pectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

ocus .....

pectr. 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 [HW] {VS} TS

CSS 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	Comparison Exp.
CC 30812	BIAS (4)			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 10E			68s
18	Comp							FeNe Clear	25s
CG 407 86/89	HD 29587	04 34 30	+41 57					4x .067s	
CG 407 90/91	"	"	"			00 01W		2x .133s	
19	BIAS (A)			18 57					
20	Comp							FeNe Clear	25s
21	HD 36395	05 26 18	-03 41 00	19 10 16		00 24E			98s
22	Comp							FeNe Clear	25s
23	Comp							"	"
24	BD-09 956	04 35 43	-09 23 20	19 35 05		01 13W			226s
25	Comp							FeNe Clear	25s

CCD
Spectr. Temp. ~100°C ..... Dome Temp./Hum. +2.0°C ... 72.3% H Transparency Conditions ... Clear, but hazy 6

Focus ... 6.94 .....

90 Cgain

Spectr. Temp. ..... Dome Temp./Hum. +1.0°C ... 73.3% H 410 0 50 1024 4 1 CCD FONT MAX ADU

Exp. Mtr.	Seeing	Ref. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
No Filter				CASSCCD	1800h/m G-5740	306u	5303A	1/2			
								3			10K
≈14K		2.89	B0.5IV					4	well, It was	Star for cross correlation	11K
								5			
								6			
3,800	3"	7.29	dG2					7	Std Vel		3.7K
								8			
		7.29	dG2		ABOVE	306u slit			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	(3.5")	10.30	M0					13	Vys 452 AB	> 50/1 S/N Some SKig guiding with 14 sec int worked OK	
								14			

7 pg #2 Sun/Mon

Date 1995. Feb. 19/20..... Observers [H.Lw.]....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	Comparison Exp.
Cc 30826	BIAS(4)			20 14					
27	Comp							FeNe Clear	25s
28	BD-02 3000	09 48 10	-03 13 04	20 22 07		3 14 E			478
29	Comp							FeNe Clear	25s
30	Comp							"	"
31	HD 95735	10 57 54	+73 38 00	21 06 21		4 02 E			849
32	Comp							FeNe Clear	25s
33	BIAS(4)			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	BIAS(4)			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.
Focus...
Spectr.

Exp. Mtr.	
no filter	
850	
4000	
1340	
800	

CCD Spectr. Temp. -100.5°C ..... Dome Temp./Hum. +00.8°C ... 74.1% H Transparency Conditions OK, but increasing haze

Focus ... 6.94 .....

Spectr. Temp. ..... Dome Temp./Hum. -00.2°C ... 76.6% H

c Lambda P = 1018 Kps and falling

max ADU

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
no filter				CASSCCD	1800 b/mm G=5140	306	5303A	1/2			
								15ci			12K
850	4"	10.54	M0					16ci	Vgs pgm Vgs 560	Field checks ok (>50/1 S/N) ie not the brighter star to SW Thin cloud at end	
								17ci			
								18			
4000	3'-4"	7.48	M2					19	std vol (mercy)		2.6K
								20			
								1/2			
								21			
1340	2'-~~7~~"	9.6	M0					22	Vgs pgm	(85/1 S/N) Auto guided Vgs 503 sBIC Rach 20,500 best	
								23			11K
								1/2			
								24			
800	0'-4"	10.54	M0					25	Vgs 560	2nd exp ~60/1 S/N	V
								26			11K

9 pg#3

Sun/Mon

Date 1995. Feb. 19/20..... Observers H.W.J. Ta.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
Cc 30841	Comp							FeNe Clear	25s	no filter
42	BD+01 2447	10 23 49	+01 21 36	22 58 44		01 11 E			2235	1430
43	Comp							FeNe Clear	25s	
44	BIAS (4)			23 37 45						
45	Comp							FeNe Clear	25s	
46	BD-08 2689	09 23 57	-08 49 46	23 47 51		00 43 W			2576	800
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 38 18		01 06 W			2369	850
51	Comp							FeNe Clear	25s	
52 – 60	FLATS x 9					00 00	-3 40	Tung Apl/2	5sec	
61	BIAS (4)			01 27						

CCD
~~Spectr~~. Temp. -100.3°C ..... Dome Temp./Hum. -00.3°C ... 766% Transparency Conditions Fine., some haze only ... 10

Focus .... 6.94 .....

CCD
~~Spectr~~. Temp. ..... Dome Temp./Hum. -00.9°C 81.0% Some Fog increasing to MAX

Exp. Mtr.	Seeing	~~M~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
no filter				CASSCCD	1800 l/m G=5140	306	5303Å	27			
1430	2"-3"	9.65	M 2					28	Stdvel (Accuracy)		RK
								29			
								1/2			
								3			
800	3"-4"	10.52	M 0					4	V_{yg} 268	60/1 S/N	
								5			
								1/2			
								6			
850	3"-4"	10.54	M 0					7	V_{yg} 560	Exp #3	
								8			
								9			14.3K
								1/2			
					All normal & Recorded.						

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Mon/Tues

Date ..1995..Feb.20/21... Observers [Eb]..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	Comparison Exp.
cc30862	B/A5(4)			~~0935~~	after Top	01 12W	−21 34		
63	Comp. FeAr		START	~~0013~~				FeAr clear	90 sec
64 – 66	TL 850 x 3		01:10157	~~01~~				400s ~~150s~~	
67	B/H5(4)			01 32					
68 → 70	FLATS x 3							TUNG Ap 1/4	12sec
71 → 73	TL 841 x 3			013937					300s
74 – 76	TL 830 x 3			020000					500
~~77~~	Comp							FeAr Clear	90sec
	Comp							FeAr Clear	90 sec

Spectr. Temp. ccd −100°C Dome Temp./Hum. +00.5°C 85%H Transparency Conditions Cloudy, Closed for Tests 12

Focus 6.89 90Cgain 410 0 50 1024 4 1 CCDFMIT

Spectr. Temp. ccd Dome Temp./Hum. +00.3C 85%H Chan bds at Row 512 (no trickle "Hot" MAX 400)

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CHSS CCD	1800 l/mm G=5497 Tilt=50.8°	306u	5749Å I 10Å	1/2c;	Fluorescent	+ Pair Lamp Tests	
								3c;		Fe/Ne no good here due to very strong Red end MAX 15.6K	620
(8000 cnts for 360sec exp test) 34.4K for 1500secs				Note only that "Hot" pixel saturated.				6c; ~~7c;~~			~~15.6K~~
								1/2			
								8c;			15K
= 7K								9c;			84K
								10c;		Just that "Hot" pixel saturated The Rodden lamps	15.3K
								11c;			620
Next setup to Do (5 15min exp each)					1800 l/mm ~~7~~ G=5584			11c;	:		3.7K

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p. 1

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	Comparison Exp.
cc30878/9	INBOARD/OUTBOARD					$0^h 4^m$ W	+44°	FeAr clear	60/60
80	BIAS(4)			19 20					—
81-85	FLAT x5					$1^h 35^m$ W	+17°	Tung ¼ App	6
86	COMP							FeAr clear	60
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							FeAr Clear	60
92	BIAS(4)			21 08					—
93-97	FLAT x5					3 10 W	+17°	Tung ¼ App	6
98	COMP							FeAr Clear	60
cc308 99	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			900

CCD
~~Spectr.~~ Temp. -100°C Dome Temp./Hum. -6.6°C/52.1% Transparency Conditions Clear

Focus 6.90

Spectr. Temp. Dome Temp./Hum. -8.6°C/54.4% @ 1130901

TEL ON E SIDE
FANS OFF

410 0 50 1024 4 1 CCDFAST

Exp. Mtr. 06 560	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~ c.	Program	Remarks	max Quality ADU
FILTER				CASS CCD	1800 l/mm G=6100	306μ	[redacted]	3/4	FOCUS TEST		
							6604A	1/2			13.3K → ↓ 12.7K
								2			
								5			
241	5"	9.40 -9.71	0.65A KOV+					6	Mki V471 Tau	S/N ~ 65:1 cosmic ray in strongest column	130 above b/g
~~281~~ 281	4.5"							7	"	S/N ~ 85:1 (along 28 column) nasty cosmic ray @ row 765	350 above b/g
	4"							6	"	S/N ~ 75:1	400 above b/g
538 for both	3"			good for proof of failure only. all is fine for this one.				7	"	signal REALLY low for this one. will check CCD - it's fine. shutter & heater. dv cracked (or 386) reset interchard.	5! above b/g!
								8			
								1/2			
								2			13.1K → 12.4K
								9		glancing cosmic ray.	
280	4"	9.40 -9.71	0.65A KOI+					10	Mki V471 Tau	S/N ~ 70:1	350 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 !	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: 1 ——

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mir.
cc30903	COMP							FeAr clear	60	06 560 Filt ND
04	BIAS(4)			22 20					—	
05-09	FLAT x 5					4 20 W	+17°	Tung ¼ Ap	6	
10	COMP							FeAr clear	60	
11	BD+16 516	3 44 43	+16 57 06	22 26 41		4 42 W			960	290
12	BD+16 516			22 44 13					1220	360
13	BD+16 516			23 05 57		5 20 W			900	244
14	BD+16 516			23 23 37		5 38 W			900	220
15	COMP							FeAr clear	60	
16	BIAS(4)			23 42						
17-21	FLAT x 5					5 47 W	+17°	Tung ¼ Ap	6	
22	COMP							FeAr clear	60	
23	HD 26793	4 09 08	+9 45 32	23 57 34		5 48 W			1060	2850
24	COMP							FeAr Clear	60	
25	BIAS(4)			00 18						

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.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	max ADU ~~Quality~~
06560 FILTER				CASS CCD	1800 ℓ/mm G=6100	306μ	6604 Å	12			
								1/2			
								2			13.2K →12.4K
								13			
290	4.5"	9.40 - 9.71	0654 KPNO red					14	Mki V471 Tau		
360	6"							15	"	EDIS files mis-numbered corrected →	
244								16	"		250 above b/g
220	7"							17	"		200 above b/g
								18			
								1/2			
								2			17.3K →17.1K
								19			
2850	variable 8"+	5.22	BATC n					20	Telluric Std.		2.8K
								21			
								1/2			

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p. 3

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	Comparison Exp.	Exp. Mtr.
cc30926-30	FLAT x 5					5 55 W	+10°	Tung ¼ Ap	6	
31	COMP							FeAr clear	60	
32	HD 32963	5 01 48	+26 12	0 29 33		5 32 W			1240	1335
33	COMP							FeAr clear	60	
34	COMP							"	"	
35	HD 35770	5 22 01	+15 41 23	01 00 51		5 32 W			600	2300
36	COMP							"	60	
37	BIAS (4)			1 15 45					—	
38-42	FLAT x 5						+16°	Tung ¼ Ap	7	
43	COMP							FeAr clear	60	
44	BM CAS	6 48 36	+63 33	1 38 03		~10h 45 W			680	~300
45	BM Cas			1 56 44		11h 07 W			1260	845
46	BM Cas			2 12 13		11h 27 W			1200	495
47	BM Cas			2 32 33		11h 47 W			1200	355
48	COMP							FeAr clear	60	

CCD
Spectr. Temp. -100°C Dome Temp./Hum. -9.7°C/53.9% Transparency Conditions clear 18.
FANS OFF
Focus 6.90
Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CJ	~~P.H.~~ Ci	Program	Remarks	max ~~Quality~~ ADU
				CASS CCD	1500 gl/mm G=6100	300μ	6604 i	21 Ci		TELESCOPE STILL ON EAST SIDE	12.5K →11.7K
								22			
13 35	8"	7.72	G2V					23	Std Velocity	RV = -63.1 ± 0.4 Ast. Alamac	1.8K
		~~7.71~~	~~G2V~~					24			
								25			
2300	8"	5.50	B9.5Vn					26	Telluric Std.		
								27			
								1/2			
								2			14.2K →16.0K
								28			
~300	7"	8.82 -9.33	e					28	Mki	Hα 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			

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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	Comparison Exp.
CC30949	BIAS(4)			2 56					—
50-54	FLAT x 5					12h W	+64°	Tung ¼ Ap	7
55	COMP							Fe Ar clear	60
56	HD123782	14 04 33	+49 55 50	3 14 38		1h 0m E			200
57	COMP							Fe Ar clear	60
58	BIAS(4)			3 20					—
59-63	FLAT x 5							Tung ¼ Ap	
CG4092-5	HD113811	13 01 12	+40 08						4x.067
96/97	"				3 33 33	0h 17m W	85° Alt	1.00 airmass	2x.133

Spectr. T
Focus...
Spectr. T
Exp. Mtr.
4900

CCD Spectr. Temp. −100°C Dome Temp./Hum. −10.6°C / 54.4% Transparency Conditions Still clear 20

Focus 6.90

Spectr. Temp. ..... Dome Temp./Hum. −11.2°C / 54.4% after seeing test TELESCOPE STILL ON EAST SIDE

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
				CASS CCD	1800 l/mm G = 6100	306μ	6404	1/2			
								2		(JUST BARELY ON EAST SIDE)	13.4K → 12.6K
								5		TELESCOPE ON W SIDE NOW	
4900	5"	5.25	M2 IIIab					6	Std. Velocity	Ast. Almanac RV = −13.4 ± 0.3 km/s	9.1K
								~~5~~			
								1/2			
								2			15.3K → 14.6K
				EEV CCD GUIDE CAMERA		above 306μ		—	SEEING TEST	Dome WSW, light NW wind, clear, bad seeing,	
						"		—	"		
					All to WORM & Perseus.						

Emulsion Batches:
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Date 1995 Feb 24/25 Observers [Hlw] Tn/Smt.....

CSS 386 CLOCK RESET TO 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	Comparison Exp.
cc30964/5	inboard / outboard					0 0	+40°	FeNe clear	20/30
66	BIAS(4) ← average, sorry.			20 48					
67	COMP							FeNe clear	25
68	HD36395	5 26 18	-3 41 00	21 00 27		1 46 W			990
69	Comp							FeNe Clear	25
70	COMP								
71	BD-2 3000	9 48 10	-3 13 04	21 37 37		1 58 E			990
72	COMP							FeNe Clear	25
73	BIASx4 ← sum			22 15 05					
74-82	FLATx9					1 30 E	-4°	Tung ½ dp.	5
83	BIASx4			22 24					

Spectr. Temp. ~~-100°C~~ -120 Dome Temp./Hum. -7.6°C/53.6% Transparency Conditions 1105tHg..cloudy.....

Focus ..7.01.....

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

N DOME FAN ON ONLY

410 0 50 1024 4 1 CCDFMT

Exp. Mtr. NO FILTER	Seeing	~~√~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	~~P.H.~~	Program	Remarks	Quality
				CASSCCD	1800 l/mm G=5140	336μ	5303 Å	3/4	FOCUS TEST		~~MAX~~ ADQ
								1/2			
								5			
1660	4"	1.97	M1					6	Mary Standard	some cloud at beginning Vys 9 RV=+18.52 km/s	~~250~~
								7			
								8			
353		10.54	M0					9	Hdw {Vys3}	Vys 560 - Lots of cloud@start lots more cloud, star gone.	150 above b/g
								10			
								1/2			
								2			16.1K → 15.0K
								1/2			
										All backed up to Perseus & WORM	

23
pg#1 SAT/Sun

Date 1995 Feb 25/26 Observers [Hlw] T.n./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	Comparison 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	HD36395	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			1799
97	Comp							FeNe Clear	
98	BIAS x4			19 43					
99									
3,007	FLATS x9					~3 30 E	-3°	Tung Apl/2	55
08	BIAS x4			20 38					

CCD Spectr. Temp. -100.3C ..... Dome Temp./Hum. -8.7°C @ focus test Transparency Conditions clear but cloud in S over horizon. 24

Focus ..... 7.01 .....

Spectr. Temp. ..... Dome Temp./Hum. -10.1°C / 49.6% @ 18:52 FANS OFF

410 0 50 1024 4 1 CCDEMP

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CASS CCD	1800 l/mm 6=5140	306u	5303Å	3/4			
								1/2		sum of 4 biases.	
								5			11.1K
10K	✓ 2.55"	B ✓ 4.19	M1.5 IIIa					6	Std. Velocity	sky still brightish.	5.2K
								7			
16K								8	Std. Velocity		8.6K
								9			
								10			
1610	3.5"	✓ 2.87	M1					11	Marcy Std Vel	Vas 9 RV = +8.52 km/s	670 clouds big
								12			11.2K
								13			
*625		10.54	M0		well > 20/1 S/N a bit backgrnd			14	Hlw Sp. Bin	* lots of sky. hard to see star Vas 560 thru cloud. very cloudy really	
								15			
								1/2			MAX
								16			15.7
								1/2			

25

PyHD

Date 1995 Feb 25/26 Observers [illegible]

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	Comparison Exp.	
CC31,009	Comp							FeNe Clear	25s	
10	HD95735	10 57 54	+36 38 00	21 51 19		2 47 E			1200	1545
11	Comp							FeNe Clear	25s	
12	BIAS x4			22 14					—	
BG 40188-801	HD 73992	8 36 12	+39 25						4x.067	
802/803	"				22 30	0h 07m E	85° Alt	1.0 ND arrest	2x.133	
CC31013	COMP							FeNe Clear	25	
14	The star to ESE of AC+53 2527-109	16 06 49 is	+53 12 11 is	23 02 14		6 37 E			1500	695
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	167
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 19.1% H Transparency Conditions Mostly cloudy 26

Focus 7.01

Spectr. Temp. ..... Dome Temp./Hum. -12.0°C / 41.8% @ seeing test FANS OFF

Exp. Mtr.	Seeing	Pk. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
No Filter				CASS CCD	1800 l/mm G=5140	306μ	5303A	17			
1545	4"	V 7.48	M2					18	Std vel	MARSG RV= -84.70 km/s	680 above Wg
								19			
								1/2			
		V 7.5	M2 III	LRV CCD	—	above 316μ	—	—	SEEING TEST	Dome NSW, little W wind, cloudy all over, thickest in S.	
				6V100 CAMERA				—	"		
								20			
695	4.6"	V +0.19	K1+ M0	Indeed, the Brighter Field Star.				21	{V_{45}} pgm	not quite so cloudy here counts/strength seems right but spectrum looks earlier, K?	400 above Wg
								22			
								1/2			
								23			
167		V 10.19	M0					24	{V_{45}}	S/N > 10:1 ! V_{45} 759 Then cloud again	piddle.
								25			12.9K
								1/2			
								3/4	FOCUS TEST.	in Focus -14.12	

27 pg 03

Date 1995 Feb 25/26. Observers [Hlw], [Uys?], Tn, 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	Comparison Exp.
cc31023	COMP							Fe Ne clear	25
24	AC+53 2527-109	16 06 49	+53 12 11	1 46 47		3 48 E			1731
25	COMP							"	25
26	COMP							"	25
27	BD-2 3000	9 48 10	-3 13 04	2 36 46		3 02 W			779
28	COMP							"	25
29	BIAS x4								—
30	BD-02 3000	9 48 10	-3 13 04	02 57 30		3 29 W			1137
31	COMP							"	25
32	Comp							Fe Ne clear	25
33	BD+01 2447	10 23 49	+01 21 36	03 24 37		3 32 W			1864
34	Comp							Fe Ne clear	25
35	COMP							"	"
36	BD-02 3000	9 48 10	-3 13 04	4 21 28		5 06 W			X448
37	COMP							"	25

~~Spectr.~~ Temp. −100 °C Dome Temp./Hum. −14.4 °C / 49.1% Transparency Conditions Hi-Sc/Cs clouds 28
- getting better

Focus 7.01

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	c. ~~P.H.~~	Program	Remarks	Quality
no filter				CASS CCD	1800 l/mm 6=5140	306μ	5303 Å	22			
475		V 10.19	MO					~~23~~ 24	{Vys}	Vys 759 clearish here	
								25			
								~~26~~ 3		RESET HEURIKON BECAUSE HUNG UP TWICE BEFORE READOUT	CCD3 # comp
260 slit at sky		V 10.54	MO		S/N ~ 17:1 ← better than before!			4	Hlw Sp. Bin	Vys 560, a little less cloudy = can see it.	not much.
								5			
								1/2			
353		V 10.54	MO					6	Hlw Sp. Bin	Vys 560 came out of Hand for a bit. too close to platform to continue.	
								7			
								8		clear here now.	
1124	3"-4"	V 9.65	M2					9	std vel	Vys 127 Regor RV = +836 km/s	
								10			
								11		TEL ON E SIDE NOW	
490		V 10.54	MO		S/N ~ 75:1	clear	b/g !!	12	Hlw	no cloud but retraction noticeable.	
								13	Vest rel	Rel to Sun = +60 kms/sec	

29 pg #4

Emulsion Batches:

Date 1995 Feb 25/26 Observers [illegible]

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
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	895
41	COMP							"	25	
42	Comp							"	"	
43	AC+53 2527-19	16 06 49	+53 12 11	5 51 28		0 10 W			1207	541
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 ½Ap	5	

Spectr. Temp. ..... Dome Temp./Hum. -15.4°C / 48.3% Transparency Conditions . clear now 30

Focus ..... 2.01 .....

Spectr. Temp. ..... Dome Temp./Hum. -16.2°C / 49.1%

MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ cλ	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm G-5140	306μ	5303 Å	1/2		Still East Side	
								14			14K
895	6"	V 9.65	M2					15	Mercy Std. Vel.	RV = +8.36 km/s	
								16			
								17		CCD warming here I think.	
541	4"-5"	10.9	M0					18	Vys 759	CCD T = -90.8°C at mid exp.	
								19			
								1/2 ~~20~~		daybreak.	
								2			15.1K →14.8K
										CCD T = -81°C at night's end	
									All backed up to Perseus & WORM.		

3/pg #1

Sun/Mon

Date 1995 Feb 26/27 Observers [Hlw] Tn/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	Comparison Exp.
cc 3104 9/50	INBOARD/OUTBOARD							FeNe clear	25/38
51	BIAS x4			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	BIAS x4			19 08					
60	COMP							FeNe clear	25
61	BD-2 3000	9 48 10	-3 13 04	19 28 41		3 40 E			2156
62	COMP							FeNe clear	25
63	BIAS x4			20 11					—
64	COMP							FeNe clear	25

CCD
Spectr. Temp. ~ 100°C ..... Dome Temp./Hum. -9.3°C/51.3% @ FOCUS TEST Transparency Conditions .. very clear except to S

Focus ..... 7.01 .....

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

N FAN ON ONLY

410 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	~~V Eng.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CD	~~S/H~~	Program	Remarks	~~max ADC Quality~~
no filter				CASS CCD	1800 l/mm 6=5140	306 μ	5303 Å	3/4	FOCUS TEST		
								1/2			
								5			
20K	3"	2.53	M1.5III					6	BRIGHT IAU STD. VEL.	moved star around ∴ α Cet double-peaked.	13K
17.7K								7		traited ∴ single-peaked	13K
								8			
								9			
2631	.3"	7.97	M1					10	MARCY STD. VEL.	≈1(750/1 S/N) V_{ys} 9, RV = +18.52 km/s	2.6K
								11			
								1/2		AFTER BIAS RT, TOPPED UP CCD DEWAR WHILE CCD TEMP HELD @ -100.2°C	
								12			
797	5"	10.54	M0					13	HLW	thin cloud + refraction V_{ys} 560, S/N ~ 50:1	900 above b/g
								14		estimated Vel rel to Sun +32 km/sec	
								1/2			
								15			

33 pg #2

Emulsion Batches:

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc31065	BD+01 2447	10 23 49	+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	-3 41'		1948
69	Comp						"	FeNe Clear	25
70	BIAS x4			21 20			"		
71 79	FLATS x 9					2 24 E	"	TUNG Ap 1/2	55s
80	Comp							FeNe clear	25s
81	BD+10 1857	08 37 20	+09 55 22	21 37 54		~0 30 E			1888
82	Comp							FeNe Clear	25s
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 x4			22 48					—

CCD
Spectr. Temp. ...-100...°C... Dome Temp./Hum. -10.3°C/49.8% Transparency Conditions clear except for partly cloudy 34 to S (-5°Alt)

Focus ...7.91...

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

N FAN ON ONLY

410 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	~~Mag.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ cλ	~~Fil.~~	Program	Remarks	Quality
619		9.65	M2	CASS CCD	1800 l/mm G=5140	306μ	5303 Å	16	MARCY STD. VEL.	S/N ~ 60:1 Vys 127, RV = +8.36 km/s	320 above b/y
								17			
								18			
755	4"	10.54	M0					19	Hlw	≈ 55/1 S/N Vys 560, mostly clear here	
								20			
								1/2			
								21		(15K-16K) max	
								22			
1150	3-4"	9.6	M2					23	{Vys}{pyn	some cloud	
								24			11.9K
								25			
743		10.54	M0					26	Hlw	Vys 560 - clouds on and off.	170 above b/y
								27		clouded over	
								1/2		closed done.	
										All backed up to Perseus & WORM	

35

Mon / Tues

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

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Exp. Mtr.
cc 31087/88	inboard/outboard					0 0	+38°	Fe Ar Clear	90/90	
89	BIAS(4)									
90	Comp					01 12W	-21°	Fe Ar Clear	90s	
91/93	TL 830 x3			204059		"	"		1200	
94/96	FLATS x3					"	"	TUNG Apl/4	9s	
cc 31097/99	TL 841 x3			215143		"	"		1800	238K
cc 31100	BIAS(4)									
101/103	TL 850 x3			232745					2400	338K
cc 31104	Comp							Fe Ar Clear	90s	
05	BIAS(4)									
cc 31106/07	inboard/outboard	Next Night	Feb 28/29			0 0	+30°	Fe Ar Clear	90/90	Dome T Set =
08	Comp					01 12 W	-21 28	Fe Ar Clear	90s	
cc 31 ~~09~~ 11	~~BIAS(4)~~ TL 850 x3			190758					1800	
→ 12/14	TL 841 x3			204734					1200	4/90
cc 31115	BIAS(4)			2212						

CCD
Spectr. Temp. −100c ..... Dome Temp./Hum. −1.8c 84%H Transparency Conditions ... Cloudy for tests ... 36

Focus ... 6.93 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 90C gain 410 0 50 1024 4 1 CCDFMT 404 MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASSCCD	1800d/mm G=5582 T:1=51.8°	3.6a	5926Å I·5 at Row512	3/4	Fluorescent lamp peaks (tests)		
								1/2			
								6			1.5K
								5		The Raddish humps Strongest line	6.1K
								7			13K
≈28K								8			8K
								1/2			
≈38K								9ci		The bluest of 3 sets	10K
								10ci			
								1/2	All to Perseus 2 workm		MAX
Dome T: −2.8c 81%H Set = 6.93				CASSCCD	1800d/mm G=5725 T:11=53.1°	3.6a	6120Å ±1Å Ht Row512	3/4			
								5ci			3.5K
								6ci		(One main central Line)	2.7K
4690								7ci			2.4K
								1/2ci	Continued next Page		

37

Tues/Wed Continuation of Lamp Tests

Date 1995 Feb 28/~~MAR~~ 1 Observers [illegible] Tu

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	Comparison Exp.
CC311 16/18	TL 830			22 17 10		01 12 W	−21 28		120 s
19/21	FLATS x 3					"	"	Tung Ap 1/4	8 s
CC311 22	Comp							Fe Ar Clear	90 s
→ 23/25	TL 830 x 3			23 41 41	CC3126 is BIAS(4)				900 s
~~24~~/29	TL 841 x 3			00 31 39					900
CC311 30/32	TL 850 x 3			01 25 19					1200
CC311 33	Comp							Fe Ar Clear	90 s
34/36	FLATS x 3							Tung Ap 1/4	7
37	BIAS(4)								

CCD Spectr. Temp. −100C °C Dome Temp./Hum. −30°C 76% H Transparency Conditions . Starting to clear a bit
Focus 6:93 Dome closed for Tests
Spectr. Temp. −101.8 °C Dome Temp./Hum. −41°C 71.3% H Low Humidity
MAx ADU

Exp. Mtr. via Filter	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
14,000	for 3 exp show			CASS CCD	1500 l/mm G=5725 Tilt 5310	306	6120Å ± 1A How 512	8	*	I was too hasty.	33K
								9	(Note, Moved grating before getting Eng Comp)		13K
				CASS CCD	1800 l/mm G=5865 Tilt 5313		6307Å I of A show 512	10			1.1K
3260 each								11		only 200 ADU above backgrd. one weak cosmic ray	
3450 each								12.		Continuum > 10 ADU above background.	300
13,500 (for All 3)								13			280
								14			1.1K
								15			12.6K
								1/2		All to worms & persons	

Oh Heck, Tonight's work done with secondary covered, ie CC31106 → Dark.
Thought exposure a tad slow.
These Repeated well MAR 11/12/95 Use Them Ja
But 5926Å Region (Previous Page) is Fine.

39

P9#1 Wed/Thurs

Date 1995 MAR 1/2 ..... Observers [H. Liu] .. T.A. .....

Emulsion Batches:
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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	
CC3[illegible] 38/39	Comp/Stellar [inbound/outbound]					00 00	+40	FeNe Check		
140	BIAS x4									
141	Comp							FeNe Check	25s	
142	HD 18884	025703	+34 51	184831		02 07W			45	155k
143	Comp							FeNe Check	25s	
144	Comp							"	"	
145	HD 36395	05 26 18	-03 41 00	190024		00 04 E			425	470
146	Comp							FeNe Check	25s	
147										
→ 155	FLATS x9							TUNG Ap=1/2	5s	
156	BIAS x4			1919						
157	Comp for Lamp test							FeNe	25s	
158	TL850			193708		01 12W	-21 26	"	2107	33k
159	"			201413		"	"		947	15k
160	Comp					"	"	FeNe Check	25s	
161	Comp							"	25s	
162	BD-02 3000	09 48 10	-03 13 04	203911		02 22E			1906	680

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

Focus 6.93 90c gain

Spectr. Temp. Dome Temp./Hum. -50°C 65.5%H 410 0 50 1024 4 1 CCDFLAT (ADU MAX)

c Lambda

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
no filter				CASSCCD	1800 l/mm G=5142	30u	* 5303Å	3/4	focus test		
				(To get same as previous Ti H=~~5[illegible]~~° 49.8°	negative G=5140)		accuracy ± 0.3Å @ Row 512	1/2			
								5			
15.5K	good	2.53	MIASW a					6	Std Vel (Bright)		
								7			
								~~7~~			
420	3"	7.79	M1					8	Std Vel Marcy	Too cloudy >30/1 S/N RV +8.152 km/sec	
								9			10.8K
								2			15K
								1/2			
33 K								11 c1	Those strong Fluorescent		8K
15K								11 c1	em lines aren't the same lines	as in Typical Sky spectrum.	
								9 c1			
								9 c1			S/N
680	5"	10.54	M0					10	Hlw Vgs 560 (Thin cloud)		50/1

41
Pg #2

Wed / Thurs

Date 1995 MAR 1/2 Observers [HLw] Tn

Emulsion Batches:

Noted CSS 386 is 6 secs ahead of WWV time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc3~~4~~163	Comp							FeNe Clear	25
64	BIH5x4			21 14					
65	BD-02 3000	09 48 10	-03 13 04	21 15 42		01 46 E			1879
66	Comp							FeNe Clear	25
67	Comp							"	"
68	HP 36395	05 26 18	-03 41 00	21 55 31		02 57 W			745
69	Comp							FeNe Clear	25
70	BIH5X4			22 09					
71	Comp								
72	BD+01 2447	10 23 49	+01 21 36	23 05 34		00 44 E			1143
73	Comp								
74	BIH5X4								
75/76	Comp (in board) / out board			~~21 25~~ 21 13 13		0 0	+4°	FeNe Clear	25/38
~~76~~	~~BD-02~~								
~~77~~									

CCD
Spectr. Temp. −100.4 °C ..... Dome Temp./Hum. −6.0°C 68.5% H Transparency Conditions P.&T. Cloudy, mostly so.

Focus 6.93 .....

Spectr. Temp. ..... Dome Temp./Hum. −6.3°C 66.8% H

c darkslide

snow again @ 22 EST or so.

Exp. Mtr.	Seeing	Pk. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASSCCD	1800 l/mm G=5142	306u	(5303Å exactly)	12c;			
					~~5205~~ 41.8°			~~12c~~			
730	3"	10.54	M0					13c;	11ys 560	clear here, mainly	
								15c;			
								16			
1950	4.5"	7.7	M1					17	Std vel	Maacy	
								18			
								1/2			
								19			
730	4"	9.65	M2					20	Std vel Maacy Vys 127	some cloud	S/N <60/1
								21	(maybe no comparison firing?)		
T = −70.0°C								22, 3/4c;	Focus test,		
										encoder Δ clear should be −00 0200 not −00 0033 ?	

43 pg # 1

Emulsion Batches:

Date 1995 Mar 2/3 Observers [Hlw]/[EVH,s]/Smt Niki 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	Comparison Exp.
cc3117 7/8	INBOARD/OUTBOARD				19 05			FeNe clear	20/30
79	BIAS x4			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	BIAS x4			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	BIAS x4			00 39					—
91	COMP							FeNe clear	25
92	HD95135	10 57 54	+36 38	00 59 40		0 30 W			510
93	COMP							FeNe clear	25

CCD Spectr. Focus Spectr. Exp. Mtr. NFILT 442 1000 784 2085

CCD
~~Spectr~~. Temp. -100.°C ..... Dome Temp./Hum. -7.3°C/51.7% Transparency Conditions. just cleared, cloud moved S...
BOTH DOME FANS ON

Focus ..... 6.96 .....

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

410 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	~~Pig~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Equinox~~ Lambda	P.H. C'	Program	Remarks	Quality
NO FILTER				CASS CCD	1800 l/mm G: 5142	306μ	5303Å	3/4	FOCUS TEST	set a bit cool intentionally T = -4.3°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 b/g
								10			
								11		S DOME FAN TURNED OFF BEFOREHAND	
789		10.54	M0		S/N ~ 50:1			12	Hlw SB	Some cloud now → 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.	1.3K
								16			

45 pg #2

Date 1995 Mar 2/3 Observers [HLW]/EVH53/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	Comparison 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	MD10 8100	12 20 06	+43 25						4x.067
08/09	"				2 13	0 13 W	88° Alt	1.00 Lamess	2x.133
cc 31199	BIAS x 4	CSS 386 time		2 41 reset to WWV					—
31200-208	FLAT x 9					0 15 W	+46°	Turn ½ 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

CCD Spectr. Temp. -109.3°C Dome Temp./Hum. -8.9°C/56.7% Transparency Conditions partly cloudy → clear 46

Focus 6.96

Spectr. Temp. Dome Temp./Hum. -9.6°C/5.9.8% @ end of seeing test

N DOME FAN ON ONLY

410 0 50 1024 4 1 CCDEMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ C λ	~~Plt~~ C.	Program	Remarks	Quality
~27 ↓				CASS CCD	1800 ll/mm G=5142	306μ	5303Å	1/2			
								17			
911		10.54	MO					18	Hlw SB	V_{45} 560 surprisingly not much sky at all!	330 above Hg
								19			
								1/2			
		7.14	F2	EEV CCD		above 306μ		–	SEEING TEST	Dome W, no wind, 75% outside humidity	
	4"			GUIDE CAMERA				–	"		
								1/2		TOPPED UP CCD DEWAR BEFOREHAND WITH CCD T = -100.2°C 14.8k → 13.6k	
								2			
								20			
497	3"	11.2	MO		S/N ~ 45:1			21	{V_{45}}	V_{45} 689 AB first time.	200 above Hg
								22			
								1/2			
								3/4	FOCUS TEST	-10.2°C at time of test.	
										All backed up to Perseus & WORM	

47 pg #1

Date 1995 May 3/4 Observers Km/Smt

Emulsion Batches:
CG 560 IN COMP TRAY
CG 385 IN STELLAR ~~TEST~~ 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	Comparison Exp.
CG 3215/16	inboard/outboard focus Test							Fe Ar clear	40/60
17	BIAS (4)			18 48					
18	COMP							Fe Ar clear	60
19	V45 428 B Ac +17 4449-111	03 38 05	+16 21 12	19 14 33		0204 W			360
20	COMP					possibly not saved as such.		(Fe Ne) clear	60
21	COMP							Fe Ar clear	60
22	BD+2 1729	07 34 11	02 24 52	~~19~~ 21 44 02		?			480
23	BIAS (4)			22 06					
24	COMP							Fe Ar clear	60
25	BD+10 1857	08 37 20	09 55 22	22 15 28		0 10 W			510
26	COMP							Fe Ar clear	60
27	COMP							Fe Ar Clear	60
28	brighter one BD+33 1646	08 02 34	+33 06 25	22 42 47		~~0 54 W~~			660
29	COMP							Fe Ar clear	60
30	fainter one BD+33 1646	"	"	23 00 00		1 40 W			1230

Spectr. Temp. ~~-100°C~~ cor ~-100°C ..... Dome Temp./Hum. ~~-4 20c. 60%~~ ..... Transparency Conditions ..clear. 1 ..... 48.

Focus ..... 7.01 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... FANS OFF

390 0 50 1024 4 1 CCDENT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ cx	~~P.H.~~ c.	Program	Remarks	Quality
				CASS CCD	1200 ℓ/mm 6=4520	306μ	6563 Å	3/4	FOCUS TEST	done with 410 0 50 1024 4 1 redfilt	
								1/2			
								5			
	~1.5"	11.1	MO					6 5	Km Hα		0.2 M ~~0.1~~ K
								7		might have re-done as Peter in and he said but not saved and overwritten	
								8			
411	~1.3	9.6	MO					9	Hα emission search.	waited too long :. only one comp done.	~1.4K
								1/2			
								10			
478	~1.5	9.6	M2					11	"		1.6K
								12			
								13			
461	1.5"	~~12.1~~ ?	MO for sure.					14	Hα search	brighter of pair and has Hα emission	2.7K Hα 1.8K cont
								15			
217	1"	12.1?	MO not so sure.					16		dimmer and has Hα emission strong.	1.6K Hα 100 above Hα continuum

49
Pg. #2

Date 1995 Mar 3/4 Observers Km/Smt

Emulsion Batches:
06560 FILTER IN COMP BEAM
GG385 " " SPECCAR "

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc31231	COMP							Fe/Ar clear	60
32	BIAS(4)			23 31					—
33	COMP							"	60
34	AC+47 2368-79 (Vgs 265)		09 04 48	+47 01 33	23 42 48				480
35	COMP							Fe/Ar	60
36	COMP			24 02 35				Fe/Ar	60
37	AC+38 28746 (Vgs 549)	09 30 07	37 58 39	00 07 01					400
38	COMP			00 23 37					
39	~~AC~~ BD-01 322 (Vgs 568)	10 06 59	-02 10 56	00 26 29					320
40	COMP								
41	BIAS (4)			00 34					
42	COMP								
43	Vgs 277 A	10 56 59	17 03 30	00 43 50					300
44	COMP								
45	Vgs 277 B	10 56 58	17 03 36	00 55 09					380
46	COMP								

CCD
Spectr. Temp. -100.2°C Dome Temp./Hum. -5.8°C/66.3% Transparency Conditions clear! 50

Focus 7.01 FANS OFF

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

390 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1200 l/mm G=4520	306u	6563 Å	17			
								1/2			
								18			
143		10.9	MO					19			0.7K MOLX
								20			
								21			
112		11.0	MO					22			0.5K
								23			
111		10.6	MO					24			0.5K
								25			
								~~26~~ 1/2			
								26			
58		11.5	MO					27		East ONE	
								28			
68 ~~68~~		11.5	MO					29		west ONE	0.3K
								30			

Spg #3

Date 1995 Mar 3/4 Observers Km/Smt

Emulsion Batches:
06.560 FILTER IN COMP BEAM
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	Comparison Exp.	Exp. Mtr.
31247	COMP							Fe Ar clear	60	
48	BD+16 2222	11 04 29	16 05 39	01 14 31					400	89
49	COMP							"	60	
50	COMP							"	"	
51	BD+33 2071 A	10 58 11	33 25 38	01 36 14					620	208
52	BD+33 2071 B			1 47 48		1 25 W			700	101
53	BD+33 2071 C			2 01 30		1 50 W			1335	100
54	COMP							"	60	
55	BIAS(4)			2 28					—	
CG40810-13	HD113811	13 01 12	+40 08			0 05 W	86° Alt	1.003 air mass	4 x .087	2 strong 2 weak
14/15	"	"	"		2 42				2x .133	strong
56	COMP							Fe Ar clear	60	
57	AC-2 1513-110	11 28 16	-2 51 02	3 00 57		2 12 W			900	78
58	COMP							"	60	
59	BIAS(4)			3 19					—	

CCD Spectr. Focus. Spectr.

CCD
Spectr. Temp. -100°C ..... Dome Temp./Hum. -7.4°C / 70.2% Transparency Conditions ... clear! 52

Focus 7.01 ..... FANS OFF

Spectr. Temp. ..... Dome Temp./Hum. -7.9°C / 71.5% @ seeing test

Exp. Mtr.	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1200 l/mm G = 4520	30μm	6563Å	4			
69		11.5	M0					5	Km Hα search		0,3 K
								67			
								8			
208		?	M?		S/N ~	75:1		9	"	brightest one furthest east Vys 597A? one in middle	400 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	2"-3"	7.53	K5 III	EEV CCD		4 above 30μm		-	SEEING TEST	Done W, no wind, clear!	
strong								-			
				CASS CCD				13			
178		11.2	M0					14	Km Hα search	Vys 613	300 above b/g
								15			
								1/2			

53
pg # 4

Date 1995 Mar 3/4 Observers Km / Smt

Emulsion Batches:
06 560 FILTER IN COMP BEAM
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	Comparison Exp.
cc 31 260	COMP							FeAr clear	60
261	AC+19 1971-31	11 47 55	19 28 59						1076
62	COMP							"	60
63	COMP								
64	AC+40 512-31	12 07 25	40 14 00	04 12 45					300
65	COMP								
66	BIAS (4)			04 21					
67	COMP								
68	Rose 917	12 12 52	47 10 47	04 42 07					340
69	COMP							FeAr	60
70	COMP			04 54 29					
71	BD +49 2126	12 10 11	49 17 23						74
72	COMP								
73	COMP								
74	Vys 645	12 14 55	53 20 04	05 18 56					380
75	COMP								

CCD
Spectr. Temp. -100 °C Dome Temp./Hum. -7.8°C / 71.5% Transparency Conditions clear 54 °C
FANS OFF
Focus 7.01
Spectr. Temp. Dome Temp./Hum. 320 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1200 ll/mm G=4520	306μ	6563 Å	17			
121 ~~178~~	2"	11.7	MO					19	Km Hα search	took a while to find. Vys 622	0.4K
								20			
								21			
56		11.4	MO					22		Vys 637	280 Max.
								23			
								1/2			
								2~~45~~			
61		11.5	MO					27		Vys 138	270 MAX
								28			
								30			
209		10.5	MO					5		Vys 640	350 ~~MAX~~
								7			
								8			
~~380~~ 82		11.2	MO					9			200 above 9/9
								12			

55 pg #5

Date 1995 Mar 3/4 Observers Km./Smt

Emulsion Batches:
06.560. FILTER FOR COMPS
66.385 " FOR STELLARS
AND 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	Comparison Exp.
cc31276	COMP							Feather clear	60
77 ~~215~~	AC+41 537-54	12 45 50	40 54 39	5 35 34					430
78	comp							"	60
79	comp							"	"
80	AC +56 45927	13 00 34	56 26 19	05 52 10					300
81	comp							"	60
82	comp							"	"
83	AC +61 23399	13 42 12	61 28 5	06 05 21		> 2h			
84	comp							"	60
85	BIAS(4)			6 16					—
86 - 94	FLAT x 9					0h	+36°.5	Turq & Lap Feather clear	A
95/96	INBOARD/OUTBOARD								40/60

Spectr.
Focus
Spectr.
Exp. Mtr.
76
90
485

Spectr. Temp. -100°C Dome Temp./Hum. -84°C/73.3% Transparency Conditions clear! 56

Focus 7.01

Spectr. Temp. " Dome Temp./Hum. " @ FOCUS TEST

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Cl. No.	~~P.H.~~ Ci	Program	Remarks	Quality
				CASS CCD	1200 l/mm G=4520	30μm	6563 Å	13			
76		11.5	MO					14	Km Hα search	Vys 677A	~~R~~
								15			
								17			
90		10.7	MO					19	"	Vys 684 AB	300
								20			
								21			
465*		11.0	Mo					22	"	Vys 699 *Hots of sky SUN coming up	
								23			
								1/2		CCD T = -96°C ∴ TOP UP LN_2	
								2		GG385 FILTER	15.7K → 14.7K
								3/4		"	
							Backed up to WORM & Perseus.				

57

pg#1 Sat/Sun

Emulsion Batches:

Date 1995 MAR 4/5 Observers K.m./T.o.

CSS386 Time OK 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	Comparison Exp.
cc 312 97/98	in board/outboard					00 00	+37°	FeAr clear	40/55
99	BIAS								
cc 31300	Comp							FeAr clear	60s
01	AC+54 2311-89	03 3354	+54 53 34	19 23 30					
02	Comp							FeAr clear	60
03	Comp							"	"
04	BD+52 911	04 55 18	+53 00 17	19 51 03		01 14 W			780
05	Comp							FeAr clear	60s
06	BIAS(4)								
07	Comp							FeAr clear	60s
08	AC+67 2334	06 57 38	+67 21 08	20 33 46		W			1068
09	Comp							FeAr clear	60s
10	Comp							"	"
11	AC+68 3124	07 21 38	+68 49 42	21 07 11		00 25 W			1055
12	Comp							FeAr clear	60
13	BIAS(4)								

CCD Spectr. Temp. −100 °C Dome Temp./Hum. −44°C 62%H Transparency Conditions Hazy 5.8

Focus 6-98 90 Cgain No RA encoder tonight

Spectr. Temp. ____ Dome Temp./Hum. −3.0°C 67.2% (unstable) 390 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CASS CCD	1200l/mm G=4520 T:H=4215°	3x	6563Å	3/4	focus test	(for slightly cooler temp)	
							6585Å Actual Row 512 center	1/2			
								6			5.5K
270	2"	11.0	MO					7	Hα search	>80/1 S/N continuum Vys 424 : Hα emission	5.5K
								8			
								9			
490	2"	9.9	M2					10	Hα search		
								11			
								1/2			
								11			5.5K
275	<2"	11.2	MO					12	Hα search	(Yes, an MO type) no Hα em. >80/1 S/N	
								13			5.5K
								14			5.9K
350	<2"	10.9	MO					15	Hα search	another MO type (all right) no Hα em	80/1 S/N
								16			5.8K
								1/2			

59
Pg #2 SAT/Sun

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

Date 1995 MAR 4/5..... Observers .Kw./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	Comparison Exp.
Cc 3 13 14	Comp						/	Feat Clear	60s
15	AC+55 30267	07 27 18	+55 03 45	21 35 02		00 59W	"		1513
16	Comp							Feat Clear	60s
17	Comp							"	"
18	Vys 488	07 04 19	+52 26 28	22 09 36		W			1254
19	Comp							Feat Clear	60s
20	BIAS(4)			22 34					
21	Comp *not intended star							Feat Clear	60s
22	*BD+10 1857C	08 37 20	+09 55 22	22 42 56		W			1308
23	Comp							Feat Clear	60s
24	Comp							"	"
25	BD-02 3000	09 48 10	-03 13 04	23 15 59		00 12 W			873
26	Comp							Feat Clear	60
27	BIAS(4)			23 34					
28	Comp							Feat Clear	60s

Spectr.
Focus.
Spectr.

Exp. Mtr.

2340
350
215
315

Spectr. Temp. ..... Dome Temp./Hum. -3.1°C ... 70% H Transparency Conditions .. Slightly hazy 60

Focus ..... G: 9.8 .....

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

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Cl Combo	P.H.	Program	Remarks	Quality
				CASS CCD	1200 l/mm G= 4520	306	6563A	17			
~340	~2"	11.3	M0					18	Hα Em search	no Hα em seen	
								19			5-6K
								20			S/N 100/1
350	<2"	11.3	M0					21		no Hα em	
								22			5-8K
								1/2			
								23			6K
215	2"-3"	11.8	M2					24		not on m star Star WNW of V45 257AB	
								25		ABOUT 1' WNW of m 4.4	6K
								25			6-2K
315	2"-4"	10.57	M0					26		(still around +10 km/sec) No Hα em	
								27			
	2"							1/2			
								28			

61 Pg#3

Emulsion Batches:

Date 1995 MAR 4/5 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	Comparison Exp.	
CC31329	AC+19909-69	09 5837	+19 1658	23 3940		00 25 W			932	200
330	Comp							Fe Ar clear	60	
331	Comp							"	7	
332	BD+01 2447	10 2349	+01 2136	000347		0023W			856	500
333	Comp							Fe Ar clear	60	
334	Comp							"	7	
335	BD-09 3070	10 2015	-094325	002844		00 48 W			712	320
336	Comp							Fe Ar clear	60s	
37	BHS(4)			00 44						
38	Comp							Fe Ar clear	60	
39	HD103095	11 4713	+38 2610	005238		00 22 E			303	3450
40	Comp							Fe Ar clear	60s	
GC40 816 819	HD103095	11 4713	+38 2610					4x	67ms	
GC40 820/821	"					0015E		2x	133ms	
CC31341	Comp	for next Star (over)						Fe Ar Clear	60s	

CCD
Spectr. Temp. -100.3°C Dome Temp./Hum. -40°C 73.1% Transparency Conditions .. Fine, slight haze 62

Focus ... 6.98

Spectr. Temp. ~~-100°C~~ Dome Temp./Hum. -44°C 73.3% S/N

Exp. Mtr.	Seeing	Pw Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200	2"	11.34	M0	C455CCD	1200 l/m G=4520	306u	6563Å	29		M0 type, No em	70/1
								30			5.9K
								6ci			
500	3"	9.65	M2					10ci	Std vel mercy	(no Hα em as expected)	
								11			
								13			
326	2-3"	10.2	M0					15		no Hα em ok M0 type	
								16			
								.			
								17			
3450	2-3"	6.45	G8V$_p$					18	Std vel (IAU)		mHK 11.7K
								19			
	(2" I say Tm	6.45	G8V$_p$		(Above 306u slit)				Seeing test " "	Dome S W, no wind	
								19ci			

63
Pg#4

Emulsion Batches:
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.....
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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	Comparison Exp.
cc31342	Vys 638	120817	171524	01 16 29		0007 W			1808
43	Comp							Feat Clear	60s
44	Comp							"	"
45	Vys 635AB	12 04 52	+06 00 42	01 57 39		W			1792
46	Comp							Feat Clear	60s
47	BIAS(4)			0231				"	"
48	Comp							Feat Clear	60s
49	AC+17 478-60	130329	+173027	024004		W			1785
50	Comp							Feat Clear	60s
51	Comp							"	"
52	AC+37 30242	13 13 23	36 49 50	032404		W			1675
53	Comp							Feat Clear	60s
54	BIAS(4)			0355					
55	Comp							Feat Clear	60s
56	BD+35 2479	13 16 20	34 48 28	040354		W			1725
57	Comp							Feat Clear	60s

Spectr.
Focus
Spectr.

Exp. Mtr.	
10 of 12 2.65	
311	
248	
318	
480	

Spectr. Temp. ..... Dome Temp./Hum. -4.4°C 73.3% Transparency Conditions O.K., slight haze in SW 64

Focus 6.98 cloud coming gradually

Spectr. Temp. ..... Dome Temp./Hum. -5.1°C 74.9% H

S/N

Exp. Mtr.	Seeing	Pix. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
110 fr Hα 265	<2"	11.96	M0	CASS CCD	1200 l/mm G9520	306u	6563Å	20	Hα search	No Hα em (Good M0 type)	80/1
								22			
								22			
311	3"	11.9	M0					21		M0 OK, no Hα em	
								23			
								~~25~~ 1/2			~~6M~~
								25			6.1K
240	2"	11.8	M0					26		Vys 686	
										CCDT = -102°C	
								28			
318	2"	11.3	M2					29		Vys 44 no Hα em	
								30			
								1/2			
								5			
480	1-2"	10.6	M0					6		Vys 47	100/1
								11			

65 : pg#5 SAT/SUN

Date 1995 MAR 4/5 Observers K.R./T.M.

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	Comparison Exp.
CC13358	Comp							Fe Ar Clear	60s
59	BD+21 2763	15 17 55	+21 2006	04 48 53	(no end comp done)	W	—		1079
60	Comp	Only valid for next stellar.						Fe Ar Clear	60s
61	AC+53 2527409	16 06 49	+53 12 11	05 30 03		00 17 W			1230
62	Comp							Fe Ar Clear	60
63	BIHS(4)			0554					
64	Comp							Fe Ar Clear	60
65	AC+26 37030	15 23 45	+26 08 16	06 00 04		W			369
66	Comp								60s
67 — 75	FLATS x 9					3 01 30 W	+26°	TUNG Ap 1/4	35
76/77	inboard / outboard					1	4	Fe Ar Clear	40/50

CCD Spectr. Temp. ...-100.1°C..... Dome Temp./Hum. -5.1°C..75.0%H Transparency Conditions Increasing cloud.....66.

Focus ...6.98.....

CCD Spectr. Temp. .....-100.6°C. Dome Temp./Hum. -5.0°C 73.1%A

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		for		CASSCCD	Mod 1/m G4520	300u	6238				
158	·	10.11	mo					12		WRONG star not M type not the bright one	
								13			
126	2"	10.19	mo					14		Vys 759	
								16			
								1/2		CCDT= -99.3°C	
								17		Vys 744	
175		11.1	mo					18		weak, but an M star no Ha em	
								19			
								2		MHX 1.25K HDU	
-5°C	6.98set			(Just warming now CCDT -96°C)				30/31		Still OK	
								All to warm c Perseus.			

67 pg#1 → Entire night is useless – indicator LED on in fiber-fed room throughout ←

Emulsion Batches: .....

Date 1995 MAR 6/7 Observers [illegible] J.n./Smit.....

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	Comparison Exp.
RF00147/51	FLATS x5	diffusor IN		19 00 →	19 15	00 0220	+42 35	TUNG Clear	60sec
RF00152	Comp	diffuser OUT		19 17 24		For encoder BRT. Star negAMLI ZATION		FeNe Clear	30sec
53	HD16970	2 38 07	+2 48 52	19 26 41	19 46 11	3 44W			
54	Comp			19 47 51				FeNe Clear	30s
55	HD33111	5 02 56	-5 12 56	19 56 59	20 23 47	~1 50 W			
56	Comp			~~20 32 53~~		~~W~~		FeNe clear	30s
57	HD 56537	07 12 21	+16 43 15	20 32 53	21 07 46	00 30 W			
58	Comp							FeNe clear	30s
59	HD97603	11 08 47	+21 04 18	21 16 11	21 47 56	02 45 E			
60	Comp							FeNe clear	30s
61	HD 97603	11 08 47	+21 04 18	21 51 10	22 4 29				
62	Comp							FeNe 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

Spectr. Temp. ..... Dome Temp./Hum. -20°C 74% Transparency Conditions .. Hazy, POAT cloudy...
increasing uniform cloud

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	max Quality
L-60s lamp on for 70s on 65s				Reticon Fiber	~~316954~~	pinhole 400μ	86859			(FLAT ADC	
← lamp on for 40s C					830 l/mm TILT 46.9°					2578/2550 contrast with the cloud)	(ADC comp ~~2240~~ 1619 Flats
NOT WORKING	5"	1.92	A3 V							HEADER HAS NO INFO	3818
← lamp on for 40s											961 701 Flats
NOT WORKING	4.5"	1.27	A3 III								5449
← headscan 40 from now on but source on for 30s as per usual protocol.											1890
NOT WORKING	4"	1.89	A3 V								7030
											2582
FOCUS PROBLEM		0.9	A4 V							thick cloud for a while.	6918
Exp meter @ 22 000											3231
9.7K in 4.5 mins		0.9	A4 V							Cloudy	2181
										BEFORE DEWAR TOP UP	3182
										AFTER " " "	3213
35 K											2337
											2967

pg#2
69

Date 1995 Mar 6/7 Observers [KK] Jn. / 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	Comparison Exp.
RF00166	HD106591	12 10 29	+57 35 18	22 35 54	22 47 03				
167	COMP			22 48 07	22 48 47			FeNe clear	30s
168-172	FLATS x 5			22 57 44		D. Fuser IN		TUNG CLEAR	6s
173/174	DARK x 2 (short)								1s
175	DARK			23 11 04					3600
Night	FLAT			19 21 59			D. Fuser IN	TUNG CLEAR	60
	DARK			19 26					36s
	DARK			19 32 51					3600s
	No observing MAR 8/9 after Hll, But these are on current						Ret. Dat		

Spectr.
Focus
Spectr.
Exp. Mtr.

Spectr. Temp. ..... Dome Temp./Hum. -3.5°C / 78.2% Transparency Conditions mostly cloudy (increasing) ...70

Focus .....

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

Freezing Rain by 0010 EST

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		2.06	13V	RETICON FIBRE-FED	830 l/mm 4H = 46.5°	400μ pinhole	8685 Å			clear here but clouded over quickly	2212
										overcast with thick clouds	2468
										DIFFUSER IN	3054 → 2900 ish
											15
										WITH GRATING COVERED.	1983
Renamed MAR0695.DAT and put to persons CCD/TO_FTP.										didn't know Peterson password (Thought I did thanks)	
Copied to Floppy.											
converted to FITS, copied to WORM & persons											MAX ADU
no corrections done											9552
										grating covered	91
											82

71

Rgt#1 " Thurs / Fri

Emulsion Batches: .....

Date .1995. MAR. 9/10.... Observers [K.K]...T.n..... CSS Time was ahead 8 secs at start

CSS Time Reset to wwvb 20 EST.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce0867/68	inboard / outboard					00 16W	+46°	ThAr	20/20
69	BIAS(4)								
70	Comp	encoders normalized on HD34029 also						ThAr	15s,
71	HD 34029	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	HD 32068	04 5529	+40 5546	19 5716		02 16W			1762
79	Comp							ThAr	15s
80	BIAS (4)			20 29					
81	HD 32068			20 3042		02 53W			1970
82	comp							ThAr	15s

CCD Spectr. Temp. −100°C ..... Dome Temp./Hum. −9.0°C 56% H Transparency Conditions Fine 72

Focus 2310

Spectr. Temp. ..... Dome Temp./Hum. −10.7°C 58% H max ADU

c Lambda

Exp. Mtr.	Seeing	Tel. Mag.	Sp.	Inst.	× Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
−9.0°C				echelle ccd 17.86 1:14	1200 l/mm 4470 Å/M	60u W 50u L	3960Å	1/2	focus test	CCD FAST for focus 0 0 128 1024 8 1	4.4 6.6
						CaK W=.277 set 50u L=.215 set		1/2		OBS FAST 0 0 256 1024 4 1	
								3			6K
14K	med poor	0.08	G5III +G0III					4	K1 composite Sp pgm	(Focus not counting Hot pixel)	3K
								3			6K
15K								5			
								3			5.8K
15K								6			
								3			6.1
								3			6.6
1270	Var 2-5	3.75	K4II +B8V					5	K1 composite sp	= goes above Backgnd	
								3			6.6
								1/2			
1100	3-5"							4			
								3			7.85K

73
P9#2 Thurs/Fri

Emulsion Batches:
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Date 1995 Mar. 9/10 ..... Observers [K.K.] ... 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	Comparison Exp.	Exp. Mtr.
CE08683	Comp							ThAr	15s	
84	HD 80586	09 15 36	-09 07 53	21 14 25		00 30 E			2640	250
85	Comp							ThAr	15s	
86	BIAS(4)			22 01						
87	Comp							ThAr	15s	
88 ✓	HD 61421	07 34 04	+52 853	22 10 02		01 37 W			847	8500
~~89~~	~~Comp~~	This Comp lost (not written)						ThAr	15s	
89	Comp							"	"	
90	HD 83808	09 35 49	+10 20 50	22 31 27		00 14 W			1885	1000
91	Comp							ThAr	15s	
92	BIAS(4)									
93	HD 83808	09 35 49	+10 20 50	23 08 27		00 58 W			2312	1550
94	Comp							ThAr	15s	
95	Comp							"	"	
96	HD 102509	11 42 50	+20 46 29	23 59 25		00 06 E			3001	690
97	Comp							ThAr	15s	

CCD
Spectr. Temp. −100.7°C..... Dome Temp./Hum. −10.8°C 57%H Transparency Conditions .. Fine..... 74

Focus ....2310.....

CCD
Spectr. Temp. −101.8°C..... Dome Temp./Hum. −12.6°C 63%H

Exp. Mtr.	Seeing	PM. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				echelle CCD 1780 T:H	1200 l/mm •4470 HH	60 μ/slit 500 Å/mm	103aO	3			5.7K
250	5"+	4.8	G8III-IV +F5V					6	kk composite spatial	↑ = 70 max ABOVE	~~5.7K~~
								3			
								1/2		Comp	6.1 K
								3			
8500	poor	B 0.74	F5III-V					4	Std vel use "Procyon"		2.4K
								3	(But no end comp)		8.5K
								3			7.85K
1000	4"6'	V 3.52	F6III +A1-5V					5c.	kk composite		370 MAX Above Bkgnd
								3			7.1 K
								1/2			
1550	4"							5c;	kk composite Repeat		
								3			
								3			
690	4"	V 4.53	G5III-IVe +A7V					6	kk composite 93 Leo		MAX 300 in ABOVE Backgnd
								3			

75

P94#3 Thurs/Fri

Date 1.9.95 MAR. 9/10.... Observers [K.K.] Th.....

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	Comparison Exp.
ce08698	BIAS(4)			00 55					
99	HD102509	11 42 50	20 46 29	00 56 28		00 37 W			2149
8700	Comp							ThAr	15s
01	Comp							"	"
02	HD124897	14 11 06	+19 42 11	01 40 27		01 35 E			460
03	Comp							ThAr	15s
04	BIAS(4)			01 50					
05 ~~10~~	FLATS x6				02 30	01 00 W	+19 12	TUNG	300
11	Comp for Arcturus after topup & changing			slit H back to 500μ				ThAr	15s
12	HD124897	14 11 06	+19 42 11	02 48 23		00 19 E			889
13	Comp							ThAr	15s
14	BIAS(4)			03 06					
15	Comp							ThAr	15s
16	HD116658	13 19 55	−10 38 22	03 15 04		00 56 W			775
17	Comp							ThAr	15sec

CCD Spectr. Temp. -100.7C ..... Dome Temp./Hum. -12.2C 63%H Transparency Conditions Ok ... slightly hazy ... 76

Focus ... 2310 .....

Spectr. Temp. ..... Dome Temp./Hum. -12.8C 62%H some cloud in SW

C a

ADC max

Exp. Mtr.	Seeing	Mic. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				echelle ccd 17.80° tilt	1200 l/mm 4470 Å H	60 μ W 520 Å H	3960 Å	1/2			
710	3-4"	453	G5 III -IV e + A7 V					6c;	kk compost	Repeat Exp	
								3			8.2K
								3			7.5K
8,600		0	K2 III p					4	std vel		1K
								3			7.4K
								1/2		CCDT = ~~-113°~~	
						800 μ H = .185		2c;		CCDT = -102.0°C @ 2:20	12K
				Ther. Topp Done by 02:40		500 μ H = .215		3c;		(Flat profile looks good, symmetric)	~~7.2K~~
8650	3"	0	K2 III p					4c;	std vel	in some cloud	
								3c;			7.7
								1/2			
		~~0.98~~ 1.0						3			
4300	5"	0.98	B1 V-IV + B2 V					5	kk composite pgm		1.5K
								3			8.5K

77
1984 Thurs/Fri

Date 1995 MAR 9/10 Observers (K.H.) 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	Comparison Exp.
ce08718	HD116658	13 19 55	-10 38 22	03 30 25		01 11 W			763
19	Comp							Th Ar	15s
20	Comp							〃	〃
21	HD139006	15 30 27	+27 03 04	03 50 14		00 29 E			1350
22	Comp							Th Ar	15s
23	BIAS(4)			04 31					
	HD143454, TCRB		apparently	has gone.	Star TO NW in Finder (seen)		(Dec circle +25 58 when TRying for TCRB SAME FROM encoders)		
ce08724/25	inboard/outboard					2 34 W	+25 58		

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..Part. cloud..... 78

Focus ..2310..... Thicker by 0420

~~Spectr.~~ CCD Temp. ..... Dome Temp./Hum. ..-12.7°C 62.1% H

Exp. Mtr.	Seeing	P.V. Mag.	Sp.	Inst.	x Grating/ Tilt	Slit	Emulsion (c Lambda)	P.H.	Program	Remarks	Quality
4600	4"	0.98	B1 III-IV +B2 V		300 H$_{mm}$ 4470	60u V 500u H	3960 Å	5	kk composite pgm		
								3			
								3			73K
7500	3"	203	A0 V +G5 V					6	kk composite		15K
								2			8.0K
								1/2			
This is medium cloud in area @ 925 EST											
20/20 secs								7/8	focus Test	CCD Emit for focus 0 0 128 1024 8 1	7K

79
pg#1

Fri/Sat

Date 1995 MAR 10/11 Observers [Hw] Vys / T.N.

Emulsion Batches:

CSS 386 Time Right on 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	Comparison Exp.
CC3137 78	BIAS(4)			18 43					
79	Comp							FeNe clear	25s
80	HD 188854	025703	+3 4151	18 5400		W	Far		29
81	"			18 5601					40
82	Comp							FeNe clear	25s
83	Comp							"	"
84	HD 36395	05 2618	-034100	19 0640		00 49 W			10 96
85	Comp							FeNe clear	25s
86	BIAS(4)			1927					
87	Comp							FeNe clear	25s
88	BD-02 3000	09 4810	-03 1304	19 3125		02 58 E			1684
89	Comp							FeNe clear	25s
90	BD-02 3000			20 02 53		02 24E			1834
91	Comp							FeNe clear	25s
92	BIAS(4)			2037					

Spectr. Temp. −100°C Dome Temp./Hum. −5.0°C 64% Transparency Conditions Some cloud 80

Focus 6.96

Spectr. Temp. Dome Temp./Hum. −5.1°C 62.5% 90 C gain

CCD FLAT 410 0 50 1024 4 1 MAX ADU

Exp. Mtr.	Seeing	Tel. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
No Filter (Elastic used to guide)				CASS CCD	1800 l/mm G=5140	300	5303?	1/2			
								3			
		253	M1.5	III a	(Post guided N S E W to hopefully improve illumination stats)			4	Std vel	bright.	8K
≈15K		253						4			9K
								5			10.8K
								6			10.3K
2250	1-2"	7.97	M1					7	Mercy Std vel	(some cloud)	10.5K
								8			
								1/2			
								9			10.5K
980	<2-3" (when seen)	10.54	M0					10	Vys pgm Vys 560	(very cloudy ⇒ medium cloud) ≈ 45/1 S/N	
								11	AGS 17 pixels Blue of skyline (@ 181 Row) actual = 173 pix		
1030	2"							12	Vys 560 again (clearer now)		S/N 55/1
								13			10.5K
								1/2			

81c
P442 Fri/Sat

Date 1945 MAR 10/11 Observers [H.Liu] [E.Vaz] & J.m

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	Comparison Exp.
93 cc31401	FLATS x9					2 43E	+0050	Tung Ap 1/2	5 sec
02	Comp							FeNe clear	25s
03	BD+01 2447	10 23 49	+01 21 36	20 07 50		1 59 E			15?1
04	Comp							FeNe clear	25s
05	BIAS(4)			21 37					
06	Comp							FeNe clear	25s
07	BD-02 3000	09 48 10	-03 13 04	21 41 15		00 36 E			2?13
08	Comp							FeNe clear	25s
CC40 822 825	Ceres	08 55 16	2000 equinox +31 43 00	~22 30				4x	67½
CC40 826/27	"	"	"			00 34 W		2x	133 sec
cc31409	Comp							FeNe clear	25s
10	Ceres	08 55 16	+31 43 00	22 36 05		00 49 W			744
11	Comp							FeNe clear	25s
12	BIAS(4)			02 53					

CCD Spectr. Temp. −100.4°C Dome Temp./Hum. −5.2°C 62.4% H Transparency Conditions Cloudy now. Some clear periods

Focus 6.96

CCD Spectr. Temp. −100.5°C Dome Temp./Hum. −5.3°C 65.5% H No focus tests possible tonight. ADC MAX

Exp. Mtr.	Seeing	Pix. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASSCCD	1800 l/mm G=5140	306μ	5300Å	14c			15K
								15			10.5K
Electrification ≈1300	2-3"	9.65	m2					16	Mercy Stdvel	B2 −00 0012 δ δ −00 0292 some cloud	
								17		(18 pixel sep of ABS & row 182 and SKY line of 164 Raw)	10.6K
								1/2c			
								18			
1200	2"	1.54	m0					19	Vgs 560 again	Using SBIG for most (looks good)	
								20	2.5 Kms Rad of BD01 2447	SKY Just hazy now.	10.6K
	1.2"	~~.70~~	G2			ABOUT 306μ SLIT			Seeing test, well ZK's a (big asteroid)		
									thinly Cloudy,	Dome S/W Only NE Fm as now,	
								21			
G80	2"	.67	G (G/GR)					22	Std Vel use		
								23			10.9K
								1/2			
					All to Groom & Perseus						

83

Pg#1 SAT/Sun

Date 1995 MAR 11/12 Observers [Bln] Tn

(Lamp tests due to advancing cloud)

Again, No Focus Test possible.

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	Comparison Exp.
CC31413	BIAS(4)								
14	Comp					01 12W	-21 43	Fe Ar clear	90s
~~15/17~~	TL 850 x3			19 41 24					280s
18/20	TL 841 x3			~~21~~ 20 23					~~240s 320s~~
21/23	TL 830 x3			20 38					220s
CC31424	Comp			20 50				Fe Ar clear	90s
25/27	FLATS x3							TUNG Ap 1/4	9s
28	BIAS(4)			21 04					
29	Comp							Fe Ar clear	90s
CC314 30/32	TL 830 x3			21 13					955
CC314 33/35	TL 841 x3			22 08					1320
CC314 36/38	TL 850 x3			23 17 39					900
CC314 39	Comp							Fe Ar Clear	90s
CC314 40/42	FLATS x3							TUNG Ap 1/4	

~~Spectr.~~ CCD Temp. −100°C ..... Dome Temp./Hum. +00.5°C 80.0%H Transparency Conditions Actually, more cloudy than thought at first.

Focus ... 6.92 .....

Spectr. Temp. ..... Dome Temp./Hum. −00.4°C 80.0%H 90 Cycles (5411 (10sec) Central 2 (2 Rav 512 410 0 50 1024 4 1 CCDFLATT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
none Filter				CASSCCD	1800 l/mm G=5728	306u	6119Å ±.8Å	1/2c:	Fluorescent Lamp RAYS under		max ADU
					Tilt=531°			3c:	Top end of Telescope.		3.2K
7000	1st one				G=5723			4c:	As in other tests, MIRRORS uncovered.		11.1K
~~7000~~ 6400	1 stone							5c:		Strongest Line of cluster ≈ 6120Å	12K
8200								6c:			13K
								7c:			3.4K
								8c:			15K
					1800 l/mm G=5860	306u	6302Å ±.5	1/2		CCD T=−100°C	
					Tilt=54.8			9c:		Main em line ≈ 6310Å	1K
21,800								10c:			6.8K
≈33K								11c:		Same central strong line	7.2K
21,500 each								12c:			4K
								13		Note for overlap of next Red	1K
								14		(Red end exactly 6400Å; ≈ 6401Å.)	11K

85
pg #2 Sat/Sun

Date 1995 MAR 11/12 Observers [illegible] checking in

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	Comparison Exp.
CC31443	BIAS(4)								
44	Comp							FeNe clear	25
45	BD-02 3000	09 48 10	-031304	00 20 37		2 03 W			2110
46	Comp							FeNe clear	25
47	BD-02 3000			00 58 55		2 44 W			2255
48	Comp							FeNe clear	25
49	BIAS(4)			01 39					
50	Comp							FeNe clear	25
51	BD+01 2447	10 23 49	+01 21 36	01 43 55		2 37 W			1295
52	Comp							FeNe clear	25
53 61	FLATS x 9					02 46 W	±1°	TUNG Ap 1/2	5 sec
62	Comp							FeNe Clear	25
63	HD107328	12 15 16	+03 52 10	02 22 14		01 11 W			500
64	Comp							FeNe clear	25
65	BIAS(4)								

CCD Spectr. Temp. −100.5°C Dome Temp./Hum. −003° 77.5%H Transparency Conditions .. Slightly hazy but clearing well, medium East wind (SE)

Focus .... 6.92 90c gain

Spectr. Temp. .... Dome Temp./Hum. .... ε δ 410 0 50 1024 41 CCD FMT

Exp. Mtr.	Seeing	PV Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
~~Hand~~ no Filter				CHSS CCD	1800 H/m G=5140	306c	5303A	1/2			
								3			10K
670	poor 6"?	1054	m0					4	Vys 560	moon 30° to west	45/1 S/N
								5			10.2K
760	4"							6	Vys 560 2nd exp	estimated velocity ≈ 59/1 S/N	
								7		Same as PREVIOUS night ± 15 km/sec	
								1/2		CCD T = −100.4°	
								8			10.2
620	*3+	965	m2					9		* Very, very poor seeing at end	10.2
								11			14K
								12			
5300	(10"+20"?)	(496V)	(K0.5 III b SP	Fe-0.5)				13	std vel	some cloud too	11.4K 28K
								1/2	All normal & to Persons		

Emulsion Batches: .....

Date 1995 Mar 12/13 Observers KK/Smt → ~~EVH53Smt~~ .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc31466	comp							FeNe	10
67	Chile source							Ar Ne	10
68	COMP							FeNe	25
69	Chile source							Ar Ne	30
~~70~~	~~BIAS x4~~	deleted.		~~19 54~~					–

rcp Spectr. Focus... Spectr. Exp. Mtr.

CCD
Spectr. Temp. -100°C @ cc31469 Dome Temp./Hum. 8.8°C / 67.6% Transparency Conditions .. clear! (melting ice & snow causing dome Heloseye to drip) + mirrors wet. 88

Focus .....

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

FANS ON

410 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	600/G=2650	306	4200 Å	4			
								5			
					1800 l/mm G=5140	306m	5303 Å	6			
								7		one stray line only.	
								~~1/2~~	All 4 to	Perseus & WORM	

10
10
25
30
-

89 Pg #1

Date 1995 Mar 13/14 Observers E. Vys. ? 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 Type/Filter	Comparison Exp.	Exp. Mtr.
CC3147	70/71 INBOARD/OUTBOARD							FeNe clear	20/30	
72	BIAS x4								—	
73	COMP							FeNe clear	25	
74	AC+67 2334	6 57 38	+67 21 08	19 52 59		0 33 W			2400	682
75	COMP							"	25	
76	BIAS x4			20 38					—	
77	COMP							"	25	
78	Vys 488	7 04 19	+52 26 28	20 49 37		1 25 W			2400	744
79	COMP							"	25	
80	BIAS x4			21 33					—	
81	COMP							"	25	
82	BD+10 1857	8 37 20	+9 55 22	21 49 24		1 05 W			3060	800*
83	COMP							"	25	
84	BIAS x4			22 ...						
85	COMP							"	25	

Spectr. Temp. ~100°C (cold) Dome Temp./Hum 11.8°C/47.9% Transparency Conditions clear & dry; some very thin cloud. FANS OFF

Focus 6.82 (cold).

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

410 0 50 1024 4 1 ccd fast

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1200 l/mm 6:5.40	30μm	5303Å	3/4	FOCUS TEST	AUTOGUIDING TONIGHT. WITH SBIG	
								1/2			
								5			
682	2"	11.2	MO	subtract sky!!				6	{Vgs} Vgs 282	light leak? b/g runs from 200 to 150 across length.	500 above b/g
								7			
								1/2			
								8			
744		11.3	MO	subtract sky!!				9	{Vgs}	still light leak with b/g.	200 above b/g
								10			
								1/2			
								11			
600*		9.6	MZ	subtract sky!!!				12	{Vgs} Vgs 259 AB	close to moon, shadow on slit. *mostly sky	1K above b/g
								13			
								1/2			
								14			

91
P9 #2

Date 1995 Mar 13/14 Observers [Hlw] / J.V45 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 Type/Filter	Comparison Exp.	Exp. Mtr.
cc31486	BD-02 3000	9 48 10	-3 13 04	22 51 16		0 31 W			1500	940
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	968
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	AC+19 1971-31	11 47 55	+19 28 59	00 45 32		0 55 W			3200	777
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. 92

Focus ..... 6.82 FANS OFF

Spectr. Temp. ..... Dome Temp./Hum. ..... 410 0 50 1024 4 1 ccdflat

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
940		10.54	M0	CASS CCD	1800 g/mm G=5140	300μ	5303Å	15	Hlw / {V_{45}}	very clean.	500 above blg
								16			
								1/2			
								17			
968		9.65	M2					18	Marcy Std. Velocity		400 above blg
								19			
								20			
~1000		10.54	M0					21	Hlw / {V_{45}}		420 above blg
								22		late.	
								1/2			
								23			
777		11.7	M0					24	{V_{45}}	V_{45} 622	200 above blg
								25			
								1/2			
								26			

93
pg #3

Date 1995 Mar 13/14 Observers {Eyes} 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 Type/Filter	Comparison Exp.
cc31501	Vys635AB	12 04 52	+60 0 #2	1 50 36		1 29 W		.	2400
02	COMP							FeNe clear	25
03	BIAS x4			2 35					
04	COMP							"	25
05	AC+40 5612-31	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 23399	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 17 W	+15°	Tung 1/2 hp	5
24/25	INBOARD/OUTBOARD							FeNe clear	20/30

Spectr.
Focus
Spectr.
Exp. Mtr.
557
723
319
534

Spectr. Temp. -100.2°C Dome Temp./Hum. 9.3°C/52.2% Transparency Conditions clear → increasingly cloud..

Focus 6.82 FANS OFF 94

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

410 0 50 1024 4 L ccdat

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
557		11.41	M0	CASS CCD	1800 l/mm G=5140	306μ	5303Å	27	{V45}	AUTOGUIDING TONIGHT	
								28			
								1/2			
								29			
723	2".5	11.4	M0					30	{V45}	V45 637	350 above b/g
								31			
								1/2			
								5			
319		11.0	M0					6	{V45}	some cloud at end V45 629	300 above b/g
								7			
								1/2			
								8			
534		8.48	M1					9	Morey Std Velocity	patchy clouds	400 above b/g
								10			
								2			M.4K → B4K
								3/4		Add to Perseus & WERM	:

95
pg #1

Emulsion Batches:

Date 1995 Mar 14/15 Observers Smt./EVy.s?....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	Comparison 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	974
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	743
35	COMP							"	25	
36	BIASx4			21 20					—	
37	COMP							"	25	
38	HD36395	5 26 18	-3 41	21 31 42		3 21 W			526	1230
39	COMP							"	25	
40	COMP							"	"	
41	BD+27 1348	7 10 07	+27 19 08	21 50 11		2 21 W			2160	815
42	COMP							"	25	

CCD Spectr.
Focus
Spectr.
Exp. Mtr.

CCD
Spectr. Temp. -100.5°C ..... Dome Temp./Hum. 14.2°C/45.4% Transparency Conditions clear., bright moon.....
Focus .....6.75.....
Spectr. Temp. ..... Dome Temp./Hum. .....

DOME FANS ON
USING SBIG AUTOGUIDER
410 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
								3/4		14.8°C 6.74 was a bit warm chip ~~[illegible]~~ saturated at red end again today upon startup.	
								1			
								5			
974	2"	10.98	MO	subtract background!				6	{V45}	some residual saturation effects the spectrum V45 457	1.1K
								7			
								1			
								8			
743	<2"	11.0	MO	subtract background!				9	{V45}	V45 424	420 abnormal bkg
								10			
								1			
								11			
1230	3"	7.97	M1					12	{V45} Marcy std velocity	V45 9,	1.1K
								13			
								14			
865	2"	10.9	MO	subtract background!				15	{V45}	slim companion to SE V45 490A?)	
								16			

97
pg#2

Emulsion Batches:

Date 1995 Mar 14/15 Observers Smt. Sivis ... ibs 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	Comparison Exp.
cc3153	BIAS x 4			22 30					
44	COMP							FeNe clear	25
45	BD+27 1348 (B?)	7 10 07	+27 19 08	22 46 56		3 24 W			2500 ~~525~~
46	COMP							"	25
47	BIAS x 4			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	BIAS x 4			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	BIAS x 4			2 13					—

CCD Spectr. Temp. ~ 100 ..... Dome Temp./Hum. 12.1°C/53.8% Transparency Conditions clear .. bright moon 98

Focus ..... 6.75 .....

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

N FAN ON ONLY NOW

410 0 50 1024 4 1 CCDFNT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm G=5140	50μm	5303Å	1			
								17			
~~400~~ 500		>12	not M	subtract sky				18	{Vys}	dim SE companion Vys490B?	
								19			
								1			
								20			
892		16.5	M2	subtract sky				21	{Vys}	Vys 493	450 above b/g
								22			
								1			
								23			
1120		>12.0	M0	subtract sky				24	{Vys}	brighter & NE of two Vys250A?	450 above b/g
								25			
631		12.1	M0	subtract sky				26	{Vys}	fainter & SW of two. Vys250B	100 above b/g
								27			
								1			

py #3
99

Date 1995 Mar 14/15 Observers Smt {Uys} ...its 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	Comparison Exp.
CC31558	COMP							FeNe clear	25
59	HD95735	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.133
CC31561	BIASx4			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					1h W	+21°	Tung ½ Ap	5
74/75	INBOARD/OUTBOARD							FeNe Clear	20/30

Spectr.
Focus
Spectr.
Exp. Mtr.
3210
488

Spectr. Temp. ...-100:3°C... Dome Temp./Hum. 9.8°C/55.3% Transparency Conditions. clear, bright moon. 100

Focus ...6.75...

Spectr. Temp. ... Dome Temp./Hum. 9.6°C/56.3% @ end of seeing test

N FAN ON ONLY

410 0 50 1024 4 1 ccdfast

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 R/mm 6=5140	5x6"	5303Å	28			
3210	3"	7.48	M2					29	{Vys} Many std. velocity	Vys 594	2.6K
								30			
	3"	6.95	KO III	EEV CCD GUIDE CAMERA		above 306 μ		—	SEEING TEST	Dome SW, light SW wind, clear unseasonably warm past 2 days	
								—			
								1			
								5			
438		11.1	M0					6	{Vys}	Vys 309 - not done before	180 above b/g
								7			
								2			14.7K →13.7K
								3/4	FOCOS TEST	9.4°C e start.	
										All backed up to Perseus & WORM	

101
pg#1 Wed/Thurs

Emulsion Batches:
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Date 1995 Mar 15/16 Observers [Rm].Tn./S.nt....+.[Hlw]

CSS 386 = 7secs ahead of usual 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	Comparison Exp.
CC315 76/77	INBOARD/OUTBOARD					≈0 0	≈+40°	Feat 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	Arrowss 1.0334	.133
CC31582	COMP							Feat Clear	60
83	HD65583	7 54 21	+29 31 04	20 49 43		0 34 W			1720
84	COMP							Feat Clear	60
85	BIAS(4)			21 25					
CC315 86/90	FLAT x5					0 44W	+29 19'	Tung 1/4 Ap.	7
CC315 91/92	Inboard/outboard							Feat Clear	20/30
93 94	BIAS x4 COMP.		~~(CC3154 7 BIAS Sum of 4 (0 01 02 18))~~					"	25
~~95~~	BD-02 3000	9 48 10	-3 13 04	1 27 06		3 26 W		Feat Clear	2100 255
96	Comp								

CCD Spectr. Temp. -100.4°C Dome Temp./Hum. +12.4°C/55.3% Transparency Conditions just cleaned 102

Focus 6.75 / 6.82 @ 5500Å

Spectr. Temp. ..... Dome Temp./Hum. 11.1°C/57.6% at seeing test DOME FANS OFF (FULL MOON, Jan 4th)

410 0 50 1024 4 1 ccdfast

Exp. Mtr.	Seeing	Ap. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
06 560 FILTER				CASSCCD	1800g/mm G=5930	20μm	6400Å	3/4	focus TEST		
								1/2c:			
								5			
4150 *4Hr								6	Rm pgm	T Mon	9.1K
								7			
	5"-6"	7.00	G8V	CCV CCD GUIDE CAMERA		above 30μm		— -	SEEING TEST	Dome SW, no wind, cold front coming in, been exceptionally warm (+15°C) during the day.	
								8			
2500	4"	7.00	G8V					9	14V Std. Velocity	7200:1 S/N Some cloud and increasing	5.0K
								10			
								1			
								11			13.5K → 12.9K
No FILTER					1800g/mm G=5140	30μm	5303Å	3/4	FOCUS TEST	set a bit cool intentionally.	
								12			
1295		10.54	M0					13	Vgs 560		220 done K/g
								14			

103
Pg#2 Wed/Thurs

Date 1995 Mar 15/16 Observers Evans 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	Comparison Exp.
cc31597	BIASx4			2 09					
98	COMP							FeNe clear	25
99	HD95735	10 57 54	+36 38	2 12 12		02 38W			760
cc31600	COMP							FeNe clear	25
01	Comp							"	25
02	BD+49 2126	12 10 11	+49 1723	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	BIAS x 4								—
09	Comp							"	25
10	BD+35 2436	13 14 56	+35 38 42	4 22 31		2 40 W			1200
11	COMP							"	25
12-16	FLAT x5					2 47 W	+35°	Tung 1/2 Ap	5

CCD
Spectr. Temp. -100.5°C ..... Dome Temp./Hum. 8.1°C / 71.6% Transparency Conditions. partly cloudy → foggy 104

Focus ..... 6.82 .....

Spectr. Temp. ..... Dome Temp./Hum. 5.5°C / 88.5% @ end of night. + Full moon

410 0 50 1024 4 1 CCD FAST

Exp. Mtr.	Seeing	P.V. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
NI FILTER				CASS CCD	1800 ℓ/mm 6=5140	30μ	5303Å	1			
								15			
3000	4"	7.48	M2					16	{V45} Many velocity	V45 594	MAX 22K
								17			86K
								18			11K
696	3-5"	10.5	M0					19	{V45}	some cloudy streaks CCDT=-100+C V45 610	280 above Wg
								20			
								1			
								21			
706		10.6	M0					22	{V45}	S/N ~ 50:1 V45 47 cloudy stretch	
								23			
								101			
								24			
645		9.5	M2					25	{V45}	S/N ~ 60:1 V45 46A - foggy	
								26			
				All backed up to WORM & Exabyte				27			14.2K → 13.4K

105

pg #1 Thurs/Fri

Date 1995 MAR 16/17 ... Observers For Lamp tests [Bln]/Tn/Smt/[Hlw]/[Vyg] Tn/Smt.

Note metea Long Sky baffle installed for most Lamp tests

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	Comparison Exp.
CC316 17/18	Inboard/outboard					01 12W	+27	FeAr clear	60/60
19	BIAS(4)					"	"		
20	Comp					"	"	FeAr clear	180
21/23	TL 850 Lamps	Use complete set of MAR 19/20 for 6498 & center		Actually 19 00 Began CSS 386 Slew 6 mins? 19 53 56		"	"		1200
24	Comp							FeAr clear	180
CC316 25/26	Inboard/outboard	CSS 386	Time now corrected					FeNe clear	20/30
27	BIAS x SUM			21 39					
28	COMP							"	25
29	BD -02 3000	9 48 10	-3 13 04	21 47 06		0003E			2606
30	Comp							FeNe clear	25
31	BIAS x4			22 35					—
32	COMP							FeNe clear	25
33	BD+01 2447	10 23 49	+01 21 36	22 39 06		0 02 W			1931
34	Comp							FeNe clear	25
35	Comp							"	"

CCD Spectr. Temp. ~100°C ..... Dome Temp./Hum. +10.7°C ..... 59% H Transparency Conditions . Cloudy. Dome closed for Tests

Focus .. 6.78 ..... 910 c gain

Spectr. Temp. ..... Dome Temp./Hum. +6.5°C / 56.8% during first star obs

Comfortable

410 0 50 1024 4 1 CCDFAST

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CASSCCD	1800bl/mm G~6000 T:H=55.7	306u	6498Å ±.8 At Ang 512	3/4 ci	focus test		
								1/2			
								5 ci			max 8K
107K	for all 3							6 ci		strongest @ 6510Å +3Å	3.2K
								7 ci			
no filter				CASSCCD	1800 l/mm G~5140	306u	5303Å exactly	3/4 ci		Right ton @ center	
								1			
								8			
1,160*		10.54	MO					9	Hlw	* lots of sky to subtract. Vys 560 60:1 S/N above b/g (Clear through)	
								10			
								1			
								11	{Vys} Mercy velocity	AUTOGUIDER lost it for a bit and star drifted.	
1465*		9.65	M2					12		* lots of sky Vys 127	
								14			
								15			

107
Pg#2 Thurs/Fri

Date 1995 MAR 16/17 Observers [illegible] 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	Comparison Exp.	
CC31636	BD -17 3088	10 07 24	-18 07 26	23 1903		1 12 W			2622	1730
37	Comp							FeNe clear	25	
38	BIAS x4			00 06						
39	Comp							FeNe Clear	25	
40	AC +38 28746	09 3007	+37 5838	00 1333		2 50 W			3193	840
41	Comp							FeNe Clear	25	
42	BIAS x4			01 10						
CG40840-843	HD103095	11 4713	+38 2610	= 01 15				4x	67ms	
844 845	"	"	"			00 43W		2x	133ms	
CC31643	Comp							FeNe Clear	25	
44	HD103095	11 4713	+38 2610	01 1959		00 55 W			491	357
45	Comp							FeNe Clear	25	
46	Comp							"	"	
47	AC +40 512-31	12 0725	+40 1400	01 39 36		1 37 W			3000	621
48	Comp							FeNe Clear	25	
49	BIAS x4			232						

CCD Spectr.
Focus
Spectr.

CCD Spectr. Temp. -100 °C Dome Temp./Hum. 7.5.0°C/60.9% Transparency Conditions clear, full moon 108.

Focus 6.78

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

N DOME, FAN ON ONLY (NW wind 4 knots/hr)

410 0 50 1024 4 1 ccd font

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 ℓ/mm G=5.40	306μ	5303 Å	16	{Vys}	S/N > 70:1 after b/g Vys 570 lots of moon	ADQ MAX
								17			11K
								/			
								18			11.2K
840	3"-5"	11.0	M0					19	{Vys} 549	≈ 60/1 S/N	
								20			11.5K
								1		CCDT = -100°C	
	POOR	6.45	G8V		Above	306μ	slit		Seeing test	Dome WSW Light NNW wind	
									1.019 A:R mass.		
								21			
3570	4"-6"	6.45	G8V					22	Std Vel	IAU	MAX 3K
								23			
								24			11.3K
621		11.4	M0					25	{Vys} 637	S/N ~60:1	
								26			

109
P943 Thurs/Fri

Date 1995 MAR 16/17 Observers {Vys} Sat/Tue

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	Comparison Exp.
CC31650	COMP							FeNe clear	25
51	AC+37 38242	13 13 23	+36 49 50	2 44 25		1 37 W			3000
52	COMP							"	25
53	BIAS x4			3 39					—
54	COMP							"	25
55	Vys 138	12 12 52	+47 10 47	03 44 45		3 19 W			1905
56	Comp							"	25
57	BIAS x4			4 20					—
58 - 66	FLAT x9					1 26 W	+33°	Twy V2 App	5
67/68	INBOARD/OUTBOARD					"	"	FeNe clear	20/30

Spectr. Temp. -100.4°C Dome Temp./Hum. +1.4°C / 70.8% Transparency Conditions clear 110

Focus 6.78 ONLY N FAN ON

Spectr. Temp. ..... Dome Temp./Hum. +1.8°C / 77.7% are closed 410 0 50 1024 4 1 coadfut

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
25				CASSCCD	1 Barden 6=5140	306	5303A	27			
3000 393		11.3	M2					28	{V45} 44		
25								29			
-								1			
25								5			
405 393		11.5	M					6	{V45} 138	S/N ~ 25: 1 cut short, some low, fast clouds.	
25								7			
-								1			
5								2			14.1K → 13.0K
4.0K								3/4	FOCUS TEST		
					All backed up to Perseus & WORM.						

III
pg # 1

Date 1995 Mar 17/18 Observers [Rm] 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	Comparison Exp.
cc3166 9/70	INBOARD/OUTBOARD							Fetr clear	60/65
71	BIAS(4)								
72	COMP							"	60
73	HD 44990	6 19 49	+7 08 25	21 29 51 ~~20 42 28~~		~~2 02 W~~			870 ~~1360~~
74	COMP							"	60
75	BIAS(4)			21 48					—
76	COMP							"	60
77	HD 30282	4 41 06	+36 32	21 56 30		4 55 W			1500
78	COMP							"	60
79	BIAS(4)			22 24					—
80	COMP							"	60
81	HD 86801	9 55 48	+29 02	22 40 47		0 24 W			1317
82	COMP							"	60
83	BIAS(4)			23 13					—
84	COMP							"	60

Spectr. Temp. -10.0°C Dome Temp./Hum 0.2°C / 65.5% Transparency Conditions .. clear .. full moon 112

Focus ..... 6.85 FANS OFF

Spectr. Temp. ..... Dome Temp./Hum. ..... 4100 50 1024 4 1 ccdfast

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
G500 FILTER				CASS CCD	1800 l/mm G=5930	300u	6400Å	3/4	FOCUS TEST	warmed CCD to -50°C and ran disc to vid chip of saturation.	
								1			
								5			
5125 325		6.8 -8.0	mTab -kI					6	Rm TMon	encoders re-normalized ~~AUTOGUIDED~~	8.2K
								7			
								1			
								8			
2820								9	Rm AWPer		4.6K
								10			
								1			
								11			
600		8.88	60V					12	Std. Vel	there is another star 0'.3's similar brightness and 3" W but coords seem to agree better with present position.	
								13			
								~~15~~ 1			
								14			

113 pg #2

Date 1995 Mar 17/18 Observers [Rm] 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	Comparison Exp.
cc31685	HD66141	7 57 04	+2 36 39	23 23 07		2 46 W			180
86	COMP							Featr clear	60
CG40846-9	HD93271	10 41 06	+43 34						4x.067
50/51	"				23 39	0 14 W	87° Alt	Air mass 1.0011	2x.133
87-95	FLAT x 9					0 25 W	+43°	Twig Y4 Ap	8
96	BIAS(4)			1 08					
97	COMP							Featr clear	60
98	HD180583	19 11 59	+27 44 59	1 24 50		6 09 E			1200
99	COMP							"	60
cc31700	BIAS(4)			1 54					—
01	COMP							"	60
02	BD+28 3402	19 34 56 (1993.5)	+29 04 36	1 57 19		5 28 E			2800
03	COMP							"	60
04	BIAS(4)			2 46					—
05	COMP							"	60

Spectr.
Focus.
Spectr.
Exp. Mtr
Pg 360
FILTER
5500
4330
1038

Spectr. Temp. -1.00..3.°C.... 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 4 1 coldfit

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Coudé	~~P.H.~~	Program	Remarks	Quality
FILTER 5500		4.39	KPNO 6 F2-0.5	CASS CCD	1200 l/mm G=5930	30μm	6400 ~~[illegible]~~ A	15	Std. Vel.	sure about Hγ/s ore.	10K
								16			
	3"-4"	7.45	KPNO III	EEV CCD GUIDE CAMERA		above 30μm		—	SEEING TEST	Dave W, very light WNW wind clear, cold front moved in	
								—			
								2			15.2K → 14.9K
								1			
								17			
4330	8"	<v> = 6.19	F6 J-II					18	Rm V473 Lyr	retracted image.	7.0K
								19			
								~~20~~ 1			
								20			
1038		9.00	F7 V					21	Std. Vel.	very near same telescope position as for V473 Lyr and spectral type	1.7K
								22			
								1			
								23			

115
pg #3

Date 1995 Mar 17/18 Observers [Rm] Smt ... its 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	Comparison Exp.
cc31706	HD331970	20 08 27	+32 34 16	2 54 31		5 25 E			1830
07	COMP							Foka clear	60
08	BIAS(4)			3 28					—
09/10	INBOARD/OUTBOARD					0 01 E	+33°	"	60/65

CCD Spectr.
Focus
Spectr.
Exp. Mtr. 540
CC FIL 560

CCD
Spectr. Temp. -100.3°C Dome Temp./Hum. -1.0°C/71.5% Transparency Conditions clear, full moon 116
FANS OFF
Focus 6.85
Spectr. Temp. ..... Dome Temp./Hum. -1.1°C/72.3% @ FOCUS TEST 410 0 50 1024 41 ccdfmt

Exp. Mtr.	Seeing	V ~~Pg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
560 OG FILTER	3-4"	9.1-9.8	F8-G2Ib	CASS CCD	1600 g/mm G=5730	30μm	6400 Å	24	Rm MWCyg		750
								25			
								1			
								3/4	FOCUS TEST	no more safety backup.	

All backed up to Perseus & WORM.

117
pg #1

Emulsion Batches:
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Date 1995 Mar 18/19 Observers [Rm] Smt ..... Bln 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	Comparison Exp.
cc31711/12	INBOARD/OUTBOARD							Fe Arc clear	60/65
13	BIAS(4)			19 52					—
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					—
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					—
25	COMP							"	60
26	HD42397	6 05 24	+25 02	21 32 58		3 12 W			1400
27	COMP							"	60

CCD
Spectr. Temp. -100.4°C Dome Temp./Hum. +5.5°C / 62.1°C @ FOCUS TEST Transparency Conditions . clear, some cloud to S 918
Focus ..... 6.81 BOTH FANS ON AT START
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
06 560 FILTER				CASS CCD	1800 l/m G= 5930	30µm	6400 Å	3/4			
								1			
								5		S DOME FAN OFF NOW	
2356	2.5"	V 7.30 - 8.07	F6 Ib - G2 Ib					6	Rm RX Cam	high wispy clouds	5.8K
								7			
								1			
								8			
2500	3"-2"	B= 7.9-8.8	F6-G1					9	Rm AW Per	clear again	6.5K
								10			
								11			
3820	2.5"	B 6.5-8.0	F7 Iab - K1 Iab					12	Rm T Man		10.5K
								13			
								1			
								14			
1475		V 8.03	G0 IV					15	IAU Std. Velocity		2.7K
								16			

119 pg #2

Date 1995 Mar 18/19 Observers [Rm] 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	Comparison Exp.
CC31728	BIAS(4)			22 00					—
29	COMP							FeAr 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
56/57	" x2				22 28	0 02 W	Alt 84°	air mass 1.0054	.133
CC31732-40	FLAT x9					0 10 W	+38°	Tung ¼ Ap	8
41	BIAS(4)			22 36					—
CG40858/59	HD74010 x2	8 36 18	+49 15						.133
60/61	" x2				22 54	1 38 W	Alt 72°	air mass 1.05	.067
62–65 ~~CC31743~~	BD+37 2174 x4	11 16 12	+37 19		23 06	0 48 E	Alt 79°	1.02	.467
CC31742/43 ~~CC31744~~	INBOARD/OUTBOARD							FeAr clear	60/65
44	BIAS(4)			1 33					—

CCD
~~Spectr~~. Temp. −100.3°C..... Dome Temp./Hum. 3.9°C / 64.5% Transparency Conditions. Clear, wispy clouds.....
only N FAN ON NOW.

Focus.....6.81.....

Spectr. Temp. ..... Dome Temp./Hum. 3.3°C / 68.5% @ seeing test

410 A 50 1024 4 1 cathode

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1800 R/mm G=5930	300μ	6400 Å	1			
								17			
7K								18	IAU Std Vel Beta Gem	trailed	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"	√primary 6.9	primary FO	EEV CCD GUIDE CAMERA		above 300μ		—	SEEING TEST CALIBRATION	Done W, no wind, increasing cloud.	
						"		—	DOUBLE STAR		
	3"	√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		

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Sun/Mon

Date 1995 MAR 19/20... Observers (Bln.) Tn.....

Emulsion Batches:

Use this set of 6498Å. Rather than previous attempts of MAR 16.

Nominal Lamp tests with Skylight baffle 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	Comparison Exp.
CC3174 5/46	Inboard/outboard			19 20		00 16W	+29 20	Fe Ar Clear	60/60
47	BIAS(4)								
48	Comp			19 33		01 12W	-21 41	Fe Ar Clear	180s
49/51	TL 830 x 3			19 39 59		01 12W	"		1700s
52/54	FLATS x 3					"	"	TUNG Ap=1/4	75s
55/57	TL 841 x 3			21 14 07		"	"		1300
58/60	TL 850 x 3			22 23 33		"	"		1100
61	Comp			23 39 40		"	"	Fe Ar Clear	180s
62	BIAS(4)			00 02 44					
63	Comp			00 03 37				Fe Ar 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	75
CC3177 3/75	TL 830 x 3			01 32 13					600
76	Comp			02 08 05				Fe Ar Clear	120s
77	BIAS(4)			02 10 44					

Spectr. Temp. CCD −100.5 C Dome Temp./Hum +3.7°C 80% H Transparency Conditions ... Cloudy, Dome closed for Fluorescent Light tests.

Focus ... 6.85 90C gain 86% H

Spectr. Temp. ... Dome Temp./Hum +4.0°C Lambda 410 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
~~red~~ OG560 filter				CASSCCD	1800 l/mm G=6000 TiH=55.7	306u	6498Å ± .3Å	3/4	focus test	Just Fine	MAX ADU
Lamps UNDER end of Telescope upper Platform By Dome opening buttons SAME AS for other tests								1/2			
								5			max 75K
25K each								6		{Continuum ≈ 1.1K ADU Strongest Line ≈ 5.3K max}	
				(13K ADU max Flat)				7			
								8		~~MAX 13K ADU~~	
13000 each								9		2.5K ADU max	-
								10		CCDT = −102.0°C	72K
					1800 l/mm G=6100 TiH=56.4	306u	* Actual 6620Å At Row 512 ± .1Å	11	*Bln usual 6604Å Region [*610-15Å Relot usual Region]		10K max
~~94K each~~								12	Continuum ~~700~~ 200 ADU	Strongest Line	62K
94K each								13	Continuum 200 ADU above background		63K
								14			145K
								15			
					dec to Perseus & WORM			16		rocks moved during middle of 1st attempt.	
								1			

123 Mon/Tues

Date 1995 MAR 20/21 Observers [illegible] J.T.

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	Comparison Exp.
cc317 78/79	Inboard/Outboard Hartmann					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
85/87	TL841x3			21 00 00					1200
88/90	FLATS x3			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	FLATS x3							TUNG Ap 1/4	
03/05	TL841x3			00 29 30					700s
cc318 06/08	TL830x3			01 08 42					700s
cc318 09	Comp			01 56 ~~47~~				FeAr Ap 1/4	30s
cc318 10	BIAS(4)			01 56					

CCD
Spect. Temp. −100.6 °C Dome Temp./Hum. +8.2°C 74%H Transparency Conditions Cloudy.. Dome closed for tests.

Focus 6.80 90Cg4in

CCD
Spect. Temp. −101.3 °C Dome Temp./Hum. +8.6°C 94%H Cloudy

410 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
~~no filter~~ OG560 FILTER				CASSCCD	1800k/mm G=6290 TiH 578	306u	6810Å ± 2Å of Run52	3/4	focus test		
								1/2			
								5			1144x 8.1K
19K each								6	Pair of Fluorescent Lamps	Continuum >300 ADU above background	3.2
19K each								7	Strong narrow ~~emission~~ Lines at both ends	emission	4K
								8			14K
								9			
								10			68K
				CASSCCD	1800k/mm G=6395 TiH=579°	306u	≈7000Å	1			
							very uncertain so far. no good lamps here.	11ci		Better than FeNe source But still poor.	135K
5,760 each								12ci		continuum >200 ADU above	2K
								13		Background continuum (>70 ADU above)	
								~~14~~		Strongest Line at Red edge.	3.2K
12,500								14		Redist source	4.0K
								15			136K
								1/2	All to WCAM 5 persons.		

125

Tues/Wed

Date 1995 MAR 21/22 Observers [Blo] JA

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	Comparison Exp.
CC318 11/12	Inboard / Out Board Hartman					01 12W	-21 32	FeAr Clear	30/23
13	BIAS(4)			20 0008					
14	Comp							FeAr Clear	22sec
15/17	TL 830 x 3			20 04 59					1050
18/20	FLATS x 3							TUNG Ap 1/4	7sec
21/23	TL 841 x 3			21 12 45					1200
24/26	TL 850 x 3			22 17 32					1800s
CC31827	Comp							FeAr Clear	22sec
28	BIAS(4)			23 53 08					

CCD
~~Spectr~~. Temp. −100.5 °C Dome Temp./Hum. +5.3°C 60%H Transparency Conditions Mostly cloudy 126
Dome closed for lamp tests
Focus 6.80
CCD
~~Spectr~~. Temp. −100.4°C Dome Temp./Hum. +4.0°C 70%H
c Lambda
MAX ADU

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
no filter				CASSCCD	1800l/mm G=6540 T.I.H=60.6°	306μ	≈ 7200Å Very Roughly Known ± 20Å	3/4	focus test	Just Red ≈ 10Å of very strong comparison line	
								1 c;			
								5 c;			13.9K
27750 each								6 c; ~~5 c;~~		Relest of 3 TL sources	5K
								7 c; ~~2 c;~~ (for last 2 exps)			14K
								8 c;			
								9 c;		Continuum > 40 ADU above Background. (no features of Red end)	4.2K
53400				Continuum > 60 ADU above background.				10 c;	~~> 60 ADU~~ (three for Cosmics)	The Bluest of 3 sources seems to go with increasing TL-ive notical.	5.2K
								11 c;			
								1 c;			

For Next Region ≈ 7400Å, use G=6680 Tilt 61.7°
(for good FeAr Comp overlap) Do 7sec FLat; Ap = 1/4 → ~~12.7K~~ max
& 20sec FeAr Ap = 1/4 → 12.4K max

Note FeNe source no good here.
(Lots of ghosts and peculiar offset in Y)

127
p9#1 Wed/Thurs

Date 1995 MAR 22/23 Observers [Blu]/Tu./[Ru]..Tu.....

Near end of Lamp Tests

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	Comparison Exp.
cc3129/30	Inboard/outboard HARTMAN					00 17W	+27 26	FeAr Ap 1/4	30/27
31	BIAS(4)								
32	Comp					01 12W	+21 30	FeAr Ap 1/4	20 sec
33/35	TL 850 x 3			19 26 02		"	"		900s
36/38	FLATS x 3					"	"	THNG Ap 1/4	7 sec
39/41	TL 841 x 3			20 23 36		"	"		666
42/44	TL 830 x 3		+21 02			"	"		600s
cc3145	COMP					"	"	FeAr Ap 1/4	20sec
46	BIAS(4)								
47	Comp	For Line ID purposes.						FeNe Clear	60sec
48	HD 89021	10 11 04	+43 24 50	22 00 33		00 30E			152
49	Comp (the only one to use for Previous star)							FeAr Clear	20s
cc3150/51	Inboard/outboard							FeAr Clear	60/65
52	Comp							"	60s
53	HD44990	06 19 49	+07 08 25	22 26 35		3 57 W			670
54	Comp							FeAr Clear	60 s

CCD Spectr. Temp. −101.4 °C Dome Temp./Hum. +3.8°C 61.4%H Transparency Conditions Cloudy - Fast clearing

Focus 6.82

CCD Spectr. Temp. −101.8°C Dome Temp./Hum. +2.0°C 68%H c Lambda

90 Cgain 410 0 50 1024 4 1 CCDFinT MAX 4064

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
+3.8°C	set 6.82			CASSCCD	1200 lines/mm G=6680 Tilt=61.7°	306u	≥7400Å	3/4	focus test		E/K
no filter.								1/2			
								5			12K
23,500 each								6		[2 match Fe/Ar comp lines 2 strong lines = 7440Å 7330 blues of 3 sets.	10K
.								7			12.5K
17,850								8			9.4K
15,230								9			9.3K
								10			
								1/2			
		V						11c	displaced to Low col Hg + ghosts of Large col Hg		
20K		345	A2 IV	Probably	lots of water vapor at Blue end. Just curious cloud 7400Å			12	Tel encoder normalization.	(1.00 AM mass)	9K
								13		(Sky clear now)	
					1200 lines/mm G=5930	306u	~7400Å	14/15	focus test	(Right on @ center)	
no filter		B						16			2.6K
1060		6.5 −8.0	F7 Iab −K1 Iab					17	Rm pgm	T mon somedeal	100/1 S/N
								18			

129

Pg #2 Wed / Thurs

Date 1995 MAR 22/23 Observers [Rm] TA

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	Comparison Exp.
CC31855	BIAS(4)								
56	Comp							Feth Clear	60s
57	HD62509	07 39 12	+28 16 04	22 46 10		2 47 W			172
58	Comp							Feth Clear	60s
59/67	FLATS x9					1 30W	+3°	TUNG AO/4	8s
CC31868	BIAS(4)			23 05					

CCD
Spectr. Temp. -100.5 °C Dome Temp./Hum. +1.7°C 69.4% H Transparency Conditions Cloudy 130

Focus 6.82

Spectr. Temp. Dome Temp./Hum. Cumbre ADC MAX

Exp. Mtr.	Seeing	Tg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASSCCD	1800l/mm G-5930	306	6900Å	1/2			
no filter								19			
4739		1.14	KO III b					20	Std Lod IAU	7250/1 S/N	
								21			24k
								22			145k
								1			

131
pg #1

Emulsion Batches:

Date 1995 Mar 23/24 Observers Smt {V4s3} [Blm] 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	Comparison Exp.	Exp. Mrr
CC31869/70	INBOARD/OUTBOARD							FeNe clear	20/30	
71	BIAS x4								—	
72	COMP							FeNe clear	20	
73	AC+68 3124	7 21 38	+68 49 42	19 55 08		0 50 W			2401	400
74	COMP							FeNe clear	20	
75	BIAS x4			20 38					—	
76	COMP							FeNe clear	25	
77	BD+10 1857C ?	8 38 12	+9 55 13	21 05 09		0 52 W			2515	215
78	COMP							FeNe clear	25	
79	BIAS x4			21 51					—	
80	COMP							FeNe clear	25	
81	BD+10 1857C ?	8 38 12	+9 55 13	21 58 22		1 50 W			2800	353
82	COMP							FeNe clear	25	
83	BIAS x4			22 49					—	
84	COMP							FeNe clear	25	

CCD Spectr.
Focus.
Spectr.

CCD
Spectr. Temp. -100.4°C Dome Temp./Hum. 13.0°C / 48.4% Transparency Conditions . clear

Focus 6.86

Spectr. Temp. . . . . Dome Temp./Hum. . . . . FANS OFF

410 0 50 1024 4 1 CCDEMT

Exp. Mtr.	Seeing	V ~~Dig.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	ADU max ~~Quality~~
				CASS CCD	1800 l/m 6-5140	30 μm	5303 Å	3/4			
								1			
								5			
400	3"	10.9	M0					6	{V45} 245		340 along b/g
								7			
								1			
								8			
275	3"	11.8?	M2?					9	{V45} 257C	no star at coords. This one has $\Delta\alpha$ ~ -40" and is furthest SE of dim stars at same dec as 257AB not very M-like but noisy	150 above b/g
								10			
								1			
								11			
353		11.8	M2		more likely than the other			12	{V45} 257C	this one further from $\Delta\alpha$=0 (and -56) but closer than still E 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. Ekas? Blu 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	Comparison Exp.
cc3185	BD+10 1857	8 37 20	+9 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
CG40866-69	HD 108100 x 4	12 20 06	+43 25						.067
70/71	" x 2				0 46 30	0 09 W	Alt 88°	air mass 1.0006	.133
cc31898-31906	FLAT x 9					0 21 W	+43°	Tungsten 1/2 Ap	5

CCD Spectr. Temp. ..−100.3°C.... Dome Temp./Hum. +1.4°C/47.6% Transparency Conditions ...clear.....

Focus .....6.86.....

Spectr. Temp. ..... Dome Temp./Hum. 0.8°C/42.7% @ seeing test FANS OFF 410 0 50 1024 4 1 CCDFAST

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
642	3"	9.6	M2	CASS CCD	1800 l/mm G=5140	30μm	5303 Å	15	{V45} 257 AB		see above b/g
								16			
								1			
								17			
644		9.65	M2					18	{V45} Mercury Std. Velocity		410 above b/g
								19			
								20			
3535		7.48	M2					21	{V45} Mercury Std. Velocity		3.1K
								22			
								1			
								23			
1146		~8	retracted G1					24	Minor planet. Std. Vel		1.2K
								25			
	3"	7.14	F2	EEV CCD GUIDE CAMERA		above 30μm		—	SEEING TEST	Dome W, med SW wind, clear tonight mostly but last 4 nights were cloudy	
	"	"	"					—	"		
				CASS CCD			5303 Å	2		All backed up to WORMfersey	14.8K → 17.7K

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Pg #1

Emulsion Batches:

Date 1995 Mar 24/25 Observers [Rm] Sant Hdq 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	Comparison Exp.
CC31907/08	INBOARD/OUTBOARD					0^h	$+46^\circ$	FeAr clear	60/60
09	BIAS(4)			19 56					
10	COMP							"	60
11	HD 44990	6 19 49	+7 08 25	20 03 24		1 41 W			730
12	COMP							"	60
13	COMP							"	"
14	HD 25361	3 56 42	+58 23	20 28 18		4 36 W			1300
15	COMP							"	60
16	BIAS(4)			20 52					—
17	COMP							"	60
18	HD 30282	4 41 06	+36 32	21 00 29		4 24 W			1230
19	COMP							"	60
20	COMP							"	"
21	HD29587	4 34 30	+41 57	21 30 54		5 09 W			1700
22	COMP								

CCD Spectr. Temp. -100.3°C Dome Temp./Hum. +1.8°C/47.1% Transparency Conditions . clear, . windy

Focus 6.84

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

N FAN ON
410 0 50 1024 4 1 ccdfmt

Exp. Mtr	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
OG560 FILTER				CASS CCD	1800 ℓ/mm G=5930	30μ	6400Å	3/4	FOCUS TEST		
								1			
								5			
9340	4"	B 6.5-8.0	F7Iab -K1Iab					6	Rm T Mon		11.8K
								7			
								8			
3200	4"	V 7.38-8.07	FGIb -G2Ib					9	Rm RX Cam		8.0K
								10			
								1			
								11			
3270	4"	B 7.9-8.8	F6 - G1					12	Rm AW Per	SBIG USED	8.5K
								13			
								14			
3500	4"	V 7.29	dG2					15	IAU Std. Vel.		7.5K
								16			

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pg #2

Emulsion Batches:

Date 1995 Mar 24/25 Observers [Rm] Smt ..... Hdy. 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	Comparison Exp.
CC31923	BIAS(4)			22 02					
24	COMP							FeAr clear	60
25	HD66141	7 57 04	+2 36 34	22 16 06		2 07 W			120
26	COMP							"	60
CG40872-75	HD90861 x4	10 24 18	+29 05						.067
76/77	" x2				22 36	0 02 E	Alt. 75°	air mass 1.0366	.133
27	BIAS(4)			22 40					—
28	COMP							FeAr clear	60
29	HD90861	10 24 18	+29 05	22 47 00		0 32 W			1400
30	COMP							"	60
31 – 39	FLAT x9							Tung X4 Ap	8
40	BIAS(4)			1 10					—
41	COMP							FeAr clear	60
42	HD180583	19 11 59	+27 44 59	1 15 16		5 46 E			1400
43	COMP							"	60

CCD Spectr. Temp. ...-100.2°C.... Dome Temp./Hum. +0.8°C / 42.3% Transparency Conditions ... Clear, windy → dying down

Focus ..... 6.84 .....

Spectr. Temp. ..... Dome Temp./Hum. +0.7°C / 41.7% @ seeing test

ONLY N DOME FAN ON
410 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	T.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm G=5930	3.04m	6400Å	1			
								17			
5300	4"	4.39	K2 III 6 F2-0.5					18	IAU Std Vel Candidate		13.2K
								19		spec controller reset after comp and moving to next star	
	3" ~~3.5~~	6.9	K2III	EEV CCD GUIDE CAMERA		above 30µm		–	SEEING TEST	Done SSW, med W wind but was strong earlier and now it's dying down, clear	
	3"	"	"					–	"		
				CASS CCD				1			
								20			
2530	3.5"	IAU ✓ 7.20	K2III					21	IAU Std. Vel	note V mag change between seeing test & list and almanac	8.1K
								22			
								2			15.6K →13.? K
								1			
								23			
4444	5.5"	<V> 6.19	F6 I-II 6					24	Rm V473 Lyr	retracted image on slit.	9.4 K
								25			

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pg #3

Emulsion Batches:
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Date 1995 Mar. 24/25 Observers [Rm] 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	Comparison Exp.
cc31944	COMP							FeAr clear	60
45	BD+28 3402	19 34 50	+29 04 36	1 50 20		5 03 E			3000
46	COMP							"	60
47	BIAS(4)			2 44					—
48	COMP							"	60
49	HD331970	20 08 27	+32 34 16	2 52 31		4 48 E			2400
50	COMP							"	60
51	BIAS(4)			3 36					—
52	COMP							"	60
53	HD214975	22 36 54	+56 19	3 46 06		6 15 E			2860
54	COMP							"	60
55	BIAS(4)			4 36					—
56	COMP							"	60
57	HD215159	22 38 15	+53 23	4 59 12		5 43 E			450
58	COMP							"	60

CCD
Spectr. Temp. ...-100.2°C.... Dome Temp./Hum. 0.0°C/40.9% Transparency Conditions . clear . . some thin cloud to SW . . (1990)

Focus .....6.84.....

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

ONLY N FAN ON
410 0 50 1024 4 1 ccdfast

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
				CASS CCD	1800 l/mm G-5932	300μ	6400Å	26			
1062		V 9.05	F7V					27	IAU Std Vel candidate		25K
								28			
								1			
								29			
1184		V 9.1-9.8	F8 -G2Ib					30	Rm MW Cyg		3.4K
								31			
								1			
								5			
2183		<V> 8.40	~G0Ib					6	Rm Z Lac		5.5K
								7			
								1			
								8			
5000		V 6.19	K2					9	Rm Z Lac Velocity comparison		12.5K
								10			

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Emulsion Batches: .....

Date 1995 Mar 24/25 Observers [Rm] 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	Comparison Exp.
cc31959	BIAS(4)			5 10					
60	COMP							FeAr clear	60
61	HD213947			5 17 50		5 09 E			900
62	COMP							"	60
63/64	INBOARD/OUTBOARD					0h	+43° i32	"	60/60

CCD
~~Spectr.~~ Temp. -100.4°C Dome Temp./Hum. -1.2°C/47.7% Transparency Conditions . clear 142

Focus 6.84

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm G=5930	306μ	G480 Å	1			
								11			
3960		7.53	K4III					12	IAU Std. Velocity	sun rising @ end.	7.8K
								13			
								3/4	Focus 7.5T		
				All to Reserves & WORM							

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pg #1

Date 1995 Mar 25/26 Observers [Rm] Smt ..... Bln 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	Comparison Exp.
CC31965/60	INBOARD/OUTBOARD					0^h	+43°	FeAr 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 x9					3 14 W	+7°	Tung Yag Fe Ar 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					—

CuO Spectr.
Focus
Spectr.
Exp. Mir. 03540
FILTER
500
3465
3500

c2d
Spectr. Temp. = 100.4°C ..... Dome Temp./Hum. +3.8°C/46.2% Transparency Conditions . mostly clear .....

Focus ... 6.84 .....

Spectr. Temp. ..... Dome Temp./Hum. +3.4/39.6% @ 2130 FANS OFF

410 0 50 1024 4 1 ccdfast

Exp. Mtr. OGSG0	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
FILTER								3/4	FOCUS TEST		
								1			
								5		TELESCOPE ON E SIDE	
500		10.8 - 11.66	F5 - F9					6	Rm	partly guided for 5 minutes or so while dec was reversed.	1.0K
								7			
								1			
								8			
3465	3'	B 6.5 - 8.0	F7 Iab - K1 Iab					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		V 4.39	K2 III b F2-0.5					12	IAU Std. Vel. candidate.	thin cloud here, windy tel on E side still	9.3K
								13			
								1			

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Emulsion Batches: .....

Date 1995 Mar 25/26 Observers [RM] Smt Kmy Bln as backup .....

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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	Comparison Exp.
cc31989	COMP							Felt clear	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 cc31990	INBOARD/OUTBOARD					0^h	$+38°$	"	60/60

CCD Specs. Focus. Spectr. Exp. Mir Dia 560 FILTER 2514 414 3570

CCD 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 ccdfast

Exp. Mtr. GG 540	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
FILTER				CASS CCD	1800 l/mm G=5930	306μ	6400 Å	13		TELESCOPE ON E SIDE OF PIERS	
2514	4"	V 7.30 -8.67	F6Ib -G2Ib					14	RX Cam		6.7K
								15			
								16			
1114		B 7.9-8.8	F6-G1					17	AW Per	cut short by increasing cloud	
								18			
								1			
								19			
3520		V 1.14	KOIII					20	IAU Std Vol β Gem	cloudy now.	10.8K
								21			
								22/23	FOCUS TEST		

All backed up to WORM & Perseus.

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pg# 1

Date 1995 Mar. 26/27 Observers EVans? Smt ..... Kun 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	Comparison Exp.	
cc32001/02	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	551
06	COMP							"	25	
07	BIAS x 4			2 06					—	
08	COMP							"	25	
09	BD+22 2632	13 42 58	+21 57 25	2 12 34		1 17 W			3130	587
10	COMP							"	25	
11	BIAS x 4			3 07					—	
12	COMP							"	25	
13	HD119850	13 40 36	+15 27	3 16 41		1 42 W			701	1190
14	COMP							"	25	
15	COMP							"	"	
16	AC+53 2527-109	16 06 49	+53 12 11	3 41 02		0 07 W			2130	1893
17	COMP							"	25	

CCD Spectr.
Focus
Spectr.
Exp. Mtr

CCD
Spectr. Temp. -100.3°C Dome Temp./Hum. +0.2°C / 49.0 % Transparency Conditions . clear . now

Focus 6.90

Spectr. Temp. . . . . Dome Temp./Hum. . . . . BOTH FANS ON TO START

410 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1800X1mm G=5140	30μm	6400Å	3/4	FOCUS TEST		
								1			
								5			
551		✓ 11.3	M2					6	{V45} 44	SDSS GUIDED RIGHT ON HOT PIXEL	330 above b/g
								7			
								1			
								8			
587		✓ 11.1	M0					9	{V45} 309		380 above b/g
								10		S DOME FAN TURNED ~~OFF~~	
								1			
								11			
1190		✓ 8.48	M1					12	{V45} Many 5th velocity 308		1.0K
								13			
								14			
893		✓ 10.89	M0					15	{V45} 759		900 above b/g
								16			

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pg #2

Emulsion Batches:
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Date 1995 Mar 26/27 Observers {Eyes} 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	Comparison Exp.
CC32018	BIAS x4			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 ~~COMP~~			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°	OTF mass 1.0012	.133
CC32023	BIAS x4			5 14					—
24-32	FLAT x9					0 28 W	+44°	Tung ¼ Ap	5
33/34	INBOARD/OUTBOARD					0 32 W	"	FeNe clear	20/30

CCD Spectr.
Focus
Spectr.
Exp. Mir.
682
911

CCD
Spectr. Temp. -100.4 °C Dome Temp./Hum. -1.5°C/59.0% Transparency Conditions . clear 150.

Focus 6.90

Spectr. Temp. Dome Temp./Hum. -1.8°C/60.0% @ seeing test ONLY N DOME FAN ON 410 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm 6 = 5140	306μm	5303 Å	1			
								17			
642		~8	?					18	{Uys} 887	887B held off of slit	530 above w/g
911	not good enough	11.2	K8					19	{Uys} 887B	887A held as far off of slit as possible — still drowned out by 887A.	
								20			
	4.05"	7.56	GS IV	ECV CCD GUIDE CAMERA		above 306μm		—	SEEING TEST	Dome W, light variable direction wind, clear, morning light in E	
								—			
				CASS CCD				1		sky too bright for {Uys}	
								2			14.9K → 13.7K
								3/4	FOCUS TEST		

All backed up to WORM & Perseus.

151.
pg#1 Mon/Tues

Date 1995 MAR 27/28 Observers [Eric]. Smot./Jim [EVans], [HLW]

Emulsion Batches: .....

CSS 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	Comparison Exp.	
cc 3203 5/36	Inboard/outboard					00 05W	+40 45	FeNe clear	20/30 ~~60/45~~	
37	BIAS ~~x4~~			22 04					—	
38	COMP							FeNe clear	25	
39	BD-02 3000	9 48 10	-3 13 04	22 08 59		0 43 W			1450	442
40	Comp							FeNe clear	25	
41	BIAS x4									
42	Comp							FeNe clear	25	
43	BD+01 2447	10 23 49	+01 21 36	22 48 12		0 43W			1585	620
44	Comp							FeNe clear	25	
45	Bias x4			23 12						
46	Comp							FeNe clear	25	
47	Ceres (Hopefully)	08 53 05 (2000 equinox)	+31 07 00	23 17 37		2 50 W			1345	520
48	Comp							FeNe Clear	25	
CG40 884 887	HD 103095	11 47 13	+38 26 10					4 x	67 ms	
CG40 888 889	"	"	"			00 01 W		2 x	133 ms	

CCD
Spectr. Temp. −99.5°C Dome Temp./Hum. +30°C 506% outlier Transparency Conditions partly cloudy 152

Focus ~~6.5~~ 6.87

Spectr. Temp. Dome Temp./Hum. +0.7°C / 59.3% @ focus test DOME FANS OFF

Emulsion 410 0 50 1024 4 1 coolAir

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
~~GG560~~ filter to father	T= +00.7c			CASSCCD	1800b/mm G-5140	306u	5303	3/4	focus test	right in focus nav.	
								1/2c			
								5			
442		10.54	M0					6	HIW	cloud increasing Vyg 560 S/N ~ 40:1	150 above s/q
								7			
								1			
								8			8.6A
620		9.65	M2					9	MARq std'd	some cloud	
								10			10.6K
								1/2.			
								11			
520		9.7	G2V	From member cat 1995.24 α 08 57 51 δ +31 08 30				12	for std'd	complex field - Drawn cloud again (Δα −00 0003, Δδ −00 0236)	
								13			
		6.45	G8Vp		Above	306u	Slit		Seeing test	Dome WSW	
									" "	Light NE breeze	

153
Pg #2 Mon/Tues

Date 1995. MAR. 27/28. Observers [H.Lw.]...Tr./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	Comparison Exp.	
CC32049	Comp							FeNe clear	25s	
50	HD 103095	11 47 13	+38 26 10	23 53 48		00 26 W			1338	3700
51	Comp							FeNe Clear	25s	
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	630
55	COMP							"	25	
56	BIAS x4			1 39					—	
57	COMP							"	25	
58	AC+76 3952	9 36 30	+76 30 57	1 47 33		4 46 W			2437	620
59	Comp							FeNe 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	644
63	Comp							FeNe Clear	25	

CCD
Spectr. Temp. ....−100.3....°C. Dome Temp./Hum. +00.4°C..+56.7% Transparency Conditions . Hazy. cloudy.....15.4

Focus ....6.8.7.....

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

MHx HDY

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion (Cambridge)	P.H.	Program	Remarks	Quality
06560 Filter				CASS CCD	1800 l/mm G=5140	30u	5303Å	14ci			11K
3700	3"	6.45	G8V$_p$					15	Std vel IAU.		
								16			
								1/2			
								16			
630	3"	✓ 10.58	M2					17ci	{V$_{45}$}550A	Telescope Eastside	370 above v/g
								18			
								1			
								19			
620	3"	✓ 10.64	M2					20	{U$_{45}$}120	S/N ~60:1 Telescope still Eastside	
								21			62K
								1			
								22			
644		✓ 11.0	M0					23	{U$_{45}$}699	S/N > 60:1	
								24			

155
19 #3

Date 1995 Mar. 27/28 Observers {V4.5} Tn/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	Comparison Exp.
cc32064	BIAS x4			3 4[illegible]					
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	25s
71/79	FLATS x 9					0 22E	+34°	Tung Ap 1/2	5s
80	BIAS(4)					"	"		
81/82	Inboard / outboard					"	"	FeNe Clear	20/30

Spectr. Temp. -1.00°C Dome Temp./Hum. 10.4°C / 54.5% Transparency Conditions Partly cloudy 156.

Focus 6.87

Spectr. Temp. -101.8°C Dome Temp./Hum. 0.00° 53.7% max 40%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
NO FILTER				CASS CCD	1800 R G5140	30μm	5303Å	1			
								25			
1367		V 8.48	M1					26	{V45} Magenta 3mm Wal 308	S/N ~ 70:1	5303 abna blg
								27			
								27			
1220	4.5"	V 9.5	M2					28	{V45} 46A		
								29			
								30			1AK
								1/2.			
								3/4			

All backed up to WORM & Perseus.

157
Pg #1

Date 1995 Mar 28/29 Observers [Rm] T.n./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	Comparison Exp.
CC32083/84	in board / out board							FeAr clear	60/55
85	BIAS(4)			19 13					
86	COMP							FeAr clear	60
87	Vesta	6 07 16 (2000 equinox)	+24 50 18	19 27 06		1 40 W			830
88	COMP							"	60
89	COMP							"	"
90	Vesta	6 07 16	+24 50 18	19 52 36		2 04 W			701
91	Comp							FeAr clear	60s
92	BIAS(4)			20 07					—
93	COMP							FeAr clear	60
94	VY Per	2 20 19	+58 28 04	20 13 57		6 34 W			
95	COMP							FeAr clear	60
96	BIAS(4)			20 58					—
97	COMP							"	60
98	HD44990	06 19.8	+07 08	21 05 06		2 55 W			500
99	COMP							"	60

CCD
~~Spectr.~~ Temp. −101.0°C Dome Temp./Hum. +7.3°C / 38.7% Transparency Conditions .. clear .. 158

Focus ..... 6.84 ..... 90 cyair @ focus test

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

FANS ON
4110 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	~~Pix~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
OG 560 FILTER				CASS CCD	1800 Rl/mm G=5930	300μ	6400 Å	3/4	FOCUS TEST		
								1/2			
								5			
1520			rotated G2II					6	Std. Vel Minor Planet.		4.9K
								7			
								8	(typical shift to known # Rol to tel)	telescope on E side of the piers now.	
1505	<3"	17	G2II					9	Std Vel - Minor Planet (Field stream) Test with telescope E of side		
								10			
								1/2			
								11			
432	~~2.5~~	10.8 -11.66	F5 - F9					12	Rm	tel. E side SB16 autoguided S/N > 60:1	1.1K
								13			
								1			
								14			
4200	3"	B 6.5 -8.0	F7 Iab - K1 Iab					15	Rm T Mon	S/N ~ 340:1	
								16			

159
pg# 2

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	Comparison Exp.
CC 32100	COMP							Fe Ar clear	60
01	HD25361	3 56 42	+58 23	21 22 38		5 40 W			900
02	COMP							"	60
03	BIAS(4)			21 41					—
04	COMP							"	60
05	HD30282	4 41 06	+36 32	21 46 52		5 18 W			700
06	COMP							"	60
07	COMP							"	"
08	HD29587	4 34 30	+41 57	22 10 20		5 50 W			808
09	COMP							"	60
10	BIAS(4)			22 28					—
11	COMP							"	60
12	HD66141	7 57 04	+2 36 34	22 36 49		~~2 38 W~~			100
13	COMP							"	60
14	COMP							"	"

CCD
Spectr. Temp. -101.3°C Dome Temp./Hum. +5.2°C / 40.4% Transparency Conditions. Clear 160

Focus 6.84

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
CG560 MLTTR				CASS CCD	1800 l/mm 6-5930	306μ	6400Å	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			
								1/2			
								20			
2400		B 7.9 - 8.8	F6 - G1					21	Rm AW Per	S/N ~ 240:1	5.5K
								22			
								23			
2330	4"	7.29	dG2					24	IAU Std Velocity	S/N ~ 250:1 RV = 112.4 ± 0.2 km/s	4.8K
								25			
								1			
		~~4.39~~						26			
5K		4.39	K2 III b	(K2 III b ~~-0.5~~) Fe -0.5 ? typo in 1995 Almanac				27	IAU 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	Comparison Exp.
		calc. 2000.0							
CC32115	CERES ?	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					
CG40890-93	~~HD103095~~ x4	11 47 13	+38 26 10						.067
94/95	" x2				23 48	0 02 W	84° 42'	air mass 1.055	.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					+0020 W	+38 00	TUNG Apl/4	8 sec
CC32132	Comp							FeAr clear	60 sec
33	HD87901	10 03 03	+12 27 22	00 26 30		2 26 W			16s
34	Comp							FeAr clear	60
35	BIAS(4)			00 30					

CCD
Spectr. Temp. ...-100°C.... Dome Temp./Hum. 14.8°C/40.2% Transparency Conditions ...clear.....162.

Focus .....6.84.....

Spectr. Temp. ..... Dome Temp./Hum. 14.1°C/41.1% after seeing test N DOME FAN ON ONLY

410 0 50 1024 4 1 ccdfast

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
OG560 2800	3"-4"	~7	related G2V	CASS CCD	1800 21mm G=5930	304μ	6400Å	30	std. vel. Minor planet	Field drawing Telescope Still East side	
								31		most likely it - brightest in field as it was last night	
~~2800~~ 1K		Fainter than 7th <7	~G2					32	check.	star to SW of Ceres not likely, but very close in sp. type	
								33		~~* CCD 32H ? most likely Ceres~~	
								1		~~A: from comparison to Vesta spectrum~~	
	2.5"	6.45	G8Ip	EEV CCD GUIDE CAMERA		above 304μ		–	SEEING TEST	Dome E, light NW wind (9km/h), clear still!!!, dry, been this	
	"	"	"					–		clear for days.	
				CASS CCD				5			
4350	2"	6.45	G8Ip					6	IAU Std Velocity	RV = -99.1 ± 0.3	
								7			
								8			MAX 14K
								11			20.7K
		1.36	B7V					12	Telluric Std		12K
								13			
								1/2			

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

163
pg #4

Tues/Wed

Date 1.19.5 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	Comparison Exp.
cc32136	Comp							FeAr clear	60s
37	Ceres (~~should be Regt~~)	085238 ~~1996.24~~	31 01 21	01 ~~0224~~		4 35 W			~~1024~~
38	Comp							FeAr clear	60s
39	"							"	"
40	HD 180583	19 11 59	+27 44 59	01 33 35		5 20 E			897
41	Comp							FeAr clear	60s
42	BIAS(4)			01 51					
43	Comp							FeAr clear	60s
44	HD171232	18 28 30	+25 25	01 57 18		4 11 E			1017
45	Comp							FeAr clear	60s
46	"							"	"
47	HD203156	21 15 23	+37 49	02 21 15		6 39 E			690
48	Comp							FeAr clear	60s
49	COMP							"	"
50	HD214975	22 36 54	+56 19	02 43 01		7 25 E			1561
51	COMP							"	60

CCD
Spectr. Temp. −100°C Dome Temp./Hum. 11.2° 40% Transparency Conditions ... Fine 164

Focus ... 6.84

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

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
OG560 Filter				CASSCCD	1800 b/mm	306	6400B	14			
1080	2"	7.15	G2V					15	Std bd ? ? (minor planet)	(SW of Pair)	
				Note. Previous exposure probably a star.				16		To SW of Brighter comet	
								17		Tel/ westside now	2.85K
5200	5"	6.19	F6 V-Vb					18	Rm pgm V473 Lyr	2.45 air mass (350/1 S/N)	
								19			
								1/2			
								20			
2600	3-4"	7.73	G8III					21	Std/vel		
								22			
								23			
5950	4½"	5.8 -5.9	F2					24	Rm pgm	refraction	
								25			
								26			
1850	5-6'	(V) 8.40	~G0Ib					27	Rm Z Lac	refraction S/N ~ 225:1	7.0K
								28			

165 pg #5

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

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	Comparison 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 08 27	+32 34 16	03 33 07		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 39 20	-20 45 00	4 40 06		1 30 E			1630
65	Comp							FeAr clear	60
66	BIAS(4)			5 10					
67/68	INBOARD / OUTBOARD			5 16		0 0	± 38°	FeAr clear	60/45

ccn
Spectr. Temp. -.100°C..... Dome Temp./Hum. 13.4°C / 91.6% Transparency Conditions ... clear, some cloudiness

Focus ..... 6.84 .....

Spectr. Temp. ..... Dome Temp./Hum. 13.3°C 46.8%A

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
05 560 FILTER				CASS CCD	1800 l/m G=5930	306μ	6400 Å	1			
								29			
2750	4"-5"	V 6.19	K2					30	Rm 2 Loc velocity comparison		9.4K
								31			
								11			
1089		V 9.1-9.8	F8 -G2Ib					12	Rm fgm MW Cyg	S/N ~ 150:1 SBIG guided	
								13			
								1			
								14		CCD T -101.3°C	
4260	3"	(V) 6.19	F6I-II					15	Rm V473 Lyr		
								16			
								17			
3390	6"	(V) 7.48	~G0 Ib					18	Rm fgm	V350 Sgr	
								19			
								1/2			
				All backed up to WORM & Exabyte				3/4	focus Test		

167
pg#1

~~Tau~~ #Fm1/SAT

Date 1995 MAR 31/~~Apr.~~1 Observers [B.m.] ~~Sat~~ /T.a.

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc321 69/70	Inboard/outboard					00 07E	+28	FeAr Clear	60/60
71	BIAS(4)			~~19 20~~					
72	Comp							FeAr Clear	60s
73	HD62509	07 39 12	+28/6 04	19 24		00 03E			21
74	Comp							FeAr Clear	60s
75	Comp							"	"
76	Vesta	06 10 50	+24 54 00	19 ~~44~~ 07		02 13 W			1285
77	Comp							FeAr Clear	60s
78	Star to East of Vesta exposure		[Actually SAO 78069]	20 09 49		02 30 W			769
79	Comp							FeAr Clear	60s
80	BIAS(4)			20 26					
81	Comp							FeAr Clear	60s
82	Vesta	06 10 50	+24 54 00	20 41 57		03 14 W			1457
83	Comp							FeAr Clear	60 s
84	FLATS x 9					03 23W	+25°	TUNG Apl/4	8s
93	BIAS (4)			~21 26					

$2000 Astrometric for date

CCD
Spectr. Temp. ...−100.2...°C.. Dome Temp./Hum. +1.5°C 40% Transparency Conditions ..Cloudy, partially.....

Focus ..6.87..... 90C gain

Spectr. Temp. ..... Dome Temp./Hum..... C Lambda 410 0 50 1024 1 4

Exp. Mtr.	Seeing	Eff. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
06 560 Filter				CASS CCD	1800 l/mm G=5430	30u	6400 Å	3/4	focus test		
								1/2			
								5			
≈7K		1.14	K0 III	Fast guiding in Dec, RA				6	STD vel (I44)	+ Telescope encoders NORMALIZATION A Bit low in Dec for this.	max 15K
								7			
								8			
1530	3-4"	≈7	G2 V					9	Stl vel (minor planet)	2455 AU distance Field drawing	S/N 200/1
								10		Brighter and west of Disp, sep ≈ 4'.	max 2.6K
365	3"	≈8	≈ B8A type:	Looks like (Yes, Jan checked it out its a B3				11		By encoders, its 16 sec time East of sta	It's a close dbl. N/S sep 6" Θ=[illegible]
								12			
								1/2			
								13			2.6K
1450	3-4"	≈7	G0 V					14	Stl vel (minor planet)	Telescope Eastside	
								15			
								16		(Rats at this configuration too)	15K
								1/2			

169 Pg#2 ~~Thurs~~/Fri/SAT

Emulsion Batches: .....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc32194	Comp							FeAr Clear	60s
95	VY Per	02 2019	+58 2804	21 2852		7 57 W			2222
96	Comp							FeAr Clear	60s
97	Comp							"	"
98	HD44990	06 1949	+07 0825	22 1954		4 27 W			3650
99	Comp							FeAr Clear	60s
cc32200	BIAS(4)			22 37					
01	Comp							FeAr Clear	60s
02	HD25361	03 5642	+58 2300	22 4719		7 27 W			1534
03	Comp							FeAr Clear	60s
04	Comp							"	"
05	Vesta again	06 1056 ↓ 3000 Astrometric	+24 5400	23 2027		5 55 W			1597
06	Comp							FeAr Clear	60s
07	BIAS(4)			23 50					
CG40 896/899	HD103095	11 4713	+38 2650			00 26 W		4x	67ms
CG40 900/901	"							2x	133ms

CCD Spectr. Focus Spectr. Exp. Mtr CG52 Fi Ne 2400 3650 2800 750

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	Hr. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
OG550 Filter				CH55 CCD	1800 l/mm G=5930	306	6400A	17			
2400	4"	10.9 −11.6	F5 −F9					18	Rm pgm	SBIG guided, but forgot about "Relay" change for Tel East for a while. ∴ some bad guiding.	
								19			
		B=						19			26K
3650	7"	6.5 −80	F7Ia6 −K1Ia6					20	Rm pgm	T mon	
								21			
								1/2			
								22			2.6K
2800	6.8"	V 7.30 −807	F6Ib −G2I6					23	Rm pgm	Rx Cam	
								24			
								24			S/N
750	5"	−8	G2V					25	Std Vel	For extreme Hr L effects much closer to Fld star now. Identity [illegible] for sure.	150/1
								26			2.7K
								1/2		medium NW wind	
		645	G8V	High coming in Today		Hbeta 306 slit			Seeing Tests	Dome SE, Telescope East side	

171
Pg#3 Fri/Sat

Date 1995 Mar 31/Apr 1 Observers [Rm] T.H.

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr
Cc 32208	Comp							FeAr Clear	60s	
09	HD 103095	11 47 13	+38 26 10	00 04 59		00 42 W			65	2900
10	Comp							FeAr Clear	60s	
11	Comp		J2000 Astrometric					"	"	
12	Ceres	08 54 00	+30 48	00 27 45		4 19 W			1557	1480
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	1500
17	Comp							FeAr Clear	60s	
18	BIAS (4)			02 32						
19	Comp							"	"	
20	HD 215159	22 38 15	+53 23 08	02 36 34		7 39 E			480	3150
21	Comp							"	"	
22	Comp							"	"	
23	HD 180583	19 11 59	+74 44 59	02 54 55		3 52 E			593	3050

Spectr. Temp. ..... Dome Temp./Hum. -20°C 52.1%H Transparency Conditions ... Fine ... 172

Focus ... 6.87 .....

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

Exp. Mtr.	Seeing	Pk. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CHSCCD	1800/m G-5430	306	6400P	27			
2900	4"	645	G8V					28	Std vel		
								29			
								30			S/N
1400	5"	7.05	G2V					31	Std vel	(Asteroid) Field drawn	170/1
								32			
								1/2			
								5	Telescope west side now		S/N
1500	4.6"	8.90	G0Ib					6	Rm pgm	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	F6V-IIb					14	Rm pgm	V473 Lyr	

173
pg #4

Fri / SAT

Date ...1995 MAR. 31 / Apr. / Observers [Rm] ... To .....

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	Comparison Exp.
Cc 32224	Comp							FeAr Clear	60
25	Comp							"	"
26	HD 331970	200827	+32 3416	03 1147		4 00 E			244
27	Comp							FeAr Clear	60
28	BIAS(4)			0356					
29	Comp							FeAr Clear	60
30	HD 171232	18 2830	+2525	04 0153		1 55 E			965
31	Comp							FeAr Clear	60
32	Comp							"	"
33	HD 173297	18 3920	-20 45 00	04 3059		01 26 E			1700
34	Comp			05 00				FeAr Clear	60
35	Comp			~~5 00~~				"	"
36	HD 203156	21 1523	+37 4855	05 11 48		03 40 E			480
37	Comp							FeAr Clear	60s
38	BIAS(4)								
39/40	Inboard / OUTBOARD	HARTMAN				3 34 E	+38°	FeAr Clear	60/60

CCD
Spectr. Temp. −100.4°C Dome Temp./Hum. −3.0°C 57%H Transparency Conditions Slightly hazy only 1/4

Focus 6.87

CCD
Spectr. Temp. −100.3°C Dome Temp./Hum. −3.7°C 59%H

Exp. Mtr.	Seeing	Fld. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0650 Filter				CASSCCD	1800 l/m G-5930	306	6400B	15			
								17			
1058	4"	9.1 −9.8	F8 −G2Ib					18	Rm pgm	MW Cyg for Ben Sugars.	5/4 >1/2
								19			26k
								1/2			
								22			
2050	5"	7.73	G8III					23	Std vel IAU		
								24			
								24			
1700	6"	7.48	G0Ib					25	Rm pgm	V350 Sgr	
								26			
								27			
3800	4"	5.8 −5.9	F2					28	Rm pgm		
								29			
								1/2			
−3.7°C		6.87	Set					3/4	focus		

175
pg#1 SAT/SUN

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

Date .1995 Apr 1/2.... Observers .[Rm]..T.n.....Bln.phone in
CSS 386 Time Reset to wwv from..encoder.pgm.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC322 41/42	Inboard/outboard Hartman					00 19W	+34°	Fe Ar clear	60/60
43	BIAS(4)			19 40 40					
44	Comp			48				Fe Ar clear	60s
45	HD65583	7 54 18	+29 31 00	19 43 39		00 14W			509
46	Comp							Fe Ar clear	60s
47	Comp							"	"
48	HD44990	6 19 49	+7 08 25	20 02 21		02 13W			606
49	Comp							Fe Ar clear	60s
50	Comp							"	"
51	HD30282	4 41 05	+36 32 36	20 22 37		04 15W			1164
52	Comp							Fe Ar clear	60s
53	BIAS (4)			20 44 58					
54	Comp							Fe Ar clear	60s
55	HD62509	7 39 12	+28 16 04	20 52 07		01 31W			70
56	Comp							Fe Ar clear	60

CCD
Spectr. Temp. −100.3 °C Dome Temp./Hum. +20°C 38.8%H Transparency Conditions ... PART Cloudy ... 176

Focus ... 6.87 (wind ESE 11 Km/hr @ 20EST) (PARKES Airport)

Spectr. Temp. ... Dome Temp./Hum. +00.8°C 38.7%H 90 Cgain

cLambda 410 0 50 1024 41 CCDFLTT

Exp. Mtr.	Seeing	M. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0650 FILTER				CASSCCD	1800 l/mm G=5930	300μ	4406	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 1995 coords	2.7K
								8			
2780	1-2"	B 6.5 – 8.0 R	F7 IIIb – K1 IIIb					9	Rm pgm	T Mon highest priority	
								10		Increasing cloud	
								11	Rm pgm	cloudy at end HW Per	
2500	2"	7.9 – 8.8	F6 – G1					12	Rm pgm	. <100 11	S/N
								13			3.6K
								1/2			
								14			
4.2K	2"	1.14	KOIII S					15	std vel	Bright IAU (Thick cloud)	max 11K
								16			

177

Pg#2 Sat/Sun

Date 1995 Apr 1/2 Observers [Rm] 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	Comparison Exp.
CC322 57/65	FLATS x 9					20140	+28°	TUNG Ap 1/4	8s
[Rm] [Tn]	Next Night, probably very short again sun/mon				1995 Apr 2/3 Pg#1	done	T=+3.0°C	H-48	
CC322 66/67	Inboard / outboard					0024E	+29°	FeAr clear	60/60
68	BIAS(4)			1914					
69	Comp							FeAr clear	60s
70	HD65583	7 54 18	+29 31 00	192144		0005E			460
71	Comp							FeAr clear	60s
CG408 02/05	HD65583	"	"			0002W		4x	106.7s
CG408 06/07	"	"	"					2x	133s
CC322 72/73	Comp							FeAr clear	60s
73/74	HD44990	06 19 49	+70 8 25	194153		0150W			453
74/75	Comp							FeAr clear	60s
CC322 75	HD44990	"	"	195455		0210 W			870
76	Comp							FeAr clear	60s
77	BIAS(4)			2012					

Spectr. Temp. ..... Dome Temp./Hum. +00.8°C 43% 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 Fi Hg				CASSCCD	1800 l/mm G-5430	306	6400A	17c:			145
Focus 6.87	again	-		CCDT	-100°C 1800 l/mm G-5430	306	6400A			Telescope still west of setting UP Touchal sheet PMR 31/APR 1	sieve
								3/4	focus Test		
								1/2			
								5			1014X
2400	1-2"	7	dG7					6	Stellel	clear, but a bit cloudy to start.	6k
								7			24k
	1-2"	7	dG7		ABae 306 + slit				Seeing test	"	
								8c:		Some Cloud	
2050	1-2"	B 6.5 -8.0	F7Iab -K2Iab					9	Rm pgm	T Mon	
								9c:	But T Mon	written OK	
1050								9c:	Rm pgm -	Hole in cloud, but mostly cloudy	
								11c.			
								1/2			

179

pg#2 sun/mon

Date 1995 Apr 2/3 Observers [illegible]

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	Comparison Exp.
CC32278	Comp							Fe Ar Clear	~~Fe Ar~~ 60sec
79	Vesta	1995.25 06 13 03	+24 55 16	20 33 24		03 08 W		1270	~~60~~ 60s
80	Comp							Fe Ar Clear	60s
81	BIAS(4)			21 04 43					
82	Comp							Fe Ar Clear	60s
83	HD 30282	04 41 06	+36 32 00	21 14 36		05 18 W			1446
84	Comp							Fe Ar clear	60s
85	Comp							"	"
86	Ceres	08 54 31	+30 40 20	21 52 41		01 54 W			1731
87	Comp							Fe Ar Clear	60s
88	BIAS(4)			22 22 25					
89	Comp							Fe Ar Clear	60
90	Vesta (again)	1995.25 06 13 03	+24 55 16	22 28 47		04 59 W			1005
91	Comp							Fe Ar Clear	60 sec
92	Comp							"	"

J2000 1st tr for Date Apr 3.1

Spectr. Temp. ..... Dome Temp./Hum. +1.7°C 49%H Transparency Conditions Part. Cloudy 180

Focus 6.87

Spectr. Temp. -1.0°C Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Image Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0650 Filt				CASSCCD	158l/mm G=5930	306	6450B	12c1			
2000		8	G2V					13c1	Std vel	minor planet	
								14			
								1/2			
								15		after sp contr failure	m4x
3100	3-4"	7.9 - 8.8	F6 - G1					16	Rmpgm	AW Per	G3K
								17			
								18			
2730	1-2"	7.9	G2V					19	Std vel	minor Planet	
								20	Fld drawn	that checks well with previous night's locations.	
								1/2			
								21			27K
1100	2-3"	8	G2V					22	Std vel	minor planet.	
								23			
								24			

181
pg#3 sun/mon

Date 1995 Apr 2/3 Observers [illegible] / E. Vys Jr.

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	Comparison Exp.
cc32293	HD103095	11 47 13	+38 26 18	22 54 46		00 25 E			39s
94	Comp							FeAr clear	60s
95/03	FLATS x 9					00 18 E	+38°	Tung Ap 1/4	85s
cc32304	BIAS (4)			23 11					
CG408 05/11	HD103095								
12/13	"					00 10 E			
cc32305/06	Inboard/outboard		Now Vys pgm			0 0	+38°	FeNe clear	20/30
cc32307	BIAS x 4			23 30					
2308	Comp							FeNe clear	25
09	HD103095	11 47 13	+38 26 18	23 31 16		00 10 W			313
10	Comp							FeNe clear	25s
11	Comp							"	"
12	BD-02 3000	09 48 10	-03 13 04	23 46 05		02 51 W			1854
13	Comp							FeNe clear	25
14	Comp							"	"

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

Focus ... 6.87 — 6.96 for 5303Å Airport Pearson Wind SSE 6 kts/Hr @ 00 00 CST

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

Exp. Mtr.	Seeing	Hr. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
06560 Filter 3000	1-2"	645	G8V p	CASS CCD	1800 l/mm G=5430	306u	6900Å	25	Std Vel	IAU	
								26			MAX
								27			15K
								7/2			
									Seeing test 2nd of night		
									Only NE Fan on now	Dome SW	
No Filter now for Exp meter				CASS CCD	1800 l/mm G=5140	306u	5303Å	3/4			
								1/2			MAX
								5			11K
2000	1"	645	G8V p					6	Std Vel		4.2K
								7			
								7			
650	1"	10.54	M0					8	H/w pgm	{Vyz} 560	S/N ≈ 40/1

183

Pg #4 Sun/Moon

Date 1995 Apr. 2/3 Observers {V.g.s} 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	Comparison Exp.	Exp. Min
cc32315	BD+01 2447	10 23 49	+01 21 36	00 22 39		2 48 W			1627	1100
16	Comp							FeNe clear	25s	
17	BIAS x4			00 52						
18	Comp							FeNe clear	25s	
19	Ceres	08 54 31	+30 40 20	00 57 35		4 42 W			701	152
		J2000 Astrometric								
20	Comp							FeNe clear	25s	
21	Comp							"	25	
22	BD+35 2439	13 16 20	+34 48 26	01 16 19		01 00 W			2229	1000
23	Comp							FeNe clear	25s	
24	BIAS x4			01 58						
25	Comp							"	25s	
26	BD+31 2500	13 27 23	+31 38 59	02 03 49		01 24 W			1501	700
27	Comp							FeNe clear	25s	
28	"							"	"	
29	AC+14 1105-9	13 57 29	+14 10 07	02 45 29		01 50 W				700

CCD
Spectr. Temp. −99.9 °C Dome Temp./Hum. +00.1° 62% Transparency Conditions Slight Hazy 184

Focus 6.90

Spectr. Temp. ____ Dome Temp./Hum. −00.1° 79% 90 Cgain

clamshell increasing cloud/fog

Exp. Mtr.	Seeing	Tel. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1100	1"	9.65	M2	CASSCCD	1800 l/mm	306	5303	9	Std vel	Mercy	
								7			
								1			
								7			
1520	2"	.75	G2V					10	Std vel	Minor planet	
								7			
								7			
1000	1"	10.6	M0					11	Vys pgm	CCDT = −100.4°	7 S/N 1
								7	GrfSBIG	Histogram says Sec .5 .5 / x V — Is that seeing?	
								1/2			
								7			
700	1"	10.45	M0					12	Vys 691 AB		
								7			
								4			10.7K
700	1-2"	1.67	M0					13	Vys 150	7 50/1 S/N	

185 pg#5 Sun/man

Date 1995 Apr. 2/3 Observers E. 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	Comparison Exp.
cc32330	Comp							Fe Ne Clear	25
31	BIAS x 4			0328					
32	Comp							Fe Ne Clear	25
33	HD119850 *	13 40 36	+45 27 00	033257		2 27 W			759
34	Comp							Fe Ne Clear	25
35/43	FLATS x 9					0 0	+20°	Tung Apl/2	5s
cc323 44/45	Inboard / outboard					"	"	Fe Ne Clear	20/3

Spectr. Temp. ..... Dome Temp./Hum. -00.3°C 80% Transparency Conditions .. P.or T. cloudy 186

Focus 6.90

~~Spectr.~~ CCD Temp. -100.3°C Dome Temp./Hum. -00.2°C 88%

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
No Filter				C455CCD	1800 l/m G-5140	30μ	5303P	7		~~Poor Star~~	
								1			
								7			
~250	1"	8.48	x M1					15	Stellar Mirach	* Spectrum not M type To check to check field.	
								7			
								17			14K
	-00.2°C	6.90 set						3/4	focus		
								All	to Perseus & Worm		

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pg#1

Mon / Tues

Date 1995 Apr. 3/4 ..... Observers {Vys} ..... T.N. .....

Emulsion Batches:

JBL Class Tour - Looked at NGC 2392 "Clown Face or Eskimo Planet"

Hα & 500nm Spectra. Looked 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	Comparison Exp.
CC323 46/47	Inboard / outboard					≈ 3 W	+25°	FeNe Clear	20/20
48	BIAS x 4								
49	Comp							FeNe Clear	25s
50	Vesta	06 14 30	+24 57 0	20 43 15		03 11 W			6/9
51	Comp							FeNe Clear	25s
52	Comp							"	4
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 +47 2368-79	09 04 48	+47 01 33	22 07 13		02 00 W			1/87
58	Comp							FeNe Clear	25s
59	BIAS x 4								
60	Comp							FeNe Clear	25s
~~61~~	KUI 39	11 31.9	1900 hopefully +48 01	22 55 36		00 11 W			1318
~~71~~	Comp							FeNe Clear	~~25s~~

CCD
Spectr. Temp. −100.0°C Dome Temp./Hum. 7.3°C 77.5%H Transparency Conditions Clearing nicely 188
Focus 6.87 Dome drying out quickly too.
Spectr. Temp. Dome Temp./Hum. +5.0°C 89%H Some increasing cloud by 22 EST
c Kenilda

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CHSCCD	1800 l/mm G=5140	30μ	5303	3/4	focus test		
								1/2			
	~~3"~~	~~.75~~						5			
1406	3"	x8	G2V					6	Std Lel	minor planet	
								7			
								8			
≈500	1"	11.3	M0					9	Vys pgm SB	NE of 115 Sgr pair > Grf says 14 for X, Y,	S/N 50/1
	1"							10			
								1/2			
								11			10.4k 10.5k
528	<1"	10.9	M0					12	Vys pgm		
								13			
								1/2			
								14	(Posn Angle if these looks ≈ 90°, along slit)		
570	<1"?	≈11	M	(Star, pair? just perhaps looks dbl. Uncertain about Finder Field) (used coordinate Epoch & proper motion)				15	KK close	dbl pgm (used SBIG totally for guiding)	

189
Pg #2 Mon/Tues

Date 1995 Apr 3/4 Observers [Vyss] Tin

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	Comparison Exp.
cc32362	Comp							FeNe Clear	25s
GC406 14/17	HD103095	11 47 13	+38 26 10					4x	67ms
GC408 18/19	"					00 19W		2x	133ms
cc32363	Comp Then cc32364	Bias x4 done (@ 22 48)						FeNe Clear	25s
cc32365	HD103095	11 47 13	+38 26 10	23 44 48		00 33W			6/8
66	Comp							FeNe Clear	25s
67	Bias x4			2357					
68	Comp							FeNe Clear	25s
69	HD123782	14 04 33	+49 55 50	00 02 59		1 27E			4 4 4
70	Comp							FeNe Clear	25s
71/79	Flats x 9					0 0	≈+35°	Tung Ap 1/2	5s
80/81	Inboard / Out Board					0 0	≈+35°	FeNe Clear	20/30

Spectr. Temp. ..... Dome Temp./Hum. +5.0°C 87%H Transparency Conditions . increasing cloud ... 190

Focus ... 6.87 .....

Spectr. Temp. ... −100.4°C .... Dome Temp./Hum. +4.5°C ... 90%H

Exp. Mtr.	Seeing	Pg/ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CASS CCD	1800b/mm G-5140	30u	5303A	16 c1			MAX
	1-2"	GAS	G8V p						Seeing Test	Pose west maximum west wind	
					ABOVE 30u S/N				" "		
								16			OK
1100	1.5"	G45	G8V p					17	Std Vel	IAU	
								18			OK
								1/2			
								19			
1400	2"	5.25	~~5.25~~	m2 III.b				20	Std Vel (IAU) 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. Hartmann 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	Comparison Exp.
CC32382	BIAS(4)			23 07					—
83	COMP							FeAr clear	60
84	ADS9537C	15 09 54	+62 13	23 17 07		2 20 E			3600
85	COMP							"	60
86	FLAT							Tung Yg 4p	8
87	BIAS(4)			0 27					—
CG40820-23	HD113811 x4	13 01 12	+40 08						.067
24/25	" x2				0 46	0 15 W	85° let	1.0039 airmass	.133

CCD Spectr. Focus, Spectr.

Exp. Mtr Cg 560 FILTER

157

CCD
Spectr. Temp. -101.9°C ..... Dome Temp./Hum. -7.6°C/57.7% Transparency Conditions . clear, y. was showing earlier 592

Focus ..... 6.92 .....

Spectr. Temp. ..... Dome Temp./Hum. -8.1/57.7% @ seeing test ONLY THE N DOME FAN IS ON

windy

410 0 50 1024 4 1 red flat

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
FILTER				CASS CCD	1200 l/mm G=6060	2"0μm	6563 Å	1		reset spec. controller 3x before	
								3			
157	6-7"	very faint						4	Hdy	autoguided with SB16 guided on bright star 5 fr	poor above b/g
								5			
								6			
								1			
		7.53	K5III	EEV CCD GOOD CAMERA		above 3/16m		—	SEEING TEST	Pole W, strong W wind, clear but snowed 5 hours ago, unseasonably cold during day and right now focus 2807	
	5-6"							—			

All to Persens & WOKM

193

Date 1995 ~~Mar~~ Apr 5/6 Observers Evans? 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	Comparison Exp.
CC 32388	BIAS x 4								—
89	COMP							FeNe clear	25
90	AC+19 909-69	9 58 37	+19 16 58	21 42 31		0 35 W			1100
91	COMP							"	25
92	BIAS x 4			22 04					—
93	COMP							"	25
94	HD95735	10 57 54	+36 38	22 11 20		0 04 E			580
95	COMP							"	25
96 - 98	FLAT x 3					0^h	+36°	Tung ½ Ap	5
99	BIAS x 4			22 27					—

CCD Spectr. Temp. -100.7°C Dome Temp./Hum. -4.5°C/55.2% Transparency Conditions: clear, now, alternating cloud and clear since sunset 1994

Focus 6.94

Spectr. Temp. Dome Temp./Hum.

DOME FANS OFF
410 0 50 1024 4 1 ccdfmt

Exp. Mtr. NO FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
-				CASS CCD	1800 ℓ/mm 6=5140	306μ	5303 Å	1		sum of 4 biases	
25								3			
200	235	3"	11.34	MO				4	{V45} 564	clouded in here (yet again) very weak	30 above b/g
25								5			
-								1			
25								6			
500	255	3"	7.48	M2				7	{V45} Marcy Std 594	through cloud VERY WEAK rack @ 12200 (~~from remark~~ not 11800 as usual) to get slit centred in camera view.	20 above b/g
25								8			
5								9			14.9K → 14.2K
-								1	* Data not very good tonight due to cloud *		

All backed up to WORM & Perseus.

195

Fri - Sat

Date 1995 Apr. 7/8 Observers {Eves} Tn / 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	Comparison Exp.
CC3240 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	195809		00 24 E			2715
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					0h	+1°	Tung ½ dp	5

Spectr. Temp. −100 Dome Temp./Hum. −0.1°C / 72.3% Transparency Conditions hazy, thin c. cloud 196

@ FOCUS TEST

Focus 6.91

Spectr. Temp. Dome Temp./Hum.

DOME FANS OFF

410 0 50 1024 4 1 ccdfast

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
NO FILTER				CAFOS CCD	1800 V_{on} G=5140	38μ	5303 Å	3/4	FOCUS TEST	right to focus	
								1			
								5			
920		10.54	M0					6	Hlw Vys560		
								7			
								1			
								8			
455		9.65	M2					6	Mauna Kea Std. Vd	readout in array cache, Vys 127 ↓ (Correct Hacked in warm backup #2 only in MAY96	
								10			
								1		clouded in	
								11			14.1K → 13.5K

197
Pg#1 Sun/Mon

Date 1995 Apr 9/10 Observers {Vys} Tn/Smt + [HLW]

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc3 2416/17	INBOARD/OUTBOARD					0 0	+43°	FeNe Clear	20/30
18/19	BIAS x4 comp	~~Average~~ Sum of 4 bias						FeNe Clear	25
20	HD 36395	05 26 18	-03 41 00	19 54 01		3 29 W			756
21	Comp							FeNe Clear	25s
22	COMP							"	"
23	BD-02 3000	9 48 10	-3 13 04	20 15 00		0 07 E			2224
24	Comp							FeNe Clear	25s
25	BIAS x4	Sum of 4 bias		20 55					—
26	Comp							FeNe Clear	25s
27	BD+01 2447	10 23 49	+01 21 36	21 00 06		00 11 E			1375
28	Comp							FeNe Clear	25s
29	Comp							"	"
30	~~BD+01 2447 Vys 573~~	~~10 11 52~~	~~-11 27 17~~	~~21 33 53~~		00 49 W			2250
31	Comp							FeNe Clear	25s
32	BIAS x4 (Sum of 4)			22 13					

CCD Spectr. Temp. −100.°C ..... Dome Temp./Hum. +2.0°C ..... 50% H Transparency Conditions .. Clearing quickly .....

Focus ... 6.91 .....

CCD Spectr. Temp. −100.5°C ..... Dome Temp./Hum. −00.4°C ... 40 90 Cgain % H

FANS OFF
410 0 50 1024 4 1 CCDPAR

Exp. Mtr.	Seeing	Pix. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
T=15 set 6.91 no filter				CASSCCD	1800 b/mm G=5490	306u	5303J	3/4	focus test		
								1/2			
1560	5"	7.97	M1					5 6	Mercy Std Vel		S/N 100/1
								7			
								8			10.7K
900	3.5"	10.54	M0		S/N ~ 65:1			9	Hdw Vys 560	1° W of Moon (>15°) glancing cosmic ray through spectrum	S/N 65/1
								10			10.5K
								1			
								11			10.6K
990	3"	9.65	M2					12	Mercy Std Vel	S/N ~ 75:1	
								13			
								14			
720	4.5"	11.0	M0					15	Vys pgm		
								16			MAX 10.9K
								1/2			

- 199

Pg #2

Date .1995. Apr. 9/10..... Observers {Vys}..Smt./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	Comparison Exp.	
cc32433	Comp	J2000 Calc for Apr 10.2 UT						FeNe clear	25s	
34	Vesta	06 22 12	+25 01 48	22 21 56		05 07 W			764	180
35	Comp							FeNe clear	25s	
36	Comp							"	4	
37	BD-09 3070	10 20 15	-09 43 25	22 46 48		1 24 W			450	190
38	Comp							FeNe clear	25	
GG40 926 929	HD103095	11 47 13	+38 26 10					4x	.067	
GG40 930 931	"			2303 →		00 05 W	84° Alt	2x	.133	
cc32439	COMP							FeNe clear	25	
40	HD103095	11 47 13	+38 26 10	23 08 08		00 19 W			577	2640
41	Comp							FeNe clear	25s	
42	B/15x4	(Sum of 4)		≈2320						
43	COMP							"	25	
44	Ceres	J2000 8 57 23	calc for Apr 10.2 UT +30 07 40	23 26 37		04 00 W			2166	1908
45	Comp							"	25	

Spectr. Temp. ..... Dome Temp./Hum. -00.5°C 41.1% Transparency Conditions .. Fine → increasing cloud 200

Focus ... 6.91 ..... @ seeing test T = -00.6°C H = 43.1%

Spectr. Temp. ..... Dome Temp./Hum. ..... Cembalo FANS OFF

Exp. Mtr.	Seeing	Tel Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASSCCD	1800 l/mm G=5140	326u	S3033	17			11.5K
1050	5"	28	G2V					18	Minor planet Std Vel	Field Drawn minor planet variety	S/N ≥100/1
								19			12K
								20			
190	?	10.2	M0					21	Vys 579	cut short due to cloud. very weak.	20 above Wg mA 11K
								22			
	3-4"	6.45	G8Ip	EEV CCD Above GUIDE CAMORA	306u slit			—	Seeing test	Done WSW, mcNE was cloud, now that cloud & the rest	
								—			
				CASS CCD				23			
2660	4"	6.45	G8Vp					24	IAU Std. Vel.		
								25			11.2K
								1			
								#1			
1908		~8	G2V					26	Minor planet Std. Vel.	saw cloud. only one other in field, this one was fainter. (Ceres)	
								27			

201
pg#3

Sun/mon

Date 1995 Apr. 9/10 ..... Observers C. Vys & Tu./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	Comparison Exp.	
CC32446	Comp							FeNe Clear	25	
47	V_{ys} 138	12 12 52	+47 10 47	00 17 24		01 37 W			2584	460
48	Comp			01 11				FeNe Clear	25s	
49	BIAS x 4	Sum of 4 bias'							—	
50	Comp							"	25	
51	HC+41 537-54	12 45 50	+40 54 39	01 22 02		2 27 W			3600	574
52	Comp							"	25	
53	BIAS x 4			2 24						
54-62	FLAT x 9					1 45 W	+15°	Tung ½ Ap	5	
63	COMP							FeNe Clear	25	
64	HD 119850	13 40 36	+15 27	2 38 17		2 09 W			1275	1920
65	COMP							"	25	
66	BIAS x 4			3 15					—	
67	COMP							"	25	
68	BD-10 4471 (8?)	17 13 39	-11 00 57	3 18 14		0 25 E			2391	380
69	Comp							"	25	

CCD
Spectr. Temp. ...-100.8°C..... Dome Temp./Hum. -1.2°C 46% H Transparency Conditions ...thin...cloud...but steady 202

Focus ...6.91.....

Spectr. Temp. ..... Dome Temp./Hum. -2.8°C 49% H

Exp. Mtr.	Seeing	Fr. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
nofilter				CASSCCD	1800d/m G=5190	306	5303Å	28			S/N
460	2"	11.5	M					29	V4s 138	or Ross 917 (Some cloud 1sthalf of exp)	40/1
				Some time lag, due to			Rack problems	30			11.7K
								1/2			max
								5			11.1K
574		11.5	M0					6	{V4s} 677A		200 above V4
								7			
								1			
								2			14.9K →BBK
								8			11.0K
1920		8.48	M1					9	{V4s} Move Std Vel 30		
								10			
								1			
								11			S/N
360	6"-8"	12.0	M					12	{V4s} 792(B)	faint and N really close <1'	25/1
								13			max 10.7K

203
Pg#4 Sun/Mon

Date 1995 Apr 9/10 ..... Observers E Hyes E. Ta./Sant .....

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	Comparison Exp.
cc32470	BD-10 4471(A)	17 13 39	-11 00 57	04 01 38		0 02 W			1353
71	Comp							FeNe clear	25s
72	BIAS X 4	Sum of 4							
73	Comp							"	25
74	BD+27 2853	17 33 15	+27 57 16	4 34 45		0 15 W			1332
75	COMP							"	25
~~76/77~~	~~Inboard Leuboard~~					0 0	+41°	~~FeNe clear~~	~~30/30~~

Spectr.
Focus
Spectr.
Exp. Mtr
no fi/He
340
324

Spectr. Temp. -100°C Dome Temp./Hum. -2.8°C 52% H Transparency Conditions. P.P.A.T. cloudy 204

Focus 6.91 BAT satellite eclipsed eps Cyg @ 4:49 moving SE

Spectr. Temp. Dome Temp./Hum. -3.2°C 52% H 410 0 50 1024 4 1 ccd test

Exp. Mtr.	Seeing	PV Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
no filter 340	6"	=11	m	CASS ccd	1800 l/mm G=5140	30c	5302P	14	Vys pgm		S/N = 40/1
								16			10.7
								1/2			
								17			
324		V mag 11.8	sp. M0p					18	{Vys} 795C	observed faint one NE of brightest — both on slit, 795C @ 23 col +795B? @ 29 col	
								19			
								~~3rd~~	~~focus test~~	rack problems	

All locked up to Perseus & WORM

205
pg #1

Date 1995 Apr. 14/15 Observers Km/Smt

Emulsion Batches:
OG 560 FILTER IN COMP BEAM
GG 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	Comparison Exp.	Exp. Mtr. No
CC32476/77	INBOARD/OUTBOARD							FeAr clear	50/60	FILTER
78	BIAS(4)			20 29					—	
79	COMP							FeAr clear	60	
80	BD+27 1348	07 10 07	27 19 08	20 32 37		2 45 W			900	142
81	COMP							"	60	
82	COMP							"	"	
83	~~start to 5 of 7 ? BD -08 2689 ?~~	~~9 23 57~~	~~-8 49 46~~	21 06 52		01 02 W			600	98
84	COMP							"	60	
85	COMP							"	"	
86	BD-08 2689 ?	9 23 57	-8 49 46	21 37 23		1 30 W			600	128
87	COMP							"	60	
88	BD-08 2689 ?			21 53 27		1 48 W			600	93
89	COMP							"	605	
90	BIAS(4)			22 07					—	
91	COMP							"	60	

CCD
~~Spectr~~. Temp. -100.°C ..... Dome Temp./Hum. 12.8°C / 53.6% @ FOCUS TEST Transparency Conditions ... clear ... full bright moon ...

Focus ..... 6.92 .....

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

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

Exp. Mtr. NO	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
FILTER				CASS CCD	1200 l/mm G=9520	300μm	6563 Å @ column 562!	3/4	FOCUS TEST		
								1			
								5			
162	4"-5"	10.9	M0					6	Km Hα	Vys 490 S/N ~ 75	
								7		reset spec controller after moving tel.	
								8			
98	5"	10.52	not M0					9	Km Hα	Vys 268 no emission wrong star got star to S of brighter one.	
								10			
								11			
128		16.52?	M0?		most likely of 3 candidates. →			12	Km Hα	late-type but not really M-ish no emission-reddened weird. SW of two somewhat close stars.	
								13			
93		?	?					12	Km Hα	NE of the two, no emission!	
								13			
								1		reset spec controller after moving tel.	
								14			

207 Pg #2

Date 1995 Apr. 14/15 Observers Km/Smt

Emulsion Batches:
OG 560 FILTER IN COMP
GG 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	Comparison Exp.
cc 32492	HD95735	10 57 54	+36 38	22 17 28		0 35 W			400
93	COMP							Fe Ar 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 → into	.133

Spectr. Temp. -100°C ..... Dome Temp./Hum. 1.4°C / 53.7% Transparency Conditions clear, full moon! 208

Focus ..... 6.92 .....

Spectr. Temp. ..... Dome Temp./Hum. +0.5°C / 54.6% @ seeing test ONLY N DOME FAN ON 385 0 50 1024 4 1 ccdfast

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1205	5"	7.48	M2	CASS CCD	1200 l/mm G=4520	30µm	Hα @ col 562	15	Km Hα	Vys 594 (Marcy's std vel *) -84.70 km/sec.	
								16			
								17			
292	5-6"	9.5	M2					18	Km Hα	Vys 46A	
								19		accidental FeNe taken before/ warmed up to -50°C and cir'd after Fe/Ar	
								20		↑	
~~137~~		10.6	M0					21	"	CCD -50°C	
								22		↓	
								~~23~~ 1		reactant into 2nd copy of CCD3 that was active. CCD -101.4°C	
								23			
195		10.5	M0					24	"		
								25		Vys 691AB	
								1			
	5"	6.95	K0III	CCD CCD GUIDE CAMERA		above 30µm		—	SEEING TEST	Dome SW, mod W wind, 1st clear day after 3 days solid cloud.	
								—	"		

209
Pg #3

Date 1995 Apr. 14/15 Observers Km/Smt

Emulsion Batches:
OG. 560 FILTER IN COMP
GG. 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	Comparison Exp.	Exp. Mtr.
CC32505	COMP							FeAr clear	60	
06	BD+22 2632	13 42 58	+21 57 25	0 56 35		0 38 W			900	152
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	171
11	COMP							"	60	
12	COMP							"	"	
13	not BD+21 2763	15 17 55	+21 20 06	1 44 01		0 18 E			330	453
14	COMP							"	60	
15	COMP							"	60	
16	AC+38 34548	15 30 11	+38 15 00	02 26 31		0 25 W			1030	162
17	Comp									
18	BIAS (4)			02 47						
19	COMP									
20	BD-07 4156	15 54 29	-07 58 11	03 02 38					500	145

LCD Spectr.
Focus
Spectr.

CCD Specir. Temp. -100.3°C Dome Temp./Hum. +0.4°C/55.2% Transparency Conditions. clear., full moon near meridian. 210

Focus 6.92

Spectr. Temp. Dome Temp./Hum.

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1200 2lmm G=9520	306μ	Hα @ col 562	26			
152	4"	11.1	MO					27	Km Hα	Vys 309	
								28			
								1			
								29			
171	3"	10.7	MO					30	Km Hα	Vys 150	
								31			
								5			
453		not 10.11	not MOe 3					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		10.7	MO					12		Vys 753	

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	Comparison Exp.	
CC32521	COMP							Fedr clear	60	
22	COMP							"	60	
23	BD -12 4523	16 ~~27 51~~ 24 44	-12 25 39	3 22 48		0 22 W			905	390
24	COMP							"	60	
25	BIAS (4)			3 40					—	
26-34	FLAT x9					0h ~~38 44~~	+33°	Tung ¼ Ap.	~~34~~ 34	
35	COMP							Fedr clear	60	
36	BD-08 4352	16 50 05	-8 09 47	3 58 25		0 29 W			660	620
37	COMP							"	60	
38	COMP							"	"	
39	BD -10 4471 (B)	17 13 39	-11 60 57	4 16 48		0 33 W			1200	119
40	COMP							"	60	
41	BD -10 4471 (A)	"	"	4 41 17		0 44 W			450	163
42	COMP							"	60	
43	BIAS (4)			04 51					—	
44/45	INBOARD/OUTBOARD							"	50/60	

CCD
Spectr. Temp. -100.4°C ..... Dome Temp./Hum. -0.6°C/52.2% Transparency Conditions ..clear., full moon, some haze.

Focus .....6.92.....

Spectr. Temp. ..... Dome Temp./Hum. -1.3°C/49.9% @ FOCUS TEST

N DOME FAN ON ONLY
385 6 50 1024 4 1 ccdfast

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	300 l/m G=4520	306μ	6563Å	13			
								14			
390		10.1	M2					15	Km Hα		
								16			
								1			
								2		GG 385 FILTER IN FLAT BEAM.	156K → 150K
								17			
620	4"	9.0	M5 c/z					18	Km Hα	Hα emission 2.5X continuum Vys 782AB as expected	
								19			
								20			
119	3'	12.0	M					21	Km Hα	Vys 792(B)	
								22			
163								23		Vys 792(A) South Lightster one	
								24			
			All to Perseus & WORM					1			
								25/26	FOCUS TEST	passed through focus overnight.	

213 Pg #1

Date 1995 Apr 15/16 Observers Km / Smt

Emulsion Batches:
OG 560 FILTER IN COMP
GG 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	Comparison Exp.
CC32546/47	INBOARD/OUTBOARD							FeAr clear	5d60
48	COMP							FeAr clear	60
49	AC+70 4336	9 33 58	+70 29 25	20 17 58		0 08 W			900
50	COMP							"	60
51	V45 550B	"	"	20 38 09		0 30 W			1000
52	COMP							"	60
53	BIAS (4)			20 59					—
54	V45 550B	"	"	21 00 23		0 47 W			675
55	COMP							"	60
56	COMP							"	"
57	AC+76 3952	09 36 30	76 30 57	21 ~~34~~ 17					360
58	COMP							"	60
59	BIAS (4)			22 26					—
60	COMP								
61	AC+79 4347	13 54 15	79 20 23	22 38 29		0 30 E			500
62	COMP								

CCD
Spectr. Temp. -100.3°C Dome Temp./Hum. +3.7°C/40.2% @ Focus TEST Transparency Conditions .. clear

Focus 6.92

Spectr. Temp. ..... Dome Temp./Hum. +3.1°C/38.7% @ end of 1st exposure FANS OFF 385 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1200 l/mm G=4512	306μ	6563 Å @ col 500	3/4	FOCUS TEST		
								5			
266	3"	10.~~64~~ 58	M2					6	Km Hα [Vys]	Vys 550A	
								7			
311	3"	>10.~~64~~ 58	M					8	"	shows Hα emission. beind bottom of exp. mtr. counts in middle.	
								9			
								1			
158	3"	>10.~~64~~ 58	M					10	"	check to see the Hα emission still there & not due to a plane or something	
								11			
								12			
~~153~~ 102		10.64	M2					13			
								14			
								~~14~~ 14½			
								15			
130		10.6	M0					16		Vys 148	
								17			

215 pg #2

Date 1995 Apr 15/16 Observers Km/Smt

Emulsion Batches:
FILTERS AS BEFORE

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc32563	COMP							FeAr clear	60
64	BD +81 465	14 10 24	81 04 30	23 01 29		-01 41 E			530
65	COMP							"	60
66	BIAS(4)			23 18					—
67	COMP							"	60
68	AC+66 4437	14 40 33	+66 28 51	23 21 06		1 40 E			1450
69	COMP								
CG40 938 -41	HD113811 x4	13 01 12	+40 08						.067
42/43	" x2				235830	0 11 W	85° alt		.133
cc32570	BIAS(4)								—
71	COMP							FeAr clear	60
72	Vys 635 AB	12 04 52	6 00 42	0 30 48		2 00 W			1200
73	COMP							"	60
74	BIAS(4)			1 02					—
75	COMP							"	60

Spectr. Temp. -100 °C Dome Temp./Hum. +1.7°C / 39.4 % Transparency Conditions . clear, full moon up

Focus 6.92

Spectr. Temp. Dome Temp./Hum. +1.5°C / 39.4 % @ end of seeing test 385 FANS OFF 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1200 l/m G=4512	306μ	6563 Å @ col 500	18			
149		10.4	MO					19	Km Eq 5 Hd		
								20			
								21			
279	2".5	10.8	MO					22	"	Uys 723	
								23			
	2"-3"	7.53	KS III	EEV CCD GUIDE CAMERA		above 306μ		–	SEEING TEST	Dome W, very light W wind clear like last night, full moon 1h east	
								–			
				CASS CCD				1			
								24		rack moved with manual switch – half strength	
166	3"	11.41	MO					25	Km Eq 5 Hd		
								26			
								1			
								27			

217 BY # 3

Date 1995 Apr 15/16 Observers Km/Smt

Emulsion Batches:
FILTERS AS BEFORE
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC32576	HD 119850	13 40 36	+15 27	1 08 44		0 48 W			400
77	COMP							Featr clear	60
78	COMP								
79	BD-1 2892	13 55 53	-02 10 09	01 25 51		0 51 W			500
80	COMP							"	60
81	COMP							"	60
82	BD+38 2445	13 20 59	38 14 21	01 44 04		01 51 W			850
83	comp								
84	~~comp~~ bias(4)			02 01					
85	comp								
86	BD+21 2763	15 17 55	+21 20 06	02 17 32		0 18 W			300
87	comp								
88	comp								
89	~~BD+47 2415~~ V45886	16 55 06	47 30 55	02 ~~38~~ 11		-0 54 E			381
90	comp								

Spectr. Temp. -100°C Dome Temp./Hum. +0.8°C/43:4% Transparency Conditions clear, full moon

Focus 6.92

Spectr. Temp. Dome Temp./Hum. FANS OFF

385 0 50 1024 4 1 ccdfast

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
740		8.48	M1	CRSS CCD	1200 l/mm G=4512	30μm	6563 Å (@ 500th col)	28		Marcy std star Vys 30p	
								29		+15.71 km/sec	
								5			
342		9.73	M0					6		Vys 705	
								7			
								9			
249		11.2	M0					10		Vys 689 AB	
								11			
								12			
497		10.11	M0e					13		Vys 740	
								14			
								15			
826								16		Vys 884 (SAO 46403)	
								17			

219 pg #4

Date 1995 Apr 15/16 Observers Km/Smt

Emulsion Batches: FILTERS AS BEFORE

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Focus Spectr. Exp. Min.
cc32591	BD +47 2415	16 55 06	47 30 55	02 49 38		0 44 E			30	86
92	COMP							Fedr clear	60	
93	COMP							"	"	
94	BD+27 2853 C?	17 33 15	+27 57 16	03 09 22		-0 29 E			240	286
95	COMP							"	60	
96	BIAS(4)			3 55 54					—	
97	COMP							"	60	
98	AC-2 1529-17	17 13 09	-1 40 36	4 07 48		0 18 W			610	690
99	COMP							"	60	
cc32600	COMP							"	"	
01	BD+05 3409	17 25 28	+5 37 49	04 31 54		0 28 W			491	448
02	COMP							"	60	
03	BIAS(4)			4 44					—	
04	COMP							"	60	
05	BD+45 2743	18 32 26	+45 39 53	4 54 47		0 17 E			300	646
06	COMP							"	60	

Spectr. Temp. ~-100°C ..... Dome Temp./Hum. +/- 0°C/49.2% Transparency Conditions . clear . full moon up .....

Focus ..... 6.92 .....

Spectr. Temp. ..... Dome Temp./Hum. ~0.2°C/50.7% FANS OFF

@ cc32400 385 0 50 1024 4 1 coadfint

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
74	862		~~H2~~	~~K8~~	CASS CCP really? no.	1200 l/mm G=4512	304μ	6563Å @ col 500	19		(SAO 46409) Vys dd 7	
60									20			
"									21			
240	286		11.8	MOp					22	Kun {Vys} Hα	close companion to AB? Vys 795C no emission	
60									23			
-									1			
60									24			
60	690	3-4"	10.59	MO					25	"	Vys 791 none. late due to racks / spec controller problems.	
60									26			
"									27			
48	418		9.3	M					28	"	Vys 321 none.	
60									29			
-									1			
60									5			
360	646	3"	9.83	MO					6	"	sun coming up - lots of Vys 182A stay b/g. Many - std (-31.19 km/sec)	
30												

221
DQ #5

Date 1995 Apr 15/16 Observers Km/Smt

~~Emulsion Batches:~~
GG 385 FILTER IN FLAT BEAM.
NO FILTERS FOR FOCUS TEST

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC32607-16	FLAT x 9					0h 14m W	+46°	Tung ½ 4p	4
~~#117~~	~~INBOARD/SOUTHERN~~							Feder Clear	40/60

Spectr.
Focus
Spectr.
Exp. Mtr

Spectr. Temp. ...-100°C..... Dome Temp./Hum. ±0.0°C/50.7% Transparency Conditions . clear, morning sky. 222

Focus .....6.92.....

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

FANS OFF.

385 0 50 1024 4 1 ccdfast

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1200l/m G=4512	300μ	6563Å @ 500cd	2			16.0k →14.9k
								3 ~~FOCUS TEST~~		used 40 FeNe and saturated will need to use for a while	
										no focus test tonight.	

All to Parsons & WORM.

223
pg#1 Mon/Tues

Emulsion Batches:

Date 1995 Apr 17/18 Observers {Vys} Tn

CCS 386 Time Reset +5 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	Comparison Exp.
cc326 17/18	Inboard/outboard hard trim					00 00	+43	FeNe Clear	20/30
cc326 19	BIAS x 4	Sum of 4 bias'							
20	Comp							FeNe Clear	25s
21	HD66141	7 5704	+2 3634	20 0914		01 34 W			
22	Comp							FeNe Clear	25s
23	Comp							"	"
24	BD-02 3000	9 48 10	-03 13 04	20 2614		00 38 W			2362
25	Comp							FeNe Clear	25s
26	BIAS x 4	Sum of 4.							
27	Comp							FeNe Clear	25
28	BD+01 2447	10 23 49	+01 21 36	21 1209		00 36 W			1619
29	Comp							FeNe Clear	25
30	Comp							"	"
31	Ceres	J2000 09 02 05	+29 23 00	21 48 49		02 28 W			919
32	Comp							FeNe Clear	25s
33	BIAS x 4			2206					

CCD Spectr. Temp. ....-100°C.... Dome Temp./Hum. +5.3°C....50%H Transparency Conditions ....Mostly clear.....

Focus ....6.88.....

CCD Spectr. Temp. ..... Dome Temp./Hum. +3.4°C....54%H

max

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter.				CASS CCD	1800l/mm G-5140	30μ	5303A	3/4			
								1/2			
								6			9.8K
		4.39	K2 III p					7	Std vel		5K
								8			
								9			9.7K
630	2"-3"	10.64	m0					10	Vys Hlw	Note [Is it brighter tonight?] Clearly visible in finder and looks as bright as the nearby star. The one 4' SSW of Wys 560	
								11			
								1/2			
								12			
970	2"-4"	9.65	m2					13	Mercy Std vel	S/N >70	
								14			10K
								15			10.2K
1960	3"-4"	≈8	G2 V					16	Std vel	minor planet field drawn	
								17			10.5K

225 pg #2

mon/Tues

Date 1995. April 7/8..... Observers {V.S.}...T.a.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	
CC32634	Comp							FeNe Clear	25s	
35	HD103095	11 47 13	+38 26 10	22 16 42		00 07 E			208	2900
36	Comp							FeNe Clear	25s	
CG409 44/47	HD103095	11 47 13	+38 26 10	22 27				4x	67ms	
CG409 48/49	"					0 0		2x	133ms	
CC32637	Comp							FeNe Clear	25s	
38	BD+33 2071B	10 58 11	+33 25 38	22 33 37		01 36 W			2403	350
39	Comp							FeNe Clear	25s	
40	BD+33 2071C?	"	"	23 16 50		02 22 W			2559	110
41	Comp							FeNe Clear	25s	
42	B/HS x4	Sum of 4		00 02						
43	BD+33 2071A	10 58 11	+33 25 38	00 03 20		03 03 W			2219	570
44	Comp							FeNe Clear	25s	
45	Comp							"	25s	
46	HD95735	10 57 54	36 38 00	00 46 11		03 19 W				3300

CCD
~~Spectr.~~ Temp. -100.4°C @2330 Dome Temp./Hum. ..... Transparency Conditions Slightly hazy 276.

Focus 6.88

Spectr. Temp. ..... Dome Temp./Hum +2.2°C 59% 90 Cgain as usual/ 410 050 1024 4 1 CCD Fwit

C Lawlor

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASSCCD	1800 l/mm G=5140	306	5303A	18			MAX 10.6K
2900	2-3"	6.45	G8V p					19	Std Vel		
								20			10.4K
										AIRPORT Wind @ 22 EST NNW 13 kms/hrs	
		6.45	G8V p		Above	306	Slit		Seeing test		
										Dome ~~WSW~~ SW	
								21			
350	2-3'	11.8	K8					22	Vgs pgm	Middle one of 3 in a line in 2' Diam field	S/N 350/1
								23		2nd Brightest too	10.4K
110	2'	12?	Looks Like solar spectrum (ie Like Ceres)					24	Vgs pgm (maybe shifted Blue 3-5 pixels of Bpectra)	(NW of triple, faintest one)	S/N 30/1
								25			
								1/2			
510	3-4'	11?	Later OR M					26	Vgs pgm	Brightest SE of Triple	
								27			MAX 10.7
								28			10.7
3300	3-4'	7.48	M2					29	Std Vel	mercy Vgs 594	

227 pg #3 Mon / Tues

Date 1995 Apr. 17/18 Observers (Vys.) 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	Comparison Exp.
CC32647	Comp							FeNe clear	25s
48/56	FLATS x 9					03 22W	+36	TUNG Ap 1/2	5sa
57	BIAS x 4	Sum of 4		01 17					
58/59	Inboard / outboard	Part Moon				0 0	+36	FeNe clear	20/30

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

Focus .... 6.88 .....

~~Spectr.~~ CCD Temp. ..... Dome Temp./Hum. +2.1°C 60%H

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm G=5146	306	5303Å	30			~~MAX~~ 10.8K
								31			13.8K
								1/2			
								3/4	focus test		
				~~All to learn 3 persons~~						~~(No problems)~~	

229
pg#1

2 Large Tours (1st SAT tour of Season) Looked at MARS

SAT/Sun

Emulsion Batches:

Date 1995 Apr 22/23 Observers {Vys & Tn

CSS Time (Header time) Reset 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	Comparison Exp.
cc 32660/61	Inboard/out board		HARTMAN			01 48E	+29°		30/30
62	BIAS x 4	Sum of 4 Bias frames							
63	Comp								25s
64	Ceres	J2000 09 05 48	+28 52 00	22 42 30		03 40 W			1037
65	Comp							FeNe clear	25s
66	Comp							"	25
67	Vys 277A	10 56 59	+17 03 30	23 09 03		W			2553
68	Comp							FeNe clear	25
69	Vys 277B	10 56 59	+17 03 30	23 56 57		03 24 W			2603
70	Comp							FeNe clear	25s
71	BIAS x 4	Sum of 4 Bias frames							
72	Comp							FeNe clear	25s
73	HD 95735	10 57 54	+36 38 00	00 48 11		03 42 W			708
74	Comp							FeNe clear	25s
75/~~83~~	Flats x 9					03 46W	+36	TUNG Apl 1/2	5sec
	~~BIAS x 4 Sum of 4~~								

CCD
Spectr. Temp. -100.7°C Dome Temp./Hum. +4.0°C 67.6% Transparency Conditions ... Fine to occasional cloud
WNW 7kms/hr wind @ 0 EST
Focus ... 6.88
90 C gain
CCD Fast
Spectr. Temp. ... Dome Temp./Hum. ... c Lambda 410 0 50 1024 4 1

Exp. Mtr.	Seeing	F/c Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CHSS CCD	150 l/mm G=5490	30μ	S 3034	3/4	focus test		
								1/2			
								5			max 10.0K
1400	4"6"	8	G2V					6	Std vel	minor planet hopefully	S/N >100/1
								7			max 10.3K
								8			9.8K
* 200	4"5"	11.5	M0	(SBIG @ 5sec exp, 2secs fast limit)				9	Vys pgm	Eastone	Westone may show at Large columns at west end of slit
* noticed Exp meter interpolator failing back when shutter closed will balance when at better angle.								10			
c 160	5"	11.6	M0					11	Vys pgm	westone and slightly brighter	S/N 260/1
								12			max 10.4K
								.			
								13			max 10.5K
3000	5"	7.6	M2					14	Std vel	MKAcy Vys 594	max 22K
								15			
								16			max 135K

231
pg#2 SAT/Sun

Date 1996 Apr 22/23 Observers {V.Y.S.} 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	Comparison Exp.	Exp. Mtr.
cc3269 84	BIAS x 4	Sum of 4 frames		01 07						
85	* Comp							FeNe Clear	25sec	
86	BD+21 2763 ?!	15 17 55	+21 2002	01 41 13		00 31 W			1555	80
87	Comp							FeNe Clear	25s	
88	BIAS x 4	Sum of 4 frames.		02 14						
89	Comp							FeNe Clear	25s	
90	BD+21 2763	15 17 55 ?	+21 2002	02 17 45		01 05 W			1372	600
91	Comp							FeNe Clear	25s	
92/93	Inboard/out	board	Hartman			00 00	+5°	FeNe Clear	20/30	T=2
94	BIAS x 4	Sum of	4	02 58						

Spectr.
Focus
Spectr.

CCD Spectr. Temp. -100.4°C Dome Temp./Hum. +3.0°C 68.8%H Transparency Conditions Slightly hazy

Focus 6.88

Spectr. Temp. Dome Temp./Hum. +2.5°C 68.7%H

Exp. Mtr.	Seeing	Pix/Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASSCCD	1800h/m G=5190	300	5303A	1/2			
								17		Field drawn - RA correction? check cuRD	
80	4"	2.1/.5	= Good					18	Vys pgm	Yes, wRong star	
								19			max 9.9K
								20			9.9K
600	5"	10.11	moe					21	Vys pgm	Right star. Tm	
								22			
T=25°C		6.88	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	Comparison Exp.
cc32695/96	INBOARD/OUTBOARD					0h	+39°	FeAr clear	60/70
97	BIAS(4)			1 07					—
98	COMP							FeAr clear	60
99	HD147379	16 16 36	+67 28	1 34 39		0h 25m E			1200
cc32700	COMP							"	60
01/02	FLAT x 2					0h 16m E	+67° 15′	Tung ½ Ap	4
03	BIAS(4)			2 05					—
04	COMP							FeAr clear	60
05	HD147379			02 22 27		0h 26m W			1350
06	COMP							FeAr clear	60
07/08	FLAT x 2					0h 31m W	+67° 15′	Tung ½ Ap	3
09	COMP							FeAr clear	60
10	HD177724	19 00 49	+13 42 53	3 01 36		2 06 E			30
11	COMP							FeAr clear	60
12/13	FLAT x 2					1 57 E	+13° 50′	Tung ¼ Ap	10
14	BIAS(4)			3 13					—

CCD Spectr. Temp. -100.1°C Dome Temp./Hum. +4.5°C / 73.9% @ FOCUS TEST Transparency Conditions suddenly clear (2nd time tonight) 234

Focus 6.84 (happy medium) DOME FANS OFF

Spectr. Temp. ..... Dome Temp./Hum. +3.7°C / 75.8% @ cc32705 410 0 50 1024 4 1 ccdfast

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
No FILTERS				CASS CCD	1800 l/mm G=5567	250μ	5890 Å (Na D)	3/4	FOCUS TEST		
								1		average of 4 biases.	
								5		CSS 386/CC03 crashed & reset before this comp.	
1280	4"-5"	>8	MOI					6	Hdy	a few clouds.	
								7			
								8			14.6K (14.6K)
				CASS CCD	1800 l/mm G=6060	250μ	6563 Å (Hα)	~~1~~			
								9		planetary cosmic ray at bottom cols and rows — small time delay to verify λ region.	
1528	5"	>8	MOI					10	Hdy		
								11			
								12			15.3K
								13			
5200		2.99	AOI?nn					14	Telluric Std.	trailed a bit	4.9K
								15			
								16			14.7K
								1			

235
Pg # 2

Emulsion Batches:
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Date 1995 Apr. 25/26. Observers [Hdqtr.] 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	Comparison 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 ½ Ap	4
20	BIAS(4)			3 27					—
CG40950-53	HD163075 x4	17 49 15	+46 40 10						.067
54/55	" x2				3 46	0h 9m E	87° Alt	1.0015 airmass	.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 ½ Ap	4
28	BIAS(4)			4 23					—
29	COMP							FeAr clear	60

~~Spectr.~~ Temp. ....-1.0.3°C..... Dome Temp./Hum. 12.6°C / 19.5% Transparency Conditions . Clear., humid..... 23.6

Focus .....6.94.....

Spectr. Temp. ..... Dome Temp./Hum. +2.6°C / 80.6% @ end of seeing test

DOME FANS OFF

410 0 50 1024 4 1 redtext.

Exp. Mtr. ~~NO FILTER~~	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
				CASS CCD	1800 l/mm G=5567	250μ	5890Å	17			
7700		2.99	AOI nn?					18	Tellurics Std.	trailed a lot	4.9K
								19			
								20			16.0K / 15.8K
								1			
	4"	6.46	KOIII	EEV CCD GUIDE CAMERA		above 250μ		–	SEEING TEST	Dome W, very light W wind, 95% on catwalk. Cloudy for a couple of days previous.	
		"	"			"		–	"		
				CASS CCD	1800 l/mm G=5567	250μ	5890Å	21			
4700	4"	5.19	K5III					22	Hdg	61 Cyg A	
								23			
4070	4-5"	6.02	K7III					24	Hdg	61 Cyg B	
								25			
								26			15.7K / 15.5K
								1			
				CASS CCD	1800 l/mm G=6060	250μ	6563Å	27			

237 pg #3

Emulsion Batches: .....

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

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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	Comparison Exp.
cc32730	HD201091	21 02 25	+38 15 27	4 28 21		2 38 E			180
31	COMP							FeAr clear	60
32	HD201092	21 02 26	+38 15 14	4 35 43		2 28 E			330
33	COMP							FeAr clear	60
34/35	FLAT x 2					2 23 E	+38° 42′	Tung ¼ Ap	10
36	BIAS(4)			4 46					—
37/38	INBOARD/OUTBOARD					0h	+38° 42′	FeAr clear	60/60

CCD
Spectr. Temp. -100.3°C ..... Dome Temp./Hum. +2.3°C/81.2% Transparency Conditions clear., sky. brightening 238

Focus ..... 6.84 .....

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

DOME FANS OFF
410 0 50 1024 4 1 ccdfmt

Exp. Mtr. NO FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
4570	5"	5.19	kSI	CASS CCD	1800 g/m G=6060	250μ	6563Å	28	Hdy	61 Cyg A	
								29			
4800*	5"	6.02	kTI					30	Hdy	61 Cyg B, *bright sky.	
								31			
								32			14.6k/14.35k
								1			
								3/4	FOCUS TEST	sun almost up.	

All backed up to Perseus & WORM.

Emulsion Batches: .....

Date 1995 Apr 27/28 + Apr 28/29 Observers [KK] Smt + SC ← 27/28 [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	Comparison Exp.
CE08726/27	INBOARD/OUTBOARD							THAr clear	20/20
~~28~~	~~BIAS(4)~~ deleted.			~~22 2+~~					~~+~~
CE08728	BIAS(4)			22 44 57	on Apr 28/29				
CE08729/30	Inboard/outboard		Apr 28 Afternoon						
CE08731/32	inboard/outboard	1995	Apr 28/29	21 31		± 00 30E	+43°	THAr clear	20/20

Spectr. Focus. Spectr. Exp. Mtr +7

Spectr. Temp. ..... Dome Temp./Hum. 8.3°C/64.8% @ FOCUS TEST Transparency Conditions . clear for ½ hour 240

Focus .....2470..... 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
				echelle CCD 17.80 tilt	1200 l/mm .4470	60µ W 500µH	6 3960 1	1/2 &	FOCUS TEST	0 0 128 1024 8 1 ccdtest 0 0 256 1024 4 1 ccdtest	
				Clouded out! Not ~~locked up at all yet!~~							
+7.2°C	set 2470				Backed to Perseus			KK 5/1	Tel focus for edelle 2236		

241

SAT / SUN

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

Emulsion Batches:

2 Large Tours looked at M3, C.V.Rs 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	Comparison Exp.
ceo8733	BIHS (4)								
34	Comp			CSS 386	5 secs 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	BIHS(4)			00 51					

ceo8733 is BIHS(4)

CCD
Spectr. Temp. ...-100°C..... Dome Temp./Hum. +4.5°C 70.2%H Transparency Conditions ... Fine 242

Focus ....2470.....

Spectr. Temp. ..... Dome Temp./Hum. +4.5°C 72.5%H

cLandale 0 0 256 1024 4 1 CCDFLHT

Exp. Mtr.	Seeing	Mag.	Sp.	Inst. echelle ccd	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				17.80	1200w W 4470 H.	60u 200u	3960Å	1/2	H=.215 SET W=.277 SET	Tel focus = 2188	ADU MAX 7.8K
		0.08	G STIC +GOTO					3			
not used (too hard to uncap)		0.08	G STIC +GOTO					4	kk pgm	Telescope East side (only ≥ 50 ADU above Background)	
								5			7.7K
								4	kk pgm	(hopefully guided for the extreme refraction.)	
								5		Cloud in from NW	7.0K
Tel west SIDE now						H= 800u W=.185		6	Flats	MAX 12.5 K ADU	
								1/2			
							All To worm, but not to Perseus Tonight.				

243 Sun/Mon

Date 1995 Apr 30/May 1 Observers [KK] Tn./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	Comparison Exp.
CE08747	BIAS(4)			20 14					—
48	Comp							ThAr clear	20
49	HD34029	5 09 18	+45 53 47	20 26 27					
50	COMP							ThAr clear	20
51	COMP							"	"
52	HD 34029	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
—	~~HD83808~~	~~9 35 49~~	~~+10 20 50~~	~~21 45 32~~					
58/63	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.....2441

Focus ....2470 90 cgain as usual

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

Exp. Mtr.	Seeing	Fig. Mag.	Sp.	Insl. CCD	X Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	max ADU Quality
				ECHELLE 17.80	1200 Rl/mm .4470	60μ W 500μ H	3960Å	1			
								3			
Thick Blue filter		0.08	G5IIIe +G0III					4	KK	cloudy, very little signal.	
								5			
no filter now								3		Telescope East side now	8.3K
* 7340		0.08	G5IIIe +G0III					4	KK	* guided slightly E and very slightly North of image some cloud.	2.3K
								5			
2385		"	"					4	KK	clear at start but clouded in	1.3K
								5			8.9K
								1		Tel back on W side	
								~~3~~		TOO CLOUDY ONCE WE STARTED EXPOSING.	
								/			
						60μ W 800μ H		2		Tel/ West side.	8.5K
						20 μ W 500μ H		4			
340		4.53	G5III-IIIe +A7IV					5 ~~6~~ ci	KK pgm		
								6			

Δ 150 ADU above background

245
Pg#2

Date 1995 Apr. 30/May 1 Observers [KK] Tn / 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	Comparison Exp.
CE08767	BIAS (4)			0 35					—
68	COMP							ThAr	20
69	HD107700	12 17 29	+26 24 04	00 44 45		3 32 W			3114
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. +5.6°C / 75.0% Transparency Conditions clear - increasing cloud

Focus .247.0

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

0 0 256 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. CCD	X Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
				ECHELLE 17.80	1200 ℓ/mm .4470	60μ W 50μ H	3960 Å	1			mA
								3			
360	3-~~5~~	4.81	G0III-IV +A3V					4	KK Composite spectra	~3,200 ADU A1200	
								3			11.3K
								1/2			
								3			
3600		223	A0V +G5V					2c.	KK composite spectra		12.6K
								3			10K
								1			
								3			
715		3.84	B9 IV +A3V					4	KK composite spectra	some cloud	500 avg obs
								3			10.5K
								1			
					Backed up on WORM only!						
			Backed to persons by KK								

247
pg#1 Mon / Tues

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

Emulsion Batches:

For Exp meter BG 39

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
ce0878 80/81	Inbound/outBound Hea Tmtn			20 09 25				ThAr	15/5
82	BIAS (4)								
83	Comp							ThAr	20s
84	HD102509	edit Header times *done 11 4250	+204629	20 57 03	* approx 21 26	00 01 W		≈	1740
85	Comp							ThAr	20s
86	HD102509	11 4250	+204629	21 33 40		00 40 W			2031
87	Comp							ThAr	20s
88	BIAS (4)								
89	comp							ThA	20s
90	HD112033	12 4824	+214703	22 19 46		00 29 W			2500
91	Comp							ThA	20s
92	BIAS (4)			23 04					
93	Comp							ThA	20s
94	HD124897	14 1106	+194211	23 13 09		00 27 E			901
95	Comp							ThA	20s

CCD Spectr. Temp. -120 °C * Forgot to Raise to -100C Dome Temp./Hum. +9.6°C 61.4%H Transparency Conditions .... Clearing gradually ....

Focus ... 2490 .....

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

Exp. Mtr.	Seeing	IV Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
~~1200~~ V											
5 (note color strength difference)				17.80	1200 W 4770 H	60u 500u	3960A		focus test	0 0 128 1024 8 1 CCDFMT FOR focus tests	
								1/2		0 0 256 1024 4 1 CCDFMT	MAX
20								3			9.8K
350		4.53	G5III-IIIe +A7V					4	KK composite pgm	(CSS 386 hung up.)	
30								3	(Then Readout using CCD2a)		
540	3"	4.53	G5III-IIIe +A7V					4		after balancing exp. meter	MAX AAO
20								3			
								1/2			
+ Then Temp switched to -100°C after this Frame.								3			MAX 9.8K
724	3"-4"	4.9	G8III +F6V					5	KK pgm		
								3		max 130 ADU ABOVE Background	
								1/2			
								3			
4850		~0.4K	1.5III					6	stdrel		19000A
								3			10.3K

249

Pl #2 Mon/Tues

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

Emulsion Batches: 8639

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Exp. Mtr.
CE08796	comparison							ThA	20	
97	HD 114330	13 04 46	-5 00 18	23 36 37		01 41 W			3200	730
98	Comp							ThA	20	
99	BIAS(4)			00 33						
CE08800	Comp							ThA	20	
01	HD 116658	13 19 55	-10 38 22	00 38 09		01 53 W			1129	2900
02	Comp							ThA	20	
03	Comp							"	"	
04	HD 139006	15 30 27	+27 03 04	01 06 11		00 07 W			983	3170
05	Comp							ThA	20	
06	BIAS(4)			01 23						
07	Comp							ThA	20	
08	HD 156633	17 13 38	+33 12 28	01 27 16		00 25 E			3765	820
09	Comp								20	
10	BIAS(4)			02 33						

Spectr. Temp. ..... Dome Temp./Hum. +7.7°C 69.2%H Transparency Conditions ..Mostly clear..... 250

Focus ....24.90..... ECO XX

Spectr. Temp. = 11.02 °C..... Dome Temp./Hum. +6.7°C 69.5%H 90 gain Exp meta 1200 V

clouds increasing cloud

Exp. Mtr.	Seeing	Rtg. Mag.	Sp.	Inst. echelle	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				17.80	1200 l/mm	60μ 500μH	3960Å	3			
730	3"-4"	4.3	A145 +Am					4	KK composite	Above background	mtc (350 ADU)
								3			14K
								1/2			
								3			11.8K
2900	4-6"	0.88	B1 III-IV +B2 V					5	KK composite (thin cloud)		1.4K
								3			12K
								3			10.7K
3170	4"	2.23	A0 V +G5 V					6	KK composite (done previous night too)		2K
								3			10.6K
								1/2	Stats (149, 153, 151.455, 0.860)		
								3			10.7K
820	2-3"	4.82	B1.5 Vp +B5 III					2	KK composite 68 Her	(500 above Background)	
								3			10.1K
XX Noticed that in tedial Temp change at 22EST was to "6" setting not "5" :: 2-11.0°C								1/2	Stats 149, 153, 150973, 1.139		

251 pg#3

Date 1995 MAY 1/2 (Mon/Tues) 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	Comparison Exp.	Exp. Mtr.
CEO8811	Comp							ThA	20	
12	HD175492	18 50 32	+223106	02 4156		0057E			3250	880
13	Comp							ThA	20	"
14	Comp							"	"	"
15	HD192577	20 1029	+462616	03 43 28		01 30E			2330	1340
16	Comp							ThA	20	
17	BIAS(4)									
18/23	FLATS x 6			0431		0100W	+20	ThNe	300s	
	May 2 (daytime)									
CEO8824	Comp			NO X-grooving skim				ThA	1	Focus
8825	"			.005	"	"		ThA	1	
8826	"			.015	"	"		ThA	1	

CCD Spectr. Temp. −110.3°C * Dome Temp./Hum. +6.7°C. 69.2% H Transparency Conditions thin cloud 25.2

Focus .2490

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

CCD Spectr. Temp. −110.8°C Dome Temp./Hum. +7.3°C. 64.5% H

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst. echelle	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				1780	.4470	60u W 800u H	3960Å	3			10.4K
880	2.3'	4.59	G4III +A6V					4	HK composite	300 ADU above background	
								3			10.4K
								3			9.8K
1340	2.4'	3.79	K2II +B3V					5	HK composite 31 Cyg	200 ADU above background	
								3			9.8K
								1/2			MAX
						60u W 800u H		3	illumination uniform, unlike Flats previous night. ? Stronger by 50% too, for same 300 sec exposure.		12.4K
Focus .2490				18.45	340/.569						
									All TO WORM ~~+ GIEG~~ and to PERSEUS		

253
Pg#1 Tues/Wed

Date 1995 MAY 21/3 Observers [KK] TA

Emulsion Batches:

CSS 386 is 5 secs ahead of WWV time in 00074

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE0887/28	INBOARD/OUTBOARD HARTMANN					(2 23W) ThA	17/	10 secs	15/15 sec
29	BIAS(4)			2037			+37°		
30	Comp							ThA	1 sec
31	HD95689	10 57 34	+62 17 27	20 55 04		00 18 W		1 15 sec	
32	Comp							ThA	1
33	HD95689	"	"	21 59 58		00 23 W			136
34	Comp							ThA	1
35	HD95689	"	"	22 04 12		00 28W			179
36	Comp								1
37	BIAS(4)			21 15 20		9 25W	89°		
38	Comp							ThA	1
39	HD88490	01 22 34	+88 46 26	21 19 12		9 40W			450
40	Comp							ThA	1
41	HD88490			21 29 34		9 49W			396
42	Comp							ThA	

CCD
Spectr. Temp. −100°C ..... Dome Temp./Hum. +11.1°C 49.1%H Transparency Conditions. Very hazy v. p.m.t. cloudy.

Focus ... 12370 ..... 90 cgain

Spectr. Temp. ..... Dome Temp./Hum. ..... Clumbido * Rel 3 orders from UL 28/84 Region ← ie Polaroid image MAP. MAX

Exp. Mtr.	Seeing	Hr. Mag.	Sp.	Inst. Echelle	Grating/ X Tilt	Slit	Emulsion *	P.H.	Program	Remarks	Quality
using 100 tscale to match					300 l/mm	60μ W 400μ H 400μ = .225 set	6300Å	1/2	focus	CCD FWST 0 0 128 1024 8 1	
1000 tscale ✓								1/2		0 0 256 1024 4 1	
270 ~~350~~ great	1"-2"	1.74	K0 III a		actual center 6509Å			2	Telescope accurate 1/2° no anomaly on this star.		13K
								3	KK telluric region		9.4K
								4			
335	2"	1.74	K0 III a					3	KK telluric region		11.5
								4			13.4
425		4	a					3	4		13.2
								4		4	13.5
								1/2		Telescope East Side.	
								4		ie Through Pole (Reversed)	
380	2-3"	2	F					5	Δ RA 00-17 40 Δ dec +0000 15		10 K
								4			14.6
400		2	F					5		1.459 Air mass	12.2
								4		unchanging of course.	14.8

255
Pg #2 Tues/Wed

Date 1995 MAY 2/3 Observers [KK] 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	Comparison Exp.
CE08843	HD8890	01 22 34	+88 46 26	21 38 19		10 01 W			628
44	Comp							ThA	Ise
45	Comp							"	"
46	HD 9028	11 18 43	+11 04 49	21 58 40		01 19 W			1144
47	comp							ThA	1s
48	BIAS (4)			22 21					
49	Comp							ThA	1s
50	HD87901	10 03 03	+12 27 22	22 27 37		03 02 W			1067
51	Comp							ThA	1s
52/57	FLATS x 6			00 23		0 0	+33°	Tung	2s
58	BIAS (4)								
59/60	Inbound/outbound Hartmann			00 46		2 18 W	+19	ThA	~~23/40~~ 2.0/1.0

CCD Spectr.
Focus ...
CCD Spectr.
Exp. Mir.
365
49
33
Scotsdale
All

CCD Spectr. Temp. −100.7 °C Dome Temp./Hum. +10.0°C 54.5%H Transparency Conditions very hazy → cloudy 256

Focus 23.70

CCD Spectr. Temp. −101.9 °C Dome Temp./Hum. +9.6°C 54.0%H (climbing)

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst. Echelle	Grating/ × Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
365	2"	2	F	18.45	300 h/mm .569 tilt	60u 400u	6300B	5	HK telluric	vel pgm	10K
	[illegible]		"Grating" header [18.45 300 x .569]			400u = .225		4			15K
								4		Telescope west side now	15:7K
49	2.3"	4.03	F2 IV					6	HK telluric	(1.242 AIR mass cloudy, but visible)	1K
								4			14:7
								1/2			
								4			
33		1.36	B7 V					3	Telluric Std.	1.480 Airmass + thick cloud.	500
								4			15:2K
						60u width 600u H = .205		3	Topp done by	00:10 EST	16:7K
	stats [min 151, max 155, X 152.769, σ 1.051]					400u Hieght		1/2	profile shows illumination uneven. High spike at Lo u column II end.		
(rootscale usual)								1/2	focus test [LHS Right in focus. middle too infocus RHS tending to indicate that we are set for a warmer temperature.		
All to WORM's Per seus											

257
pg#1 Wed / Thurs

Date 1995 MAY 3/4 Observers [K.K.] ... J.n

Emulsion Batches:

CSS 386 (6-7) secs Ahead of WWV time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	
ce0886/62	Inboard / Outboard Hartmann					2 48W	+38°	ThA	20/1.0	
63	BIAS (4)	Average of 4 bias		19 49						
64	Comp							ThA	1s	
65	HD95689	10 57 34	+601727	20 08 42		00 25 E			75s	350
66	~~Comp~~ "	"	"	20 11 36				~~ThA~~	87s	420
67	"			20 13 43		00 20 E			86s	450
68	Comp							ThA	1s	
69	Comp									
70	HD88990	01 22 34	+88 46 26	20 21 20		08 40 W			183	480
71	X Comp							ThA	1s	
72	HD88990	"	"	20 37 ~~36~~					120	440
73	Comp							ThA	1	
74	HD88990			20 41 13					124	460
75	Comp							ThA	1	
76	BIAS (4)			≈ 20 45						
77	Comp							ThA	1s	

Spectr. Temp. ~~con~~ −100.°C ..... Dome Temp./Hum. +12.3°C 42.0% H Transparency Conditions ... Fine ... 258.

Focus ... 2370 ... unchanged. 90 cgain as usual

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

ADC MAX

Exp. Mtr.	Seeing	Pr. Mag.	Sp.	Inst. echelle	Grating/ × Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
using 100 tscale				1845 tilt	300 l/mm .569 tilt	COUDE 900 μH	6300 Å	1/2	focus	CCDFMT 0 0 128 1024 8 1 Just Right or far very slightly	
			−101.7°C	Shutter	155 158	156 535	0.820	1/2		cooler 0 0 256 1024 4 1	
								3			13.5
350	2"	1.79	KO III					3	tilt composite		9K
420		"	"					3	"		10K
460	1-2"	"	"					3	"		13.2K
								4			13.4K
480	2"	2	F					5	tilt composite	Δα −00 18 28 Δδ +0 00 06	12.3K
								6			
440								5			12.4K
								6			
460	1½"							5			11.4K
								6			15.3
								1/2			
								3			15.6K

259 pg #2 Wed / Thurs

Date 1995 MAY 3/4 Observers [T.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	Comparison Exp.	
~~C e08878~~	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			982	360
81	Comp							ThA	1s	
~~82~~	"	Lost (not sure why? maybe my error)?						"	"	
~~82~~ 82	ADS 8119 ~~82~~	11 12 48	+32 06	21 36 30		00 55 W			479	170
~~84~~	~~Comp~~	Lost	again, what happened? (ESS 386 seems ok) (my error Tn)					~~ThA~~	~~1s~~	
~~83~~ 83	✓ ADS 8119 ~~83~~	"	"	21 47 03		W			366	177
84	Comp ~~84~~							ThA	1s	
85	✓ BIAS (4			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	+15 53 56	22 59 52		00 18 E			480	460
91	Comp							ThA	1s	

CCD Spectr. Temp. −100.7°C ..... Dome Temp./Hum. +10.5°C. 41.0% H Transparency Conditions ..... Some cloud 260

Focus ..... 2370 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... cloudy MAX

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
242	1-2"	4.03	F2 IV	echelle	300 l/mm 5.89	60μ W 90μ H	6300A	4c	kk [illegible]	1.197 Airmass.	45K
								3			
360								4			66K
								3			154K
								3			
170	1-2"	4.5						5	kk db1	Barely separated North one, point-source	38K
								3			17K
177	2"	4.6						6	kk db1.	South and slightly East of Pair.	
								3			
								3			
90	2-3"	6.21	G8 V	~~echelle~~				4	kk ~~[illegible]~~	[OK TV view, but near mag limit]	3K
								3			14K
								3			
460	2"	2.18	G0					2	kk ~~[illegible]~~		11K
								3			

261
pg#3

wal / Tyuns

Date 1995 MAY 3/4 Observers [KK] ... 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	Comparison Exp.
ce08892	HD 121370	13 49 55	+18 53 58	23 09 50		00 06 E			606
93	Comp							THA	1s
94	BIAS (4)			23 21					
95	Comp							THA	1s
96	HD 138918	15 30 01	+10 52 23	23 29 39		01 24 E			730
97	Comp							THA	1s
98	HD 138917	"	"	23 43 22		01 03 E			1167
99	Comp							THA	1s
ce08900	HD 138918	15 30 01	+10 52 23	00 05 18		00 47 E			806
01	Comp							THA	1s
02	BIAS (4)								
03	Comp							THA	1s
04	HD 154905	17 03 15	+54 36 07	00 44 16		01 38 E			818
05	Comp							THA	1s
06	HD 154906	"	"	01 00 10		01 19 E			1002

CCD Spectr. Temp. −100.6 °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 (Limbo)

Exp. Mtr.	Seeing	P.V. Mag.	Sp.	Inst. Reticle	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
475	1"-2"	2.8	G0	18:45	300 l/mm .569 tilt	60u W 400u H	6300A	2c	kk composite		11K
								3			
								1			
								3			14K
126	1"-2"3"	4.23	F0 IV					4	kk dbl	well separated star BATER and NORTHone.	
								3			
110	<2"	5.16	dF0					4	"	Fainter and south one	2K
								3			
140	2"	4.03	F0 IV					4	"	Brighter again	2.6K
								3			14.6K
								1/2			
								3		* Pair easily separated 3.3" Sep in Bet Star cat	
100	1-3"	5.83	dF6					5	kk dbl	SSW and slightly brighter perhaps?	2.2K
								3			13.9K
100	1-2"	5.80	dF6					5	kk dbl	NNE of pair	2.2K

263
Pg#4 Wed / Thurs

Date . 1995. MAY. 3/4. ..... Observers . [RK] .. TA .....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
Ceo8907	Comp							ThA	1s
08	HD154905	17 0315	+543607	01 2010		1 05 E			669
09	Comp							ThA	1s
10	BIAS(4)								
11/16	FLATS x 6					0 0	+20	TWXG	16s
17/18	Inboard / outboard					2 48	+7°	ThA	1/15s *

* Inboard stronger than outboard for same exp.
This contrasts with past 2 focus tests.
I'm sure of the mask protocol too.

Spectr. Temp. ..... Dome Temp./Hum. +7.8°C 44.7%H Transparency Conditions Fine .....

Focus ...2370.....

CCD
~~Spectr~~. Temp. -100.5 °C..... Dome Temp./Hum. +7.2°C 46.0%H
Cumbla

Exp. Mtr.	Seeing	PV Mag.	Sp.	Inst. edelle	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				18.95	300 l/mm .569	60 w 400 H	6300Å	3c		Both components well separated	14.8K
80	2½-3"	5.83	dF6	[18.45 - 300x.569] Harlow				5c	KK dbl	when guiding. Slight seeing problem for this exp.	
								3c			
								1/2			
4 sting 100 scale						600u H		6		Profile illumination Flat compared to last night	14.3
" "								7/8	0 0128 20481 ccdfmt for tonic	Blue edge spike still there,	

Not All to worm. Disc Full; Only to CE08910. inclusive

Now All to worm after format of new optical disc,
All to Perseus too,

pg #1
265

Emulsion Batches:
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Date 1995 May 4/5 Observers [Bln] 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	Comparison Exp.
α 32739/40	INBOARD/OUTBOARD							FeNe clear	20/40
41	FLAT							Tung clear	2
42	BIAS(4)			1 17					—
43	COMP							FeNe clear	20
44	HD193322AB	20 14 34	+40 25 13	2 09 20		3 19 E			960
45	COMP							FeNe clear	20
46	BIAS(4)			2 28					—
47	COMP							"	20
48	HD188001	19 47 54	+18 24 53	2 33 42		2 35 E			600
49	COMP							"	20
50	HD188001	"	"	2 47 10		2 08 E			1390
51	COMP							"	20
52	BIAS(4)			3 16					—
53	COMP							"	20
54	HD190429	19 59 48	+35 45	3 22 12		1 51 E			1050
55	COMP							"	20

CCD Spectr. Temp. -140.1°C Dome Temp./Hum. 10.1°C / 46.9% Transparency Conditions partly cloudy → mostly cloudy
@ FOCUS TEST

Focus 6.90

Spectr. Temp. ..... Dome Temp./Hum. ..... ONLY N DOME FAN ON

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	600 l/mm C G=2510	250μ	3990Å	3/4	FOCUS TEST	400 0 50 1024 4 1 ccdfast	
								2		for focus test reduction	
"								1		415 0 50 1024 4 1 ccdfast	
								5			
1080		B 5.94	O9 V n		S/N > 120:1			6	Bln O-star	lots of cloud @ beginning for ~3 minutes	2.0K
								7			
								1			
								8			
712		B 6.24	O7.5 Iaf		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		B 5.96 B 7.28	O6 V n O4 If+		S/N > 35:1			14	Bln O star	some cloud on and off. exit short due to cloud.	
								15			

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pg #2

Date 1995 May 4/5 Observers [Blw] 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	Comparison Exp.
CCD2756-64	FLAT x9					2 25 E	+45°	Tung clear	15
65	BIAS(4)			3 58					—
66/67	INBOARD/OUTBOARD					0h	+45°	FeNe clear	20/40

CCP
Spectr. Temp. ...-100.4°C.... Dome Temp./Hum. 9.0°C/47.7% Transparency Conditions ..cloudy most of the time...
Focus .....6.90.....
Spectr. Temp. ..... Dome Temp./Hum. .....

415 0 50 1024 4 1 ccdfast

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5 6334 FILTER				CASS CCD	600l/mm C G=2570	250μ	3740Å	16			15.0K
-								1			
								3/4	FOCUS TEST		
			Backed up to WORM & Perseus (1 tape.)								

pg #1
269

Date 1995 May 5/6 Observers [Blu] 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	Comparison Exp.
CC32768/69	INBOARD/OUTBOARD							FeNe Clear	10/20
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~~		6h 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		3h 46m E			1975
76	Comp			1 30 18				FeNe Clear	20
77	Bias (4)								—
78	Comp			1 35 37				FeNe clear	20
79	HD193322 AB	20 14 34	+40 25 13	1 37 34		3h 50 E			760
80	Comp							FeNe clear	20
81	Comp			1 57 44				FeNe clear	20
82	HD199579	20 53 03	+44 32 24	1 59 17		4h 8 E			730
83	Comp			2 12 16				FeNe clear	
84	Bias (4)			2 13					—

CCD
~~Spectr~~. Temp. −100.4°C Dome Temp./Hum. 10.8°C / 59.9% Transparency Conditions. partly cloudy → clouded in quickly

Focus 6.90

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

462 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	600 l/mm C G=2661	250μ as exact as possible	4300 Å	3/4	FOCUS TEST		
								1		one cosmic ray	
								5			
4090	5" M	5.83 B	09.5I					6	Bln − 0*	HD 34656 not kept — far too weak due to cloud	
	6	6.81	O7III(f)		S/N ~ 290:1			~~6~~	~~Bln − 0*~~		
								7		observed through some cloud & v. poor seeing at times	
								8			
5175		B 6.24	07.5Iaf		S/N ~ 330:1			9	Bln 0*	observed through some cloud	12.4K
								10			
								1			
								11			
5000		B 5.94	0.9II(f)		S/N ~ 375:1			12	Bln 0*		12.4K
								13			
								14			
5000		B 5.965	0.6II		S/N ~ 345:1			15	Bln 0*		13.1K
								16			
								1			

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Pg # 2

Emulsion Batches:
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Date ....1995...May 5/6 Observers ..[Blo.]..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	Comparison Exp.	Exp. Mtr.
cc 32785	Comp			2 17 24				Fe Ne clear	20	
86	HD 196 980	19 42 24	31 52 00	2 18 40		1h 58m E			3070	5005
87	Comp			3 12 05				Fe Ne clear	20	
88	Bias (4)			3 15					—	
89	Comp			320 33				Fe Ne clear	20	
90	HD 207 198	21 42 03	61 59 59	321 51		3h 32 E			794	5015
91	Comp			3 40 03				Fe Ne clear	20	
92	Comp			346 22				Fe Ne clear	20	
93	HD 207538	21 44 36	59 14 00	3 47 26		2h 52m E			1830	3645
94	COMP			4 18 37				"	20	
CG40956-59	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 20					—	
796-804	FLAT x9					0 10 W	+41°	Tung clear	5	
05/06	INBOARD/OUTBOARD							FeNe clear	10/20	

CCD
Spectr. Temp. ~~-100.9°C~~ Dome Temp./Hum. 8.5°C / 74.8% Transparency Conditions ~~Clear~~ 272

Focus 6.90

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Chemistry	P.H.	Program	Remarks	Quality
				Cass CCD	600 l/mm G=2661	250μ	4300Å	17			
5005		B 7.53	O7.5III((f))	S/N ~ 350:1				18	Bin 0*		13.0K
								19			
								1			
								20			
5015		B 6.27	O9Ib-II	S/N ~ 350:1				21	Bin 0*	Spindles at red end of ctm saturated	
								22			
								23			
3645		V 7.31	O9.0V	S/N ~ 135:1				24	Bin 0*	cut short: Sun comes in	5.3K
								25			
		V 6.65	M2III	EEV CCD GUIDE CAMERA*	*NEW INTENSIFIER FIRST USAGE	ABOVE 250μ		–	SEEING TEST	Dome W, med. NNW wind, clear 7.0°C, 67.2%, 82% cotwalk 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:
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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	Comparison Exp.	
CC32807/08	INBOARD/OUTBOARD							FeNe clear	20/35	Big 39 FILTER
09-28	BIAS x20								—	
29	COMP							Fe Ar clear	60	
30	CERES	calc 2000.0 9 18 42	27 15	~~lost star CCD's quit.~~ 23 41 33		5 21 W			1000	486
31	COMP							Fe Ar clear	60	
32-36	FLAT x5							Tung clear	25	
37-39	DARK x3							—	180	
40	COMP							Fe Ar clear	60	
41	HD101501	11 35 47	+34 46	0 52 07		3 57 W			300	3780
42	"			01 00 03		4 26 W			1530	17460
43	"			1 27 23		4 58 W			1800	19050
44	COMP							Fe Ar clear	60	
45	COMP							"	"	
46	HD121370	13 49 55	+18 53 56	2 10 52		3 04 W			400	5760
47	"			2 19 25		3 16 W			550	7700
48	"			2 31 20		3 28 W			650	10000

CCD Spectr. Temp. -100.5°C ..... Dome Temp./Hum. 8.5°C @ FOCUS TEST Transparency Conditions .. clear, calm 274

Focus ..... 61.84 .....

Spectr. Temp. ..... Dome Temp./Hum. 7.3°C/48.4% @ DARKS

4/12 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
NG 39 FILTER				IASS CCD	1800 l/mm G=4466	306μ	4300 Å	3/4	FOCUS TEST	in focus.	
								1			
								5			
486		V 8.4	G2V					6	Minor planet	cat shut due to HA limit might not be it, $\Delta\alpha$ too big but normalized on visitor's eyepiece not slit. $\Delta\alpha = -30^s$ when on slit to normalize	
								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	
69060		"	"					14	"	trailing to beat 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	Comparison Exp.
CC32849	COMP							FeAr 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 x4	18 57 03	+40 32 36						.067
66/67	" x2				4 16	0 02 E	87° Alt	1.0016 airmass	.133
55-74	BIAS x 20								—
75-79	FLAT x 5							Tung clear	25
80-82	DARK x3							—	180
83/84	INBOARD/INBOARD					0^h	~44°	FeAr clear	40/70

CCD Spectr. T...
Focus...
Spectr. T...

Exp. Mtr.
BG 39 FILTER
10000
9864

CCD
Spectr. Temp. -100.4°C Dome Temp./Hum. 6.9°C / 46.2% Transparency Conditions clear 276

Focus 6.84

Spectr. Temp. ..... Dome Temp./Hum. 6.7°C / 46.2% @ seeing test end. N DOME FAN ON

4/12 0 50 1024 4 1 ccdfast

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	1800 l/mm G = 4466	30μm	4300 Å	15			
								16			
10000	3"-4"	B 6.60	G2 I					17	Zhu	16 Cyg A S/N > 200:1	
			~~G5 V~~					18			
9864	4"	B 6.86	G5 V					19	Zhu	16 Cyg B S/N ~ 200:1	
								20			
	4"	V 6.65	M2 III	EEV CCD GUIDE CAMERA		above 30μm		—	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°C	

All to Persons & WORM

277

Emulsion Batches:
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Date ..... Observers .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 278

Focus .....

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

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

pg #1
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[Hlw]

Emulsion Batches:
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Date 1995 May 7/8 Observers {Vys} 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	Comparison Exp.	
cc32885/86	INBOARD/OUTBOARD			21 48*				FeNe clear	~~25~~/38	NO FILTER
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	550
90	COMP							FeNe clear	25	
CG40968-71	HD108100 x4	12 20 06	+43 25						.067	
72/73	" x2				21 43	2m W	89° Alt.	1.0002 air mass	.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	738
94	COMP							FeNe clear	25	
895-903	FLAT x9					2 46 W	0° 51' N	Tung ½ 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	460
07	COMP							FeNe clear	25	

CCD Spectr.
Focus
Spectr.
Exp. Mtr.

CCD Spectr. Temp. -100.3°C Dome Temp./Hum. 9.5°C / 39.4% @ opening at dome Transparency Conditions. clear, 1st ¼ moon 280

Focus 6.81

Spectr. Temp. Dome Temp./Hum. 8.0°C / 40.2% @ 1st exposure's end. FANS OFF.

410 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
NO FILTER				CASS CCD	1800 ℓ/mm G=5140	306μ	5303 Å	3/4	FOCUS TEST	* GPIB problems - lost 1st focus test T = 7.5°C when completed.	
								1		SUM OF 4 BIASES	
								5			
550	4"	V 10.54	M0					6	Hlw {V_{45}}	V_{45} 560, <15° from Moon	S/N ~40:1
								7			
	4"	V 7.14	F2	LEV CCD GUIDE CAMERA		above 306μ		–	SEEING TEST	Dome W, very light SW wind, clear 7.5°C, 40.9%, 50% catwalk	
								–	"	@ seeing test end.	
				CASS CCD				1			
								8			
738		V 9.65	M2					9	{V_{45}}? Maray Std. Vel.	V_{45} 127, close to Moon	S/N ~50:1
								10			
								2			14.6K −13.7K
								1			
								11			
460	5"	V 11.2	11.2					12	{V_{45}}	V_{45} 613	S/N ~30:1
								13			

pg #2
281

Date 1995 May 7/8 Observers {EVans} Smt ..... Km 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	Comparison Exp.
cc32908	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	BIAS x4			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	BIAS x4			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	BIAS x4			1 45					—

CCD
~~Spectr.~~ Temp. -100.3°C Dome Temp./Hum. 6.5°C/42.4% Transparency Conditions clear, 1st 1/4 Moon setting 282

Focus 6.81

Spectr. Temp. ..... Dome Temp./Hum. 5.9°C/43.8% @cc32920 FANS OFF 410 0 50 1024 4 1 ccdfmt

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

pg#3

283

Date 1995 May 7/8 Observers EVans 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	Comparison Exp.	
CC32923	COMP							FeNe clear	25	
24	BD+21 2763	15 17 25	+21 20 06	1 52 43		1 31 W			900	593
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	524
WORM CASS CLOSED 28	COMP							FeNe clear	25	
WORM: CASS CLOSED 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	432
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	555*
36	COMP							FeNe clear	25	
37	COMP							FeNe clear	25	

CCD
Spectr. Temp. -100.5°C Dome Temp./Hum. 5.7°C / 43.4% Transparency Conditions. clear., moon has set

284

Focus 6.81

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

FANS OFF
410 0 50 1024 4 1 ccdfwt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
NO FILTER				CASS CCD	1800 l/mm G=5140	306μ	5303Å	26			
543		V 10.11	M0e					27	{V_{45}}	V_{45} 740, RA on card is: 15 17 55 but must be typo. ∴ early-type star there	S/N ~50:1
								28			
								29			
524	4"	V 11.1	M0					30	{V_{45}}	V_{45} 744	
								31			
								1			
								5			
432		V 11.3	M0					6	{V_{45}}	V_{45} 746	S/N ~40:1
								7			
								1			
								8			
555*	4"	V 10.19	M0					9	{V_{45}}	V_{45} 759 *sky getting bright. big ra delta (-35s)	S/N ~80:1
								10			
								11			

pg #4

285

Date 1995 May 7/8 Observers Evans, Smt ..... Km 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	Comparison Exp.
CC32938	BD+45 2743	18 32 26	+45 39 53	4 23 55		0 39 W			300
39	COMP							FeNe clear	25
40	BIAS x4			4 32					—
41/42	INBOARD/OUTBOARD					0 45 W	+45°	FeNe clear	20/30

CCD Spectr. Temp. -100.3°C Dome Temp./Hum. 3.8°C / 44.6% Transparency Conditions clear, bright sky now

Focus 6.81 " @focus test FANS OFF

Spectr. Temp. Dome Temp./Hum. 410 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~T.H.~~	Program	Remarks	Quality
NO FILTER 1330+		V 9.83	MO	CASS CCD	1800 l/mm G=5140	306μ	5303 Å	12	{Vys} Harvey Std. Vel.	Vys 182A, *BRIGHT sky, subtract it.	S/N ~30:1
								13			
								1			
								3/4	FOCUS TEST	set too warm T drop of 4°C since last test	
					~~FILE~~ Backed up to WORM & Perseus.						
										only to cc32928.fts then WORM full (CASS CCD IX) ~~Full night of data still on E:\CASS~~ Sat,	
										cc32929.fts → cc32942.fts on WORM: CASS CCD IX May 9/95	

287
pg #1

Emulsion Batches: .....

Date 1995 May 8/9 Observers {Eyes} Smith + Stacey Smith. .....

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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	Comparison Exp.
CC 3294 3/44	INBOARD/OUTBOARD							FeNe clear	20/30
45	COMP							FeNe clear	25
46	AC+82 779	3 53 19	+82 38 57	21 07 07		8 21 W			2205
47	COMP							FeNe clear	25
48	BIAS x4			21 47					—
49-51	FLAT x 3							Tung 2 Ap	8
52	BIAS x4			0 10					—

CCD Spectr: Focus . Spectr. Exp. Mtr. 450nt

CCD
Spectr. Temp. -100.4°C Dome Temp./Hum. 9.8°C/35.0% Transparency Conditions partly cloudy/partly clear.

Focus 6.81

Spectr. Temp. Dome Temp./Hum.

ONLY N DOME FAN ON
410 0 50 1024 4 1 ccdfmt

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+		11.0	MO					6	{Vys}	Vys 105, lots of clouds beginning to roll.	
								7			
								1		clouded out completely.	
								8			13.8K → 12.8K
								1			

All backed up to WORM & Perseus.
↓
CASS CCD I

289 ~~II~~ pg#1 Fri/Sat

Date ~~1995 May 11/12~~ 1995 May 12/13 Observers ~~[Bln] III/Tn~~ [Bln] III/Tn

High voltage reg'd reset at start up

Emulsion Batches:

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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	Comparison Exp.
~~CC32953/54~~	~~INBOARD ABORTED. OUTBOARD~~	CC 32953/54	Inboard/OUTBOARD Hartmann			00 06E	+44°	FeAr clear.	40/66
55	Bias (4)								
56	Comp			20 27 22				FeAr clear	60
57	HD86360	9 52 51	+12 55 19	20 32 48		1:46 W			370
58	Comp			20 40 56				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
CG40974/77	HD 103095			22052		00 05W		4x	67ms.
CG40978/79	"							2x	133ms
CC32962	BIHS(4)							—	
63	Comp			21 20 42				FeAr clear	
64	HD112028	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	17s

CCD
Spectr. Temp. -100±4°C ..... Dome Temp./Hum. ~~[illegible]~~ % Transparency Conditions . Fine....slightly hazy (smog).....

Focus ..... 6.78 ..... 16.0°C 59.1% H 90 cgain

Spectr. Temp. ..... Dome Temp./Hum. ..... Lambda 410 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
BG39 Filter				Cass CCD	1800 gl/mm h=4575	300 μm	4475 Å	3/4	Focus TEST ~~3m SB~~		
								1 ci			
								6 ci			1.7K
6500		B 5.22	B9 II	*NOTE: LMCR OPTICAL RACK PROBLEMS (MAY HAVE BEEN LOOSE DURING THESE OBS).		*		7 ci	Bln SB		4.4K
								8 ci			
								9 ci			1.7K
3900	1-2"	V 6.45	hBVp					10 ci	std vel	high proper motion ΔRA = 32" Δdec = -10'45"	2.6K
								11 ci			1.7K
	1"	V 6.45	G8Vp						Seeing test	Dome SW, no wind	
									Only NE Fan on by now		
								1 ci			
								12 ci			
7210		V 5.2	A0 III					13 ci	Bln Shell		5.8K
								14 ci			
								15 ci			12K

291
Pg #2 Fri/Sat

Emulsion Batches:
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Date ..1995..MAY.12/13.. Observers .[Bina] 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	Comparison Exp
cc32975	Bias (4) (Average of 4 biases)			21 49				—	
76	Comp			21 58 10				Fe Ar clear	60
77	HD164852	17 58 01	+20 49 60	22 02 50		4 42 E			772
78	Comp			22 17 25				Fe Ar clear	60
79	Bias (4)			22 80					
80	Comp			1 03 21				Fe Ar clear	60
NOTE: OUT OF SEQUENCE 84	HD130841	14 45 21	-15 37 34	1 20 19 ~~1 05 20~~		1 37 W ~~0 44 E~~			216 ~~135~~
NOTE: OUT OF SEQUENCE 85	Comp			1 25 36				Fe Ar clear	60
81	HD130819	14 45 09	-15 34 53	~~1 05 20~~ ~~1 08 31~~ 1 14 01	1 07 20	1 26 W			35
82	Comp			1 18 03				Fe Ar clear	60
83	Comp								
86	Bias (4)			1 29				—	
87	Comp			1 35 34				Fe Ar clear	60
88	HD152614	16 49 17	+10 19 48	1 38 31		0 05 E			340
89	Comp			~~1 49 55~~				Fe Ar clear	60
90	Comp			1 49 55				Fe Ar clear	60

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

Focus ..... 6.79 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... (moon almost full)

Exp. Mtr. Bin 39 Fuse	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Electrode	P.H.	Program	Remarks	Quality
				Cass CCD	1800 11mm G=4575	300 μm	4475Å	1 ci			
								16			1.8 K
8230		B 5.19	B3 IV					17	Bin SB		4.2 K
				*NOTE: OPTICAL RACK WAS LOOSE DUE TO PROBLEM WITH BEARING *				19			
								1			
								2		* down for few hours due to rack problems	1.8 K
16500		V 2.75	Am					6	Bin	α² Libra	8.3 K
7970								7 ci			1.8 K
2740		V 5.16	F5 IV					3 ci	Tn	α¹ Libra	6.9 K
								4 ci 5 ci			1.9 K
								1 ci			
								19 ci			
4500		N 4.20	B8V					20 ci	Bin		9.0 K
								21 ci			
								22 ci			

293
Pg # 3

Fri / Sat

Emulsion Batches: .....
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Date ...1995 MAY 12/13... Observers ...[Blm] 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	Comparison 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 55 E			2115
95	Comp							Fe Ar clear	60
96	Bias (4)			248				—	
97	Comp			255 26				Fe Ar Clear	66
98	HDE 235679	21 55 00	54 00 00	02 58 15		3 15 E			2415
99	Comp							Fe Ar Clear	66
33003	Bias (4)			4 02				—	
33004	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	66
04	Comp							Fe Ar Clear	603
05	HD177724	19 00 49	+ 13 42 53	04 09 29		0 08 W			93

Spectr. Temp. ..... Dome Temp./Hum. 12.0°/60,27% Transparency Conditions . Fine .....

Focus ..... 6.78 - tight screw for this due to temperature drop.

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

Exp. Mtr. Bk,39F,-2A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion Electric	P.H.	Program	Remarks	Quality
14190		V 4.46	A1 V	CASS CCD	600 Rlmm G=4515	300 um	4475Å	23	Bln		8.4K
								24			1.8K
								25			1.9K
1560		B 8.48	B2 V					26	Bln - He ★		0.8K
								27			1.8K
								1			
								28			1.9K
1415		B 9.21	B2.5 Ib					29	Bln SB		
								30			
								1			
no filter	1-2"	B 9.21	[illegible]		1800 1Imm G=6090	306 um	6604Å	11	[illegible]		
980		V 8.86	B2.5 Ia					12	Bln SB		3K max 1.2K cam
								13			
		V 2.99	A0 V					14			
8000								15	Telluric std.	AIR MASS: 1.15	7.3K

295
Pg #4

Fri/Sat

Emulsion Batches:
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Date ...1995 MAY 12/13. Observers ...[Blind] 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	Comparison Exp.
cc33006	Comp							Flat clear	60
7/8	Inboard/Outboard Hartmen					0 18 W	+ 13°50		60/60
9-17	Flat x 9					0 22 W	"	Turn Ae=1/4	7
18	Bias (4)								

Spectr. Temp. ..... Dome Temp./Hum. 10.8°/61.5% Transparency Conditions ..a. clear ..morning.....

Focus ..... 6.78 .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800 l/mm h=6080	806 um	6604 Å	16ci			
+10.8°C	Set 6.78 still							17/18	Focus TEST	(Just Right)	
~~Set 6.78, +10.8°C~~								19			13.4K
								1			

297

SAT/SUN 2 Large Tours (MARS) through Cloud Filter

Emulsion Batches:

Date 1995 MAY 13/14 Observers Zhu/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	Comparison Exp.
CC3300 19/20	In board/out board		HARTMAN			∞ ~~05E~~	+41°	FeAr Clear	40/70
21	Comp								
22	HD 131156	14 46 46	+19 30 57	23 43 03		00 14W			801
23	Comp								
24	HD 131156			00 00 33		W			1475
25	Comp								
26	HD 131156			00 29 35		01 03 W			964
27	Comp								
28	BIAS(4)	Average of 4							
29	Comp	12 29 00 ~~14 15 5~~	5403	~~01 25 31~~		~~W~~		FeAr Clear	60
30	~~HD 109358~~ Ganymede Comp	~~16 45 48~~	~~-21 30 48~~	01 25 31 ~~00 58 54~~		4 16W			458
31	~~HD 109358~~			01 42 07				FeAr Clear	605
32	BIAS(4)								
33/41	FLATS x9					4 35W	+41°	Tung Clear	253
42	BIAS(4)								

CCD
Spectr. Temp. ...-100°C..... Dome Temp./Hum. +12.7°C....72%H Transparency Conditions. Thin cloud..... 298

Focus...6.8.1..... 90 cgain 410 0 50 1024 4 1 Strong East SE wind

Spectr. Temp. ..... Dome Temp./Hum. +11.7°C... CCD FAST 76%H increasing cloud

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39 Filter				CASS CCD	1800 l/mm G=4966	30u	4300Å	3/4	focus test		
								6			
3800	6-15"	5.31	G8V					7		120/1 S/N	
								8			
2560								9		HARD to keep close Fainter companion off slit.	
								10			
5000								11			
								12			
								1/2			
								13			
2740	8"	485	G0V					14		~~Too Cloudy~~ ~~Too Cloudy~~ ≥ 100/1 S/N	
								~~15~~			
								1/2			
								17		13K HOU max	

299

Mon / Tues

Date 1995. MAY. 15/16... Observers ..B.L.n./.T.n.....

Emulsion Batches:

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CSS 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	Comparison Exp.
cc 330 43/44	inboard/outboard HARTMAN					00 29W	+36°	FeNe clear	10/22
45	BIAS(4) Average of 4 biases								
46/54	FLATS x 9					00 18E	+14 27	TUNG Clear	5s
55	Comp			21 14 30				FeNe clear	30s
56	SKY	12 29 Exposure START	+41 54 03	21 15 52		DRIVE OFF 00 00 17	+41 22		3560
57	~~BIAS(4)~~			~~22 15 47~~					
58	BIAS(4)			00 23					
59	Comp							FeNe 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							FeNe clear	30s
64	BIAS(4)								
65/66	inboard/outboard HARTMAN					"	"	FeNe clear	10/22

CCD Spectr. Temp. ..-100°C..... Dome Temp./Hum. +15.3°C ..42.0% H Transparency Conditions. Mostly cloudy & clear 300

Focus .. 6.85 .....

CCD Spectr. Temp. ..-100.3°C..... Dome Temp./Hum. +12.5°C ..... 90 cepin 51.0% H clear & windy

CCDFMT 428 0 50 1024 4 1 Flat well centered too max ADU

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
BG39 Filter				CASS CCD	600/mm G = 2661	250μ	4300Å	3/4	focus test		
exp meter	Finely balanced.							1/2		[min 128 max 151 $\bar{x}$ 141.173 $\bar{s}$ 5.728 Stats]	
								2			1484
								5			3.9K
286								6	sky at zenith	Full Moon far SE (Donahue) Thin mostly clear Half cloudy, DRIVE OFF	900
								7	"	Rain at 22 30 CCDT −100.7°C	
								1/2		CCDT = −100.4°C	
~~440~~								8		Dome T = +14.3°C	4K
147								9	(sky well 6° South of Zenith)	Clear now (for duration mostly clear)	500
162								10	"	½ cloudy	540
58								12	"	thin cloud	
								13			4.4
								1/2			
125°								3/4			
							711 to worm & Perseus				

301
Pg#1 Wed / Thurs

Date 1995 May 17/18 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	Comparison Exp.
CE 08919	Hartmann - IN BOARD							ThAr	4
8920	Hartmann - OUT BOARD							"	"
8921	Biax (4)								-
22	COMP							ThAr	1
23	HD 89484	10 14 28	+20 20 51	20 53 59		2 10 W			701
24	COMP							ThAr	1
25	HD 89485	10 14 28	+20 20 49	21 11 32		2 36 W			1200
26	COMP							ThAr	1
27	HD 89484	10 14 28	+20 20 51	21 34 41					544
28	COMP							ThAr	1
29	COMP							ThAr	1
30	HD 8890	1 22 34	+88 46 26	22 23 23		12 35 E!			597
31	COMP							ThAr	1
32	HD 8890			22 35 15		12 25 E			500
33	COMP							ThAr	1
34	COMP							"	"

CCD
Spectr. Temp. -101.6°C Dome Temp./Hum. 11.0°/57.6% Transparency Conditions Some thin cloud 302.
→ clear
Focus 237
Spectr. Temp. ..... Dome Temp./Hum. 8.3°C/69.6% @ HD5890

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				Echelle	300 X	60μ	6100Å			0 0 1250 1024 8 1 ccdfmt	
				~~2nd~~ 18.45	~~2nd~~ .5790					T=13.8 F=.237	
								1/2		0 0 256 1024 4 1 ccdfmt	
								3			
750		2.61	KOIII					4	KK Vis Bin	γ Leo A	12.7K
								3			
752	ugh.	3.80	G7III					5	KK Vis Bin	γ Leo B not really separated.	8.9K
								3			
750		2.61	KOIII					4	kk Vis Bin	γ Leo A	
								3			
								3		Telescope on E side.	
750		2.0	F8Ib					4	KK		13.5K
								3			
610								5	KK		10.5K
								3			6.5
								3			

303 pg #2

Emulsion Batches:

Date 1995 May 17/18 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	Comparison Exp.	Exp. Mtr.
5 CE0893	HD 8890	1 22 34	+88 46 26	23 02 56 ~~22 47 48~~		11 57 E ~~12 07 E~~			500 ~~660~~	315 ~~335~~
36	COMP							ThAr	1	
37	BIAS (4)			23 14					—	
38	COMP							ThAr	1	
39	HD138918	15 30 00	+10 52 19	23 30 33		0 06 E			2000	258
40	COMP							ThAr	1	
41	HD138917			0 06 46		0 49 W			3120	154
42	COMP							ThAr	1	
43	HD138918			1 02 59		1 13 W			1200	43
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		~ 21 W			1217	29

Spectr. Temp. ..... Dome Temp./Hum. 8.2°C/64.9% Transparency Conditions ... clear → thin cloud. 304

Focus ..... 2.37 .....

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

0 0 256 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst. ECHELLE	X Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
385 ~~256~~	5"	2.0	F8Ib	18.45	300 ℓ/mm .5790	60μW 400μH =.225	6100 Å	4	KK		11.3K
								3			
								1/2			
								3		telescope on W side again.	
268		4.20						4	KK Vis Bin	thin cloud here → increasing	4.1K
								3			
154		5.82						5		clouding in.	
								3			
43								4		cut short due to cloud	1.0K
								3			
								1/2			
						60μW 600μH =.205		2		tscale set to 100!	14.8K → 11.7K
								1/2		tscale back to 1000.	
						60μW 400μH =.225		3		patchy cloud	
29	4"-5"	5.58	?					4	KK Vis Bin	brighter of 2	1.1K

pg #3

305

Date 1995 May 17/18 Observers [KK] STn / 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	Comparison Exp.
CEO8955	COMP							ThAr	1
56	HD146362	16 10 56	+34 06 42	3 13 48		3 06 W			2500
57	COMP							ThAr	1
58	BIAS(4)			3 57					—
59	COMP							"	1
60	HD177724	19 00 49	+13 42 53	4 05 06		0 33 W			480
61	COMP							ThAr	1
62	BIAS(4)			4 15					

CCD
Spectr. Temp. -102.9°C Dome Temp./Hum. 6.5°C/69.2% Transparency Conditions ..patchy..clouds..... 306

Focus .....237.....

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

0 0 256 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst. ECHELLE	X Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
				18.45	300 ℓ/mm .5790	60μW 400μH	6100Å	3			
15	4"	6.59						5	KK Vis Bin	painter one now guided on brighter for a tiny bit while in thick cloud. sky getting brighter.	poor
								3			
								1			
								3			
378		2.99						4	Telluric Std.	close to Moon & Sun coming up.	3.7K
								3			
								1		Sun up.	
					All backed up to WORM & Perseus.						

pg#1
307

Date 1995 May 18/19 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	Comparison Exp.	Exp. Mtr.
ce08963	BIAS (4)			20 56						
64	COMP							ThAr	1	
65	HD89484	10 14 28	+20 20 51	21 07 14 ~~20 59 43~~		2 19 W			232	800
66	COMP							ThAr	1	
67	HD89485	10 14 28	+20 20 49	21 15 16		2 37 W			837	845
68	COMP							ThAr	1	
69	HD89484	10 14 28	+20 20 51	21 32 05		2 46 W			334	800
70	COMP							ThAr	1	
71	BIAS (4)			21 40					—	
72	COMP							ThAr	1	
73	ADS9031	13 44 30	+27 29	21 49 13		0 08 E			1435	25
74	COMP							ThAr	1	
75	ADS9031			22 16 11		0 35 E			2400	3
76	COMP							ThAr	1	
77	ADS9031			22 59 06		0 56 E			1002	0
78	COMP							ThAr	1	

CCD Spectr. T
Focus...
Spectr. T

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 ccdtest

308

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst. ECHELLE	X Grating/ Tilt	Slit	~~Emulsion~~	~~T.II.~~	Program	Remarks	Quality
				18.45	300 gr/mm -5790	60μM 40μH	6100Å	1			
								3			
800		2.22	KOIII					4	kk Vis Bin	saturated on 1st attempt γ Leo A	14.9K
								3			
845		3.47	G7III					5	"	γ Leo B	13.3K
								3			
800		2.22	KOIII					4	"	γ Leo A	15.3K
								3			
								1			
								3			
25	3"	7.59	?					4	"	brighter & N	500 above bkg
								3			
3		8.06	?					4	"	fainter & S thin wispy clouds	350 above bkg
								3			
0		7.59						4	"	brighter & N seeing deteriorating thicker haze now cloud @ end.	100 above bkg
								3			

309 pg #2

Date 1995 May 18/19 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	Comparison 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 08~~ 1 21 34		~~9 36 E~~ 9 42 E			~~254~~ 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°C / 52.7% Transparency Conditions .. cloudy → clearing 310

Focus .237

Spectr. Temp. ..... Dome Temp./Hum. 9.9°C / 56.3% 2nd grating 0 0 256 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst. ECHELLE	X Grating/ Tilt	Slit	~~Emulsion~~	~~P.M.~~	Program	Remarks	Quality
				18.45	300 R/mm .5970	60μm W 400μm H	6100 Å	1			
						60μm W 600μm H = .205		6		closed for ~ 1 hour	13.7K
								1			
						60μm W 400μm H		3			
800		2.0	F8Ib					5	KK		15.8K
								3			
~~800~~ ~~750~~								~~5~~	~~KK~~	wildly saturated by 4th & 5th orders on 1st attempt!	
								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.				

pg #1
311

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	Comparison Exp.	Exp. Mtr.
CE09997/98	INBOARD/OUTBOARD							ThAr	2/2	
99	BIAS (4)								—	
CE09000	COMP							ThAr	1	
01	HD87901	10 03 03	+12 27 22	20 38 42		2 04 W			90	695
02	COMP							"	1	
03	COMP							"	1	
04	HD8[illegible]4441	9 40 11	+24 14 05	20 53 05		2 46 W			391	750
05	COMP							"	1	
06	BIAS (4)			21 02					—	
07	COMP							"	1	
08	HD8890	1 22 34	+88 46 26	21 20 06		10 41 W			153	750
09	COMP							"	1	
10	HD8890			21 26 50		10 46 W			166	750
11	COMP							"	1	
12	HD8890			21 31 44		16 51 W			158	750
13	COMP							"	1	

~~CCD~~ ~~Spectr.~~ Temp. -100.4°C Dome Temp./Hum. 13.5°C / 53.7% Transparency Conditions clear 312

Focus 1.237 @ FOCUS TEST

Spectr. Temp. Dome Temp./Hum. 12.5°C / 52.9%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				ECHELLE 1845	300 ℓ/mm .5790	60μW 90μH	6100Å	2/3	FOCUS TEST	0 0 128 1024 8 1 ccdfmt set a bit cool, T dropping though.	
				"	"	"	"	1		0 0 256 1024 4 1 ccdfmt	
								3			
695		V 1.36	BTV					4	Telluric Std	Regulus (α Leo)	6.0K
								3			
								3			
750		V 2.98	G 3IIab					5	Std. Vel.	ε Leo	12.4K
								3			
								1			
								3			
750		V 2.0	F8Ib					3	KK		12.2K
								3			
750								6	KK		10.7K
								3			
750								6	KK		11.3K
								3			

pg #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	Comparison Exp.	Exp. Mtr.
CE09014	BIAS(4)								—	
15	COMP							ThAr	1	
16	HD154906	17 03 15	+54 36 07	21 58 25		3 15 E			1200	197
17	COMP							ThAr	1	
18	HD154905	17 03 15	+54 36 07	22 21 55		2 52 E			1200	156
19	COMP							"	1	
20	HD154906			22 45 20		2 27 E			1217	219
21	COMP							"	1	
22	HD154905			23 11 57		2 00 E			1300	151
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	16
27	COMP							"	1	
28	ADS9842 B			0 32 58		1 05 W			3333	0

CCD Spectr. Temp. -100.4°C Dome Temp./Hum. 11.5°C/54.7% Transparency Conditions ... clear ... 314

Focus ... .237 ...

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst. ECHELLE	X Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				18.45	300 ℓ/mm .5970	64μW 140μH	6100 Å	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	2.7K
								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 b/g

pg #3
315

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	Comparison 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 ~~750~~
35	COMP							ThAr	1
36	COMP ~~HD 165341~~							"	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		143 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°C/57.0% Transparency Conditions. clear → thin wispy cloud
316
Focus.....23.7.....
Spectr. Temp. ..... Dome Temp./Hum. 7.2°C/59.9% @ end of night. 0 0 256 1024 4 1 ccdfat

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst. ECHELLE	X Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				18.45	500 l/m .5790	40μ W 400μ H	6100 Å	3			
21	2"-3"	7.20						4	KK Vis Bin	brighter & S	400 above b/g
								3			
								1			
								3			
720		2.77	K2III CN0.5					6	Std. Vel	β Oph	9.8K
								3			
								3		some thin cloud now	
284	4"	4.20	KOV					4	KK Vis Bin	seeing deteriorating barely separable. Northern	5.1K
								3			
110		5.99	?					5	"	southern. 2 *'s barely separable.	
								3			
410*		4.20	KOII					4	"	northern 2 *'s barely separable * bright sky	5.2K
								3			
← (you mean "2 secs"				No? Yes. Smt	Tm mthy20)			1			
						80μ W 600μ H		3	All backed up to WORM A	Reverses.	12.3K

317
pg#1 SAT/Sun

Emulsion Batches:

Date 1995 May 20/21 Observers [KK] Tn

CSS 386 Time set by WWV. Time was 7 secs ahead

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Min.
CE09051	BIAS(4)			23 37						
52	Comp							ThA	1s	
53	HD8890	01 22 34	+88 46 26	23 49 19					305	150
54	Comp							ThA	~~15~~ 298	~~145~~
55	HD8890			23 56 46		10 57 E			298	165
56	Comp							ThA	1s	
57	HD8890			00 04 36		10 46 E				145
58	Comp							ThA	1s	
59	Comp							"	"	
60	HD146361	16 10 56	+34 06 42	00 30 12		00 18 W			1477	66
61	Comp							ThA	1s	
62	HD146362	16 10 56	+34 06 42	00 58 07		00 47 W			1662	6
63	Comp							ThA	1s	
64	BIAS(4)									
65	HD146361	16 10 56	+34 06 42	01 32 44		01 10 W			947	74

CCD
Spectr. Temp. -100.9 °C Dome Temp./Hum. +13.3°C 82.8% Transparency Conditions Slightly hazy 318

Focus .237 unchanged 90 c gain 0 0256 CCD Fmt P2A 41 To some cloud.

Spectr. Temp. Dome Temp./Hum. c Lambda Fog coming too. ADC MAX

Exp. Mtr.	Seeing	P Mag.	Sp.	Inst. Echelle	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				18:45	300 .5790 H=	60u 400u	6100Å	1/2			
								3			10K
100	2"	~~2.0~~	F8I b					4	kk pgm	Δ α 00 10 54 Tel west + 00 01 39 side	9.5K
~~185~~								3			~~5K~~
165								4			6K
								3			
145								4			8K
								3			9.5K
								5			
66	(~~1.2"~~)	5.58	~~dF6~~					5	kk Vis Bin	some cloud Brighter and NEat Pair	1.6K
								3			
6	1.8"	6.59	dG1					6	kk Vis Binary		650
								3			
	~~2"~~	5.58	~~dF6~~					1/2		Noisy - 159 - 161 ADU Bands / stripes	
74	2"	5.58	dF6					5	kk Vis Bin	Bright one again	1.3K

319
pg #2 SAT/Sun

Date 1995 MAY 20/21 Observers [KK] ... 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	Comparison Exp.
ce09066	Comp							ThA	1s
67	Comp							ThA	1s
68	HD161096	17 38 32	+43 36 32	015454		00 10 E			141
69	Comp							ThA	1s
70	HD161096	"	"	015925		00 01 W			523
71	Comp							ThA	1s
72	BIAS (4)								
73	Comp							ThA	1s
74	HD177724	19 00 49	+13 42 53	021524		01 05 W			5/6
75	Comp							ThA	1s
76/82	FLATS x7					01 50 W	+16°	TUNG	2s
83/84	INBOARD/OUTBOARD HARTMAN					03 W	+16°		1.0/06
85	BIAS (4)								

CCD
Spectr. Temp. ..... Dome Temp./Hum. ~~+12°C~~ 86% Transparency Conditions ... Incr. clouds, fog .....

Focus ..... 237 .....

CCD
Spectr. Temp. ~~-100.5~~ ..... Dome Temp./Hum. +11.1°C ..... 88% MAX

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	× Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				18.45	.5790	W 60u H 400u = .225	6100Å	3			11.6K
								3			
130	4"	2.77	K2 III CN0.5					2	Stellvel		2.4K
								3			10.2K
570		2.77	K2III CN0.5					2	Stellvel	Repeat	14K
								3			
						60u ~~600u = .205~~		1/2			
								3			
350	4"	2.99	A0 V n					4	Telluric Std	Air mass = 1.20	3.7K
								3			10.3K
						H = 600u = .205		~~3~~			15.5K
100 t scale						H = 400u = .225		7/8		CCD FMT 0 0 1281024 8 1	
								1/2		NOT. noisy like an earlier one.	
			All to worm's forceps.								

pg #1

321 sun/mon

Date 1995 MAY 21/22 Observers [K.K] T.n./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	Comparison Exp.	
CE09086/87	inboard/out Board					=3 W	+30°	ThAr	10/06	
88	BIAS(4)			20 55					—	
89	Comp							ThAr	1	
90	HD110379	12 36 36	-0 54 03	21 12 32		00 13W			180	5
91	Comp							ThAr	1	
92	Comp							"	1	
93	HD110380	12 36 36	-0 54 03	21 28 21		00 31 W			279	55
94	Comp							ThAr	1	
95	HD110379			21 35 20		00 45 W			656	20
96	Comp							ThAr	1	
97	BIAS(4)			21 49					—	
98	Comp							ThAr	1	
99	HD121325 A	13 49 43	-7 34	22 03 44		0 10 W			1300	27
100	Comp							ThAr	1	
101	HD121325 B'			22 27 57		0 53 W			2430	20

CCD
Spectr. Temp. ~99.8°C Dome Temp./Hum. +12.0°C 54%H Transparency Conditions ... Mostly Clear max 322

Focus .....237.....

Spectr. Temp. ..... Dome Temp./Hum. T 10.8°C/54.99° 90 C gain @99 c Lambda Slit N S this Time max

Exp. Mtr.	Seeing	Pix. Mag.	Sp.	Inst. echelle	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				1845	300/mm W 5790 H	60u 400u	N5 baked 6100Å	7/8	0 0 128 0 0 248 1 CCDFOTT	Set-Gr slightly cooler	
								1	0 0 256 0 0 248 1 CCDFOTT		
								3			12K
5		3.48	FOV					4	KK Vis Bin	West end of Rain	500
								3		interrupted by brief Rain	
								3			
255	2"4"	3.50	FOV					5	"	Eastern	2.5K
								3			
220	3"5"	3.48	FOV					4	"	Poor separation sometimes	7.5K
								3			
								1/5			
								3			
27		6.60	F8V					4	"	brighter E W, just separated. AVS 9053A	600 above b/g
								3			
20		7.50	?					5	"	fainter E AVS 9053B	500 above b/g

pg #2

323

Date 1995 May 21/22 Observers [kk] Tn / 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	Comparison Exp.	Exp. Mtr.
CE0902	COMP							ThAr	1	
03	HD121325 A	13 49 43	-7 34	23 10 58		1 20 W			1400	21
04	COMP							ThAr	1	
05	BIAS (4)			23 36						
06	COMP							ThAr	1	
07	HD136202	15 14 12	+2 08 37	23 45 23		0 27 W			1200	142
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	280
12	COMP							ThAr	1	
13	HD131156 B			0 42 49		2 06 W			2058	40
14	Comp							ThAr	1	
15	HD131156 A			01 19 55		2 31 W			1319	33
16	Comp							ThAr	1	
17	BIAS (4)			1 43						

CCD Spectr. Temp. −100.4°C ..... Dome Temp./Hum. 10.1°C / 69.5% Transparency Conditions. clear, some low fast moving clouds 324

Focus ..... 2.237 .....

SSD Spectr. Temp. −100.7°C ..... Dome Temp./Hum. 18.7°C / 73% 0 0 256 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst. ECHELLE	X Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				18.45	300 Rl mm .5790	60μ W 400μ H	6100 Å	3			
21	3"	6.60	F8 I			NS		6	KK Vis Bin	brighter & W	552 above W/G
								3			
								1		9.7°C	
								3			
132		5.06	F8 III-II					4	Std. Vel.		2.9K
								3			
								1			
								3			
280	3"	4.74	G8 V					4	KK Vis Bin	brighter & SE, easily separated	4.6K
								3			
40	2.3	6.90	K8 V					5	"	fainter & NW, easily separated.	1.6K
								3			
233	2.3"	4.74	G8 V					4	"	*Refocused to good Round image BRighter one again	4.7K
								3			10.9K
								1/2			

325
pg#3

Sun/mon

Date 1995 MAY 21/22... Observers KK...To.L.Scot.....

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	Comparison 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	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	HD8890	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 ccdfat

Exp. Mtr.	Seeing	Pr. Mag.	Sp.	Inst. echelle	Grating/ × Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				18.45	300l/mm .5790 W H	N/S 60- 40u	6100Å	3			
740	2"	3.50	M5Ib					6	KK Vis Bin		12K
								3			
318	1.2"	5.40	G5Ib					2	KK Vis Bin	well separated despite MAG difference	5.5 ~~6~~K
								3			
430		3.50	M5Ib					6	"		9.8K
								3			
								1		8.7°C	
								3			
0	3"	8.90	dM4					4	"	brighter & N, faint parr weak	150 above sky
								3			
0	2"	9.69	dM5					5	"	fainter & S Very weak	160 above background
								3		easily visible @ 270msec Int + Vid Amplifier	
								3			
314		2.0	F8Ib					4	KK	into dawn.	10K

327
19 #3

Emulsion Batches:

Date 1995 May 21/22 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	Comparison Exp.
CE9133	COMP							ThAr	1
34	HD8890	1 22 34	+88 46 26	3 59 54		6 54 E			216
35	COMP							"	1
36	HD8890			4 05 01		6 48 E			300
37	COMP								
38 -44	FLATS x 7			4 18		9h 45 W	+10°	TUNG	1.5s
45	BIAS (4)			4 24					

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

Focus .....237.....

~~Spectr.~~ Temp. -100.4°C..... Dome Temp./Hum. +8.1°C 77.2% H

0 0 256 1024 4 1 ccdfast

Exp. Mtr.	Seeing	N.T. Mag.	Sp.	ccg Inst. ECHELLE	X Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
				18.45	300 ℓ/mm .5790	60μ W 90μ H	6100 Å	3			
~300		2.0	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			12.6K
								1			

all backed up to Perseus.

329
Pg #1 Mon/Tues

Emulsion Batches:
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Date ...1995 May 22/23 Observers ...E.K.K.J.S.T.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	Comparison Exp.
CE 09946 [illegible]	in board / Outboard		HARTMAN		"	3 W	= +25°	ThAr	
ce09148	bias (4)								
49	Comp							ThAr	1s
50	ADS 7251 (A)	9 7.8	53 7	21 01 02		04 00 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
CG40980 [illegible]	" "	"	"	=2221				Corrct Tint 4x	0.67s
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?

CCD Spectr. Temp. −100.4°C ..... Dome Temp./Hum. 14.4°C/55.5% Transparency Conditions Fine 330

Focus .....241.....

Spectr. Temp. ..... Dome Temp./Hum. ..... Slit aligned N/S

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				echelle 18.45	300 ln/mm W=60m H=100m .5790	N/S	6100Å	7/8	focus test.		
								1/2			
											10.4K
6	2"	7.64	NOV					4c.		Airmass 1.27 West one of Pair || image slightly out of focus	200 above bkgr.
22	1"	7.74	NOV		"			5c.		Tel Focus = 7224 Row	1.3 K
35	1"	7.64	NOV					4c.			1.7 K
Handok says 133ms	(1" or less)"	"	(Video Amp in use)		(G1 mode)				Seeing test frames,	Left hand (west) on slit	
								3			12.2 K
10	<1" less than one	8.9	K2					6 c:		West pair of close pair - pair well separated but hard to keep indiv. star on slit	400 above bkg
10	<1"	9.1	"					4 c.		E S East = fainter of closer pair (position angle 130°) 2 second separation. 2 stars	200+ above bkg.
	Really I think			(I Really feel confident about separating these with vanes attentive guiding) TH							

pg #2
331

Emulsion Batches:
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Date .. 1995 May 22/23 Observers .[KKJ..STn./.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	Comparison Exp.
Ce 09161	BIAS(4)								
GC409 ~~84~~ 87	ADS 9167 (A)	14 9.7	55 48	~23 44 ~~23 47 58~~				4 =	270ms
CE09162	ADS 9167 (A)	14.97	55 48	23 47 58		1 40 W			1289
63	Comp							ThAr	1s
64	Comp							ThAr	1s
65	HD 136202	15 14 12	02 08 37	00 26 34		1 11 W			1200
66	Comp							ThAr	1s
67	Comp							ThAr	1s
68	HD 146051	16 09 06	-03 26 13	00 54 36		0 36 W ~~0 30 W~~			152 ~~330~~
69	Comp							ThAr	1s
70	Comp							ThAr	1s
71	HD 8890	1 22 34	88 14 9	01 19 59		-9 30 E			117
72	Comp							ThAr	1s
73	HD 8890	1 22 34	88 14 9	01 23 58		-9 26 E			166
74	Comp							ThAr	1s
75	HD 8890	1 22 34	88 14 9	01 28 19		-9 22 E			132
76	Comp							ThAr	1s

CCD
~~Spectr.~~ Temp. -101.7°C Dome Temp./Hum. 12.2°C/63% Transparency Conditions Slightly hazy 332

Focus 24.1

Spectr. Temp. ..... Dome Temp./Hum. ..... Echelle 01

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. Echelle	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				18.45	300 l/mm .5790	60 x W 400 x H	6100Å	1/2			
									Image of pair To Right (East) of Slit	seeing test	
5	~1" or better	8.9	K2					5 ci		NW & brighter of pair	200 + above bkgr. 11.3
								3			
								3			
175	1-3"	5.06	F8 IV-V					2 ci	Std. Vel.		3.6 K
								3			
								3			
255 ~~699~~		2.74	A2s III					2	Std. Vel.		6.6 K
								3			max 10.9 K
								3			
324	3-4"	2.0	F8 Ib					4	Polaris.		5.8 K
								3			
398		2.0	F8 Ib					4	Polaris		10.1 K
								3			
440	~3"	2.0	F8 Ib					4	Polaris		9.2 K

pg #3
333

Emulsion Batches:
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Date .1995...May.22123 Observers .[KKJ..STa./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	Comparison Exp.
Ce 09177	BIAS (4)			1 32 00					
78	Comp							ThAr	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 37 E			288
82	"	"	"			-1 24 E			994
83	Comp							ThAr	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 haze 334

Focus .....241.....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. echelle	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				18.45	300 l/mm 0.5790	60μ W 400μ H	6100 Å				
416	~3"	2.91	B9.5 Ia					5		Brighter of close pair with Δmag ~ 3.4	~8.0K ~~10K~~
								3			
37	~3"	6.33	?					6		weaker of pair - stars appear ~~to be just well resolved~~	500 above bkg
97	~3"	"	"					2		hard to resolve!	3.2K
								4			
500	2"	2.91	B9.5 Ia					4		Brighter of close pair	5.0 K
								3			
480		2.99	A0 Ia					5		Telluric	5.9 K
								3			
270		3.5	M5 Ib					4		brighter of pair - western star	10.0 K

Date 1995 May 22/23 Observers LKKJ STn / 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	Comparison Exp.	Exp. Mtr.
CE 09192	Comp							ThAr	1s	
93	HD 156015 (B)	17 10 05	14 30 15	3 29 33		2 20 W			1200	177
94	Comp							ThAr	1s	
95	~~HD B/HS (4)~~ HD156014(A)	17 10 05	14 30 15	3 52 32		2 25 W			137 ~~300~~	300
96	Comp							ThAr	1s	
97	B/HS (4)			3 56 27						
98-204	FLATS x7			3 59 23		2 30 W	14 21 9		≡2s	

Spectr. Temp. ..... Dome Temp./Hum. 10.7 °C / 66.1 % Transparency Conditions ... slightly hazy 336

Focus ..... 241 .....

Spectr. Temp. ..... Dome Temp./Hum. +10.0°C 70% H

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
177	1-2"	5.4	G5 III					5	Kk Bln Vis	faintor eastern star of pair	4.1 K
								3	"		
300		3.5	M5 III					4			7.2 K
								3			
								1/2			~~10 K~~
~~1 cycle~~											10 K
					All to Worm E Persons						

337
pg #1 Wed/Thurs

Date ...1995...May.24/25 Observers ...EKKJ.STo/To....

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	Comparison 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	10
08	Comp							ThAr	1s	
09	BIAS (4)									
10	Comp							ThAr	1s	
11	HD84441	9 40 11	+24 14 05	21 21 09		03 31W			257	4
12	Comp							ThAr	1s	
13	Comp							ThAr	1s	
14	HD84441	9 40 11	+24 14 05	21 40 01		03 58W			699	6
15	Comp							ThAr	1s	
16-22	Flat x7			~22 03 37		04 15 W	23 46 54		2s	
23	Comp							ThAr	1s	
24	HD ~~137909~~ 84441	~~15 23 42~~ 9 40 11	~~29 27 01~~ 24 14 05	22 34 54		4 57 16W			978	3
25	Comp							ThAr	1s	

CCD Spectr. Temp. ~100°C ..... Dome Temp./Hum. ....11.9°C/75% Transparency Conditions ...cloudy...with...clear... patches.

Focus .....24!.....

Spectr. Temp. ..... Dome Temp./Hum. ..... Slit still NS aligned

Exp. Mtr.	Seeing	Tel. Mag.	Sp.	Inst. echelle	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				18.45	300 l/mm 0.5790	60μ V 900μ H	6100 Å	1/2			
								3			10 K
16		3.66	F_p					4	KK pgm	quite cloudy	250 above bckgrd.
								3			10.8 K
								1/2			
								3			
4		298	GI II					5	Std Vel		CLOUDY ABOVE LEVEL
								3			
								3			
6	2"	298	GI II					5	Std Vel	another cloud hole.	1:20 ABOVE BKGND.
								3			
					W 60μ H 600μ			6			10 K
					H 400μ			3			
3		2.98 ~~3.66~~	GI II F_p					5	Std Vel	another cloud hole	150 above bkg.

339 pg # 2 Wed / Thurs

Emulsion Batches: .....

Date 1995 May 24/25 Observers EKK J. STn / Th .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC09226	Comp							ThAr	1s
27	HD 137909	15 23 42	29 27 01	22 57 33		-00 26 E			742
28	Comp					~~-00 26 E~~		ThAr	1s
29	Comp							ThAr	1s ~~742~~
30	HD 124897	14 11 06	19 42 11	23 16 25		1 00W			405
31	Comp							ThAr	1s
32	BIAS(4)			23 26 57					

Spectr. Te
Focus ....
Spectr. Te
Exp. Mtr.
62
380

Spectr. Temp. ....-100°C.... Dome Temp./Hum. ....10.9°C/78.8% Transparency Conditions ...Cloudy.....340

Focus .....241.....

Spectr. Temp. ..... Dome Temp./Hum. .....+10.5°C 80% H

clamshell

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					W 60u H 400u		6100Å	3			
62		3.66	Fp					4c.	kk pgm		800 above bkgrd.
								3			9K
~~62~~								3			10K
386	<2"	006	K2IIIp					6	Std vel	(only thing visible)	64K
								3			11K
								1/2			
	Tried often to get Polaris, no luck										
							Hit to worm & Perseus.				

pg #1
341

Date 1995 May 25/26 Observers Bln / 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	Comparison Exp
CC 3306 ~~7~~ / 68	INBOARD / OUTBOARD							FeNe clear	10/20
~~67~~ 69 / 70	INBOARD / OUTBOARD							"	10/20
CG40988-90	HD142658 x 3	15 50 42	+10 24						.067s
CG40991	" x1				21 54	2 06 W	47° Alt		.133s
71	BIAS(4)								—
72	COMP							FeNe clear	20
73	SKY			22 09 00		0h 0m 02s W	+43° 58'		1800s
74	"			22 40 44		"	"		1800
75	"			23 13 27		"	"		1800
76	"			23 47 08		"	"		1800
77	COMP							FeNe clear	20s
78-80	FLAT x 3							Tung clear	5s
81	BIAS(4)			0 25					—
82	COMP							FeAr clear	60
83	SKY			0 40 14		0h 0m 2s W	+43° 58'		1800

CCD

Spectr. ~~Temp~~. -101.5°C ... Dome Temp./Hum. 13.0°C / 55.0% @ 2nd focus test ... Transparency Conditions .. cleared up ~ 21:00

Focus ..... 6.85 .....

Spectr. Temp. ..... Dome Temp./Hum. 12.6°C / 54.0% @ stringent EEV cal. 430 0 50 1024 4 1 ccdfast

~~39~~ FILTER Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	600 l/mm (C) G=2662	250μ	~~4270Å~~ ~~4300Å~~	3/4	FOCUS TEST	T=14.5°C dome closed	
					G=2662		4275Å	3/4	"	T≤13.0°C dome open now	
		Vprism 8.6	Prism FO	EEV CCD GTV GUIDER		above 250μ		—	SEEING TEST	Dome SE, bad seeing	
								—	EEV SCALE CALIBRATION		
				CASS CCD	600 l/mm (C) G=2662		4275Å	1			
							actually.	5		clouded in again.	
~90								6	Bln	rack moved to slit pos'n just after 1800 obs started, cloudy	
27								7	"	clear now.	
28								8	"	still clear	
20								9	"	still clear	
								10			
								11			15.0K, 14.8K, 14.7K
								1			
					600 l/mm (C) G=2133		~~4625Å~~ ~~4650Å~~ SA	12			
23							~~4700Å~~	13	Bln	not much here glancing cosmic ray	

pg #2
343

Date 1995 May 25/26 Observers Bln / 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	Comparison Exp.
cc33084	SKY			01 14 38		$0^h\ 0^m\ 2^s$ W	$+43^\circ\ 58'$		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	+10 09 55	3 15 52		0 31 ~~E~~			466
96	COMP							FeAr clear	60
97	COMP							"	"
98	HD188001	19 47 54	+18 24 53	3 36 49		0 06 E			1122
99	COMP							FeAr clear	60
cc33100	BIAS(4)			3 53					—
101-103	FLAT x 3					$0^h\ 0^m$	$+18^\circ$	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

4/30 0 50 1024 4 1 ccdfmt

34.37 Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
↓				CASS CCD	600 l/mm (c) G=2733	250μ	4625 Å	14	Bln		
								15	"		
66 total								16	"	getting into twilight again.	
								17			
								1			
								18			15.6K 15.6K 15.5K
					600 l/mm (c) G=2462		<4300 Å	19/20	Focus Test	in focus now.	
							4275 Å actually.	21			
4000	bad	V 5.11	F8V					22	IAU std Velocity		10.7K
								23			
								24			
5000	awful	B 6.24	G7.5Iaf					25	Bln - 0*	sky getting bright at end.	
								26			
								1			
			All to Perseus & WORM					27			15.1K →14.3K

345
pg #1

Emulsion Batches:
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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	Comparison Exp.
CC33004/05	INBOARD/OUTBOARD							FeNe clear	10/25
06	BIAS(4)			0 22					
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	FLAT x 3					"	"	Tung ¼ Ap.	5
15	BIAS(4)			2 08					
16/17	INBOARD/OUTBOARD							FeNe Clear	10/20
18	BIAS (4)			2 44					—
19	COMP							FeAr clear	60
20	HD187691	19 46 14	+10 09 55	2 55 17 ~~3 47 38~~		0 49 E ~~1 41 E~~			390 ~~300~~
21	COMP							FeAr clear	60
22	BIAS(4)			3 21					

CCD
Spectr. Temp. -99.6°C Dome Temp./Hum. 12.2°C/52.2% Transparency Conditions clear 346

Focus 6182 @ FOCUS TEST

Spectr. Temp. ____ Dome Temp./Hum. 11.2°C/57.5% N FAN ON ONLY

@ 2nd FOCUS TEST 462 0 50 1024 4 1 ccdfmt

10 FILTER Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	600 R/mm (c) G=2875	250μ	5346 Å	3/4	FOCUS TEST	just a tiny bit cool.	
								1			
								5			
						Sun spectrum		6	B/n	first 2 minutes at 31750* rack recnf.	
↓								7	" by batch.		
155 tbl								8	"		
								9			
								10			14.6K → 14.1K
								1			
36, 39 FILTER				CASS CCD	400 R/mm (c) G=2666	250μ	4300 Å	11/12	FOCUS TEST	just a very tiny bit warm recnf.	
								1			
								13			
4000 ~~3000~~		V 5.11	F8 V					14	~~3rd. Vel. B/n - 0*~~		~~7.0K~~ 6.0K
								15			
								1			

pg #2
347

Date 1995 May 26/27 Observers [Bln]./Smt.....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	Comparison Exp.
CG40992 →95	HD176844 x4	18 57 03	+40 32 36						.067
96/97	" x2				3 17	0 17 W	86° Alt	1.0031 air mass	.133
CC33123	COMP							FeAr clear	60
24	HD186980	19 42 24	+31 52	3 29 01		0 02 E			900
25	COMP							FeAr clear	60
26-28	FLAT x 3					0 05 W	+32°	Tung clear	5
29	BIAS (4)			3 50					—

CCD Spectr. Temp. -100°C Dome Temp./Hum. 10.9°C / 51.5% Transparency Conditions clear 348

Focus 60.82 (@ SEEING TEST end.)

Spectr. Temp. Dome Temp./Hum.

N FAN ON
462 0 50 1024 4 1 codfnt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	~~3~~ 4"	6.65	KOIII	CCD CCD TV GUIDER		above 250μ		—	SEEING TEST	Done W, light W wind, 72% catwalk, clear all day & night. Further W than most tests	
								—	"		
BG 39 FILTER				CASS CCD	600ℓ/mm (c) G=2446	250μ	4300Å	16			
1300	4"	B 7.53	O7.5III((f))					17	Bln - O*	twilight - nearing dawn	4.7K
								18			
								19			15.0K → 14.6K
								1			
				All to Perseus & WORM							

pg #1
349 Tues/Wed

Date 1995 May 30/31 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	Comparison Exp.
cc 8313 0/31	INBOARD/OUTBOARD							FeNe clear	20/30
32	BIAS (4)			20 40					—
33	COMP							FeNe clear	20
34	HD95735	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	HD112956	12 55 18	+69 19	21 50 15		1 27 W			1200
42	Comp							FeNe clear	20s
43	COMP							"	"
44	HD124752	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°C / 46.9% Transparency Conditions ...clear.....350..

Focus .....6.70.....

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

FANS ON
410 0 50 1024 4 1 ccdfmt

Exp. Mtr. NO FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	max ADU Quality
				CASS CCD	1800 l/mm G=5023	306μ	5140 Å	3/4	FOCUS TEST		MAX ADU
								1		ONLY N DOME FAN ON	
								5			
?	3-4"	7.48	M2					6	KK Asm/Sp	Hγδ 594	
								7			
								8			
1600	3-4"	9.32	M1 II					9	kk Asm/Sp		1.3K
								10			26K
								1			
								11			
2140	3-4"	8.2	dG6					12	kk Asm/Sp		2.3K
								13			
								14			
1360	3-4	8.79	K0					15	kk Asm Sp/		1.5K
								16			2.7K

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Date 1995 MAY 30/31 ... Observers [KK] Tu/Sat .....

Emulsion Batches: .....

.....

CSS 386 noted to be aboard ... 10 secs .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC33146	HD124752B	14 10 18	+68 03	22 39 42		01 12W			1769
147	Comp							FeNe clear	20s
148	BIAS(4)			23 17					—
49	HD124752			23 18 28		1 41 W			1200
50	COMP							FeNe clear	20
GG40998 #41001	HD144579 x4	16 01 30	+39 25 36	~~23 50~~				4x	67ms
CG41002/3	4 x2				23 50 ?	00 01 W	85° Alt	2x	133ms
CC33151	COMP							FeNe clear	20
52	HD144579	16 01 30	+39 25 36	23 53 26		0 14 W			600
53	COMP							FeNe clear	20
54	BIAS(4)			0 06					—
55	COMP							FeNe clear	20
56	HD144287	16 00 00	+25 30	0 15 11		0 37 W			600
57	COMP							FeNe clear	20
58	COMP							"	"

CCD

Spectr. Temp. −101.7°C Dome Temp./Hum. 417.0°C 53824 Transparency Conditions Slightly hazy 352

Focus 6.70

Spectr. Temp. ..... Dome Temp./Hum. 16.0°C / 57.1% @ SEEING TEST 410 0 50 1024 4 1 ccd Cnt

Exp. Mtr.	Seeing	Ang. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	max Appr. Quality
~~no filter~~ ~~Balance~~ ~~Button~~	* 2"-3"	12		CASSCCD	1800 l/m G=5023	30μ	5140Å	17	KK Asm Sp	Exp Balance. clocked (Right on)	20:1 S/N
180 sec's	* Seeing suddenly = 4"-5" at end of exp.							18		nice separation from Brighter Star	
								#1			
1111	4"	8.79	KO					19	KK Asm/Sp	brighter again.	1.1K
								20			
	4" and getting worse?	6.66	G8V	EEV CCD TV GUIDER		ABOUT 306μ	SLIT	—	Seeing test, Only NE Fan on		
								—	Some SW, Light W wind 70% cal mode		
				CASS CCD				21			
2555	4"-5"	6.66	G8V					22	Std. Vel		3.4K
								23			
								1			
								24			
2515		7.07	G8V					25	KK Asm/Sp	some windy bursts blew seeing to >8"	2.2K
								26			
								27			

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pg 03

Tues/Wed

Date 1995 MAY 30/31 Observers [KK] Tu./Sat.

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	Comparison Exp.	Exp. Mtr. & Filter
CC33159	HD 149162	16 27 54	+03 28	00 34 03		0 42 W			1500	1165
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	1181
64	COMP							FeNe clear	20	
65	COMP							"	"	
66	HD158633	17 25 18	+67 23 26	1 34 08		0 30 W			303	2060
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		0059 W			1807	1820
71	Comp							FeNe Clear	20	
72	Comp							"	20	
73	Juno	J2000 18 03 30	−5 08	02 27 55		01 14 W			1972	500

Spectr. Temp. ..-100, 3°C.... Dome Temp./Hum. ..715.9°C.....56.3%H Transparency Conditions ...slightly hazy.....

Focus ....6.70.....

Spectr. Temp. ..-100.4°C..... Dome Temp./Hum. ..715.1°C...60.8%H

410 0 50 1024 4 1 ccd font

Exp. Mtr. / B FILTER	Seeing	Rpt. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	max ADU Quality
1165	4"-5"	8.84	KOV p	CASSCCD	1800 l/mm G-5023	30u	5140A	28	Asm Sp kk		1.0K
								29			
								1			
								30			
1181		8.63	MOV					31	kk Asm/Sp		900
								32			
								5			
2060	4"-5"	6.43	dk1 or G9V					6	kk Asm/Sp		2.0K
								7			
								1			
								8			
1820	3-4"	9.15	M4V					9	kk Asm/Sp		0.5K
								10			2.8K
								11			
500	5"	10.2	G2V		60/1 S/N though			12	Std vel	# Too hazy here I guess Magastar Field clocks ok Tel at ~ 18 02 27 & -5 08 27	200 ADU above background.

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Date 1995 MAY 30/31 Observers [F.K.] T.L./Smt

Emulsion Batches:
Pre T 15:0°C H=63%

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Exp cm's
cc33174	Comp							FeNe Clear	20s	Pleiades
75	BIAS(4)								—	
76	Comp							FeNe clear	20s	M42
77	HD173740	18 41 46	+59 29 00	03 09 36		1 03 W			1200	771
78	Comp							FeNe Clear	20s	
79	HD173739	"	"	3 32 14		1 24 W			1085	1470
80	COMP							FeNe clear	20	
81–89	FLAT x 9					1 30 W	+ 60°	Tungsten 2Ap	7	
90	BIAS(4)			3 58					—	
91/92	INBOARD/OUTBOARD							FeNe clear	20/35	

Exp cnts					
KSec	mag	Sp. Type	13c:		
14q			14c:		
771	9.69	dM5	15c:	KK Asm/Sp	faster & SE — 600 max ADU
			16		
1470	8.90	dM4	17	KK Asm/Sp	guided off center for 1st image / bright & NW sky getting bright. — 800 max ADU
			18		
			20		13.3K → 12.4K
			1		
			3/4	FOCUS TEST	set a bit warm now as expected.

All backed up to WORM & Perseus.

5023 = 5155Å