°C
Focus 6.94
Spectr. Temp.

Dome Temp./Hum. $-4.5^{\circ}\text{C}/55.2\%$
Dome Temp./Hum.

Transparency Conditions ¹⁹⁹⁴ clear now, alternating cloud..
and clear since sunset

DOME FANS OFF
410 0 50 1024 4 1 cedfint

Exp. Mtr. NO FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 R/low 6=5140	306 μ	5303 \AA	1		SUM of 4 biases	
								3			
235	3"	11.34	M0					4	{U45} 504	clouded in here (get again) very weak	30 above blg
								5			
								1			
								6			
255	3"	7.48	M2					7	{U45} 594	Money Std through cloud VERY WEAK rack w 12200 (normal not 11800 as usual) to get slit centered in camera view.	20 above blg
								8			
								9			14.9K → 14.2K
								1		* Data not very good tonight due to cloud *	
All backed up to WORM & Nisens.											

195

Fri - Smt

Emulsion Batches:

Date 1995 Apr. 7/8 Observers {V45} Tn / Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC32 400 401	INBOARD/ OUTBOARD					0 10 W	+43°	FeNe clear	20/30
02	BIAS x 4			19 47					
03	COMP							FeNe clear	25
04	BD-02 3008	09 48 10	-3 13 04	19 58 09		00 24 E			27/5
05	COMP							FeNe clear	25
06	BIAS x 4			20 46					—
07	COMP							"	25
08	BD+01 2447	10 23 49	+01 21 36	20 53 43		0 06 E			2600
09	COMP							"	25
10	BIAS x 4			21 40					—
11-15	FLAT x 5					0 ^h	+1°	Tung 1/2 dp	5

Spectr. Temp. -100

Dome Temp./Hum. -0.1°C / 72.3%

Transparency Conditions 196

Focus 8.91

Spectr. Temp.

Dome Temp./Hum.

DOME FANS OFF

410 0 50 1024 4 1 redant

Exp. Mtr	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
NO FILTER				CAS CCD	1800 lines 6.5140	50µm	5303 Å	3/4	FOCUS TEST	right in focus	
								1			
								5			
920	10.58		M0					6	Hlw Vys 560		
								7			
								1			
								8			
155	9.65		M2					6	Maxon Vys 53 Std. Vel	redant in wrong cache	
								10		[Correct Header in wrong backing #2 only in mag 95]	
								1		clouded in	
								11			14.4K → 13.5K

197

P9#1

Sun / Mon

Emulsion Batches:

Date 1995 Apr 9/10

Observers E. V. S. T. N. / S. M. T. + [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 32416/17	INBOARD / OUTBOARD					00	+43°	FelNe Clear	20/30
18	BIAS x 4 Comp	Average Sum of 4 bias						FelNe Clear	25
20	HD 36395	05 26 18	-03 41 00	19 54 01		3 29 W		FelNe Clear	25
21	Comp							FelNe Clear	25
22	COMP							"	"
23	BD-02 3000	9 48 10	-3 13 04	20 15 00		0 07 E			222A
24	Comp							FelNe Clear	25
25	BIAS x 4	Sum of 4 bias			20 55				-
26	Comp							FelNe Clear	25
27	BD+01 2447	10 23 49	+01 21 36	21 00 06		00 11 E			1375
28	Comp							FelNe Clear	25
29	Comp							"	"
30	BD 01 302 V45 573	10 11 52 10 06 59	-11 27 17 -02 10 56	21 33 53 21 29 19		00 49 W			2250
31	Comp							FelNe Clear	25
32	BIAS x 4 (Sum of 4)			22 13					

CCO Spectr. Temp. -100°C Dome Temp./Hum. $+2.0^{\circ}\text{C}$ 50%RH Transparency Conditions ... clearing quickly 198

Focus ... 6.91

CCO Spectr. Temp. -100.5°C Dome Temp./Hum. -00.4°C 40%RH ^{90 Cyain} FANS OFF
410 0 50 1024 + 1 CCDPMT

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
T-15 set 691 no filter				CASSCG	1800 m/mm G=5140	30 μ	5303A	3/4	focus test		
								1/2			
1560	5"	7.97	M1					5/6	Murphy Std Vel		51H 100/1
								7			
								8			
900	3.5"	10.54	M0			S/N ~ 65:1		9	Hlw Vys 560	1" W of Moon ($>15^{\circ}$) glancing cosmic ray through spectrum	10.7K SIX 65/1
								10			10.5K
								11			
990	3"	9.65	M2					12	Murphy Std Vel	S/N ~ 75:1	10.6K
								13			
								14			
720	4.5"	11.0	M0					15	Vys pgm		max 10.9K
								16			
								1/2			

Spectr. Temp. Dome Temp./Hum. -00.5°C $41\% \text{H}$ Transparency Conditions ... Fine \rightarrow increasing. ²⁰⁰ cloud
 Focus ... 6.91 \odot seeing test $T = -00.6^{\circ}\text{C}$ $\text{H} = 43\% \text{H}$
 Spectr. Temp. Dome Temp./Hum. *c. variable* FANS OFF

Exp Mtr	Seeing	Mag.	Sp	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASSCOO	18006/4m G-5140	306 μ	S303A	17			max 11.5K
1080	5" 28		G2V					18	Minor planet Std Vel	Field drawn minor planet variety	S/H = 100/1
								19			12K
								20			
190	?	10.2	M0					21	Vys 579	cut short due to clouds. very weak.	20 above 11K
								22			
	3-4"	6.45	G8Vp	EEV CCD Above 306 μ slit				-	Seeing test	Done WSW, red NE was was clear, now YRS cloud & the re-seeing	
				GUIDE CAMERA				-			
				CASS CCD				23			
2660	4"	6.45	G8Vp					24	IAU Std. Vel.		
								25			11.2K
								1			
								21			
1908	~8		G2V					26	Minor planet Std. Vel.	see cloud, only one other in field, they were farther. (cores)	
								27			

CCD
Spectr. Temp. ... -100.9°C

Dome Temp./Hum. ... -1.2°C 76.8% H

Transparency Conditions ... thin cloud but the seeing ²⁰²

Focus ... 6.91

Spectr. Temp.

Dome Temp./Hum. ... -2.8°C 79.5% H

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
max filter				CASSCG	1800/4 G=5140	30 μ	5303A	28			
460	2"	11.5	M					29	Vys 138	or Ross 917 (Some cloud 1st half of exp)	S/H 40/1
				Some time lag, due to Rack problems				30 μ			11.7K
								1/2			max
								5			14K
574		11.5	MO					6	{Vys} 677A		200 above 4g
								7			
								1			
								2			14.9k → B8K
								8			11.0K
1920		8.48	M1					9	{Vys} ^{max 30μ del} 308		
								10			
								1			
								11			
360	6"-8"	12.0	M					12	{Vys} 792(B)	Point and N really close < 1'	S/N 25/1 max 107K
								13			

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Pg 4

Sun / man

Date 1995 Apr 9/10

Observers

E. V. S. J. / Sant

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 32970	BD-10 4471(A)	17 13 39	-11 00 57	04 01 38		0 02 W			1353
71	Comp							Felto Char	25
72	BIAS X 4		Sum at 4						
73	Comp							"	25
74	BD + 27 2853	17 33 15	+27 57 16	4 34 45		0 15 W			1332
75	COMP							"	25
76	Inboard lens board					0 0	+41°	Felto Char	20/30

Spectr. Temp. -100°L Dome Temp./Hum. -2.8°C 52%RHTransparency Conditions *Part cloudy* 204Focus 6.91

Spectr. Temp.

Dome Temp./Hum. -3.2°C 52.0%RH

BRT 5 with eclipsed eps Cyg 4.49 moving SE

410 0 50 1024 4 1 CCD Foot

Exp. Mtr.	Seeing	PV Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter 340	6"	11	<u>m</u>	CASS CCD	1800nm G-5140	306	5303A	14	V45 pgn		SA = 10/1
								16			10.7
								1/2			
								17			
324		Yasuda 11.8	sec. MOp					18	{V45} 795C	observed faint one NE of brightest - both on slit, 795C @ 23 cal +745187 @ 29 cal	
								19			
								340	focus test rack problems		
All backed up to Perseus & WORM											

CCD
Spectr. Temp. -100°C
Focus 6.92
Spectr. Temp.

Dome Temp./Hum. $12.8^{\circ}\text{C}/53.0\%$
@ FOCUS TEST
Dome Temp./Hum.

Transparency Conditions ... clear ... bright moon ...
N DOME FAN ON ONLY
385 0 50 1024 4 1 CCD Faint

Exp Mtr No	Seeing	Pig Mag.	Sp	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
FILTER				CASS CCD	1200lan 6-4520	300 μm	6563 Å @ column 562!	3/4	FOCUS TEST		
								1			
								5			
162	4.5"	10.9	M0					6	Km H α	Vys 480 S/N ~ 75	
								7			
								8		reset spec controller after moving tel.	
98	5"	10.52	M0					9	Km H α	Vys 268 ^{no emission} wrong slit got star to S of bright star.	
								10			
								11			
128	16.52"	M0?						12	Km H α	late type but not really M-15k no emission - red end weired. SW of two somewhat close stars.	
								13			
93	?	?						12	Km H α	NE of the two, no emission.	
								13			
								1			
								14		reset spec controller after moving tel.	

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Pg #2

Date 1995 Apr 14/15 Observers Km/Smt

Emulsion Batches:

OG 560 FILTER IN COMP

GG 385 " " STEWAR

Plate No.	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 32492	HD95735	10 57 54	+36 38	22 17 28		0 35 W			400
93	COMP							Fehr clear	60
94	COMP							"	"
95	BD+35 2436	13 14 56	+35 38 42	22 33 44		1 22 E			600
96	COMP							"	60
97	COMP								60
98	BD+35 2439	13 16 20	+34 48 28	23 09 59		-0 45 E			650
99	comp							"	60
cc 32500	comp BIAS(4)			00 02					-
01	COMP							"	60
02	BD+31 2500	13 27 23	31 38 59	0 14 05		0 09 W			750
03	COMP							"	60
04	BIAS(4)			0 31					-
CG40932-5	HD120245 x4	13 47 21	+37 54 33						.067
36/37	" x2					0 42	0 09 W	84° Alt despite header info →	.133

Spectr. Temp. -100.4 Dome Temp./Hum. $1.4^{\circ}\text{C}/53.7\%$ Transparency Conditions *clear, full moon!* 208Focus 6.92

Spectr. Temp.

Dome Temp./Hum. $+0.5^{\circ}\text{C}/54.6\%$ @ seeing test ONLY N DOME FAN ON
385 0 50 1024 4 1 ccd/air

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1205	5"	7.48	MZ	CASS CCD	1200 λ/mm G=4520	30 μm	H α @ red 562	15	Km H α	Vys 594 (Mars's std vel \times) -84.70 km/sec.	
								16			
								17			
292	5.6"	9.5	MZ					18	Km H α	Vys 46A 46A accidental FeNe taken behind warmed up to -50°C and used after FeNe	
								19			
								20			
137		10.6	M0					21	"	↑ CCD -50°C	
								22		↓	
								23		radiant into 2nd copy of CCD3 that was active. CCD -101.4°C	
								24	"		
195		10.85	M0					25		Vys 691AB	
								1			
	5"	6.85	K0III	DEV CCD GOING CAMERA		Above 30 μm		-	SEEING TEST	Dome SW, med W wind, 1 st clear day after 3 days solid cloud.	

209
pg #3

Date 1995 Apr. 14/15 Observers Km/Smt

Emulsion Batches:

06.560. FILTER IN COMP
66.385 " " STELLAR

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC32505	COMP							FeAr clear	60
06	BD+22 2632	13 42 58	+21 57 25	0 56 35		0 38 W			900
07	COMP							"	60
08	BIAS(4)			1 14					—
09	COMP							"	60
10	AC+14 1105-9	13 57 29	+14 10 07	1 26 13		0 49 W			600
11	COMP							"	60
12	COMP							"	"
13	^{not} BD+21 2763	15 17 55	+21 20 06	1 44 01		0 18 E			330
14	COMP							"	60
15	COMP							"	60
16	AC+28 34548	15 30 11	+38 15 00	02 26 31		0 25 W			1030
17	COMP								
18	BIAS(4)			02 47					
19	COMP								
20	BD-07 4156	15 54 29	-07 58 11	03 02 38					500

LSP
Specif.
Focus -
Spectr.

Exp. Mtr.

152

171

453

162

45

^{LED}
Spectr. Temp. ... -100.3°C.....

Dome Temp./Hum. +0.4°C/55.2%

Transparency Conditions . Clear, full moon near 210 meridian.

Focus 6.92.....

Spectr. Temp.

Dome Temp./Hum.

ONLY N DOME FAN ON
385 0 50 1024 4 1 offset

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Transmission	P.H.	Program	Remarks	Quality
				CASS CCD	1200 21m G=9520	304m	Hx @ cal 562	26			
152	4"	11.1	MO					27	Km Hx	Vys 309	
								28			
								1			
								29			
171	3"	10.7	MO					30	Km Hx	Vys 150	
								31			
								5			
453		not 10.11	not MOe 5					6	"	not M, too bright. caps Vys 740 but other choice WAY too dim. No other stars around.	
								7			
								8			
162		11.3	MO					9			
								10			
								1/2			
								11			
145		10.5	MO					12		Vys 783	

211
pg # 4

Date 1995 April 14/15 Observers Km/Smt

Emulsion Batches:
FILTERS AS BEFORE.
... EXCEPT FLATS

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC32521	COMP							Fed clear	60
22	COMP							"	60
23	BD-12 4523	16 ^{24 44} 24 44	-12 25 39	3 22 48		0 22 W			905
24	COMP							"	60
25	BIAS(4)			3 40					-
26-34	FLAT x 9					0 ^h 22 +93°		Tung 1/4 Ap. Fed clear	60
35	COMP								60
36	BD-08 4352	16 50 05	-8 09 47	3 58 25		0 29 W			660
37	COMP							"	60
38	COMP							"	"
39	BD-10 4471 (B)	17 13 39	-11 00 57	4 16 48		0 33 W			1200
40	COMP							"	60
41	BD-10 4471 (A)	"	"	4 41 17		0 44 W			450
42	COMP							"	60
43	BIAS(4)			04 51					-
44/45	INBOARD/OUTBOARD							"	50/60

Co-D
Spectr.

Focu

Spectr.

Exp. Mtr.

390

600

119

163

CCD Spectr. Temp. -100.4°C Dome Temp./Hum. $-0.6^{\circ}\text{C}/52.22$ Transparency Conditions *clear, full moon, some haze* 212
 Focus 6.92
 Spectr. Temp. Dome Temp./Hum. $-1.3^{\circ}\text{C}/49.92$ @ FOCUS TEST N DOME FAN ON ONLY
 385 0 50 1024 4 1 CCD/flat

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality	
				CAS5 CCD	H2002h 6-4520	306u	6563A	13				
								14				
390	10.1		MZ					15	Km Hx			
								16				
								1				
								2		GG 385 FILTER IN FLAT BEAM.	156k → 150k	
								17				
620	4"	9.0	M5 _C					18	Km Hx	Hx emission 2.5X confirmed Vys 782AB as expected		
								19				
								20				
119	3"	12.0	M					21	Km Hx	Vys 792(B)		
								22				
163								23		Vys 792(A) South lighter core		
								24				
								1				
				All to Perseus & woven					25/26	FOCUS TEST	passed through focus overnight.	

^{ced}
 Spectr. Temp. = 100.3°C Dome Temp./Hum. +3.7°C/40% Transparency Conditions .. CLEAR 214
 Focus 6.92 @ FOCUS TEST
 Spectr. Temp. Dome Temp./Hum. +3.1°C/39.7% @ end of 1st exposure FANS OFF
 385 0 50 1024 4 1 ccd/ant

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1200R/mm G=4512	306µm	6563Å @ col 500	3/4 5	FOCUS TEST		
266	3"	10.5 ⁵⁸	MZ					6	Km Hα [EUS]	Vys 55DA	
								7			
311	3"	7.10 ⁵⁰	M					8	"	shows Hα emission. broad band of exp. str. counts in middle.	
								9			
								10	"	check to see the Hα emission if it there & not due to a plane or something	
								11			
								12			
								13			
								14			
								15			
130		10.6	M0					16		Vys 148	
								17			

Spectr. Temp. -100°C Dome Temp./Hum. $+1.7^{\circ}\text{C}/39.4\%$ Transparency Conditions *clear, full moon up* ²¹⁶Focus *6.92*Spectr. Temp. Dome Temp./Hum. $+1.5^{\circ}\text{C}/39.4\%$ @ end of *FANS OFF*
seeing test 305 @ 50 1024 4 1 red font

Exp Mtr	Seeing	Ptg Mag	Sp	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCO	1200 1200 G=4512	306 μ	6563A @ col 500	18			
149		10.4	MO					19	Km E453 Hex		
								20			
								20 21			
279	2.5	10.8	MO					22	"	Uys 723	
								23			
	2-3"	7.53	KSLII	EEV CCD GORPE CAMERA		above 306 μ		-	SEEING TEST	Dome W, very light w wind clear like last night, full moon 1 st east	
				CASS CCD				1			
								24		rack moved with manual switch - half strength	
166	3"	11.41	MO					25	Km E453 Hex		
								26			
								1			
								27			

Spectr. Temp. -100°C Dome Temp./Hum. $+0.8^{\circ}\text{C}/43.4\%$ Transparency Conditions *clear, full moon* 218Focus 6.92

Spectr. Temp.

Dome Temp./Hum.

FANS OFF

385 0 50 1024 4 1 CCD/FIT

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
740		8.48	M1	CROSS CCD	1200 l/m $\delta = 4512$	30 μ m	6563A (250 μ m col.)	28		Mary std stars	Vys 30p +15.71 km/sec
								29			
								5			
342		9.73	M0					5		Vys 705	
								7			
								9			
249		11.2	M0					10		Vys 609 AB	
								11			
								12			
497		10.11	M0e					13		Vys 740	
								14			
								15			
826								16		Vys 800 (SAO 46403)	
								17			

Spectr. Temp. -100°C Dome Temp./Hum. $+1-0^{\circ}\text{C}/49.2\%$ Transparency Conditions *clear, full moon up 220*Focus 6.92

Spectr. Temp.

Dome Temp./Hum. $-0.2^{\circ}\text{C}/50.7\%$

FANS OFF

385 0 50 1024 4 1 cutoff

Exp. Mtr	Seeing	Fig. Mag	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
862		#2 #8		CAS CCD really no.	1200 2mm G=9512	306 μ	6563A @ col 500	19 20 21		(SAB 46409) Vys 287	
286		11.8	MO _p					22 23 1 24	Kim {Vys} Hex	close companion to AB? Vys 795C No emission	
907	3.4"	10.59	MO					25 26 27	"	Vys 791 none. late due to rack/spec controller problems.	
418		9.3	M					28 29 1 5	"	Vys 321 none.	
646	3"	9.83	MO					6	"	Sun coming up - lots of Vys 182A stay b/g. Many - std (-31.19 μm)	

Spectr. Temp. ... 100°C

Dome Temp./Hum. ± 0.8°C/50.7%

Transparency Conditions .. clear, moon, sky, 222

Focus 6.92

FANS OFF.

Spectr. Temp.

Dome Temp./Hum.

385 0 50 1024 4 1 red fast

Exp. Mtr	Seeing	Pig. Mag	Sp	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality	
				case CCD	1200 lines G=4512	300µm	6563Å @ 500cd	2		3H FOCUS REST	used 40 F.No and saturated will need to circ for a while no focus test tonight.	16.0K → 14.9K
All to Perseus & WORM.												

223

p941

Mon/Tues

Emulsion Batches:

Date 1995. Apr. 17/18. Observers {V. G. S.} T. H.

CS 386 Time Reset. 10. W. 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.	Exp. Mtr
CC 326 ^{17/} 18	Inboard/outboard HAATMAN					00 00	+43	FelNe Clear	20/30	no film
CC 326 19	BIAS x 4	Sum of 4 bias'								
20	Comp							FelNe Clear	255	
21	HD 66141	7 5704	+2 3634	20 0914		01 34 W				
22	Comp							FelNe Clear	255	
23	Comp							"	"	
24	BD-02 3000	9 48 10	-03 13 04	20 2614		00 38 W			2362	630
25	Comp							FelNe Clear	255	
26	BIAS x 4	Sum of 4.								
27	Comp							FelNe Clear	25	
28	BD+01 2447	10 23 49	+01 21 36	21 12 09		00 36 W			1619	970
29	comp							FelNe Clear	25	
30	Comp							"	"	
31	Ceres	J 2000 09 02 05 +29 23 00		21 48 49		02 28 W			919	1960
32	Comp							FelNe Clear	255	
33	BIAS x 4			22 06						

CCD Spectr. Temp. -100°C Dome Temp./Hum. $+5.3^{\circ}\text{C}$ $50\% \text{H}$ Transparency Conditions *mostly clear* 224

Focus 688

CCD Spectr. Temp. Dome Temp./Hum. $+3.4^{\circ}\text{C}$ $54\% \text{H}$

MAX

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CASS CCD	1900/100 G 5190	30 μ	53038	3/4			
								1/2			
								6			98K
	4.39		K2 III					7	Std Vel		5K
								8			
								9			
630	2.3	105A	m0					10	Vys H/w	Note [Is it brighter tonight?] Clearly visible in finder and looks as bright as TAE nearby star. There 4' SSW of Vys 560	9.7K
								11			
								1/2			
								12			
970	2.4	9.65	m2					13	Marcy Std Vel		SN 770K
								14			10K
								15			102K
1960	3.4	28	G2 V					16	Std Vel	minor planet	
								17		Field drawn	10.5K

225 pg #2

mon/Tues

Date 1995. April 7/18..... Observers (V. S. S.) T. n.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC32634	Comp							FelNe Clear	25s
35	HD103095	11 4713	+38 2610	22 1642		00 07E			208
36	Comp							FelNe Clear	25s
CG409 ⁴⁴ 47	HD103095	" 4713	+382610	2227				4x	67ms
CG409 ⁴⁸ 49	"					0 0		2x	133ms
cc32637	Comp							FelNe Clear	25s
38	BD+33 2071B	10 5811	+33 25 38	22 3337		01 36 W			2403
39	Comp							FelNe Clear	25s
40	BD+33 2071C?	"	"	23 1650		02 22 W			2559
41	Comp							FelNe Clear	25s
42	BIAS x 4	Sum of 4		200 02					
43	BD+33 2071A	10 5811	+33 25 38	00 03 20		03 03 W			2219
44	Comp							FelNe Clear	25s
45	Comp							"	25s
46	HD 95735	10 5754	36 3800	00 4611		03 19 W			

CCD

Spectr.

Focus

Spectr.

Exp. Mr

2900

350

110

510

3300

CCD Spectr. Temp. -100.9°C @ 2330 Dome Temp./Hum. Transparency Conditions *Slightly hazy* 276.

Focus 6.88

Spectr. Temp. Dome Temp./Hum. $+2.2^{\circ}\text{C}$ 5924 90% gain as usual
c Lambda 410 050 1024 41 CCD FWIT

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 h/mm G=5140	306 _μ	5303A	18			MAX 106K
2900	2.3"	6.45	G82p					19	std vel		
		6.45	G82p		Above	306 _μ slit		20	Seeing test	AIRPORT Wind @ 22 EST NNW 15 knts/hr Dome 15 SW	104K
								21			
350	2.3"	11.8	K8					22	Vys pgn	Middle one of 3 in g line in 2 1' diam field	SIX 50/1
								23		2nd BRIGHTEST too	104K
110	2"	12?	Looks	Like solar spectrum (ie Like Ceres)				24	Vys pgn	(NW of triple, faintest one)	SIX 730/1
								25		(maybe shifted blue 3-5 pixels of B spectra)	
								1/2			
570	3.4"	11?	Late k OR M					26	Vys pgn	Brightest SE of Triple	MAX 10.7
								27			
								28			10.7
3300	5.4"	7.48	M2					29	std vel	marcy Vys 594	

227
pg #3

Mon/Tues

Emulsion Batches:

Date 1995 Apr. 17/18 Observers (Vys.) T.A.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC32647	Comp							F&N Clean	25s
48/ 56	FLATS x 9					03 22W	+36	TUNG Ap 1/2	5sa
57	BHS x 4	Sum of 4		01 17					
58/ 59	Inboard / OUTBOARD	AurTaur				00	+36	F&N Clean	20/30

Spectr. Temp. Dome Temp./Hum. Transparency Conditions *Increasingly hazy* 228

Focus *6.88*

Spectr. Temp. Dome Temp./Hum. *+2.1°C 68H*

Exp. Mtr.	Seeing	Pig-Mag	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CPSS CCD	1800 lines 6: 546	306	5303A	30			MAX 10.8K
								31			13.8K
								1/2			
								3/4	Focus test		
All to 4000 Å process (no problems)											

CCD Spectr. Temp. -100.7°C Dome Temp./Hum. $+1.0^{\circ}\text{C}$ 6768H Transparency Conditions *Fine to occasional cloud*
 Focus ... 6.88 WNW 7Kms/hr wind @ 0 EST
 Spectr. Temp. Dome Temp./Hum. *90C gain* CCD FWHM
c Lumbale 410 0 50 1024 4 1

Exp. Mtr.	Seeing	F _w Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
n.o.f. Her				CCSS CCO	1500/line G5940	300	S3038A	3/4	Focus test		
								1/2			max 10.0K
								5			S/N
1400	4.6"	8	G2V					6	Std vel	Minor planet hopefully	7.100/1
								7			max 10.3K
								8			9.8K
* 200	4.5"	11.5	M0	(S/N 6 @ 5 sec exp, 25 sec for dark)				9	Vys ppm	Eastone	max 10.4K
† natural Exp meter integration falling back when shutter closed will balance when at Betelge angles											
								10		Wastone may show at large columns at west end of slit	S/N
160	5"	11.6	M0					11	Vys ppm	wastone and slightly bright	2.60/1
								12			max 10.4K
								13			max 10.5K
3000	5"	7.48	M2					14	Std vel macy	Vys 594	max 2.2K
								15			
								16			max 13.5K

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pg#2

SAT/Sun

Emulsion Batches:

Date 1995 Apr 22/23..... Observers {V.45} J.A.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC32684	BIAS x 4			Sum of 4 frames	01 07				
85	* Comp							Felko Clear	255e
86	BD+21 2763 ?	15 17 55	+21 20 02	01 41 13		00 31 W			1555
87	Comp							Felko Clear	255
88	BIAS x 4			Sum of 4 frames	02 14				
89	Comp							Felko Clear	255
90	BP+2 2763	15 17 55	+21 20 02	02 17 45		01 05 W			1372
91	Comp							Felko Clear	255
92/93	Inboard / out board			HARTMAN		00 00	+5°	Felko Clear	20/30
94	BIAS x 4			Sum of 4	02 58				

COO
Spectr. Temp. $-100 \pm 2^\circ\text{C}$

Dome Temp./Hum. $+30^\circ\text{C}$ 68.476A

Transparency Conditions ... Slightly hazy

232

Focus ... 6.88

Spectr. Temp.

Dome Temp./Hum. $+25^\circ\text{C}$ 68.776A

Exp. Mtr.	Seeing	P [✓] Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 lines G-5190	30 μ	5303A	1/2			
								17		Field drawn - RA smudged? check cube	
80	4"	2115	Gark					18	Vys ppm	Yes, wrong star.	max 99K
								19			
								20			99K
600	5"	1011	moe					21	Vys ppm	Right star. Tin	
								22			
		T=25 $^\circ\text{C}$	688 set					3/4	focus test		
								1/2.			

233
Pg #1

Emulsion Batches:

Date 1995 Apr 25/26 Observers [Hdy]/Smt Km as backup

Plate No.	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 32695 /96	INBOARD/ OUTBOARD					0 ^h	+39°	Fed clear	60/70
97	BIAS(4)			1 07					—
98	COMP							Fed clear	60
99	HD147379	16 16 36	+67 28	1 34 39		0 ^h 25 ^m E			1200
CC 32700	COMP							"	60
01/02	FLAT x 2					0 ^h 16 ^m E	+67° 15'	Tung 1/2 Ap	4
03	BIAS(4)			2 05					—
04	COMP							Fed clear	60
05	HD147379			02 22 27		0 ^h 26 ^m W			1350
06	COMP							Fed clear	60
07/08	FLAT x 2					0 ^h 31 ^m W	+67° 15'	Tung 1/2 Ap	3
09	COMP							Fed clear	60
10	HD177724	19 00 49	+13 42 53	3 01 36		2 06 E			30
11	COMP							Fed clear	60
12/13	FLAT x 2					1 57 E	+13° 50'	Tung 1/4 Ap	10
14	BIAS(4)			3 13					—

CCD
Spectr. Temp. = 100.1 °C

Dome Temp./Hum. $4.5^\circ\text{C} / 73.9\%$
@ FOCUS TEST

Transparency Conditions suddenly clear (2nd time this pt) 234

Focus 6.84 (happy medium)

Spectr. Temp.

Dome Temp./Hum. $3.7^\circ\text{C} / 75.8\%$
@ CC 32705

DOME FANS OFF
410 0 50 1024 4 1 CCD test

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
NO FILTERS				CASS CCD	1800 λ max G=5567	250 μ	5890 Å (Na D)	5/4 1 5	FOCUS TEST	average of 4 frames. CASS 320/CC 03 crashed & reset before this comp.	
1286	4"-5"	> 8	MOI					6 7 8	Hdy	a few clouds.	14.6K 14.6K
				CASS CCD	1800 λ max G=6060	250 μ	6563 Å (H α)	9 10 11 12 13		glancing cosmic ray at bottom edge mid rows - small time delay to verify region.	
1528	5"	> 8	MOI					10 11 12	Hdy		15.3K
5200		2.99	AOI?					14 15 16 1	Telluric Std.	trailed a bit	4.9K 14.7K

235
Pg # 2

Emulsion Batches:

Date 1995 Apr. 25/26 Observers [Hdg] Smt Km as backup

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC32715	COMP							FeAr clear	60
16	HD177724	19 00 49	+13 42 53	3 18 49					50
17	COMP							FeAr clear	60
18/19	FLAT x 2					1 43 E	+13° 50'	Tung 1/2 Ap	4
20	BIAS(4)			3 27					—
CG40950-53	HD163075 x 4	17 49 15	+46 40 10						.067
54/55	" x 2				3 46	0 ^h 9 ^m E	87° Alt	1.0015 armass	.133
CC32721	COMP							FeAr clear	60
22	HD201091	21 02 25	+38 15 27	4 02 00		3 04 E			180
23	COMP							FeAr clear	60
24	HD201092	21 02 26	+38 15 14	4 09 58		2 53 E			330
25	COMP							"	60
26/27	FLAT x 2					2 48 E	+38° 42'	Tung 1/2 Ap	4
28	BIAS(4)			4 23					—
29	COMP							FeAr clear	60

Spectr. Temp. -100.3°C Dome Temp./Hum. $+2.6^{\circ}\text{C}/79.5\%$ Transparency Conditions *clear, humid* 23.6

Focus 6.9f Dome Temp./Hum. $+2.6^{\circ}\text{C}/80.6\%$ *DOMIE FANS OFF*
 Spectr. Temp. *end of seeing test* 410 0 50 1024 4 1 *redfrnt.*

Exp. Mir <i>NO FILTER</i>	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	PH	Program	Remarks	Quality
				<i>CASS</i> CCD	<i>1800 l/mm</i> G=5567	<i>250μ</i>	<i>5890A</i>	17			
7700		2.99	<i>ADIn?</i>					18	<i>Telluric Std.</i>	<i>trailed a lot</i>	4.9K
								19			
								20			16.0K 15.8K
								1			
	4"	6.46	<i>K7III</i>	<i>EEV CCD</i> <i>GUIDE</i> <i>CAMERA</i>		<i>above</i> <i>250μ</i>		-	<i>SEEING</i> <i>TEST</i>	<i>Done w, very light w/ wind, 95% a</i> <i>catwalk. Cloudy for a couple of days</i> <i>previous.</i>	
	"	"	"			"		-	"		
				<i>CASS</i> CCD	<i>1800 l/mm</i> <i>G=5567</i>	<i>250μ</i>	<i>5890A</i>	21			
4700	4"	5.19	<i>K5V</i>					22	<i>Hdy</i>	<i>61 Cgg A</i>	
								23			
4070	4"-5"	6.02	<i>K7V</i>					24	<i>Hdy</i>	<i>61 Cgg B</i>	
								25			
								26			15.7K 15.8K
								1			
				<i>CASS</i> CCD	<i>1800 l/mm</i> <i>G=6060</i>	<i>250μ</i>	<i>6563A</i>	27			

CCD
Spectr. Temp. -100.3°C
Focus 6.84
Spectr. Temp.

Dome Temp./Hum. $+2.3^{\circ}\text{C}/81.2\%$
Dome Temp./Hum.

Transparency Conditions *clear, sky, brightening* 238

DOME FANS OFF
410 0 50 1024 4 1 ccd fan

Exp Mtr NO FILTER	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Filt	Slit	Emission	P.H.	Program	Remarks	Quality
4570	5"	5.19	K5V	CASS CCD	1800 R G=6060	250 μ	6563A	28	Hdy	61 Cyg A	
								29			
4800*	5"	6.02	K7V					30	Hdy,	61 Cyg B, *bright sky.	
								31			
								32			
								1			
								3/4	FOCUS TEST	Sun almost up.	
All backed up to Perseus & WORM.											

14.6k
14.35k

239

Emulsion Batches:

Date 1995 Apr 27/28 Observers [KK] Smt + SC ← 27/28
+ Apr 28/29 [KK] Tu/Smt ← 28/29

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE08726 /27	INBOARD/ OUTBOARD							Thin clear	20/20
	BIAS(4) deleted.			22 24					*
CE08728	BIAS(4)			22 44 57	on Apr 28/29				
CE087 ²⁹ / ₃₀	Inboard/outboard			Apr 28 Afternoon					
CE08731/32	Inboard/outboard	1995	Apr 28/29	21 31		± 00 30E	+43°	Thin clear	20/20

Spectr. Temp. Dome Temp./Hum. 8.3°C/64.8% Transparency Conditions clear for 1/2 hour 240
 Focus 2470 @ FOCUS TEST overcast now
 Spectr. Temp. Dome Temp./Hum. N FAN ON FOR 3 HOURS TO DRY OUT DOME.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality	
				edelle CCD	1200/21mm	600 W			FOCUS TEST	00 128 1024 8 1 ccd test		
				17.80 slit	.4470	500µM	3960A	1/2	TEST	00 256 1024 4 1 ccd test		
								£				
				<p>Clouded out! Not backed up at all yet! Backed to Perseus CK 5/1 Tel focus for edelle 2236</p>								
				+7.2°C	set	2470						

241

SAT/SUN

Emulsion Batches:

Date 1995 Apr 29/30... Observers [K4] Tn.....

2 Large Tours looked at M 3. (VERY FINE).....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CE08733	BIAS (4)								
34	Comp			CSS 386	5secs ahead of WWV Time				20s
35	HD 34029	050918	+45 53 47	22 39 29		7 49 W			766s
36	Comp								20s
37	HD 34029	050918	+45 53 47	22 54 42		8 20 W			1687
38	Comp								20s
40/45	FLATS x 6			00 04		3 41 W	+31°		300s
46	BIAS (4)			00 51					

9
CE08733 is BIAS (4)

Spectr. Temp. -100°C Dome Temp./Hum. $+4.5^{\circ}\text{C}$ 70.28H Transparency Conditions ... Fine 242

Focus 2470

Spectr. Temp. Dome Temp./Hum. $+4.5^{\circ}\text{C}$ 72.52H
 0 0 256 1024 4 1 CCD/FHT

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				17.80	1200W 4470	W 60 H 50	3960A	1/2	H = .215 SET W = .277 SET	Tel focus = 2188	ADU MAX 7.8K
not used		0.08	G SITE GOTT					3			
back to group)		0.08	G SITE GOTT					4	Kk ppm	Telescope East side	
								5		(only ~50 ADU above background)	7.7K
								4	Kk ppm	hopefully guided for the extreme retraction.	
								5		Cloud in Far NW	7.0K
Tel west side now							H = 800 = .185	6	Flats	MAX 1215 KADU	
								1/2			
										All To worm, but not to Perseus tonight.	

243 Sun/Mon

Emulsion Batches:

Date 1995 Apr 30/May 1 Observers [KK] Tn/Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE08747	BIAS(4)			20 14					—
48	Comp							ThAr clear	20
49	HD34029	5 09 18	+45 53 47	20 26 27				ThAr clear	20
50	COMP							"	20
51	COMP							"	"
52	HD34029	5 09 18	+45 53 47	20 53 30		6 16 W			1324
53	COMP							ThAr	20
54	HD34029	"	"	21 17 44		6 32 W			840
55	COMP							ThAr	20
56	BIAS(4)			21 35					—
57	COMP BIAS(4)			22 57				ThAr	20
58	HD83808	9 35 49	+10 20 50	21 45 32					
58	FLAT x 6			23 02.		2 34W +10°		Tung	300
64	Comp							ThAr	20
65	HD102509	11 42 56	+20 46 29	23 46 50		3 00 W			2628
66	COMP							ThAr	20

CCD Spectr. Temp. -100.4°C Dome Temp./Hum. 7.9°C/69.1% Transparency Conditions mostly cloudy 244
 Focus 2470 90cm gain as usual
 Spectr. Temp. Dome Temp./Hum. 0 0 256 1024 4 1 CCD for

Exp. Mtr.	Seeing	Mag	Sp.	Inst. CCD	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	max ABU Quality
				CCD EURE 17.80	1200 R/1m .4470	60x W 500µm	3960A	1			
								3			
	0.08		65IIIe +60III					4	KK	cloudy, very little signal.	
								5			
								3		Telescope East side now	8.3K
	0.08		65IIIe +60III					4	KK	quadrant slightly E and very slightly North of image some cloud.	2.3K
								5			
								4	KK	clear at start but clouded in	1.3K
								5			8.9K
								1		Tel back on W side	
								3		TOD CLOUDY ONCE WE STARTED EXPOSING.	
								/			
						60x W 80µm H 60µm W 500µm H		2		Tel West side.	8.5K
								4			
	4.53		65IIIe +A75I					5	KK ppm		2 150 ABU ABOVE BACKGROUND
								6			

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P#2

Emulsion Batches:

Date 1995 Apr. 30/May 1 Observers [KK] Tn / Sant

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CE08767	BIAS (4)			0 35					-
68	COMP							ThAr	20
69	HD107700	12 17 29	+26 24 04	00 44 45		3 32 W			31/4
70	Comp							ThAr	20
71	BIAS (4)			01 39					
72	Comp							ThAr	20
73	HD139006	15 30 27	+27 03 04	01 45 53		0 57 W			1684
74	Comp							ThAr	20
75	BIAS (4)			2 19					-
76	COMP							ThAr	20
77	HD140436	15 38 33	+26 36 45	2 23 46		1 45 W			2753
78	COMP							ThAr	20
79	BIAS (4)			3 19					-

CCD Spectr. Temp. -100.3°C Dome Temp./Hum. $15.6^{\circ}\text{C}/75.0\%$ Transparency Conditions *clear - increasing cloud* 246
 Focus 247.0
 Spectr. Temp. Dome Temp./Hum. $0\ 0\ 256\ 1024\ 4\ 1\ \text{ccdfmt}$

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	PH	Program	Remarks	Quality
				CCD EMELLE 17.80	1200 L/m	60 μ W 50 μ H	3960 Å	1			NA
								3			
360	3.6	4.81		60 III-IV +A3V				4	KK Composite spectra		3.20 ADU ABOVE
								3			11.5K
								1/2			
								3			
3600		2.23		AQV +G5V				2c.	KK composite spec		72.6K
								3			10K
								1			
								3			
715		3.84		81 IV +A3V				4	KK composite spectra	some cloud	500 avag wly
								3			10.5K
								1			

Backed up on WORM only!
 Bachel to persens by KK

247

pg 01

Mon / Tues

Emulsion Batches:

Date 1995 MAY 1/2 Observers K.K. / T.A.

For
Exp
meter
BGS

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
ce087 ⁸⁰ / ₈₁	In board / out board H.A. T.M.P.			20 ²⁵ 09				ThAr	15/5
82	BIAS(A)								
83	Comp							ThAr	20s
84	HD 102509	11 42 50	+20 46 29	20 57 03	21 26	00 01 W		~	1740
85	Comp							ThAr	20s
86	HD 102509	11 42 50	+20 46 29	21 33 40		00 40 W			203X
87	Comp							ThAr	20s
88	BIAS(A)								
89	comp							ThA	20s
90	HD 12033	12 48 24	+21 47 03	22 19 46		00 29 W			2500
91	Comp							ThA	20s
92	BIAS(A)			23 04					
93	Comp							ThA	20s
94	HD 124897	14 11 06	+19 42 11	23 13 09		00 27 E			901
95	Comp							ThA	20s

edit H.A. times *done ✓

*approx

CCD * forgot to RAISE to -100
 Spectr. Temp. -120 °C Dome Temp./Hum. +9.6 °C 61.7 %H Transparency Conditions Clearing gradually 248
 Focus 24.90
 Spectr. Temp. Dome Temp./Hum.

Exp Mtr	Seeing	W Mag	Sp	Inst	Grating/ Tilt	Slit	Emission	P.H	Program	Remarks	Quality
1200V				edelle	1200						
(note add strength d. frame)				17-80	W/mm +470	w H	60um 500a		3960A	focus test	0 0 128 1024 8 1 current
								1/2		0 0 256 1024 4 1 current	MAX 9.8K
350		4.53		G5W-12E +A7E				3		(CSS 356 hung up.)	
								4	KK composite pgr		
								3	(Then default using CCD2a)		
540	2.3	4.53		G5W-12E +A7E				4		after balancing exp. meter	MAX 110
								3			
* Then Temp switched to -100°C after this frame.								1/2			
								3			MAX 9.8K
224	3.4	4.9		G8III +F6V				5	KK pgr		MAX 130AD4 +80UE Background
								3			
								1/2			
								3			
4850				-OAK 115 III				6	std vel		190000
								3			10.3K

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p442

Mon/Tues

Emulsion Batches:

Date 1995 MAY 1/2 Observers KK/Tn/Tn

659

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CE08796	compariser							ThA	20
97	HD 114330	13 04 46	-5 00 18	23 36 37		01 41 W			3200
98	Comp							ThA	20
99	BIAS(A)			00 33					
CE08800	Comp							ThA	20
01	HD 116658	13 19 55	-10 38 22	00 38 09		01 53 W			1129
02	Comp							ThA	20
03	Comp							"	"
04	HD 139006	15 30 27	+27 03 04	01 06 11		00 07 W			983
05	Comp							ThA	20
06	BIAS(A)			01 23					
07	Comp							ThA	20
08	HD 156633	17 13 38	+33 12 28	01 27 16		00 25 E			3765
09	Comp								20
10	BIAS(A)			02 33					

Spectr. Temp. Dome Temp./Hum. $+7.2^{\circ}\text{C}$ 69.2% H Transparency Conditions ... Mostly clear 250

Focus ... 24.90
 Spectr. Temp. -11.02°C *
 Dome Temp./Hum. $+6.7^{\circ}\text{C}$ 69.5% H
 90 cc gain
 exp meter 1200 v
 c variable
 increasing cloud

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				17.80	1200 l/m	60 μ 500AH	3960A	3			
730	3"-4"	43	A148 +Am					4	KK composite	Above horizon	11.8K (350 ADP)
								3			14.4K
								1/2			
								3			11.8K
2900	4" 0.8		B16V +B2V					5	KK composite (thin cloud)		1.4K
								3			12K
								3			10.7K
3170	4"	223	A0V +G5V					6	KK composite (low previous night too)		2K
								3			10.6K
								1/2	stats (149, 153, 151, 455, 0860)		
								3			10.7K
820	2.3" 4.82		B15VP +B5V					2	KK composite 68 Her		500 above background
** Noticed that in tented Temp changed								3			10.5K
was to "6" setting not "5" : 2-11.0°C								1/2	stats 149, 153, 150, 973, 1139		

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pg#3

Mon/Tues

Date 1995

MAY 1/2

Observers

Th

Emulsion Batches:

0639

Filter

Before exp meter

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
ce08811	Comp							ThA	20
12	HD175492	18 50 32	+22 31 06	02 41 56		00 57 E			3250
13	Comp							ThA	20
14	Comp							"	"
15	HD192577	20 10 29	+46 26 16	03 43 28		01 30 E			2300
16	Comp							ThA	20
17	BIAS(4)								
18/ 23	FLATS x 6			04 31		01 00 W	+20	TUNG	300s
	May 2 (daytime)								
ce08824	Comp			NO X-graining skin				ThA	1
8825	"			.005	"	"		ThA	1
8826	"			.015	"	"		ThA	1

CED
Spectr. Temp. -110.3°C^*

Dome Temp./Hum. $+6.7^{\circ}\text{C}$ 69.2% H

Transparency Conditions thin cloud 25.2

Focus 2490

* Noted Temp at wrong setting, but left it as is.

CED
Spectr. Temp. -110.8°C

Dome Temp./Hum. $+7.3^{\circ}\text{C}$ 69.5% H

Exp. Mtr	Seeing	Mag	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				1280	1200 .4970	600 W 500 H	3760A	3			10.4K
880	2.5"	A59	64 III +16V					4	HK composite	300 ADU above Background	10.4K
								3			10.4K
								3			9.8K
1340	2.4"	379	K2 II +83V					5	HK composite 31 Cyg	200 ADU above background	9.8K
								3			9.8K
						600 W 800 H		1/2			max
								3	illumination uniform, unlike Flats previous night? Stronger by 50% too, for same 300 sec exposure.		12.4K
Focus	2490			18.45	300 /569						
<p>All TO WORM only and to PERSOUS</p>											

CCD
Spectr. Temp. -100°C
Focus 2370
Spectr. Temp.

Dome Temp./Hum. $+11.1^{\circ}\text{C}$ 49/8H
90c gain

Transparency Conditions *Very hazy, PART. cloudy.*

254

ie Polaroid image MAP.

Chimble * Ref 30MERS FROM JUL 28/74 Region

MAX

Exp Mtr	Seeing	Mag.	Sp.	Inst	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
using 100tscale to match				E. Kalle	300in/mm	60w 400H	6300A	1/2	focals	CCD FWT 0 0 128 1024 8 1	
1000 scale ✓						400w 275set		1/2		0 0 256 1024 4 1	
270	great							2	Telescope enders also normality		13K
270	1-2'	1.79	KO IIIa					3	KK telharic film	on this star,	9AK
						actual center 2 6509A		4			
335	2"	1.74	KO IIIa					3	KK telharic film		11.5
								4			13.4
425								3			13.2
								4			13.5
								1/2		Telescope east side.	
								1		ie Through Pole	
380	2-3"	2	F					5	DR 100-1740 (reversed)		10K
								4	1.00-1000 45		14.6
400		2	F					5		1.459 HR mass	12.2
								4		unchanging of course.	14.8

255
Pg #2

Tues/Wed

Emulsion Batches:

Date 1995 MAY 2/3..... Observers [KK] In.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
ce08893	HD8890	01 22 34	+88 46 26	21 38 19		10 01 W			678
44	Comp						ThA		1 sec
45	Comp								" "
46	HD99028	11 18 43	+11 04 49	21 58 40		01 19 W			1144
47	comp						ThA		15
48	BIAS (A)			22 21					
49	Comp						ThA		15
50	HD87901	10 03 03	+12 27 22	22 27 37		03 02 W			1067
51	comp						ThA		15
52/57	FLATS x 6			00 23		0 0 +330	Jung		25
56	BIAS (A)								
59/60	Inboard/outboard HARRISMAN			00 46		2 18 W +19	ThA		15/60 2.0/1.0

CCD Spectr. Temp. -100.7°C Dome Temp./Hum. $+100^{\circ}\text{C}$ 595%
 Transparency Conditions $\text{V. R. y. 142y} \rightarrow \text{cloudy}$ 256

Focus $\cdot 2370$

CCD Spectr. Temp. -101.9°C Dome Temp./Hum. $+9.6^{\circ}\text{C}$ 540%
Cumbola

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ x Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
365	2"	2	F	Edelle 1845	300h/lin 569 tilt	60u 400u 400u	63008	5	KK telluric	vel pgn	10K
							.225	4		Telexop west side row	15.7K
49	2.3"	4:03	F2IV					6	KK telluric	1.242 HR mass (cloudy, but visible)	1K
								4			14.7
								1/2			
								4			
33		1:36	B7V					3	Telluric std.	1.480 Air mass + thick cloud	500
								4			15.2K
						80u width 600u H-1205		3	Topo done by	00:10 EST	12.4K
								1/2		profile shows illumination uneven, High spike at low column end	
								1/2		focus test	
						400u Night				[LHS Rig ht in focus, middle too intense]	
										RHS tending to indicate that we are set for a warmer temperature.	

stats

min 151 , max 155 , 152.769 , 1.051

(rootscale used)

All to WORM & Perseus

257.

p4#1

Wed / Thurs

Emulsion Batches:

Date 1975 MAY 3/4 Observers [R.K.] J.n

CSS 386 (6-T) sacs Ahead of N.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.
ce098 ^{61/62}	Inboard / OUT BOARD HURTMAN					2 48W	+38°	THA	20/1.0
63	BHS (4)			19 49					
64	Comp							THA	1s
65	HD 95689	10 57 34	+62 17 27	20 08 42		00 25 E			75s
66	Comp	"	"	20 11 36				THA	87s
67	"			20 13 43		00 20 E			86s
68	Comp							THA	1s
69	Comp								
70	HD 8890	01 22 34	+88 46 26	20 21 20		08 40 W			183
71	X Comp							THA	1s
72	HD 8890	"	"	20 37 36					120
73	Comp							THA	1
74	HD 8890			20 41 13					124
75	Comp							THA	1
76	BHS (4)			20 45					
77	Comp							THA	1s

Spectr. Temp. ^{cen} -100°C Dome Temp./Hum. 112.3°C $400\% \text{H}$ Transparency Conditions Fine 258

Focus 2370 unchanged 90 grains as usual

Spectr. Temp. Dome Temp./Hum. ADU MAX

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ X Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
using 100 scale				1895 711T	300 in/nm 569-11T	600uW 900uM	6300 Å	1/2	focus	SCORPIO 128/1024 8 1 Just right or for very slightly cooler 0 0 256 1024 4 1	
				-101.7°C slits	155 158	156 535	0.820	1/2			
								3			135
350	2"	1.79	KOMa					3	HK composite		9K
420	"	"	"					3	"		10K
460	1.2"	"	"					3	"		130K
								4			134K
480	2"	2	F					5	HK composite	$\Delta\alpha -00 18 28$ $LS + 0000 06$	423K
								6			
440								5			124K
								6			
460	1.1"							5			114K
								6			153
								1/2			
								3			156K

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p442 Wed/Thurs

Emulsion Batches:

Date 1995. MAR. 3/4..... Observers [J.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.
CE08878	HD 99028	11 18 43	+11 04 49	20 55 27		00 15 W		889	242
79	Comp						THA	1s	
80	HD 99028 ✓	11 18 43	+11 04 49	21 12 15		00 33 W		980	360
81	Comp						THA	1s	
82	"	Lost (not sure why? maybe my error?)					"		
82	ADS 8119	11 12 48	+32 06	21 36 30		00 55 W		479	170
84	Comp	Lost again, what happened? (SS 386 seems ok) (my error Tn)					THA	1s	
83 ✓	ADS 8119	"	"	21 47 03		W		366	174
84	Comp						THA	1s	
85 ✓	BIAS 14			22 1 55					
86	Comp						THA	1s	
87	HD 122742	13 58 38	+11 16 34	22 09 48		00 41 E		2653	90
88	Comp						THA	1s	
89	Comp						"	"	
90	HD 121370	13 49 55	+18 53 56	22 59 52		00 18 E		480	460
91	Comp						THA	1s	

CO₂ Spectr. Temp. -100.7°C Dome Temp./Hum. $71.0/5^{\circ}\text{C}$ $41.0/81\%$ Transparency Conditions *Some cloud* 260

Focus 2370

Spectr. Temp. Dome Temp./Hum. *c. Keck* MAX

Exp. Mtr	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
242	1.2"	4.03	F2 II	<i>e. Keck</i>	800 <i>in</i> 589	60 <i>in</i> 400 <i>in</i>	6300A	4c	KK <i>W</i>	1.197 AIR mass.	45K
								3			
360								4			66K
								3			154K
								3			
170	1.2"	4.5						5	KK dbl	<i>Barely separated</i> NORTH ONE point	38K
								3			14K
177	2"	4.5						6	KK dbl.	<i>South and slightly East of Air.</i>	
								3			
								3			
90	2.3"	6.21	G8V	Keck				4	KK Keck	<i>[OK TV view, but near mag limit]</i>	3K
								3			14K
								3			
460	2"	2.8	G0					2	KK Keck		11K
								3			

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pg#3

Wed / THURS

Emulsion Batches:

Date 1945 MAY 3/4 Observers [K.K.]... Tn.....

Plate No.	Object	R.A.		Declination		Starting Time		Ending Time		Hour Angle		Comparison	
		1900	1900	1900	1900	E.S.T.	E.S.T.	End	Declination	Type/Filter	Exp.		
ce08892	HD 121370	13 49 55	+18 53 58	23 09 50				00 06 E				606	975
93	Comp											THA	1s
94	BIAS(4)			23 21									
95	Comp											THA	1s
96	HD 138918	15 30 01	+10 52 23	23 24 39				01 24 E				730	126
97	Comp											THA	1s
98	HD 138917	"	"	23 43 22				01 03 E				1167	110
99	Comp											THA	1s
ce08900	HD 138918	15 30 01	+10 52 23	00 05 18				00 47 E				806	140
01	Comp											THA	1s
02	BIAS(4)												
03	Comp											THA	1s
04	HD 154905	17 03 15	+5 36 07	00 44 16				01 38 E				818	110
05	Comp											THA	1s
06	HD 154906	"	"	01 00 10				01 19 E				1002	110

Specfr. Temp. ^{CD} -10.6 °C

Dome Temp./Hum. +8.4 °C 44.7% H

Transparency Conditions *Fine* again 262

Focus 2370

Spectr. Temp.

Dome Temp./Hum. +7.6 °C 46.0% H
Cloudy

Exp. Mtr.	Seeing	✓ Mag.	Sp.	Inst. <i>2.5 k/16</i>	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
475	1.2"	2.8	G0	18.45	300 μ/min + 589 tilt	60 μ W 400 μ H	6300A	2c1	KK composite		11K
								3			
								1			
								3			14K
126	1.2-3"	4.23	F0 IV					4	KK dbl	<i>Well separated view BATEX and HOAT Hone.</i>	
								3			
110	5.2"	5.16	dFO					4	"	<i>Fainter and south are</i>	2K
								3			
140	2"	4.03	F0 IV					4	"	<i>Brighter again</i>	2.6K
								3			14.6K
								1/2			
								3			
100	1.3"	5.83	dFG					5	KK dbl	<i>* Pair easily separated 3.3" sep in Bt starcat</i>	2.2K
								3		<i>SSW and slightly brighter perhaps,</i>	13.9K
100	1.2"	5.80	dFG					5	KK dbl	<i>NNE of pair</i>	2.2K

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p944

Wed / Thurs

Emulsion Batches:

Date . 1995. MAY. 31. 4. Observers [JK]..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.
CE08907	Comp							ThA	Is
08	HD154905	17 0315	+543607	01 2010		1 05 E			669
09	Comp							ThA	Is
10	BIAS(4)								
"16	FLATS x 6					0 0	+20	TUNG	185
17/18	Inboard / outboard					2 48	+7°	ThA	1/1155

* Inboard stronger than
outboard for same exp.This contrasts with past
focus tests.

I'm sure of the mask protocol too.

Spectr. Temp. Dome Temp./Hum. $+7.8^{\circ}\text{C}$ $44.7\% \text{H}$ Transparency Conditions *Fine* 264

Focus : 2370

CCD Spectr. Temp. -100.5°C Dome Temp./Hum. $+7.2^{\circ}\text{C}$ $46.0\% \text{H}$
Chamber

Exp Mtr	Seeing	Mag	Sp.	Inst	Grating/ Tilt	Slit	Emulsion	P.H	Program	Remarks	Quality
				<i>edelle</i> 18.95	300 w/m .589	60 w 700 H	6300A	3c		Both components well separated	14.8K
80	2.3	5.83	df6	[18.95-300.589] standard				5c	kk dbl	when guiding slight seeing problem for this exp.	
								3c			
								1/2			
using 100 base						600 H		6		Profile illumination flat compensated to test night	14.03
								7/8	0.012800481 CCDF01 FOR FOCUS	Blue orange spikes still there	
<p><u>Plot All to worm. Disc Full; Only to C08910 inclusive</u> Now All to worm after format of new optical disc, All to Perseus too,</p>											

CAD
Spectr. Temp. -140.9°C

Dome Temp./Hum. $10.1^{\circ}\text{C}/46.9\%$

Transparency Conditions *partly cloudy*

266

Focus 6.90

Ⓞ FOCUS TEST

\rightarrow mostly cloudy

Spectr. Temp.

Dome Temp./Hum.

ONLY N DOME FAN ON

Exp. Mtr.	Seeing	Fg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B6 39 FILTER				CASS CCD	600 μm C G=2570	250 μm	3790A	3/4	FOCUS TEST	400 0 50 1024 4 1 ccdhat	
								2		for focus test reduction	
"								1		415 0 50 1024 4 1 ccdhat	
								5			
1080		B 5.94	09 In			S/N > ¹²⁰ 100 :1		6	Bln O-star	lots of cloud @ beginning for ~ 3 minutes	2.0K
								7			
								1			
								8			
712		6 6.24	07.5 In			S/N ~ 90:1		9	Bln O star	some cloud	1.5K
								10			
2277		"	"			S/N ~ 180:1		11	"	clearish now	4.0K
								12			
								1		cosmic ray	
								13			
195		7.28 7.28	04 In 04 In			S/N > 35:1		14	Bln O star	some cloud on and off. cut short due to cloud.	
								15			

267
pg #2

Emulsion Batches:
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.....
.....

Date 1995 May 4/5 Observers [Blm] III / Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC82756-64	FLAT x9					2 25 E	+45°	Tung clear	15
65	BIAS(4)			3 58					-
66/67	INBOARD/ OUTBOARD					0 ^h	+45°	Fene clear	20/40

cep
Spectr.
Focus.
Spectr.

Exp. Mtr.
1057
F. 78

Pg #1

269

Date 1995 May 5/6..... Observers [B.N.] III / Smt.....

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.
CC32768 169	INBOARD/ OUTBOARD							Fene clear	20/20
70	BIAS(4)			0 18					—
71	COMP							Fene clear	20
72	HD206267 HD34656	21 35 51 5 14 00	+57 02 12 +37 20	0 29 43 21 14 53			6 ^h E		1000
73	COMP			0 47 53				Fene clear	20
74	Comp							Fene Clear	20
75	HD 188001	19 47 54	+18 24 53	0 57 21			3 ^h 46 ^m E		1875
76	Comp			1 30 18				Fene clear	20
77	Bias (4)								—
78	Comp			1 35 37				Fene clear	20
79	HO 193322 AB	20 14 34	+40 25 13	1 37 34			3 ^h 50 E		760
80	Comp							Fene clear	20
81	Comp			1 57 44				Fene clear	20
82	HO 199579	20 53 03	+44 32 24	1 59 17			4 ^h 8 E		730
83	Comp			2 12 16				Fene clear	
84	Bias (4)			2 13					—

CCD
Specs. Temp. -100.4°C

Dome Temp./Hum. $10.8^{\circ}\text{C}/59.9\%$

Transparency Conditions *partly cloudy* 270
→ clouded on quickly

Focus 6.90

Spectr. Temp.

Dome Temp./Hum.

462 0 50 1024 4 1 ccd/mt

Exp Mtr	Seeing	Pg. Mag	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	600x1mm C G=2661	250 μ m	4300 \AA	3/4	FOCUS TEST		
							as exact as possible	1		one res in 2 mag	
								5			
4090	5" $\frac{8}{6}$	5.83 6.81	07.5II 07II(A)					6	Bln - O*	4034050 not kept - film too weak due to cloud	
					S/N ~ 290:1			6	Bln O*	Observed through some cloud + v. poor seeing at times	
								7			
								8			
5175		3 6.2+	07.5IAf			S/N ~ 330:1		9	Bln O*	observed through some cloud	12.4K
								10			
								11			
5000		B 5.9+	0.9I(G)			S/N ~ 375:1		12	Bln O*		12.4K
								13			
								14			
5000		B 5.965	0.6II			S/N ~ 345:1		15	Bln O*		13.1K
								16			
								1			

271
Pg 2

Emulsion Batches:

Date 1995 May 5/6 Observers [Bin.] III / Smt

Plate No.	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 32785	Comp			2 17 24				Fe Ne clear	20
86	HD 196 980	19 42 24	31 52 00	2 18 40		1 ^h 58 ^m E		Fe Ne clear	30/70
87	Comp			3 12 05				Fe Ne clear	20
88	Bias (4)			3 15					—
89	Comp			3 20 38				Fe Ne clear	20
90	HD 207 198	21 42 03	61 59 59	3 21 51		3 ^h 32 E			794
91	Comp			3 40 03				Fe Ne clear	20
92	Comp			3 40 22				Fe Ne clear	20
93	HD 207538	21 44 36	59 14 00	3 47 26		2 ^h 52 ^m E			1830
94	Comp			4 18 37				"	20
6440956-59	HD 176844 x4	18 57 03	+40 32 36						.067
60/61	" x2				4 25	0 02 W	87° Alt		.133
cc 32795	Bias (4)			4 28					—
796-804	FLAT x9					0 10 W	+41°	Tung dear	5
05/06	INBOARD/OUTBOARD							Fe Ne clear	10/20

CCD Spectr. Temp. ... -100.5°C ... Dome Temp./Hum. ... 0.5°C / 74.8% Transparency Conditions ... Clear ... 272

Focus ... G:90

Spectr. Temp. ... Dome Temp./Hum. 7.0°C / 67.2% @ seeing test

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion-Element	P.H.	Program	Remarks	Quality	
		B		Cass CCD	600 21mm G=2661	250μ	4300Å	17				
5005	7.53	0.75 III	(4r)		S/W ~ 350:1			18	Bin 0*		12.0K	
								19				
								1				
								20				
5015	6.27	0.91b III			S/W ~ 350:1			21	Bin 0*	Spikes at red end of cm saturated		
								22				
								23				
3645	7.31	0.9.0 I			S/W ~ 135:1			24	Bin 0*	cut short: Sun comets	5.3K	
								25				
	6.65	MZ III		EEV CCD GUIDE CAMERA*	A NEW INTENSIFIER FIRST USAGE	AGAVE 250μ		-	SEEING TEST	Dome W, med. NW wind, clear 7.0°C, 67.2%, 82% co-work seeing has improved greatly over the course of the night.		
								-	"			
								1				
				All to Perseus & WORM					26			14K → 12.9K
								3/4	FOCUS TEST			

pg #1
273

Date 1995 May 6/7 Observers Zhu/Smt

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.
CC32807/108	INBOARD/ OUTBOARD							FeNe clear	20/35
09-28	BIAS x 20								—
29	COMP							FeAr clear	60
30	CERES	calc 2000.0 9 18 42	27 15	lost in cos part. 23 41 33		5 21 W			1000
31	COMP							FeAr clear	60
32-36	FLAT x 5							Tung clear	25
37-39	DARK x 3							—	180
40	COMP							FeAr clear	60
41	HD161501	11 35 47	+34 46	0 52 07		3 57 W			300
42	"			01 00 03		4 26 W			1530
43	"			1 27 23		4 58 W			1800
44	COMP							FeAr clear	60
45	COMP							"	"
46	HD121370	13 49 55	+18 53 56	2 10 52		3 04 W			400
47	"			2 19 25		3 16 W			550
48	"			2 31 20		3 28 W			650

Exp. Mtr.
Foot.
Spectr.

Exp. Mtr.

Foot.
Spectr.

486

3280

17460

19150

57960

19300

70000

SPECTR. Temp. -100.5°C Dome Temp./Hum. 8.5°C @ FOCUS TEST Transparency Conditions .. *clear, calm* 274
 Focus 61.84 Dome Temp./Hum. $7.3^{\circ}\text{C}/48.47\%$ @ *OVERS*
 SPECTR. Temp. Dome Temp./Hum. 412 0 50 1024 4 1 *cdfont*

Exp. Mtr.	Secing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	Exp.	Program	Remarks	Quality
RG 39 FILTER				1.4K5 CCD	1500 L _{max} G = 4466	50 μm	4300 Å	3/4	FOCUS TEST	in focus	
								1			
								5			
486		✓ 8.4	G2V					6	M.in planet	cut short due to 4A limit might not be it, ex too big but normal, and on vis. star's eye piece not slit. $\alpha = -30^{\circ}$ when on slit to normal	
								7			
								8			
								9			
								10			
3280	3"	B 6.05	G8V					11	Zhu	S/N ~ 90:1	
17460		"	"					11	"	S/N ~ 250:1	
19050		"	"					11	"	S/N ~ 250:1	
								12			
								13			
57960		B 3.26	G0IV					14	Zhu	subtracted 1st 200 rows of strongest column, S/N ~ 400:1	
69000		"	"					14	"	trailing to heat up S/N S/N ~ 480:1	
78000		"	"					14	"	S/N ~ 525:1	

pg #2

275

Date 1995 May 6/7 Observers Zhu/Smt

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.
CC32849	COMP							Fair clear	60
50	COMP							"	"
51	HD186408	19 39 09	+50 17 35	3 00 25		1 34 E			1584
52	COMP							"	60
53	HD186427	19 39 12	+50 17 08	3 31 57		0 59 E			1800
54	COMP							"	60
CG40962 -65	HD176844 x 4	18 57 03	+40 32 36						.067
66/67	" x 2					4 16 05	0 02 E	87° Alt 1.0016 airmass	.133
55-74	BIAS x 20								-
75-79	FLAT x 5							Tung claw	25
80-82	DARK x 3							-	180
83/84	INSOURED INTROBRED					0h	~44°	Fair clear	40/70

CCD

Spectr. T

Focus

Spectr. T

Exp. Mir

No. 39

FILTER

16000

9864

^{CCD}
 Spectr. Temp. -100.4°C Dome Temp./Hum. $6.9^{\circ}\text{C}/46.2\%$ Transparency Conditions *clear* 276
 Focus 6.84
 Spectr. Temp. Dome Temp./Hum. $6.7^{\circ}\text{C}/46.2\%$ @ *5000* N DOME FAN ON
 tested. 412 0 50 1024 4 1 *ccdfmt*

Exp. Mtr	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	1800 Elm G = 4466	300 μ	4300 \AA	15			
								16			
10000	3"-4"	^B 6.80	G2V					17	Zhu	16 Cyg A S/N > 200:1	
			G2V					18			
9864	4"	^B 6.86	G5V					19	Zhu	16 Cyg B S/N ~ 200:1	
								20			
	4"	^V 6.65	M2III	EEV CCD GUIDE CAMERA		above 300 μ		-	SEEING TEST	Dome W, light W wind, clear all night, 60% on catwalk first frame not @ optimum focus.	
				CASS CCD				1			
								2			~13K
								3		clock drive off now.	
								3/4	FOCUS TEST	6.4 $^{\circ}\text{C}$	

All to Persens & WORM

pg #1
279

[Hlw]

Emulsion Batches:

Date 1995 May 7/8 ... Observers {V45} Smt ... Mki. as backup

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC32885/ 86	INBOARD/ OUTBOARD			21 48*				FeNe clear	25/38
87	BIAS x4			20 52					-
88	COMP							FeNe clear	25
89	BD-02 3000	9 48 10	-3 13 04	20 58 55		2 17 W			1600
90	COMP							FeNe clear	25
CG40968 -71	HD108100 x4	12 20 06	+43 25						.067
72/73	" x2				21 43	2 ^m W	89° Alt.	1,000 airmass	.133
91	BIAS x4			21 54					-
92	COMP							FeNe clear	25
93	BD+01 2447	10 23 49	+01 21 36	22 00 02		2 36 W			1200
94	COMP							FeNe clear	25
895-903	FLAT x9					2 46 W	0° 51' N	Tung 1/2 Ap.	8
04	BIAS x4			22 31					-
05	COMP							FeNe clear	25
06	AC-2 1513-110	11 28 10	-2 51 02	22 38 01		2 30 W			2400
07	COMP							FeNe clear	25

CCD Spectr. Temp. -100.3°C Dome Temp./Hum. $9.5^{\circ}\text{C}/39.4\%$ Transparency Conditions $\text{clear, } 1^{\text{st}} \text{ } 1/4 \text{ moon } 280$
 Focus 6.81 @ opening of dome

Spectr. Temp. Dome Temp./Hum. $8.0^{\circ}\text{C}/40.2\%$ FANS OFF
 @ 1st exposure's end. 410 0 50 1024 4 1 CCD font

Exp Mtr	Seeing	Pig Mag	Sp	Inst.	Grating/Tilt	Slit	Emulsion	P.H	Program	Remarks	Quality
NO FILTER				CASS CCD	1800 λ/mm G=5140	300 μ	5303A	3/4	FOCUS TEST	* GP1B problems - lost 1st focus test T=7.5°C when completed. SOM OF 4 BIASES	
								1			
								5			
550	4"	10.54	M0					6	HLW {V ₄₅ }	V ₄₅ 560, <15° from Moon	SW 40:1
								7			
	4"	1.14	FZ	CCD CCD GUIDE CAMERA		above 300 μ		-	SEEING TEST	Dome W, very light SW wind, clear 7.5°C, 40.9%, 50% catwalk @ seeing test end.	
				CASS CCD				-	"		
								1			
								8			
738		9.65	M2					9	{V ₄₅ } ² Marcy Std. Vel.	V ₄₅ 127, close to Moon	SW ~50:1
								10			
								2			14.6K -13.7K
								1			
								11			
460	5"	11.2	11.2					12	{V ₄₅ }	V ₄₅ 613	SW ~30:1
								13			

pg #2

281

Emulsion Batches:

Date 1995 May 7/8 Observers {Vus} Smt Km as backup

Plate No.	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 32908	COMP							FeNe clear	25
09	AC+17 478-60	13 03 29	+17 30 27	23 29 31		1 46 W			2400
10	COMP							FeNe clear	25
11	BIASx4			0 12					-
12	COMP							FeNe clear	25
13	HD119850	13 40 36	+15 27	0 21 01		1 31 W			660
14	COMP							FeNe clear	25
15	COMP							FeNe clear	25
16	BD+38 2445	13 20 59	+38 14 21	0 42 14		2 38 W			2160
17	COMP							FeNe clear	25
18	BIASx4			1 21					-
19	COMP							FeNe clear	25
20	BD+48 2108	13 15 27	+48 18 11	1 27 38		3 05 W			700
21	COMP							FeNe clear	25
22	BIASx4			1 45					-

CCD
Spectr. Temp. -100.3°C

Dome Temp./Hum. $6.5^{\circ}\text{C}/42.4\%$

Transparency Conditions *clear*, ^{1st} $\frac{1}{4}$ Moon setting 282

Focus 6.81

Dome Temp./Hum. $5.9^{\circ}\text{C}/43.8\%$ @ 0032920

FANS OFF
410 0 50 1024 4 1 ccd/mt

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Resolution	P.T.	Program	Remarks	Quality
NO FILTER				CASS CCD	1800 λ/mm G = 5140	306 μ	5303 \AA	14			
350	3.5	\checkmark 11.8	M0					15	{V ₄₅ }	V ₄₅ 686	S/N ~30:1
								16			
								1			
								17			
1296	4"	\checkmark 8.48	M1					18	{V ₄₅ } ^{Harvey} Std. Vel.	V ₄₅ 308	
								19			
								20			
438	4"	\checkmark 11.2	M0					21	{V ₄₅ }	V ₄₅ 689 AB	S/N ~40:1
								22			
								1			
								23			
1560	4"	\checkmark 8.5	M2					24	{V ₄₅ }	V ₄₅ 142 AB	
								25			
								1			

pg#3

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Date 1995 May 7/8

Observers {V453} Smt Km as backup

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.
CC32923	COMP							FeNe clear	25
24	BD+21 2763	15 17 25	+21 20 06	1 52 43		1 31 W			900
25	COMP							FeNe clear	25
26	COMP							FeNe clear	25
27	AC+26 37030	15 23 45	+26 08 16	2 17 31		2 17 W			2500
WORM CLASS ED 28	COMP							FeNe clear	25
WORM CLASS 29	BIAS x4			3 02					—
30	COMP							FeNe clear	25
31	AC+38 34548	15 30 11	+38 15	3 11 30		3 03 W			2405
32	COMP							FeNe clear	25
33	BIAS x4			3 54					—
34	COMP							FeNe clear	25
35	AC+53 2527-109	16 06 49	+53 12 11	4 01 11		2 53 W			900
36	COMP							FeNe clear	25
37	COMP							FeNe clear	25

Spectr. Temp. -100.5°C
 Focus 6.81
 Spectr. Temp.

Dome Temp./Hum. $5.7^{\circ}\text{C}/43.4\%$
 Dome Temp./Hum.

Transparency Conditions *clear*, moon has set
 284

FANS OFF
 410 0 50 1024 4 1 ccd/fat

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
NO FILTER				CAS CCD	1800.0um G=5140	300μ	5303A	26			
543		10.11	MOe					27	{Uys}	Vys 740	RA on card is: S/N=50:1 151755 but must be typo. early-type star there
								28			
								29			
524	4"	11.1	MO					30	{Uys}	Vys 744	
								31			
								1			
								5			
432		11.3	MO					6	{Uys}	Vys 746	S/N 40:1
								7			
								1			
								8			
555*	4"	16.19	MO					9	{Uys}	Vys 759	big red delta (-35) S/N 10:1 *sky getting bright
								10			
								11			

20
Spectr. Temp. -100.3°C
Focus 6:51
Spectr. Temp.

Dome Temp./Hum. 3.8°C/44.6%
" @ focus test

Transparency Conditions clear, bright sky now. 236

FANS OFF
410 0 50 1024 4 1 ccd/mt

Exp Mtr	Seeing	Pig Mag	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	PH	Program	Remarks	Quality	
W E ₁ 1330+		✓ 9.83	MO	CASS CCD	1600 Å G-5140	30µm	5303 Å	12	EV ₁ 3 Mercury Std Vel.	Vys 182A, *BRIGHT sky, subtract it.	1/5N N30:1	
								13				
								1				
								3/4	FOCUS TEST	set too warm T drop of 4°C since last test		
Backed up to WORM & Perseus.												
								↑				
									only to cc32928.fts then WORM full (CASS CCD I) Full night of data still on E-CASS SW.			
									cc32929.fts → cc32942.fts on WORM: CASS CCD I			
									May 9/95			

CCD
Spectr. Temp. ... -100.4°C

Dome Temp./Hum. 9.8°C / 35.0% Transparency Conditions partly cloudy / partly clear.

288

Focus 6.81

Spectr. Temp.

Dome Temp./Hum. ONLY N DOME FAN ON
910 0 50 1024 4 1 ccd fnt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
NO FILTER								3/4		T ~ 10.5°C at this time	
								5			
458*		110	MO					6	{Vys}	Vys 105, lots of clouds beginning to end.	
								7			
								1		clouded out	
								8		completely.	13.8K → 12.9K
								1			
All backed up to WORM & Perseus.											
CAS CCD I											

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~~11/11~~ pg#1

Fri/Sat

High voltage req'd reset at start up

Emulsion Batches:

Date

~~1995 12/12/13~~
~~1995 11/12~~

Observers

~~[Blk] III/ITn~~
~~[Blk] III/ITn~~

CSS 386 Time updated to W.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.
CC32953/54 54	WASP ABR10 OUTBOARD	CC 32953/54	In board/OUT BOARD	HEATMAN		00 06 E	44°	Fear clear	40/66
55	Bias (4)								
56	Comp			20 27 22				Fear clear	60
57	HDB6360	9 52 51	+12 55 19	20 32 48		1:46 W			370
58	Comp			20 40 50				Fear clear	60s
59	Comp							Fear clear	60s
60	HD103095	11 47 13	+38 26 10	20 57 06		00 20 W			699
61	Comp							Fear clear	60s
CG40977A 77	HD103095			22 05 2		00 05 W		4x	67ms
CG40978A 78	"							2x	133ms
CC32962	BTHS(4)							—	
63	Comp			21 20 42				Fear clear	
64	HO112028	12 48 23	83 57 24	21 24 23		0 12 E			573
65	Comp			21 35 32					
66/74	FLATS x 9					00 00	83 25 clear	TUNG A	17s

CCO
Spectr. Temp. $-100 \pm 2^\circ$

Dome Temp./Hum. ~~11.2/70%~~
160°C 59.1% H

Transparency Conditions *Fine... slightly hazy* 290
(smog)

Focus 6.78

90 cgs/in

Spectr. Temp.

Dome Temp./Hum.

E Lambda

410 0 50 1024 4 1 CCD FMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B639 F7/102				Cass C60	1800 Bl/mm $\lambda = 4575$	300 μ m	4475A	3/4	Focus TEST 3 in SB		
								1 ci			
								6 ci			1.7K
6800		B 5.22	BA II	* NOTES: LATER OPTICAL RACK PROBLEMS (MAY HAVE BEEN LOOSE DURING THESE OBS.)				7 ci	Bln SB		4.8K
								8 ci			
								9 ci			1.7K
3900	1.2"	V 6.45	68Vp					10 ci	sid vel	high proper motion $\Delta RA = 32''$ $\Delta Dec = -10'45''$	2.6K
								11 ci			1.7K
	1"	V 6.45	68Vp						Seeing test	Poor SW, no wind Only NE Fan on by now	
								1 ci			
								12 ci			
7210		V 5.2	ADWV					13 ci	Bln SBell		5.8K
								14 ci			
								15 ci			12K

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Pg 2

Fri. 1 Sat

Emulsion Batches:

Date 1995 MAY 12/13 Observers [B] III / Jn

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
CL 32975	Bias (4) (Average of 4 bases)			21 49				-	
76	Comp			21 53 10				R Ar clear	60
77	HD 164852	17 58 07	+20 49 60	22 02 50		4 42 E			772
78	Comp			22 17 25				R Ar clear	60
79	Bias (4)			22 50					
80	Comp			1 03 21				R Ar clear	60
NOTE: OUT OF SEQUENCE	84	HD 130841	14 45 21	-15 37 34	1 20 19 1 05 20	1 37 W 1 44 E			216 216
	85	Comp		1 25 36 1 05 20	1 07 20			R Ar clear	60
	81	HD 130819	14 45 09	-15 34 53	1 05 20	1 26 W			351
	82	Comp		1 14 01				R Ar clear	60
	83	Comp		1 18 08					
	86	Bias (4)		1 29				-	
	87	Comp		1 35 34				R Ar clear	60
	88	HD 152614	16 49 17	+10 19 43	1 38 31		005 E		340
	89	Comp		1 44 55				R Ar clear	60
	90	Comp		1 49 55				R Ar clear	60

Spectr. Temp. Dome Temp./Hum. 14.5°C / 61.5% Transparency Conditions .. nice & clear 292

Focus 6.079

Spectr. Temp. Dome Temp./Hum.

(moon almost full)

Exp. Mtr	Seeing	Flg. Mag	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
8230	B	5.19	B3 IV	CCD	1800 81mm	300	4475 Å	1c	B1n SB		1.8 K
					4475 Å			1b			4.2 K
				* NOTE: OPTICAL RACK WAS * * <u>LOOSE</u> DUE TO PROBLEM * * WITH BEARINGS *				17			
								18			
								1		* down for a few hours due to rack problems at Libra	1.8 K
16500	V	2.75	Am					2			1.8 K
1870								6	B1n		1.8 K
								7c		d' Libra	1.8 K
2740	V	5.16	FS IV					3c	Tn		6.9 K
								4c			1.9 K
								5c			1.9 K
								1c			1.9 K
								19c			1.9 K
4500	N	4.28	B3 V					20c	B1n		9.0 K
								21c			
								22c			

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Pg #3

Fri/Sat

Emulsion Batches:

Date 1995 May 12/13 Observers [Blair] III / 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.
cc32991	HD164577	17 56 41	+ 01 18 27	1 52 45		0 56 E			445
92	Comp			2 01 07				Fe Ar clear	60
93	Comp			2 05 54				Fe Ar clear	60
94	HD186205	19 37 54	+ 08 59 00	2 08 37		1 53 E			2115
95	Comp							Fe Ar clear	60
96	Bias (4)			2 48				—	
97	Comp			2 55 26				Fe Ar clear	60
98	HDE 235679	21 55 00	54 00 00	02 58 15		3 15 E			2415
99	Comp							Fe Ar clear	60
{33003	Bias (4)			4 02				—	
{33000	Comp							Fe Ar clear	60
01	HDE 235679	21 55 00	54 00 00	03 48 21		2 55 E			691
02	Comp							Fe Ar clear	60
04	Comp							Fe Ar clear	60
05	HD177724	19 00 49	+ 13 42 53	04 09 29		0 08 W			43

Spectr. Temp. Dome Temp./Hum. 12.0°/60.2% Transparency Conditions *Fine* 294

Focus *6.78 - kept same for hrs due to temperature drop.*

Spectr. Temp. Dome Temp./Hum.

Exp. Nr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1419D		V 4.46	A1 V	CASS CCD	1800 21mm G=4575	300 um	4475A	23c	Bln		8.4K
								24			1.0K
								25			1.9K
1560		B 8.48	B2 V					26	Bln - He*		0.8K
								27			1.0K
								1			
								28			1.9K
1415		B 9.21	B2.5 Ib					29	Bln SB		
								30			
								1c			
<i>no filter</i>	<i>1.2"</i>	B 9.21	B2.5 Ib		1800 21mm G=6090	306 um	6604A	11	Bln SB		
900		V 8.86	B2.5 Ib					12	Bln SB		3K mag 1.2K cm
								13			
		V 2.99	A0 I _n					14			
8000								15	Telluric std.	Air MASS: 1.15	7.3K

Spectr. Temp. Dome Temp./Hum. 12.8°/61.5% Transparency Conditions a clear morning 1:296
 Focus 6.78
 Spectr. Temp. Dome Temp./Hum.

Exp. Mtr	Seeing	Pig Mag	Sp	Inst	Grating/Filt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCP	1800 flm G=6090	800 μm	6604A	16.1			
								17/18	Focus TEST	(Just Right)	
								19			B.4K
								1			

+10.8° C set 6.78 still

set 6.78, ~~+10.8° C~~

CCD Spectr. Temp. -100°C

Dome Temp./Hum. +12.7°C 72.0% H

Transparency Conditions Thin cloud 298

Focus 6.81

90 c gain 410 0 50 1074 4 1

Strong East SE wind

Spectr. Temp.

Dome Temp./Hum. +11.7°C CCD FWHM 6 km/s

increasing cloud 76% H

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
BG 39 Filter				CASS CCD	1800 l/m G = 49.66	30x	4300A	3/4	focus test		
								6			
3800	6-15"	5.31	G8V					7		120/1 S/N	
								8			
2560								9		Hard to keep close Fainter comparison off slit.	
								10			
5000								11			
								12			
								1/2			
								13			
2740	8"	4.85	G0V					14		too cloudy, 2 100/1 S/N in funny mode	
								15			
								1/2			
								17		13K 400 max	

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Mon/Tues

Emulsion Batches:

Date 1995. m.Hy. 15/16... Observers .. Pln. / T.A.....

C55 386 3 secs ahead of W.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.
CC 330	^{13/14} in board/outboard		HARTMAN			00 29W	+36°	Felt clear	10/22
45	BIAS(4)		Average of 4 biases						
^{46/54}	FLATS x 9					00 18E	+41 27	TUNG check	5s
55	Comp			21 14 30				Felt clear	30s
56	SKY	12 29	+41 54 03	21 15 52		00 00 17	+41 22	DRIVE OFF	3560
57	BIAS(4)			22 15 47					
58	BIAS(4)			00 23					
59	Comp							Felt clear	30s
60	SKY			00 26 37			+37 35		3601
61	SKY			01 27 16		00 00 17W	"		3600
62	SKY			02 27 35		"	"		1953
63	Comp							Felt clear	30s
64	BIAS(4)								
^{65/66}	in board/outboard		HARTMAN			"	"	Felt clear	10/22

CCD Spectr. Temp. -100°C

Dome Temp./Hum. $+15.3^{\circ}\text{C}$ 42.0%RH

Transparency Conditions. Mostly cloudy. \approx clear 300

Focus 6.85

Dome Temp./Hum. $+12.5^{\circ}\text{C}$ 51.0%RH

CCD FMT Flat well centered tabs
428 0 50 1024 4 1
MAX ADU

CCD Spectr. Temp. -100.3°C

Dome Temp./Hum. $+12.5^{\circ}\text{C}$ 51.0%RH

Exp. Mtr	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Exposure	P.H.	Program	Remarks	Quality
B639 Filter				C155 CCD	C60 h/m G=2651	250	4300A	3/4	focus test		
exp meter	Finely balanced.							1/2	min max 128 151	x 14.193	5.728 Stats
								2			148K
								5		Full moon far SE	3.9K
285								6	sky at zenith	(Orion) Thin mostly clear Half cloudy. <u>DRIVE OFF</u>	900
								7	"	Rain at 22 30 CCOT -100.7°C	
								1/2		CCOT $-100A^{\circ}\text{C}$	
147								8		Dome T $+14.3^{\circ}\text{C}$	4K
147								9	(sky well above of zenith)	Clear now (mostly clear) (reduction)	500
162								10	"	1/2 cloudy	590
58								12	"	thin cloud	
								13			4.4
								1/2			
1252								3/4			
									911 to worm & perseus		

CCD Spectr. Temp. -101.6°C

Dome Temp./Hum. 11.0 / 57.6%

Transparency Conditions Some thin cloud 302

Focus 237

→ clear

Spectr. Temp.

Dome Temp./Hum. 8.3°C / 69.6% @ HD8890

Exp Mtr	Seeing	Pig Mag.	Sp	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Max Quality (P.V.)
				Echelle	300 X					0 0 128 1024 8 1 cadant	
				18.45	5790	60µ	6100A			T=13.8 F=.237	
								1/2		0 0 256 1024 4 1 cadant	
								3			
750		2.61	K0III					4	KK Vis Bin	Leo A	12.7K
								3			
752	ugh.	3.80	G7III					5	KK Vis Bin	Leo B not really separated.	8.9K
								3			
750		2.61	K0III					4	KK Vis Bin	Leo A	
								3			
								3		Telescope on E side.	
750		2.0	F8Ib					4	KK		13.5K
								3			
610								5	KK		16.5K
								3			16.5
								3			

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Pg #2

Emulsion Batches:

Date 1995 May 17/18 Observers KK/STn/SmT

Plate No.	Object	R.A.		Declination		Starting Time		Ending Time		Hour Angle		Comparison	
		1900	1900	1900	1900	E.S.T.	E.S.T.	E.S.T.	E.S.T.	End	Declination	Type/Filter	Exp.
5 CE0893	HD 8890	1 22 34	+88 46 26	23 02 56		23 02 56		11 57 E					500
36	COMP											ThAr	1
37	BIAS(4)					23 14							—
38	COMP											ThAr	1
39	HD 138918	15 30 00	+10 52 19	23 30 33		23 30 33		0 06 E					2000
40	COMP											ThAr	1
41	HD 138917					0 06 46		0 49 W					3120
42	COMP											ThAr	1
43	HD 138918					1 02 59		1 17 W					1200
44	COMP											ThAr	1
45	BIAS(4)					1 26							—
46-51	FLAT x 6							3 11 W		+14°			2.5 s
52	BIAS(4)					2 34							—
53	COMP												
54	HD M6361	16 10 56	+34 06 42	2 50 19		2 50 19		2 21 W					1217

Spectr. Temp. Dome Temp./Hum. 8: 2°C / 64.9%

Transparency Conditions ... clear → thin cloud ... 304

Focus 23.7

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 41 ccd fwt

Exp. Mtr.	Seeing	PIG Mag.	Sp.	CCD Inst. ECCHELLE	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
385	5"	2.0	F81b	18.45	300 μ /mm .5790	60 μ m 400 μ m H = .205	6100 Å	4	KK		1.3K
								3			
								1/2			
								3		telescope on W side again.	
288		4.20						4	KK Vis Bin	thin cloud here → increasing	4.1K
								3			
154		5.0?						5		clouding in.	
								3			
43								4		cut short due to cloud	1.0K
								3			
								1/2			
						60 μ m W 600 μ m H = .205		2		tscale set to 100!	1.8K → 1.7K
								1/2		tscale back to 1000.	
						60 μ m W 400 μ m H = .225		3		patchy cloud	
29	4"-5"	5.58	?					4	KK Vis Bin	brighter of 2	1.1K

CCD
Spectr. Temp. -102.9°C
Focus 237
Spectr. Temp.

Dome Temp./Hum. $6.5^{\circ}\text{C}/69.2\%$
Dome Temp./Hum.

Transparency Conditions *patchy clouds* 306
0 0 256 1024 4 1 CCD Port

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst. ECKELLE	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				18.45	300 λ/mm 5790	600 W 400 μH	6100 Å	3			
15	4"	6.59						5	KK Vis Bin	fainter one now guided on brighter for a tiny bit while in thick cloud. they getting brighter.	900
								3			
								1			
								3			
378		2.19						4	Telluric Std.	close to Moon & Sun coming up.	3.7K
								3			
								1		Sun up.	

All backed up to WORM & Perseus.

p941

307

Date 1995 May. 18/19.

Observers

[KK] SIn / Smt

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.
ce08963	BIAS (4)			20 56					
64	COMP							ThAr	1
65	HD89484	10 14 28	+20 20 51	21 07 14 20 57 43		2 19 W			232
66	COMP							ThAr	1
67	HD89485	10 14 28	+20 20 49	21 15 16		2 37 W			837
68	COMP							ThAr	1
69	HD89484	10 14 28	+20 20 51	21 32 05		2 46 W			334
70	COMP							ThAr	1
71	BIAS (4)			21 40					—
72	COMP							ThAr	1
73	ADS9031	13 44 30	+27 21	21 49 13		0 08 E			1435
74	COMP							ThAr	1
75	ADS9031			22 16 11		0 35 E			2400
76	COMP							ThAr	1
77	ADS9031			22 59 06		0 56 E			1002
78	COMP							ThAr	1

CCD Spectr. Temp. -100.4°C

Dome Temp./Hum. 12.1°C/59.1%

Transparency Conditions .. mostly clear → thin cloud all over.

Focus 23.7

Spectr. Temp.

Dome Temp./Hum.

0 0 256 1024 4 1 CCD flat 308

Exp. Mtr	Seeing	Prg. Mag.	Sp.	CCD Inst. ECHELLE	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				18.45	30021-5790	60µm 400µm	6100Å	1			
								3			
800	2.22	K02II						4	KK Vis Bin	saturated on 1st attempt & Leo A	94.9K
								3			
845	3.47	G7III						5	"	& Leo B	13.3K
								3			
800	2.22	K02II						4	"	& Leo A	15.3K
								3			
								1			
								3			
25	3"	7.59	?					4	"	brighter & N	500 above Wg
								3			
3	8.06	?						4	"	fainter & S thin wispy clouds	350 above Wg
								3			
0	7.59							4	"	brighter & N seeing deteriorating thicker haze now cloud @ end.	100 above Wg
								3			

309
pg # 2

Emulsion Batches:

Date 1995 May 18/19 Observers [KK] S.T. / Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE08979	BIAS(4)			23 18					—
80-86	FLAT x 7					4 23 W	+27°	Tung	2
87	BIAS(4)			1 13					—
88	COMP							ThAr	1
89	HD8890	1 22 34	+88 46 26	1 15 26		9 49 E			271
90	COMP							ThAr	1
	HD8890			1 28 00 1 21 34		9 36 E 9 42 E			278
91	COMP							ThAr	1
92	HD8890			1 34 57		9 31 E			177
93	COMP							ThAr	1
94	HD8890			1 39 22		9 26 E			200
95	COMP							ThAr	1
96	BIAS(4)			1 56					

CCD Spectr. Temp. -100°C Dome Temp./Hum. $10.1^{\circ}\text{C}/52.7\%$ Transparency Conditions $\text{cloudy} \rightarrow \text{clearing}$ 310
 Focus 237
 Spectr. Temp. Dome Temp./Hum. $9.9^{\circ}\text{C}/56.3\%$ 2nd gen 0 0 256 1024 4 1 CCD/Int

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	CCD Inst.	X Grating/Tilt	Slit	Emulston	P.H.	Program	Remarks	Quality
				18.45	300 21mm .5970	60um W 400um H	G100A	1			
						60um W 600um H =.205		6		closed for ~ 1 hour	13.7K
						60um W 400um H		1			
800		2.0	F8Ib					3			
								5	KK		15.8K
								3			
800 750								5	KK	wildly saturated by then 5 orders on 1st attempt & 2nd.	
								3			
600		2.0	F8Ib					5	KK		12.4K
								3			
~600								5		little bit of cloud.	10.2K
								3		clouded out again.	
All backed up to WORM & Perseus.											

COO
Spectr. Temp. -100.4°C

Dome Temp./Hum. 13.5°C/53.7%

Transparency Conditions clear 312

Focus 2.37

@ focus TEST

Spectr. Temp.

Dome Temp./Hum. 12.5°C/52.9%

Exp Mtr	Seeing	Pig Mag	Sp	CP Inst ELKELÉ	X Grating/ Tilt	Slit	Jewelston	P.H.	Program	Remarks	Quality
				1845	300 2/ mm .5790	600 W 420 H	6100Å	2/3	FOCUS TEST	0 0 128 1024 81 ccd/fit set a bit cool, T dropping; keep.	
				"	"	"	"	1		0 0 256 1024 4 1 ccd/fit	
								3			
695		1.36	BTV					4	Telluric Std	Regulus (2 Leo)	6.0K
								3			
								3			
750		2.98	G 311b					5	Std. Vel.	ε Leo	12.4K
								3			
								1			
								3			
750		2.0	F81b					3	KK		12.2K
								3			
750								6	KK		10.7K
								3			
750								6	KK		11.3K
								3			

M #2
313

Date 1995 May 19/20 Observers [KK] Stn. / Smt

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.
CE09014	BIAS(4)								—
15	COMP							ThAr	1
16	HD154906	17 03 15	+54 36 07	21 58 25		3 15 E			1200
17	COMP							ThAr	1
18	HD154905	17 03 15	+54 36 07	22 21 55		2 52 E			1200
19	COMP							"	1
20	HD154906			22 45 20		2 27 E			1217
21	COMP							"	1
22	HD154905			23 11 57		2 00 E			1300
23	COMP							"	1
24	BIAS(4)			23 37					—
25	COMP							"	1
26	ADS9842 A	15 50 42	-1 54	23 50 00		0 07 W			2430
27	COMP							"	1
28	ADS9842 B			0 32 58		1 05 W			3333

CCD Spectr. Temp. -100.4°C Dome Temp./Hum. $11.5^{\circ}\text{C}/54.7\%$ Transparency Conditions *clear* 314

Focus 237

Spectr. Temp. Dome Temp./Hum. $0\ 0\ 256\ 1024\ 4\ 1\ \text{ccdint}$

Exp. Mtr	Seeing	Pig. Mag.	Sp.	CCD Inst. <i>EMULE</i>	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				18.45	300 L/mm .5970	6 μm W equant	6100A ^o	1			
								3			
197	2.3"	5.65						4	KK Vis Bin	northern one of very close pair of same magnitude.	2.6K
								3			
156	3"	5.70						5	"	southern of very close pair	2.5K
								3			
219	3"	5.65						4	"	brighter & N again	2.7 K
								3			
151		5.70						5	"	southern of very close pair	2.5K
								3			
								1			
								3			
16	3"	7.20						4	"	brighter & S	900
								3			
0	3"	7.70						5	"	fainter & N	200 above 6/9

pg # 3
315

Emulsion Batches:

Date 1995 May 19/20 Observers [kk] STn / Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CE09029	COMP							ThAr	1
30	ADS9842 A	15 50 42	-1 54	1 31 21		1 39 W			1850
31	COMP							ThAr	1
32	BIAS(4)			2 06					-
33	COMP							"	1
34	HD161096	17 38 32	+4 36 32	2 12 47		0 21 W			1150 780
35	COMP							ThAr	1
36	COMP HD165341							"	1
37	HD165341 A	18 00 24	+2 31 22	3 03 40		0 48 W			1030
38	COMP							ThAr	1
39	HD165341 B			3 23 28		1 25 W			2100
40	COMP							"	1
41	HD165341 A			4 00 43		1 43 W			915
42	COMP							"	1
43	BIAS (4)			4 19					-
44-50	FLAT x 7					3 12 W	+2°	Tung	2

CCD
 Spectr. Temp. -100.4°C Dome Temp./Hum. $8.4^{\circ}\text{C}/57.0\%$ Transparency Conditions *clear* \rightarrow *thin wispy cloud*
 Focus 23.7 316
 Spectr. Temp. Dome Temp./Hum. $7.2^{\circ}\text{C}/59.9\%$ @ end of night. 0 0 256 1024 4 1 *ccdata*

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst. FCHERLE	X Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
				18.45	500 lines 5790	625 W 400 μ H	6100 \AA	3			
21	2-3	7.20						4	KK Vis Bin	brighter & S	400 above b/g
								3			
								1			
								3			
790		2.77	K2 III CN0.5					6	Std. Vel	β Oph	9.8K
								3			
								3		some thin cloud now	
284	4	4.20	K0V					4	KK Vis Bin	Seeing deteriorating hardly separable. Northern	5.1K
								3			
110		5.99	?					5	"	southern. 2 stars hardly separable.	
								3			
410*		4.20	K0V					4	"	northern 2 stars barely separable * bright sky	5.2K
								3			
								1			
								3		All backed up to WORMA Perseus.	12.3K

(you mean "2 sec" Po? To mthg 20)
 Yes. Sent
 see W
 400 μ H

317

p921

SAT/Sun

Date 1995 MAY 20/21

Observers

[KK] T.A.

Emulsion Batches:

C55 386 Time set to WWV. Time. It was 7 secs ahead

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.
CE09051	BIASCA)				23 37						
52	Comp									THA	1s
53	HD889D	01 22 34	+88 46 26		23 49 19						305
54	Comp									THA	15 278
55	HD889D				23 56 46			10 57 E			298
56	Comp									THA	1s
57	HD889D				00 04 36			10 46 E			
58	Comp									THA	1s
59	Comp									"	"
60	HD 146 361	16 10 56	+34 06 42		00 30 12			00 18 W			1977
61	Comp									THA	1s
62	HD 146 362	16 10 56	+34 06 42		00 58 07			00 47 W			1652
63	Comp									THA	1s
64	BIASCA)										
65	HD 146 361	16 10 56	+34 06 42		01 32 44			01 10 W			947

CCO Spectr. Temp. -100.9°C Dome Temp./Hum. $+13.3^{\circ}\text{C}$ 87.8% Transparency Conditions \dots *slightly hazy* \dots 318

Focus \dots 2.37 unchanged \dots 90C gain 0 0256 024 41 To some cloud.

Spectr. Temp. \dots Dome Temp./Hum. \dots *c. Lambert* Fog coming too.

ADU
max

Exp. Mtr	Seeing	Pr Mag	Sp	Inst <i>Echelle</i>	XGrating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				1845	300 0.5790	H: 60 400	6100A	1/2			
								3			10K
100	2"	20	F8J6					4	KK pgn	Δ 00 10 57 Tel west + 00 01 39 side	9.5K
105								3			5K
165								4			6K
								3			
145								4			15K
								3			9.5K
								3			
66	(12")	5.58	dfg					5	KK Vis Bin	some cloud Brighter and NE of pair	1.6K
								3			
6	13"	6.59	dG1					6	KK Vis Binary		6.50
								3			
		5.58	dfg					1/2		Noisy - 159-161 ADU around Bands (STRIPES)	
74	2"	5.88	dfg					5	KK Vis Bin	Brighter again	1.3K

CCD Spectr. Temp. Dome Temp./Hum. ~~70~~ 47°C 86% Transparency Conditions ... Inct. clouds & fog 320

Focus 237

CCD Spectr. Temp. -100.5 Dome Temp./Hum. 41.1°C 88% H

MAX

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
				1845	5790	W 60 H 400 = 225	6100A	3			11.6K
								3			
130	4"	2.77	K2 III CNO.5					2	Std Vel		2.9K
								3			10.7K
570		2.77	K2 III CNO.5					2	Std Vel Repeat		14K
								3			
						600		1/2			
								3			
350	4"	2.99	H α V α					4	Telluric Std	H α W α = 1.20	3.7K
								3			10.3K
						H 600 = 205		3			15.5K
100	tscale					H 400 = 225		7/8		CCD FWHM 0.01281024 8 1	
								1/2		No T noisy like an earlier one.	
All to warm & focus.											

pg #1
321

Sun/Mon

Emulsion Batches:

Date 1995 MAY 21/22... Observers [KK] Jn./Smt.....

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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.
CE 09086/87	inboard/outboard					= 3 W	± 30°	ThAr	1/0/06
88	BIAS(4)			20 55					—
89	Comp							ThAr	1
90	HD 110379	12 36 36	- 0 54 03	21 12 32		00 13 W			180
91	Comp							ThAr	1
92	COMP							"	1
93	HD 110380	12 36 36	- 0 54 03	21 28 21		00 31 W			279
94	Comp							ThAr	1
95	HD 110379			21 35 20		00 45 W			656
96	Comp							ThAr	1
97	BIAS(4)			21 49					—
98	COMP							ThAr	1
99	HD 121325 A	13 49 43	- 7 34	22 03 44		0 10 W			1300
100	COMP							ThAr	1
101	HD 121325 B''			22 27 57		0 53 W			2430

Spectr. Temp. ^{COO} -99.8°C Dome Temp./Hum. +12.0°C 547% H Transparency Conditions ... Monthly ... Clear Nov. 322

Focus 237

Spectr. Temp. Dome Temp./Hum. +10.8°C / 59.9% H ^{90 C gain} _{10.0 0.99}
c. Laminator *Slit N S this Time* mAx

Exp. Mtr.	Seeing	PA Mag.	Sp.	Inst. <i>etelle</i>	Grating/ Tilt x	Slit	Emulsion	P.H.	Program	Remarks	Quality
				1845	300/45 5790 H	60a 90a	<i>NS</i> <i>subsegment</i> 6100A	7/8	00128102481 CCDFRT	Set for slightly cooler.	
								1	00258102441 CCDFRT		
								3			12K
5		3.48	FOV					4	KK Vis Bin	West end of pair	500
								3		intercepted by bird then	
								3			
255	2.4	3.50	FOV					5	"	East end	25K
								3			
270	3.5	3.48	FOV					4	"	Pool square from caustics	7.5K
								3			
								1/6			
								3			
27		6.60	F8V					4	"	brighter & W, just separated. ANS 90S3A	600 above 6/9
								3			
20		7.50	?					5	"	fainter & E ANS 90S3B	500 above 6/9

p9#2

323

Date 1995 May 21/22 Observers [kk] Tn / Smt

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.
CE09002	COMP							ThAr	1
03	HD121325 A	13 49 43	-734	23 10 58		1 20 W			1400
04	COMP							ThAr	1
05	BIAS(4)			23 36					
06	COMP							ThAr	1
07	HD136262	15 14 12	+2 08 37	23 45 23		0 27 W			1200
08	COMP							ThAr	1
09	BIAS(4)			0 08					-
10	COMP							ThAr	1
11	HD131156 A	14 46 46	+19 30 57	0 15 16		1 30 W			1500
12	COMP							ThAr	1
13	HD131156 B			0 42 49		2 06 W			2658
14	COMP							ThAr	1
15	HD131156 A			01 19 55		2 31 W			1319
16	COMP							ThAr	1
17	BIAS(4)			1 43					

CCD Spectr. Temp. -100.9°C

Dome Temp./Hum. 10.1°C/69.5%

Transparency Conditions. clear, some low fast moving clouds ³²⁴

Focus 237

Spectr. Temp. -100.7°C

Dome Temp./Hum. 18.7°C/73%

0 0 256 1024 4 1 cid/fnt

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	100 Inst. Eff. %	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				18.45	300 21 mm .5790	600 W 400 W NS	6100 Å	3			
21	3"	660	F8I					6	KK Vis Bin	brighter & w	550 above w/g
								3			
								1		9.7°C	
								3			
152		5.00	F8II-V					4	Std Vel.		2.9K
								3			
								1			
								3			
280	3"	4.74	G8V					4	KK U.S. Bin	brighter & SE, easily separated	4.6K
								3			
40	2.3"	690	F8V					5	"	fainter & NW, easily separated.	1.6K
								3			
233	2.3"	474	G8V					4	"	Re-focused to good round image Brighter one again	4.7K
								3			10.9K
								1/2			

325
A943

Sun/Mon

Emulsion Batches:

Date 1995.12.21/22... Observers [J.M.] T. & S.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
ce09118	Comp							ThAr	1s
19	HD156014	17 10 05	+14 30 15	01 50 12		00 22 W			350
20	Comp							ThAr	1s
21	HD156015			01 59 21		12 W			2800
22	Comp							ThAr	1s
23	HD156014			2 48 25		1 19 W			300
24	COMP							ThAr	1
25	BIAS(4)			2 56					—
26	COMP							ThAr	1
27	HD ADS 11632 A	18 41 42	+59 29	3 06 49		0 19 W			900
28	COMP							ThAr	1
29	ADS 11632 B	"	"	3 23 50		0 45 W			1417
30	Comp							ThAr	1
31	Comp							"	"
32	HD 8890	01 22 34	+88 46 26	3 55 35		6 59 E			174

Spectr. Temp. Dome Temp./Hum. 18.9°C 72.4% Transparency Conditions Fine 326

Focus .237

Spectr. Temp. Dome Temp./Hum. 0 0 256 1024 4 1 redflat

Exp. Mtr.	Seeing	P ₀ Mag.	Sp.	Inst. Echelle	Grating/ x Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				1845	3004/mm .5770 H	N/S 60- 400x	6100A	3			
740	2"	3.58	M61b					6	KK Dis Bin		12K
								3			
318	1.2"	5.40	G51b					2	KK Dis Bin	well separated despite mag difference	5.5 12K
								3			
430		3.50	M51b					6	"		9.8K
								3			
								1		8.7°C	
								3			
0	3"	8.90	dM4					4	"	brighter SW, faint part weak	150 above 2nd mag
								3			
0	2"	9.69	dM5					5	"	fainter & S Very weak only visible @ 270 msec Int + Vid Amplifier	180 above 1st mag
								3			
								3			
314		2.0	F81b					4	KK	into dawn.	10K

Spectr. Temp. Dome Temp./Hum. 8.2°C/76.7% Transparency Conditions clear, dawn is here 328

Focus 237

Spectr. Temp. -100.9°C Dome Temp./Hum. +8.1°C 77.2% H

0 0 256 1024 4 1 ccd fat

Exp. Mtr.	Seeing	Mag.	Sp.	exp Inst.	X Grating/ Tilt	Slit	Exposure	PH	Program	Remarks	Quality
				EKHEIE 18.45	200 L/min .5790	60μ W 40μ H	6100 Å	3			
~300	20	F8Ib						4	KK	dawn now.	9.9K
								3			
300								4	KK	cloud? slow counts. bright sky!	10.6K
								3			
100 + scale						60μ W 60μ H		3			126K
								1			
all backed up to Perseus.											

329
P4#1 Mon/Tues

Emulsion Batches:

Date 1995 May 22/23 Observers [E.K.] 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.
CE 0046417	in board / out board		HURTMAN			" 3 W	" +25°	ThAr	
009148	bias (4)								
49	Comp							ThAr	1s
50	ADS 7251 (A)	9 7.8	53 7	21 01 02		04 06 W			1800
51	Comp							ThAr	1s
52	ADS 7251 (B)	9 7.8	53 7	21 36 31		04 30 W			1457
53	Comp							ThAr	1s
54	ADS 7251 (A)	"	"	22 03 34		04 57 W			1461
CG 40980/52	" "	"	"	22 21				Correct Int -4x 067s	
55	Comp							ThAr	1s
56	bias (4)								
57	ADS 9167 (A)	14 9.7	55 48	22 43 18		0 37			1292
58	Comp							ThAr	1s
59	ADS 9167 (B)	"	"	23 09 37		01 04 W			1412
60	Comp								

No first comp?

CCO Spectr. Temp. -108.4° Dome Temp./Hum. $14.4^{\circ}\text{C}/55.5\%$ Transparency Conditions *Fine* 3.30

Focus $.241$

Spectr. Temp. Dome Temp./Hum. $5.17^{\circ}\text{C}/100\%$ *split original N/S*

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
				echelle 18.45	300 l/m 5790	N/S W: 600 H: 1000	6100A	7/8	focus test		
								1/2			10.4K
6	0.2"	7.64	NOV					4c		Airmass 1.27 West one of pair. <small>image slightly above focus</small>	270 above bkg.
22	1"	7.74	NOV					5c		Tel Focus = 2224 Rows	1.3 K
35	1"	7.64	NOV					4c			1.7 K
Headlock says 133ms	(1" or less)							3	Seeing test frames, <small>Left hand (west) on slit</small>		12.2 K
10	< 1" less than one	8.9	K2					6c		West one of close pair - pair well separated but hard to keep indiv. star on slit	400 above bkg
18	< 1"	9.1						4c		ES East = fainter of close pair (position angle 180°) 2 second separation.	400+ above bkg.
	Rally, I think								(I Really feel confident about separating these 2 stars with very attentive guiding) TA		

pg #2
331

Emulsion Batches:

Date # 1995 May 22/23 Observers [KK] 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.
CE 09161	B1A5(4)								
GC409- 84	ADS 9167 (A)	14 9.7	55 48	^{23 44} 23 47 58				4	270ms
CE 09162	ADS 9167 (A)	14. 97	55 48	23 47 58		1 40 W			1289
63	Comp							Th Ar	1s
64	Comp							Th Ar	1s
65	HD 136202	15 14 12	02 08 37	00 26 34		1 11 W			1200
66	Comp							Th Ar	1s
67	Comp							Th Ar	1s
68	HD 146051	16 09 06	-03 26 13	00 54 36		0 36 W 0 30 W			152 330
69	Comp							Th Ar	1s
70	Comp							Th Ar	1s
71	HD 8890	1 22 34	88 14 9	01 19 59		-9 30 E			117
72	Comp							Th Ar	1s
73	HD 8890	1 22 34	88 14 9	01 23 58		-9 26 E			166
74	Comp							Th Ar	1s
75	HD 8890	1 22 34	88 14 9	01 28 19		-9 22 E			132
76	Comp							Th Ar	1s

CCD Spectr. Temp. -101.7°C Dome Temp./Hum. $12.2^{\circ}\text{C}/63\%$ Transparency Conditions *Slightly hazy* 332

Focus 241

Spectr. Temp. Dome Temp./Hum. *circumflex*

D /

Exp. Mtr.	Seeing	Pig. Mag	Sp.	Inst. <i>Echelle</i>	Grating/ X Tilt	Slit	Emulsi-on	P.H.	Program	Remarks	Quality
				18.45	3004/lan .5790	60x W 400x H	6100A	1/2			
										Image of pair To Right (East) of slit	
5	$\sim 1''$ <i>or better</i>	8.9	K2					5ci		Seeing test NW a brighter of pair	200 + above bkgc. 11.3
175	$1.2''$	5.06	F8IV-V					2ci	Std. Vel.		3.6 K
								3			
								3			
255		2.74	A05 III					2	Std. Vel.		6.6 K max 10.9 K
								3			
								3			
324	3-4''	2.10	F8 Ib					4	Polaris.		5.8 K
								3			
398		2.10	F8 Ib					4	Polaris		10.1 K
								3			
440	$\sim 3''$	2.10	F8 Ib					4	Polaris		9.2 K

pg #3
333

Emulsion Batches: 217

Date 1995 May 22/23 Observers [K.K.] 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.
Ce 09177	BIAS (4)			1 32 00					
78	Comp							Th Ar	1s
79	HD 186882 (A)	19 41 51	44 53 12	1 49 43		-02 03 E			412
80	Comp							Th Ar	1s
81	HD 186882 (A)	19 41 51	44 53 12	1 07 51		-1 47 31 E			288
82	"	"	"			-1 24 E			994
83	Comp							Th Ar	1s
84	HD 186882 (A)	19 41 51	44 53 12	2 39 25		-1 14 E			373
85	Comp							Th Ar	1s
86	BIAS (4)			2 50 44					
87	Comp							Th Ar	1s
88	HD 177724	19 00 49	13 42 53	2 58 10		00 12 00 W			323
89	Comp							Th Ar	1s
90	Comp							Th Ar	1s
91	HD 156014 (A)	17 10 05	14 30 15	3 24 43		1 57 W			132

Spectr. Temp. Dome Temp./Hum. 10.8°C/68.7% Transparency Conditions .. Increasing .. 4.4.78 .. 334

Focus .. 0.291 ..

Spectr. Temp. Dome Temp./Hum.

Exp Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. <i>echelle</i>	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				18.45	300 l/mm 0.5790	60 μ W 400 μ H	6100 A				
416	"3"	2.91	BA.5E					5		Brighter of close pair with mag ~ 3.4	~ 8.0K 1.2K
								3			
37	"3"	6.33	?					6		weaker of pair - stars appear well resolved to suggest it's a pair	500 above 5K
97	"3"	"	"					2		hard to resolve!	2.2K
								4			
500	2"	2.91	BA.5E					4		Brighter of close pair	5.0K
								3			
480		2.99	AO Ia					5		Telluric	5.9K
								3			
270		3.5	MS Ib					4		brighter of pair - western star	10.0K

Spectr. Temp. Dome Temp./Hum. $10.7^{\circ}\text{C}/66.1\%$ Transparency Conditions ... slightly hazy 3.36

Focus 241

Spectr. Temp. Dome Temp./Hum. $+10.0^{\circ}\text{C}$ 70% H

Exp. Mtr.	Seeing	Pig Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
177	1-2"	5.4	G3 III					5	KK Pin Vis	fainter eastern star if pair	4.1 K
								3			
300		3.5	M5TB					4			1.2 K
								3			
								1/2			10K
											10K
All to work & persons											

337
PS #1

Wed/Thurs

Emulsion Batches:

Date 1995 May 24/25 Observers [KK] ST_n/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.
CE 09205	bias (4)			20 21					
06	Comp							ThAr	1s
07	HD 137909	15 23 42	29 27 01	20 23 38		-3 08 01E			234
08	Comp							ThAr	1s
09	Bias (4)								
10	Comp							ThAr	1s
11	HD 84441	9 40 11	+24 14 05	21 21 09		03 31W			257
12	Comp							ThAr	1s
13	Comp							ThAr	1s
14	HD 84441	9 40 11	+24 14 05	21 40 01		03 58W			699
15	Comp							ThAr	1s
16-22	Flat x7			~22 03 37		04 15 W	23 46 54		2s
23	Comp 84441	9 40 11	24 14 05					ThAr	1s
24	HD 137909	15 23 42	29 27 01	22 34 54		4 57 16W			978
25	Comp							ThAr	1s

CCD Spectr. Temp. -100°C Dome Temp./Hum. $11.9^{\circ}\text{C}/75\%$ Transparency Conditions ... cloudy ... with ... clear ... ³³⁸

Focus 2.41

patches.

Spectr. Temp.

Dome Temp./Hum.

slit set: 1 NS aligned

m/hr
8004

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				18.45 schells	300 w/mm 0.5 790	60 μ W 90 μ H	6100 Å	1/2			
16		3.66	F _p					3			10 K
								4	KK ppm	to Cloudy	250 above background.
								3			10.8 K
								1/2			
								3			
4		2.98	GI II					5	Std Vel		6000 above background
								3			
								3			
6	2"	2.98	GI II					5	Std Vel	another cloud hole.	150 above background
								3			
						w 600 H 600		6			10 K
						H 1000		3			
3		2.98	GI II F _p					5	Std Vel	another cloud hole	150 above background

Spectr. Temp. -150°C Dome Temp./Hum. 10.9°C / 78.8% Transparency Conditions ... Cloudy 340

Focus 2.1
Spectr. Temp.

Dome Temp./Hum. 10.5°C ... 40% H
C 24000

Exp. Mtr.	Secing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
						W 60 H 400	6100A	3			
62		3.06	F p					4c	KK pyro		500 above bkgd.
								3			9 K
62								3			10 K
380		<2" 006	K2mp					6	std vel	(only thing visible)	6AK
								3			11K
								1/2			
<p>Tried often to get polaris, no luck</p> <p>All to warm & Pergeus.</p>											

Pg #1
341

Emulsion Batches:

Date 1995 May 25/26 Observers Bln/Smt

Plate No.	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 33067/68	INBOARD/OUTBOARD							FeNo Clear	10/20
69 70	INBOARD/OUTBOARD							"	10/20
G40988-90	HD142658 x 3	15 50 42	+10 24						.007s
G40991	" x 1				21 54	Z 06 W	47° Alt		.133s
71	BIAS(4)								-
72	COMP							FeNo Clear	20
73	SKY			22 09 00		0 ^h 0 ^m 02 ^s W	+43° 58'		1800s
74	"			22 40 44		"	"		1800
75	"			23 13 29		"	"		1800
76	"			23 47 08		"	"		1800
77	COMP							FeNo Clear	20s
78-80	FLAT x 3							FeNo Clear	5s
81	BIAS(4)			0 25					-
82	COMP							FeAr Clear	60
83	SKY			0 40 14		0 ^h 0 ^m 2 ^s W	+43° 58'		1800

CCD
Spectr. Temp. -101.5°C
Focus 6:85
Spectr. Temp.

Dome Temp./Hum. $13.0^{\circ}\text{C}/55.0\%$
@ 2nd focus test
Dome Temp./Hum. $12.6^{\circ}\text{C}/54.0\%$

Transparency Conditions $\text{cleared up } \sim 21:00$
430 0 50 1024 4 1 CCD

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
				CASS CCD	600 λ/m (C) G=2662	250 μm	4270\AA 4270\AA 4275 \AA	34	FOCUS TEST	T=14.5 $^{\circ}\text{C}$ dome closed	
					G=2662		4275 \AA	34	"	T=13.0 $^{\circ}\text{C}$ dome open now	
		Vpr. mag 8.6	Prism FO	CCD CCD TV GUIPER		above 250 μm		-	SEEING TEST	Dome SE, <u>bad seeing</u>	
								-	CCD SCALE CALIBRATION		
				CASS CCD	600 λ/m (C) G=2662		4275 \AA actually.	1 5			
20								6	Blk	clouded in again. rack moved to sl. + pos'n just after 1800 obs started, cloudy	
27								7	"	clear now.	
28								8	"	still clear	
20								9	"	still clear	
								10			
								11			
								1			
					600 λ/m (C) G=2133		4275\AA 4275\AA 4275 \AA	12			15.0K, 14.9K, 14.8K
23								13	Blk	not much here glancing cosmic ray	

pg #2
343

Emulsion Batches:

Date 1995 May 25/26 Observers Bln/Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC33084	SKY			01 14 38		0 ^h 0 ^m 2 ^s W	+43° 58'		1800s
CC 33085	sky			1 45 08 02:16:56		"	"		1800
86	SKY			2 16 56		"	"		1800s
87	COMP							FeAr clear	60
88	BIAS(4)			2 55 29					-
89-91	FLAT x 3							Tung clear	2
92/93	INBOARD/OUTBOARD							FeNe clear	10/20
94	COMP							FeAr clear	60
95	HD 187691	19 46 14	+16 09 55	3 15 52		0 31 E			466
96	COMP							FeAr clear	60
97	COMP							"	"
98	HD 188001	19 47 54	+18 24 53	3 30 49		0 06 E			1122
99	COMP							FeAr clear	60
CC 33100	BIAS(4)			3 53					-
101-103	FLAT x 3					0 ^h 0 ^m	+18°	Tung clear	5

Spectr. Temp. Dome Temp./Hum. 10.8°C/55.5% Transparency Conditions clear, some haze 344

Focus 6.85

Spectr. Temp.

Dome Temp./Hum. 10.1°C/59.1% @ FOCUS TEST

FANS OFF

430 0 50 1024 4 1 redfont

Exp. Mtr	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
↓				CASS CCD	600 lines (C) G=2733	250μ	4625Å	14	Blh		
								15	"		
↓	6.6 total							16	"	getting into twilight again.	
								17			
								1			
								18			15.6K 15.6K 15.5K
					600 lines (C) G=2662		4300Å	19/20	Focus TEST	in focus now.	
							4275Å actually.	21			
4330	bad	V 5.11	F8V					22	1M 3H Velocity		10.7K
								23			
								24			
5000	awful	B 6.24	O7.5Iaf					25	Blh - O*	sky getting bright at end.	
								26			
								1			
				All to Perseus & WORM				27			15.1K →14.3K

345
pg # 1

Emulsion Batches:

Date 1995 May 26/27 Observers Bln / Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC33004/ 05	INBOARD OUTBOARD							FeNe clear	10/25
06	BIAS(4)			0 22				FeNe clear	20
07	COMP							FeNe clear	20
08	SKY			0 28 20			$0^h 0^m 1^s W + 43^{\circ} 50'$		1800
09	SKY			0 58 46			" "		1800
10	SKY			1 29 12			" "		1800
11	COMP							FeNe clear	20
12-14	FLATx 3						" "	Tung 1/4 App.	5
15	BIAS(4)			2 08					
16/17	INBOARD OUTBOARD							FeNe clear	10/20
18	BIAS(4)			2 44					-
19	COMP							FeNe clear	60
20	HD187691	19 46 14	+10 09 55	2 55 17 2 47 38			0 49 E 1 51 E		390 390
21	COMP							FeNe clear	60
22	BIAS(4)			3 21					

CCD Spectr. Temp. - 99.6°C

Dome Temp./Hum. 17.24.57.27%

Transparency Conditions clear 346

Focus 6.82

@ FOCUS TEST

N FAN ON ONLY

Spectr. Temp.

Dome Temp./Hum. 11.2°C / 57.5%

462 0 50 1024 4 1 ccd/m²

Exp. Mir.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	600 Å m 10 G = 2875	250 μ	5346 Å	3/4	FOCUS TEST	just a tiny bit cool.	
								1			
								5			
							Sem spatref	6	B/n	first 2 minutes at 31750 ⁺ rack coord. by batch	
								7	"		
								8	"		
155 b/w								9			
								10			19.6K → 14.1K
								1			
39 FILTER				CASS CCD	400 Å m 10 G = 2666	250 μ	4300 Å	11/12	FOCUS TEST	just a very tiny bit warm now.	
								1			
								13			
4000		V	F8V					14	2-3rd Vel. B/n = 0 *		20K 6.0K
								15			
								1			

LED
Spectr. Temp. ... -100°C

Dome Temp./Hum. 10.9% / 59.5%
@ SEEING TEST end.

Transparency Conditions ... clear 348.

Focus ... 6.82

Spectr. Temp.

Dome Temp./Hum.

N FAN ON
462 0 50 1024 4 1 cadfat

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	4"	6.65	KOIII	EEV CCD TV GUIDER		slit 250μ		-	SEEING TEST	Done w, light w wind, 72% catwalks, clear all day & night. Further w than most tests	
K9 39 FILTER				CASS CCD	600 Blm (C) G = 2000	250μ	4300Å	16			
1300	4"	B 7.53	075III (1)					17	Blm - 0*	twilight - nearing dawn	4.7K
								18			
								19			15.0K → 14.6K
								1			
All to Purseus & worm											

Pg #1
349

Tues/wed

Date 1995 May 30 (3) Observers [KK] Jn / Smt

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 831 30/ 31	INBOARD/ OUTBOARD							FeNe clear	20/30
32	BIAS (4)			20 40					—
33	COMP							FeNe clear	20
34	HD 95735	10 57 54	+36 38	20 47 47		2 15 W			900
35	COMP							FeNe clear	20
36	COMP							"	"
37	BD+66 717	11 14 26	+66 23 24	21 12 03		2 37 W			1783
38	COMP							FeNe clear	20s
39	BIAS (4)			21 47					—
40	COMP							FeNe clear	20
41	HD 112956	12 55 18	+69 19	21 50 15		1 27 W			1200
42	Comp							FeNe clear	20s
43	COMP							"	"
44	HD 124752	14 10 18	+68 03	22 16 35		0 40 W			1239
45	Comp							FeNe clear	20s

CCD Spectr. Temp. ... = 100.4 °C ... Dome Temp./Hum. 19.3% / 46.9% Transparency Conditions ... Clear ... 350

Focus ... 6.70

Spectr. Temp. ... Dome Temp./Hum. ...

FANS ON

410 0 50 1024 4 1 ccd fnt

Exp. Mtr. NO FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Index ADJ Quality
				CASS CCD	1800 λ min 6 = 5023	306 μ	5140 Å	3/4	FOCUS TEST		MAX AREA
								1		ONLY N DOME FAN ON	
								5			
?	3-4"	7.48	MZ					6	KK Asm/Sp	W/S 574	
								7			
								8			
1600	3-4"	9.32	M1 I					9	KK Asm/Sp		1.3K
								10			26K
								11			
2140	3-4"	8.2	dG6					12	KK Asm/Sp		2.3K
								13			
								14			
1360	3-4"	8.79	KO					15	KK Asm Sp/		1.5K
								16			2.7K

CCD
 Spectr. Temp. -101.7°C Dome Temp./Hum. $+17.0^{\circ}\text{C}$ 53884 Transparency Conditions *Slightly hazy* 352
 Focus 6.70
 Spectr. Temp. Dome Temp./Hum. 16.0°C / 57.1% @ SEEING TEST
c. 2000h

410 0 50 1024 4 1 ccd Gnt

Exp. Mtr.	Seeing	Fw. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	raw Exp. Quality
1111	* 5.3	12		CASS CCD	1900nm G-5023	30μ	5140A	17	KK Asm/Sp	Exp Balance checked (Right on.)	20:1 S/N
1180 Gnt	/K Seeing stability = +5" at end of exp.										
								18		nice separation from brighter star	
								19			
1111	4"	8.79	K0					19	KK Asm/Sp	brighter again.	1.1K
								20			
	4"	6.66	G8V	EEV CCD		ABOVE 306μ Slit		-	Seeing test	only NE Fan on	
								-	Pozne SW	Light W wind 70% calante	
				CASS CCD				21			
B 555	4"-5"	6.66	G8V					22	Std. Vel		3.4K
								23			
								1			
								24			
2575	7.07	G8V						25	KK Asm/Sp	some windy bursts blew up seeing to 8"	2.2K
								26			
								27			

353

p403

Tues/Wed

Emulsion Batches:

Date 1995. MAY. 30/31. . . . Observers [K.K.] J.A./S.G.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC33159	HD 149162	16 27 54	+03 28	00 34 03		0 42 W			1500
360	Comp							FeNe Clear	20s
61	BIAS(4)			1 01					-
62	COMP							FeNe clear	20
63	HD147379	16 16 36	+67 28	1 11 31		1 28 W			1000
64	COMP							FeNe clear	20
65	COMP							"	"
66	HD158633	17 25 18	+67 23 26	1 34 08		0 30 W			30s
67	COMP							FeNe clear	20
68	BIAS(4)			1 41					-
69	COMP							FeNe clear	20
70	BD+68 946	17 36 56	+68 24 47	1 49 26		00 59 W			1807
71	Comp							FeNe Clear	20
72	Comp							"	20
73	Juno	18 03 30	-5 08	02 27 55		01 14 W			1912

Spectr. Temp. -100.3°C Dome Temp./Hum. $+15.9^{\circ}\text{C}$ 56.384

Transparency Conditions . . . slightly hazy 354

Focus . . . 670

Spectr. Temp. -100.4°C Dome Temp./Hum. $+15.1^{\circ}\text{C}$ 60.874410 0 50 1024 4 1 cd $\frac{1}{2}$

Exp. Mtr. FILTER	Secing	F \checkmark Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	max Quality APV
1165	4-5	8.84	KOY _P	CASSCO	1800 λ /mm G-5023	306 μ	5140A	28 29 1 30	Asm Sp KE		1.0K
1181		8.63	MOY					31 32 5	KK Asm/Sp		900
2060	4-5	6.43	dk1 "G98					6 7 1 8	KK Asm/Sp		2.0K
1820	3-4	9.15	M4E					9 10 11	KK Asm/Sp		0.5K 2.8K
500	5"	10.0	G2V					12	Silver	Too hazy here I guess magstar Field checks OK Tel at 2 18 02 27 8-5 0827	900 max above Best qual.

60/1 S/W
through

Exp
CNTS

KBCs

✓
mag Sp. Type

13c:

14g

14c:

771

✓
9.69 dms

15c:

KK A_{km}/Spfarther
& SE600
max ABU

1470

✓
8.90 dm4

16

KK A_{km}/Spguided off cable
for 1st minute
sky getting bright.brighter
& NW800
max
ABU

18

20

13.3K
→ 12.4K1
3/4 FOCUS
TESTset a bit warm now
as expected.

5023

= 5135Å

All backed up to WORM
& Perseus.

